UGC NET PAPER 1 PAPER 2 DECEMBER 19, 2018 SHFIT 1 ELECTRONIC SCIENCE QUESTION PAPER

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Paper I

Group Number :	1
Group Id :	913943153
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Revisit allowed for edit? :	No
Break time:	30
Mandatory Break time:	Yes
Group Marks:	100

00 General Aptitude

Section Id :	913943153
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	42
Number of Questions to be attempted:	42
Section Marks:	100
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	913943585
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 91394311607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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In the following list identify these statements which are indicative of helping behaviour of effective teaching. Select from the code to give your answer.

(a) Instructional variety marked by multiple devices used.

(b) Using the ideas of students while making presentations.

(c) Student's success rate as evident in correctly understanding the assignments.

(d) Engagement in learning tasks.

(e) Teacher affect as manifest in relations with students.

(f) Probing to add and seek classifications of ideas.

Code :

Options :

91394345601. (b), (e) and (f)

91394345602. (a), (b) and (c)

91394345603. (d), (e) and (a)

91394345604. (b), (c) and (d)

Question Number : 1 Question Id : 91394311607 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित सूची में उन कथनों की पहचान करें जो प्रभावी शिक्षण के सहायक व्यवहार को दर्शाते हैं। कूट में से सही उत्तर चुनें।

(a) प्रयुक्त विविध प्रविधियों वाली अनुदेशात्मक विविधता।

(b) प्रस्तुति करते समय छात्रों के विचारों का प्रयोग करना।

(c) छात्र की सफलता दर जो कार्य की सही समझ में प्रदर्शित होती है।

(d) अधिगम कार्य में संलग्नता।

(e) छात्रों के साथ संबंध में प्रदर्शित शिक्षक प्रभाव।

(f) विचारों की स्पष्टता प्राप्त करने के उद्देश्य से जाँच-परख।

कूट :

Options :

91394345601. (b), (e) और (f)

91394345602. (a), (b) और (c)

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91394345603. (d), (e) और (a)

91394345604. (b), (c) और (d)

Question Number : 2 Question Id : 91394311608 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

From the list given below identify these statements which relate to the characteristics of a teaching act. Select from the code to indicate your answer.

(a) Teaching is a personal act to facilitate self development.

(b) The goal of all teaching is to cause learning.

(c) Teaching invariably implies changing the opinion of others.

(d) Teaching is triadic rather than dyadic in nature.

(e) Teaching means selling ideas.

(f) Teaching means reaching the mind of students.

Code :

Options :

91394345605. (a), (b) and (c)

91394345606. (c), (d) and (e)

91394345607. (b), (d) and (f)

91394345608. (f), (e) and (d)

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Question Number : 2 Question Id : 91394311608 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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नीचे दी गई सूची में से उन कथनों की पहचान करें जो शिक्षण कार्य की विशेषता से संबंधित हैं। दिए गए कूट में से अपना उत्तर चुनें।

(a) शिक्षण स्व:विकास को सुगम बनाने वाली एक वैयक्तिक गतिविधि है।

(b) सभी शिक्षणों का ध्येय अधिगम कराना होता है।

(c) व्यक्तियों के शिक्षण का निहितार्थ दूसरों का मत परिवर्तित करना है।

(d) शिक्षण अपनी प्रकृति में द्विक होने की बजाये त्रिक है।

(e) शिक्षण का अर्थ है विचारों का विक्रय।

(f) शिक्षण का तात्पर्य छात्रों के मस्तिष्क तक पहुँचना है।

कूट :

Options :

91394345605. (a), (b) और (c)

91394345606. (c), (d) और (e)

91394345607. (b), (d) और (f)

91394345608. (f), (e) और (d)

Question Number : 3 Question Id : 91394311609 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For promoting competence and excellence in and through education, which of the needs of Maslow's hierarchy has to be addressed ?

Options :

91394345609. Need for love and belongingness

91394345610. Need for self esteem

91394345611. Safety needs

91394345612. Need for self - actualization

Question Number : 3 Question Id : 91394311609 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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शिक्षण में, शिक्षण के माध्यम से सक्षमता और उत्कृष्टता को बढ़ावा देने के लिए मास्लो के पदानुक्रम की किन आवश्यकताओं को संतुष्ट किया जाना चाहिए?

Options :

91394345609. प्रेम और अपनत्व की आवश्यकता

91394345610. आत्म सम्मान की आवश्यकता

91394345611. सुरक्षा की आवश्यकतायें

91394345612. आत्म-सिद्धि की आवश्यकता

Question Number : 4 Question Id : 91394311610 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित में से कौन प्रभावी शिक्षण में बाधक कारक हैं? कूट में से सही उत्तर चुनें :

(a) शिक्षक की आत्म-सामर्थ्य

(b) शिक्षक का विषय ज्ञान

(c) शिक्षक की निम्न योग्यता और तत्परता

(d) शिक्षक में नियोजन और शिक्षण कौशल का अभाव

(e) भाषिक कौशलों पर शिक्षक की पकड़

(f) शिक्षक की असंगत देह-भाषा

कूट :

Options :

91394345613. (c), (d) और (f)

91394345614. (a), (e) और (c)

91394345615. (b), (c) और (d)

91394345616. (a), (c) और (f)

Question Number : 4 Question Id : 91394311610 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct Marks : 2 Wrong Marks : 0

Which of the following are hindering factors in effective teaching ? Select from the code to give your answer.

(a) Teacher's self-efficacy.

(b) Teacher's subject knowledge.

(c) Low ability and willingness level of teacher.

(d) Lack of planning and teaching skills in a teacher.

(e) Teachers's mastery of linguistic skills.

(f) Inappropriate body language of the teacher.

Code :

Options :

91394345613. (c), (d) and (f)

91394345614. (a), (e) and (c)

91394345615. (b), (c) and (d)

91394345616. (a), (c) and (f)

Question Number : 5 Question Id : 91394311611 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In the following characteristics of an evaluation procedure, identify those which describe formative assessment. Select from the code to indicate your answer.

(a) Evaluation is a post instructional event.

(b) Evaluation occurs during instruction.

(c) Evaluation is carried out by policy makers.

(d) Evaluation takes place periodically.

(e) The aim of evaluation is to improve the process of teaching.

(f) Evaluation is based on participation of students and teacher.

Code :

Options :

91394345617. (a), (b) and (c)

91394345618. (b), (c) and (d)

91394345619. (b), (e) and (f)

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91394345620. (c), (d) and (f)

Question Number : 5 Question Id : 91394311611 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

मूल्यांकन प्रक्रिया की निम्नांकित विशेषताओं में से, निर्माणात्मक मूल्यांकन का वर्णन करने वाली विशेषताओं की पहचान करें। कूट में से सही उत्तर चुनें।

(a) मूल्यांकन उत्तर-अनुदेशात्मक घटना है।

(b) मूल्यांकन अनुदेश के दौरान घटित होता है।

(c) मूल्यांकन का कार्य नीति-निर्माता करते हैं।

(d) मूल्यांकन सावधिक रूप से घटित होता है।

(e) मूल्यांकन का उद्देश्य शिक्षण प्रक्रिया में सुधार करना है।

(f) मूल्यांकन छात्रों और शिक्षक की प्रतिभागिता पर आधारित होता है।

कूट :

Options :

91394345617. (a), (b) और (c)

91394345618. (b), (c) और (d)

91394345619. (b), (e) और (f)

91394345620. (c), (d) और (f)

Question Number : 6 Question Id : 91394311612 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A researcher while writing his/her thesis does not give the rationale underlying use of statistical techniques. This will be best described as a case of :

Options :

91394345621. Ethical misconduct

91394345622. An error of omission

91394345623. An error of commission

91394345624. Technical lapse

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Question Number : 6 Question Id : 91394311612 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

अपना शोध-प्रबंध लिखते समय एक शोधार्थी सांख्यिकीय तकनीकों के अनुप्रयोग का तर्काधार नहीं बताता है, इसे निम्न में किसका उत्तम उदाहरण माना जाएगा?

Options :

91394345621. नैतिक कदाचार

91394345622. भूल से हुई त्रुटि

91394345623. जान-बूझ कर की गई त्रुटि

91394345624. तकनीकी चूक

Question Number : 7 Question Id : 91394311613 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which type of research, the steps of research have to be cyclic ?

Options :

91394345625. Grounded theory research

91394345626. Action research

91394345627. Experimental research

91394345628. Case study research

Question Number : 7 Question Id : 91394311613 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किस प्रकार के शोध में, शोध के चरणों को चक्रीय होना चाहिए?

Options :

91394345625. जमीनी सिद्धांत शोध

91394345626. क्रियात्मक शोध

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91394345627. प्रायोगिक शोध

91394345628. व्यष्टि अध्ययन शोध

Question Number : 8 Question Id : 91394311614 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A researcher plans to study the effect of socio-economic status of parents on the school drop-out rate in a district. What type of research will it be ?

Options :

91394345629. Hypothesis formulating research

91394345630. Experimental hypothesis testing research

91394345631. Non Experimental hypothesis testing research

91394345632. Ethnographic research

Question Number : 8 Question Id : 91394311614 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

एक शोधार्थी किसी जिले में विद्यालय को बीच में छोड़ देने वाले छात्रों की दर पर अभिभावकों की सामाजिक–आर्थिक स्थिति के प्रभाव का अध्ययन करने की योजना बनाता है। यह किस प्रकार का शोध होगा?

Options :

91394345629. परिकल्पना निरूपण शोध

91394345630. प्रायोगिक परिकल्पना परीक्षण शोध

91394345631. गैर–प्रायोगिक परिकल्पना परीक्षण शोध

91394345632. नृजातीय शोध

Question Number : 9 Question Id : 91394311615 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Below are given a few key terms. Identify these which denote qualitative research paradigm.

(a) Ex post facto method

(b) Ethnography

(c) Symbolic interaction

(d) Descriptive survey

(e) Narrative

(f) Experimental method

Code :

Options :

91394345633. (a), (b) and (c)

91394345634. (d), (e) and (f)

91394345635. (a), (b) and (f)

91394345636. (b), (c) and (e)

Question Number : 9 Question Id : 91394311615 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे कुछ प्रमुख पद दिए गए हैं। उनकी पहचान करें जो गुणात्मक शोध प्रतिमान को प्रदर्शित करते हैं।

(a) कार्योत्तर विधि

(b) नृजाति विज्ञान

(c) सांकेतिक अंत:क्रिया

(d) विवरणात्मक सर्वेक्षण

(e) वृतांत परक

(f) प्रायोगिक विधि

कूट :

Options :

91394345633. (a), (b) और (c)

91394345634. (d), (e) और (f)

91394345635. (a), (b) और (f)

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91394345636. (b), (c) और (e)

Question Number : 10 Question Id : 91394311616 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For which type of research, the action words - 'Control, manipulate and observe' are most relevant ?

Options :

91394345637. Action research

91394345638. Historical Research

91394345639. Experimental research

91394345640. Grounded theory approach based research

Question Number : 10 Question Id : 91394311616 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किस प्रकार के शोध के लिए, क्रिया-सूचक शब्द 'नियंत्रण, हेर-फेर करना और अवलोकन' - सर्वाधिक प्रासंगिक हैं?

Options :

91394345637. क्रियात्मक शोध

91394345638. ऐतिहासिक शोध

91394345639. प्रायोगिक शोध

91394345640. जमीनी सिद्धांत दृष्टिकोण आधारित शोध

Sub-Section Number:	2
Sub-Section Id:	913943586
Question Shuffling Allowed :	Yes

Question Id : 91394311617 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (11 to 15)

Question Label : Comprehension

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Read the passage carefully and answer the questions from 11 to 15.

Smart phones have grown in popularity over the last few years, and applications, or content, rest at the heart of this growth. Content has become more important than hardware and the quality of content is determined by creativity. Creativity emerges as seemingly disparate areas, such as education, industry, and culture. As a result, convergence of virtually all areas is receiving the spotlight today.

Convergence must also take place in the area of policy-making. Breaking down the walls between education and science and technology (S & T) universities and businesses and research and education, and convergence of these areas will bring about synergy and perhaps yield unexpected creative results. When education and S & T merge, one plus one can result in something greater than two. Convergence can take many forms : providing an education that develops divergent thinking and encourages creativity in students at an early age; developing human talents required by business by breaking down the barriers between universities and businesses, and sharing the assets of government funded research institutes with university students. These merges form the platforms for human creativity.

A nation can only become a world leader in S & T when its scientists are cultivated and allowed to research to their heart's content.

Sub questions

Question Number : 11 Question Id : 91394311618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

According to the passage use of the smart phones has grown because of developments in :

Options :

91394345641. Technologies

91394345642. Researches

91394345643. Need for applications

91394345644. Interest of people

Question Number : 12 Question Id : 91394311619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In the view of the author of this passage, what determines the quality of content ?

Options :

91394345645. Prevailing traditions

91394345646. Areas of application

91394345647. Creativity and convergence factors

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91394345648. Areas of concern

Question Number : 13 Question Id : 91394311620 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Unique results will flow owing to :

Options :

91394345649. Policy-making

91394345650. Creative results of synergy

91394345651. Removing the hindering factors between research and education

91394345652. Synergy

Question Number : 14 Question Id : 91394311621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

On the basis of this passage, it can be stated that convergence is :

Options :

91394345653. A linear process developing in a sequential fashion

91394345654. A simple additive process to enhance power

91394345655. An interactive process centred on various elements

91394345656. A multifaceted interactive process

Question Number : 15 Question Id : 91394311622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Quality of research in a nation gets enhanced as a result of :

Options :

91394345657. Dedicated spirit of the researchers

91394345658. Hardwork of the researchers

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91394345659. Expert power of the researchers

91394345660. Variety in researches

Question Id : 91394311617 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (11 to 15)

Question Label : Comprehension

निम्नांकित गद्यांश को सावधानीपूर्वक पढ़ें और प्रश्न 11 से 15 के उत्तर दें।

पिछले कुछ वर्षों में स्मार्ट फोन की लोकप्रियता काफी बढ़ी है और इसके मूल में उनका अनुप्रयोग अथवा प्रयोज्यता है। प्रयोज्यता हार्डवेयर से अधिक महत्वपूर्ण हो गई है और प्रयोज्यता की गुणवत्ता रचनात्मकता से निर्धारित होती है। रचनात्मकता जाहिर तौर पर असमान क्षेत्रों में उभरती है जैसे शिक्षा, उद्योग और संस्कृति। इसके परिणाम स्वरूप, आज लगभग सभी क्षेत्रों के सुसंयोजन पर जोर दिया जा रहा है।

सुसंयोजन नीति-निर्धारण के क्षेत्र में भी अवश्य होना चाहिए। शिक्षण और विज्ञान एवं प्रौद्योगिकी (एस एंड टी); विश्वविद्यालयों और व्यवसायों तथा शोध और शिक्षण के बीच की दीवार को तोड़ने एवं इन क्षेत्रों के सुसंयोजन से सुसंगति आएगी और संभवत: इसके अप्रत्याशित रचनात्मक नतीजे भी निकलेंगे। जब शिक्षा का विज्ञान एवं प्रौद्योगिकी से सम्मिलन होगा तो एक तथा एक का योग दो से ज्यादा होगा। यह सुसंयोजन कई स्वरूपों में हो सकता है : जैसे एक ऐसी शिक्षा प्रदान करना जो भिन्न सोच विकसित करती है और प्रारंभिक आयु में ही छात्रों की रचनात्मकता को प्रोत्साहित करती है; विश्वविद्यालय और व्यवसाय के बीच की दीवार को तोड़ते हुए व्यवसायों की आवश्यकतानुरूप मानव प्रतिभा विकसित करना तथा सरकार द्वारा वित्त-पोषित शोध संस्थानों की परिसंपत्तियों को विश्वविद्यालय के छात्रों के साथ साझा करना। इन सम्मिलनों से मानवीय रचनात्मकता को नया आयाम मिलेगा।

विज्ञान एवं प्रौद्योगिकी के क्षेत्र में कोई राष्ट्र तभी विश्व नेतृत्व प्रदान कर सकता है जब उसके वैज्ञानिक सम्बुद्ध हों तथा उन्हें अपने नैष्ठिक संकल्पों के अनुरूप शोध की स्वतंत्रता हो।

Sub questions

Question Number : 11 Question Id : 91394311618 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

गद्यांश के अनुसार स्मार्ट फोन का प्रयोग निम्नांकित में से किस में विकास के कारण बढ़ा है?

Options :

91394345641. प्रौद्योगिकियाँ

91394345642. शोध

91394345643. अनुप्रयोगों की आवश्यकता

91394345644. लोक रुचि

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Question Number : 12 Question Id : 91394311619 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

इस गद्यांश के लेखक के अनुसार, प्रयोज्यता की गुणवत्ता किससे निर्धारित होती है?

Options :

91394345645. प्रचलित परंपराओं से

91394345646. अनुप्रयोग के क्षेत्र से

91394345647. रचनात्मकता और सुसंयोजन कारकों से

91394345648. हित क्षेत्रों से

Question Number : 13 Question Id : 91394311620 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किसके माध्यम से विलक्षण परिणाम होंगे?

Options :

91394345649. नीति-निर्माण

91394345650. सुसंगति के रचनात्मक परिणाम

91394345651. शोध एवं शिक्षा के मध्य के अवरोधकों को हटाना

91394345652. सुसंगति

Question Number : 14 Question Id : 91394311621 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

गद्यांश के आधार पर यह कहा जा सकता है कि सुसंगति है :

Options :

91394345653. क्रमिक रूप से विकसित होने वाली एक उदग्र प्रक्रिया

91394345654. शक्ति संवर्धन की एक सामान्य योगात्मक प्रक्रिया

91394345655. विभिन्न पक्षों पर आधारित एक अंत:क्रियात्मक प्रक्रिया

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एक बहुविध अंत:क्रियात्मक प्रक्रिया

91394345656.

Question Number : 15 Question Id : 91394311622 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किसी राष्ट्र में शोध की गुणवत्ता में किसके परिणामस्वरूप बढ़ोत्तरी होती है?

Options :

91394345657. शोधार्थियों की समर्पित भावना

91394345658. शोधार्थियों का कठोर श्रम

91394345659. शोधार्थियों की विशेषज्ञता शक्ति

91394345660. शोधों में विविधता

Sub-Section Number: 3
Sub-Section Id: 913943587
Question Shuffling Allowed : Yes

Question Number : 16 Question Id : 91394311623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following sequence **correctly** depicts the linear communication model between teacher and students.

Options :

91394345661. Encode → Symbols → Message → Channel

91394345662. Channel → Message → Symbols → Encode

91394345663. Message → Channel → Symbols → Encode

91394345664. Symbols → Message → Encode → Channel

Question Number : 16 Question Id : 91394311623 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित में से कौन सा अनुक्रम शिक्षक और छात्रों के बीच उदग्र संप्रेषण प्रतिमान को **सही** रूप में प्रदर्शित करता है?

Options :

91394345661. कूट संकेतन → संकेत → संदेश → चैनल

91394345662. चैनल → संदेश → संकेत → कूट संकेतन

91394345663. संदेश → चैनल → संकेत → कूट संकेतन

91394345664. संकेत → संदेश → कूट संकेतन → चैनल

Question Number : 17 Question Id : 91394311624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A university teacher makes a very effective expository presentation in his/her class without caring for its effect on the students. This is an example of a/an :

Options :

91394345665. Linear Communication Model

91394345666. Interactive Communication Model

91394345667. Transactional Communication Model

91394345668. Authoritarian Communication Model

Question Number : 17 Question Id : 91394311624 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

एक विश्वविद्यालय शिक्षक अपनी कक्षा में बहुत प्रभावी वर्णनात्मक प्रस्तुति करता/करती है, छात्रों पर इसके प्रभाव के बारे में चिन्ता किए बगैर/यह निम्नांकित में से किसका उदाहरण है?

Options :

91394345665. उदग्र संप्रेषण प्रतिमान

91394345666. अंत:क्रियात्मक संप्रेषण प्रतिमान

91394345667. क्रियान्विति परक संप्रेषण प्रतिमान

91394345668. सत्तात्मक संप्रेषण प्रतिमान

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Question Number : 18 Question Id : 91394311625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Below are given two sets. **Set - I** specifies the sensory modes while **Set - II** offer illustration of speech communication to go with them. Match the two sets and indicate your answer by selecting the appropriate code.

Set - I **(Sensory modes)**		**Set- II** **(Illustrative speech)**	
(a)	Sight mode	(i)	It leaves a bad taste in my mouth.
(b)	Hearing mode	(ii)	I can't put my finger on the problem.
(c)	Touch mode	(iii)	Something is fishy.
(d)	Smell mode	(iv)	That looks good to me.
(e)	Taste mode	(v)	That sounds fine to me.

Code :

(a) (b) (c) (d) (e)

Options :

91394345669. (iv) (v) (ii) (iii) (i)

91394345670. (i) (ii) (iii) (iv) (v)

91394345671. (ii) (iii) (iv) (v) (i)

91394345672. (ii) (iii) (i) (iv) (v)

Question Number : 18 Question Id : 91394311625 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे दो समूह दिए गए हैं। **समूह-I** में इन्द्रिय-संवेदी प्रकारता विनिर्दिष्ट हैं जबकि **समूह-II** में उनके अनुरूप संभाषिक संप्रेषण का वर्णन है। दोनों समूहों को सुमेलित करें और उपयुक्त कूट का चयन करते हुए अपना उत्तर दें।

समूह-I **(इन्द्रिय-संवेदी प्रकारता)**		**समूह-II** **(दृष्टान्त परक संभाषण)**	
(a)	दृश्य प्रकारता	(i)	इससे मेरे मुँह में बुरा स्वाद आता है।
(b)	श्रवण प्रकारता	(ii)	मैं समस्या पर अपनी उँगली नहीं रख सकता।
(c)	स्पर्श प्रकारता	(iii)	कुछ सड़ांध है।
(d)	घ्राण प्रकारता	(iv)	यह मुझे सही लगता है।
(e)	रस प्रकारता	(v)	मुझे सुनने में यह ठीक लगता है।

कूट :

(a) (b) (c) (d) (e)

Options :

91394345669. (iv) (v) (ii) (iii) (i)

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91394345670. (i) (ii) (iii) (iv) (v)

91394345671. (ii) (iii) (iv) (v) (i)

91394345672. (ii) (iii) (i) (iv) (v)

Question Number : 19 Question Id : 91394311626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following is a powerful indicator of mis-communication in a classroom transaction ?

Options :

91394345673. Volley of questions relevant to the subject.

91394345674. 'Yawning' by most of the students.

91394345675. Purposely non-participative moves of students.

91394345676. Volley of questions irrelevant to the subject.

Question Number : 19 Question Id : 91394311626 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित में से कौन कक्षा क्रियान्विति में कु-संप्रेषण का एक सशक्त संसूचक है?

Options :

91394345673. विषय के प्रति प्रासंगिक प्रश्नों की झड़ी

91394345674. अधिकांश छात्रों का 'उबासी लेना'

91394345675. छात्रों द्वारा सोद्देश्य अप्रतिभागी संचलन

91394345676. विषय के प्रति अप्रासंगिक प्रश्नों की झड़ी

Question Number : 20 Question Id : 91394311627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which model of communication 'noises' are introduced as an important variable ?

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Options :

91394345677. Linear Model of Communication

91394345678. Participative Model of Communication

91394345679. Transactional Model of Communication

91394345680. Assertive Model of Communication

Question Number : 20 Question Id : 91394311627 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किस संप्रेषण प्रतिमान में 'शोर' को महत्वपूर्ण चर के रूप में प्रवर्तित किया जाता है?

Options :

91394345677. संप्रेषण का उदग्र प्रतिमान

91394345678. संप्रेषण का प्रतिभागिता परक प्रतिमान

91394345679. संप्रेषण का क्रियान्विति परक प्रतिमान

91394345680. संप्रेषण का आग्रही प्रतिमान

Question Number : 21 Question Id : 91394311628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Aman travelled 300 km by train and 200 km by taxi, and he completed this journey in 5 hours and 30 minutes. However, if he travels 260 km by train and 240 km by taxi, it will take 6 minutes more to complete the journey. The speed of the train is :

Options :

91394345681. 100 km/hour

91394345682. 120 km/hour

91394345683. 80 km/hour

91394345684. 110 km/hour

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Question Number : 21 Question Id : 91394311628 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

अमन ने 300 कि.मी. की यात्रा ट्रेन से और 200 कि.मी. की यात्रा टैक्सी से की और उसे उसमें 5 घंटे 30 मिनट का समय लगा। बहरहाल, यदि वह 260 कि.मी. ट्रेन से और 240 कि.मी. टैक्सी से यात्रा करता है तो उसे यात्रा पूरी करने में 6 मिनट का समय और लगेगा। ट्रेन की गति है :

Options :

91394345681. 100 कि.मी/घंटा

91394345682. 120 कि.मी/घंटा

91394345683. 80 कि.मी/घंटा

91394345684. 110 कि.मी/घंटा

Question Number : 22 Question Id : 91394311629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The present age of the father is twice that of the elder son. Ten years hence the age of the father will be three times that of the younger son. If the difference in ages of the two sons is as 15 years, the present age of the father is :

Options :

91394345685. 110 years

91394345686. 70 years

91394345687. 60 years

91394345688. 50 years

Question Number : 22 Question Id : 91394311629 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

पिता की वर्तमान आयु बड़े पुत्र की आयु की दुगुनी है। आज से दस वर्ष बाद पिता की आयु छोटे पुत्र की आयु की तीन गुना होगी। यदि दोनों पुत्रों की आयु में अंतर 15 वर्ष हो तो पिता की वर्तमान आयु है :

Options :

91394345685. 110 वर्ष

91394345686. 70 वर्ष

91394345687. 60 वर्ष

91394345688. 50 वर्ष

Question Number : 23 Question Id : 91394311630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In the sequence of numbers 2, 8, 24, 64, 160, x,....., the term x is :

Options :

91394345689. 320

91394345690. 384

91394345691. 192

91394345692. 224

Question Number : 23 Question Id : 91394311630 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

संख्याओं के क्रम 2, 8, 24, 64, 160, x,....., में x पद का मान है :

Options :

91394345689. 320

91394345690. 384

91394345691. 192

91394345692. 224

Question Number : 24 Question Id : 91394311631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In a certain code, PLEADING is written as FMHCQMFB. How is SHOULDER written in that code ?

Options :

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91394345693. KCDQTIPV

91394345694. QDCKVPIT

91394345695. QDCKTIPV

91394345696. TIPVQDCK

Question Number : 24 Question Id : 91394311631 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किसी कतिपय कूट में PLEADING को FMHCQMFB लिखा जाता है। उस कूट में SHOULDER को कैसे लिखा जाएगा ?

Options :

91394345693. KCDQTIPV

91394345694. QDCKVPIT

91394345695. QDCKTIPV

91394345696. TIPVQDCK

Question Number : 25 Question Id : 91394311632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In conveying the same meanings, which of the following is incongruous ?

Options :

91394345697. Unique

91394345698. Beautiful

91394345699. Rare

91394345700. Exceptional

Question Number : 25 Question Id : 91394311632 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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समान अर्थ संप्रेषित करने में निम्नांकित में से कौन असंगत है?

Options :

91394345697. अनूठा

91394345698. सुंदर

91394345699. दुर्लभ

91394345700. अपवादात्मक

Question Number : 26 Question Id : 91394311633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In terms of the relationship indicated below, which word will correctly pair to replace the question mark (?) ?

Scrub : wash : : Sob : ___?___.

Options :

91394345701. Cry

91394345702. Water

91394345703. Sad

91394345704. Tease

Question Number : 26 Question Id : 91394311633 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे दर्शाये गए संबंध के अनुसार, कौन सा शब्द खाली स्थान भरने के लिए उपयुक्त होगा?

रगड़ना : धोना : : सुबकना : ___?___.

Options :

91394345701. रोना

91394345702. पानी

91394345703. उदास

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91394345704. चिढ़ाना

Question Number : 27 Question Id : 91394311634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Given below are two premises with four conclusions drawn from them (taking singly or together). Which conclusions are validly drawn ? Select the **correct** answer from the code given below.

Premises :
(i) All lawyers are extroverts.
(ii) Some wisemen are extroverts.

Conclusions :
(a) All lawyers are wisemen.
(b) All wisemen are lawyers.
(c) Some extroverts are wisemen.
(d) All extroverts are lawyers.

Code :

Options :

91394345705. (a) only

91394345706. (b) and (c) only

91394345707. (a) and (c) only

91394345708. (c) only

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Question Number : 27 Question Id : 91394311634 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे दो आधार वाक्य दिए गए हैं जिनसे चार निष्कर्ष निकलते हैं (अकेले या एक साथ)। कौन सा निष्कर्ष सही है? नीचे दिए गए कूट में से **सही** उत्तर चुनें।

आधार वाक्य :
(i) सभी अधिवक्ता बहिर्मुखी होते हैं।
(ii) कुछ बुद्धिमान लोग बहिर्मुखी होते हैं।

निष्कर्ष :
(a) सभी अधिवक्ता बुद्धिमान हैं।
(b) सभी बुद्धिमान अधिवक्ता हैं।
(c) कुछ बहिर्मुखी बुद्धिमान हैं।
(d) सभी बहिर्मुखी अधिवक्ता हैं।

कूट :

Options :

91394345705. सिर्फ (a)

91394345706. सिर्फ (b) और (c)

91394345707. सिर्फ (a) और (c)

91394345708. सिर्फ (c)

Question Number : 28 Question Id : 91394311635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which is an example of a **correct** deductive argument ?

Options :

91394345709. There are 24 CDs on the top shelf of my bookcase and 14 on the lower shelf. There are no other CDs in my bookcase. Therefore, there are 38 CDs in my bookcase.

91394345710. No one got an 'A' grade on yesterday's test. Jatin wasn't in school yesterday. Jatin will make up the test today and get an 'A' grade.

91394345711. All human beings are in favor of world peace. Terrorists don't care about world peace. Terrorists bring about destruction.

91394345712. You have to be 16 years old to get a driver's license. Abhi will be 16 years old tomorrow. Therefore, Abhi can now buy a car.

Question Number : 28 Question Id : 91394311635 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित में से कौन एक **सही** निगमनात्मक तर्क का उदाहरण है?

Options :

91394345709. मेरे बुक-केस के ऊपरी शेल्फ में 24 और निचले शेल्फ में 14 सीडी हैं। मेरे बुक-केस में कोई और सीडी नहीं है। इसलिए, मेरे बुक-केस में 38 सीडी हैं।

91394345710. कल की परीक्षा में किसी को 'A' ग्रेड नहीं मिला। जतिन कल स्कूल में नहीं था। जतिन आज परीक्षा देगा और 'A' ग्रेड प्राप्त करेगा।

91394345711. सभी मनुष्य विश्व शांति के पक्ष में हैं। आतंकवादी विश्व शांति की परवाह नहीं करते। आतंकवादी विनाश करते हैं।

91394345712. ड्राइविंग लाइसेंस पाने के लिए आपको 16 वर्ष का होना चाहिए। अभि कल 16 वर्ष का हो जाएगा। इसलिए, अब अभि एक कार खरीद सकता है।

Question Number : 29 Question Id : 91394311636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct Marks : 2 Wrong Marks : 0

In a certain flight crew, the positions of the pilot, copilot and flight engineer are held by Mr. Ajit, Mr. Bhavesh and Mr. Chirag, though not necessarily in that order. The following statements are **true** for all the three :

(i) The copilot is the only child and earns the least.

(ii) Chirag is married to Bhavesh's sister and earns more than the pilot.

Who is the copilot ?

Options :

91394345713. Ajit

91394345714. Bhavesh

91394345715. Chirag

91394345716. Either Ajit or Chirag

Question Number : 29 Question Id : 91394311636 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

कतिपय विमान चालक दल में श्री अजित, श्री भवेश और श्री चिराग पायलट, सह-पायलट और फ्लाइट इंजीनियर हैं, हाँलाकि जरूरी नहीं कि यह इसी क्रम में हो। निम्नांकित कथन इन तीनों के लिए **सही** हैं :

(i) सह-पायलट अकेली संतान है और सबसे कम कमाता है।

(ii) चिराग की शादी भवेश की बहन से हुई है और वह पायलट से अधिक कमाता है।

सह पायलट कौन है?

Options :

91394345713. अजित

91394345714. भवेश

91394345715. चिराग

91394345716. या तो अजित या चिराग

Question Number : 30 Question Id : 91394311637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Ravi and Kunal are good in Hockey and Volleyball. Sachin and Ravi are good in Hockey and Baseball. Gaurav and Kunal are good in Cricket and Volleyball. Sachin, Gaurav and Mandeep are good in Football and Baseball. Who is good in Hockey, Cricket and Volleyball ?

Options :

91394345717. Sachin

91394345718. Kunal

91394345719. Ravi

91394345720. Gaurav

Question Number : 30 Question Id : 91394311637 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

रवि और कुणाल हॉकी और वॉलीबॉल के अच्छे खिलाड़ी हैं। सचिन और रवि हॉकी और बेसबाल के अच्छे खिलाड़ी हैं। गौरव और कुणाल क्रिकेट और वॉलीबाल के अच्छे खिलाड़ी हैं। सचिन, गौरव और मनदीप फुटबॉल और बेसबॉल के अच्छे खिलाड़ी हैं। हॉकी, क्रिकेट और वॉलीबॉल का अच्छा खिलाड़ी कौन है?

Options :

91394345717. सचिन

91394345718. कुणाल

91394345719. रवि

91394345720. गौरव

Sub-Section Number: 4
Sub-Section Id: 913943588
Question Shuffling Allowed : Yes

Question Id : 91394311638 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (31 to 35)

Question Label : Comprehension

Consider the following two tables (I and II) that show the production (in Tonnes) of four products P, Q, R and S during the years 2010-2015 and the selling price per Tonne (in ₹ thousands) respectively. In accordance with the tables I and II, answer the questions that follow (Questions **31 - 35**) :

I : Production Yearwise (in Tonnes)

Year ↓ / Product →	P	Q	R	S
2010	45	99	75	115
2011	25	41	93	158
2012	40	108	107	166
2013	38	60	63	139
2014	76	41	132	88
2015	56	70	120	97

II : Selling Price (in ₹ thousands)

Product	Price Per Tonne
P	₹ 9
Q	₹ 4
R	₹ 13
S	₹ 3

Where,

Stability of production of a given product during 2010-2015

$$= \frac{\text{Average Production}}{\text{Maximum Production} - \text{Minimum Production}}$$

and Revenue (in ₹ thousands) from selling a product

= Production of a Product × Selling Price

Sub questions

Question Number : 31 Question Id : 91394311639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which year, the annual growth rate of production (of all the products together) is highest ?

Options :

91394345721. 2011

91394345722. 2012

91394345723. 2014

91394345724. 2015

Question Number : 32 Question Id : 91394311640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What is the stability of the production of P during 2010 - 2015 ?

Options :

91394345725. 0.92

91394345726. 1.04

91394345727. 1.43

91394345728. 1.63

Question Number : 33 Question Id : 91394311641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which year, the total revenue of all the four products is lowest ?

Options :

91394345729. 2011

91394345730. 2012

91394345731. 2013

91394345732. 2010

Question Number : 34 Question Id : 91394311642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the products P, Q, R and S fetches the lowest revenue ?

Options :

91394345733. P

91394345734. Q

91394345735. R

91394345736. S

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Question Number : 35 Question Id : 91394311643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements is **true** ?

Options :

91394345737. Product R fetches second highest revenue across products in the year 2011.

91394345738. Sum of revenue of P, Q and S is more than the revenue of R in the year 2014.

91394345739. Cumulative revenue of P and Q is more than the revenue of S in the year 2013.

91394345740. Sum of revenue of P, Q, and S is more than the revenue of R in the year 2012.

Question Id : 91394311638 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (31 to 35)

Question Label : Comprehension

निम्नांकित दो सारणियों (I और II) पर विचार करें जो चार उत्पादों P, Q, R, S का वर्ष 2010-2015 के दौरान उत्पादन (टन में) और क्रमशः प्रति टन विक्रय मूल्य (हजार ₹ में) दर्शाती हैं। सारणी I और II के अनुसार निम्नांकित प्रश्नों (प्रश्न **31** से **35**) का उत्तर दें :

I : वर्षवार उत्पादन (टन में)

उत्पाद → / वर्ष ↓	P	Q	R	S
2010	45	99	75	115
2011	25	41	93	158
2012	40	108	107	166
2013	38	60	63	139
2014	76	41	132	88
2015	56	70	120	97

II : विक्रय मूल्य (हजार ₹ में)

उत्पाद	मूल्य प्रति टन
P	₹ 9
Q	₹ 4
R	₹ 13
S	₹ 3

जहाँ,

वर्ष 2010-2015 के दौरान किसी दिए गए उत्पाद के उत्पादन की स्थिरता

$$= \frac{\text{औसत उत्पादन}}{\text{अधिकतम उत्पादन} - \text{न्यूनतम उत्पादन}}$$

और किसी उत्पाद की बिक्री से प्राप्त आय (हजार ₹ में)

= किसी उत्पाद का उत्पादन × विक्रय मूल्य

Sub questions

Question Number : 31 Question Id : 91394311639 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किस वर्ष में उत्पादन (सभी उत्पादों का एक साथ) की वार्षिक वृद्धि दर उच्चतम है?

Options :

91394345721. 2011

91394345722. 2012

91394345723. 2014

91394345724. 2015

Question Number : 32 Question Id : 91394311640 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

वर्ष 2010 - 2015 के दौरान P के उत्पादन की स्थिरता क्या है?

Options :

91394345725. 0.92

91394345726. 1.04

91394345727. 1.43

91394345728. 1.63

Question Number : 33 Question Id : 91394311641 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

सभी चार उत्पादों से प्राप्त कुल आय किस वर्ष में न्यूनतम है?

Options :

91394345729. 2011

91394345730. 2012

91394345731. 2013

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91394345732. 2010

Question Number : 34 Question Id : 91394311642 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

P, Q, R और S में से किस उत्पाद से प्राप्त आय निम्नतम है?

Options :

91394345733. P

91394345734. Q

91394345735. R

91394345736. S

Question Number : 35 Question Id : 91394311643 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्न में से कौन सा कथन **सही** है?

Options :

91394345737. वर्ष 2011 में सभी उत्पादों में से उत्पाद R से प्राप्त आय दूसरी सबसे ज्यादा है।

91394345738. वर्ष 2014 में P, Q और S से प्राप्त कुल आय का योग R से प्राप्त आय से अधिक है।

91394345739. वर्ष 2013 में P और Q से प्राप्त कुल आय S से प्राप्त आय से अधिक है।

91394345740. वर्ष 2012 में P, Q और S से प्राप्त कुल आय R से प्राप्त आय से अधिक है।

Sub-Section Number:	5
Sub-Section Id:	913943589
Question Shuffling Allowed :	Yes

Question Number : 36 Question Id : 91394311644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A virus hoax is an untrue virus warning email. When you receive a virus hoax such as the one below, what is the appropriate action ?

Subject : Warning!
A new Virus has been detected in your computer. Format your hard disk and re-install all softwares immediately.

Options :

91394345741. Ignore this email

91394345742. Reply to the sender

91394345743. Forward this email to your friends

91394345744. Format your hard disk and re-install all software immediately

Question Number : 36 Question Id : 91394311644 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

एक 'वॉयरस हॉक्स' वॉयरस की मिथ्या सूचना प्रदायी सचेतक इमेल है। जब आपको निम्नानुसार एक 'वॉयरस हॉक्स प्राप्त होता है तो उचित कार्रवाई क्या होगी ?

विषय : चेतावनी !
आपके कंप्यूटर में एक नये वायरस का पता चला है। अपने हार्ड डिस्क को तत्काल फॉर्मेट करें और सभी सॉफ्टवेयर को री-इंस्टॉल करें।

Options :

91394345741. इस इमेल की अनदेखी करना

91394345742. प्रेषक को उत्तर देना

91394345743. अपने मित्रों को यह मेल अग्रेषित करना

91394345744. तत्काल अपना हार्ड डिस्क फॉर्मेट करना और सभी सॉफ्टवेयर को री-इंस्टॉल करना

Question Number : 37 Question Id : 91394311645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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There are two sets given below. **Set - I** specifies the IT related acronyms, while **Set - II** indicates their meanings. Match the two and give your answer by selecting the **appropriate** code.

	Set - I (Acronyms)		**Set - II (Meanings)**
(a)	DPI	(i)	Measures resolution of a laser printer
(b)	CRT	(ii)	An example of read-only storage
(c)	NIC	(iii)	A type of computer monitor
(d)	CD-ROM	(iv)	Enables a computer to connect to other computers

Code :

Options :

91394345745. (ii) (iv) (iii) (i)

91394345746. (i) (iv) (iii) (ii)

91394345747. (i) (iii) (iv) (ii)

91394345748. (ii) (iii) (iv) (i)

Question Number : 37 Question Id : 91394311645 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे दो समूह दिए गए हैं। **समूह - I** में आई.टी. से संबंधित शब्द-संक्षेप हैं जबकि **समूह - II** में उनके अर्थ हैं। दोनों समूहों को सुमेलित करें और **उचित** कूट का चयन करते हुए उत्तर दें।

	समूह - I (शब्द-संक्षेप)		**समूह - II (अर्थ)**
(a)	डी.पी.आई.	(i)	एक लेजर प्रिंटर की रिजोल्यूशन की माप करता है।
(b)	सी.आर.टी.	(ii)	रीड-ओनली स्टोरेज का एक उदाहरण
(c)	एन.आइ.सी.	(iii)	एक प्रकार का कंप्यूटर मॉनीटर
(d)	सीडी-रोम	(iv)	एक कंप्यूटर को दूसरे कंप्यूटर से जुड़ने में मदद करता है।

कूट :

(a) (b) (c) (d)

Options :

91394345745. (ii) (iv) (iii) (i)

91394345746. (i) (iv) (iii) (ii)

91394345747. (i) (iii) (iv) (ii)

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91394345748. (ii) (iii) (iv) (i)

Question Number : 38 Question Id : 91394311646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statement(s) regarding the term ICT is/are **True** ?

P : ICT is the abbreviation of Information and Collaboration Technology, meaning technology related to information and collaboration, such as computers and the Internet.

Q : The gap between people with effective access to ICT and those with very limited or no access at all, is termed as digital divide.

Options :

91394345749. **P** only

91394345750. **Q** only

91394345751. **P** and **Q**

91394345752. Neither **P** nor **Q**

Question Number : 38 Question Id : 91394311646 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

आई.सी.टी. पद के बारे में निम्नांकित में से कौन सा कथन **सही** है/हैं?

P : आई.सी.टी., सूचना और प्रतिभाग आधारित प्रौद्योगिकी का शब्द-संक्षेप है, यानि सूचना और प्रतिभागिता से संबंधित प्रौद्योगिकी जैसे कंप्यूटर और इंटरनेट.

Q : आई.सी.टी. तक प्रभावी पहुँच वाले लोगों और अत्यंत सीमित अथवा शून्य पहुँच वाले लोगों के बीच अंतर को डिजिटल डिवाइड कहा जाता है।

Options :

91394345749. सिर्फ **P**

91394345750. सिर्फ **Q**

91394345751. **P** और **Q**

91394345752. न तो **P** और न ही **Q**

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Question Number : 39 Question Id : 91394311647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The computer software that runs a computer, including scheduling tasks, managing storage and handling communication with peripherals is called :

Options :

91394345753. Device Driver

91394345754. Application Suite

91394345755. Operating System

91394345756. Bluetooth Technology

Question Number : 39 Question Id : 91394311647 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

कंप्यूटर को चलाने वाला कंप्यूटर सॉफ्टवेयर, जिसमें कार्यों की अनुसूची बनाना, भंडारण प्रबंधन और अवआधारकों के साथ संप्रेषण संचालन शामिल है, क्या कहलाता है?

Options :

91394345753. डिवाइस ड्राइवर

91394345754. एप्लीकेशन सुइट

91394345755. ऑपरेटिंग सिस्टम

91394345756. ब्लूटुथ प्रौद्योगिकी

Question Number : 40 Question Id : 91394311648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following list indicates different types of computer file formats. Which of them is devoted exclusively to graphic file formats ?

Options :

91394345757. GIF, JPEG, DOC

91394345758. PNG, GIF, JPEG

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91394345759. JPEG, TIFF, HTML

91394345760. TIFF, XLS, PNG

Question Number : 40 Question Id : 91394311648 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

निम्नांकित सूची में विविध प्रकार के कंप्यूटर फाइल फॉर्मेट दिए गए हैं। निम्नांकित में से कौन पूर्णत: ग्राफिक फाइल फॉर्मेट के लिए समर्पित है?

Options :

91394345757. जी.आई.एफ., जे.पी.ई.जी., डी.ओ.सी.

91394345758. पी.एन.जी., जी.आई.एफ., जे.पी.ई.जी.

91394345759. जे.पी.ई.जी., टी.आई.एफ.एफ., एच.टी.एम.एल.

91394345760. टी.आई.एफ.एफ., एक्स.एल.एस., पी.एन.जी.

Question Number : 41 Question Id : 91394311649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are two sets of items. **Set - I** lists different types of wastes, while **Set - II** indicates methods of their disposal. Match the two sets and give your answer from the code given below :

	Set - I (Types of Waste)		**Set - II (Methods of Disposal)**
(a)	Dry waste	(i)	By composting
(b)	Wet waste	(ii)	By burying in landfills
(c)	Toxic waste	(iii)	By dropping them in corporation bins
(d)	Soiled waste	(iv)	By recycling

Code :

(a) (b) (c) (d)

Options :

91394345761. (i) (ii) (iii) (iv)

91394345762. (iv) (i) (ii) (iii)

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91394345763. (ii) (iii) (iv) (i)

91394345764. (iii) (iv) (i) (ii)

Question Number : 41 Question Id : 91394311649 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे मदों के दो समूह दिए गए हैं। **समूह – I** में भिन्न प्रकार के अपशिष्ट हैं, जबकि **समूह – II** में उनके निस्तारण की विधियाँ दी गई हैं। दोनों समूहों को सुमेलित करें और नीचे दिए गए कूट में से सही उत्तर दें :

समूह – I (अपशिष्ट का प्रकार)		**समूह – II** (निस्तारण की विधियाँ)
(a)	शुष्क अपशिष्ट	(i) उर्वरक बनाने के द्वारा
(b)	गीला अपशिष्ट	(ii) जमीन में गाड़ने के द्वारा
(c)	विषैला अपशिष्ट	(iii) नगरपालिका के कूड़ेदान में डालने के द्वारा
(d)	मलिन अपशिष्ट	(iv) पुनर्चक्रण के द्वारा

कूट :

(a) (b) (c) (d)

Options :

91394345761. (i) (ii) (iii) (iv)

91394345762. (iv) (i) (ii) (iii)

91394345763. (ii) (iii) (iv) (i)

91394345764. (iii) (iv) (i) (ii)

Question Number : 42 Question Id : 91394311650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For ensuring sustainability in the quality ethos of the university environment which of the following would be considered high priority skill for a vice-chancellor ?

Options :

91394345765. Financial Management Skill

91394345766. Administrative Skill

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91394345767. Technical Management Skill

91394345768. Human Resource Management Skill

Question Number : 42 Question Id : 91394311650 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

विश्वविद्यालय परिवेश में गुणवत्ता की संस्कृति की समर्थनीयता सुनिश्चित करने के लिए निम्नांकित में से किसे एक कुलपति का उच्च प्राथमिकता कौशल माना जायेगा?

Options :

91394345765. वित्तीय प्रबंधन कौशल

91394345766. प्रशासनिक कौशल

91394345767. तकनीकी प्रबंधन कौशल

91394345768. मानव संसाधन प्रबंधन कौशल

Question Number : 43 Question Id : 91394311651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The purposes underlying the Renewable Energy Education programmes are :

Options :

91394345769. Educative and investigative

91394345770. Diagnostic and evaluative

91394345771. Corrective and predictive

91394345772. Preventive and ameliorative

Question Number : 43 Question Id : 91394311651 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

पुनर्नवीकरणीय ऊर्जा शिक्षा कार्यक्रमों के मूलभूत उद्देश्य हैं :

Options :

91394345769. शिक्षणात्मक और अन्वेषणात्मक

91394345770. नैदानिक और मूल्यांकनात्मक

91394345771. संशोधनात्मक और भविष्यसूचक

91394345772. निवारक और सुधारात्मक

Question Number : 44 Question Id : 91394311652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For an effective organisational climate within a university system, which of the following measures will be most appropriate ?

Options :

91394345773. Creating an equilibrium between driving forces and restraining forces.

91394345774. Increasing the power of driving forces and decreasing the power of restraining forces.

91394345775. Decreasing the power of restraining forces without caring about the driving forces.

91394345776. Increasing the power of driving forces without caring about the restraining forces.

Question Number : 44 Question Id : 91394311652 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

किसी विश्वविद्यालयी तंत्र के भीतर एक प्रभावी संगठनात्मक परिवेश के लिए निम्नांकित में से कौन सा उपाय सर्वाधिक उपयुक्त होगा ?

Options :

91394345773. चालक बलों और अवरोधक बलों के बीच संतुलन कायम करना।

91394345774. चालक बलों की शक्ति बढ़ाना और अवरोधक बलों की शक्ति घटाना।

91394345775. चालक बलों की परवाह किए बगैर अवरोधक बलों की शक्ति घटाना।

91394345776. अवरोधक बलों की परवाह किए बगैर चालक बलों की शक्ति बढ़ाना।

Question Number : 45 Question Id : 91394311653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Below are given a number of roles and functions at the government/non-government level indicating the specific responsibilities of the Ministry of Drinking Water and Sanitation. Identify those statements which indicate the areas of responsibility of this ministry. Select from the code to give your answer :

(a) Overall policy and planning in respect of programmes of drinking water and sanitation.

(b) Funding in respect of the programmes listed in (a).

(c) Coordination of programmes floated.

(d) Supply of food grains at reasonable price to the consumers.

(e) Achieving the goal of zero hunger.

(f) Implementation of Swachh Bharat Abhiyan in rural India.

(g) Monitoring of prices and availability of essential commodities.

Code :

Options :

91394345777. (a), (b), (c), and (g)

91394345778. (a), (b), (d) and (e)

91394345779. (a), (b), (c) and (f)

91394345780. (a), (c), (d) and (e)

Question Number : 45 Question Id : 91394311653 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

नीचे पेयजल और स्वच्छता मंत्रालय के विशिष्ट उत्तरदायित्वों को दर्शाते हुए सरकारी/गैर-सरकारी स्तर पर अनेक भूमिकायें और कार्य दिए गए हैं। उन कथनों की पहचान करें जो इस मंत्रालय के उत्तरदायित्व को दर्शाते हैं। दिए गए कूट में से अपना उत्तर चुनें :

(a) पेयजल और स्वच्छता संबंधी कार्यक्रमों का समग्र नीति-निर्धारण और नियोजन

(b) (a) में वर्णित कार्यक्रमों का वित्त पोषण

(c) चलाये गए कार्यक्रमों का समन्वयन

(d) उपभोक्ताओं को उचित कीमत पर खाद्यान्न की आपूर्ति

(e) क्षुधा शून्यता के लक्ष्य को प्राप्त करना

(f) भारत के ग्रामीण अंचलों में स्वच्छ भारत अभियान को लागू करना

(g) आवश्यक वस्तुओं की उपलब्धता और कीमतों की निगरानी

कूट :

Options :

91394345777. (a), (b), (c) और (g)

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91394345778. (a), (b), (d) और (e)

91394345779. (a), (b), (c) और (f)

91394345780. (a), (c), (d) और (e)

Question Number : 46 Question Id : 91394311654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are **correct** about Indira Gandhi National Open University (IGNOU) ? To indicate your answer, select from the code given below :

(a) It is an autonomous organisation.

(b) It is devoted to promotion of open and distance education system.

(c) It conducts assessment and accredits the State Open Universities.

(d) It has jurisdiction in respect of Open and Distance learning system in India and to the study centres outside India.

Code :

Options :

91394345781. (a) and (b)

91394345782. (b) and (d)

91394345783. (c) and (d)

91394345784. (d) and (a)

Question Number : 46 Question Id : 91394311654 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

इंदिरा गाँधी राष्ट्रीय मुक्त विश्वविद्यालय (इग्नू) के बारे में निम्नांकित में से कौन से कथन **सही** हैं? दिए गए कूट में से अपना उत्तर दें :

(a) यह एक स्वायत्तशासी संगठन है।

(b) यह मुक्त और दूरस्थ शिक्षा प्रणाली के संवर्धन के लिए समर्पित है।

(c) यह राज्यों के मुक्त विश्वविद्यालयों का मूल्यांकन और प्रत्यायन करता है।

(d) भारत में मुक्त और दूरस्थ अधिगम प्रणाली और भारत के बाहर के इसके अध्ययन केंद्र इसके क्षेत्राधिकार में आते हैं।

कूट :

Options :

91394345781. (a) और (b)

91394345782. (b) और (d)

91394345783. (c) और (d)

91394345784. (d) और (a)

Question Number : 47 Question Id : 91394311655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 2 Wrong Marks : 0

The leadership and executive role in higher education system in respect of state universities of India is assigned to :

Options :

91394345785. Chancellor of the University

91394345786. Vice-Chancellor of the University

91394345787. Deans of Faculties

91394345788. Dean of Studies

Question Number : 47 Question Id : 91394311655 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical Correct Marks : 2 Wrong Marks : 0

भारत में राज्यों के विश्वविद्यालयों की उच्च शिक्षा प्रणाली में नेतृत्वात्मक और कार्यपालक भूमिका किसे दी गई है?

Options :

91394345785. विश्वविद्यालय के कुलाधिपति

91394345786. विश्वविद्यालय के कुलपति

91394345787. संकाय प्रमुख

91394345788. अध्ययन केंद्र प्रमुख

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Question Number : 48 Question Id : 91394311656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The formal authority for approving the University level courses vests in :

Options :

91394345789. The Academic Council

91394345790. The University Court

91394345791. The Executive Council

91394345792. The Research Degree Committee

Question Number : 48 Question Id : 91394311656 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

विश्वविद्यालय स्तरीय पाठ्यक्रमों के अनुमोदन के लिए औपचारिक प्राधिकारी है :

Options :

91394345789. विद्या परिषद्

91394345790. विश्वविद्यालय कोर्ट

91394345791. कार्य परिषद्

91394345792. शोध उपाधि समिति

Question Number : 49 Question Id : 91394311657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For promoting human values through College/University programmes which one of the following leadership styles would be the most appropriate ?

Options :

91394345793. Directive Leadership Style

91394345794. Participative Leadership Style

91394345795. Consultative Leadership Style

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91394345796. Delegating Leadership Style

Question Number : 49 Question Id : 91394311657 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

विद्यालय/विश्वविद्यालय कार्यक्रमों के माध्यम से मानवीय मूल्यों के संवर्धन के लिए निम्नांकित में से कौन सी नेतृत्व शैली सर्वाधिक उपयुक्त होगी ?

Options :

91394345793. निदेशात्मक नेतृत्व शैली

91394345794. प्रतिभाग आधारित नेतृत्व शैली

91394345795. परामर्शात्मक नेतृत्व शैली

91394345796. प्रत्यायोजनात्मक नेतृत्व शैली

Question Number : 50 Question Id : 91394311658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A post-graduate degree holder student with 55% marks intends to pursue research for the award of Ph.D. degree. What will be the formal requirements in this regard ? To indicate your **correct** answer choose from the code given below :

(a) Appearing in an admission test of a university
(b) Attending a coaching institute
(c) Consulting an expert teacher
(d) Submitting an application for enrollment
(e) Submitting a proposal for the research
(f) Discussing the research proposal with a peer group
(g) Getting the opinion of the experts on the research theme
(h) Getting the proposal approved by the relevant body of the university
(i) Attending mandatory course work

Code :

Options :

91394345797. (a), (d), (e), (h) and (i)

91394345798. (b), (c), (f) and (i)

91394345799. (c), (e), (g) and (h)

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91394345800. (d), (f), (h) and (i)

Question Number : 50 Question Id : 91394311658 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

55% अंकों वाला एक स्नातकोत्तर उत्तीर्ण छात्र पी.एच.डी. उपाधि प्राप्त करने के लिए शोध करना चाहता है। इसके लिए औपचारिक आवश्यकतायें क्या होंगी? नीचे दिए गए कूट में से **सही** उत्तर चुनें :

(a) किसी विश्वविद्यालय की नामांकन परीक्षा में बैठना

(b) एक कोचिंग संस्थान में जाना

(c) एक विशेषज्ञ शिक्षक से सलाह लेना

(d) नामांकन के लिए आवेदन प्रस्तुत करना

(e) शोध के लिए प्रस्ताव प्रस्तुत करना

(f) एक सहपाठी समूह के साथ शोध प्रस्ताव पर चर्चा करना

(g) शोध के विषय पर विशेषज्ञों की राय लेना

(h) विश्वविद्यालय के संगत निकाय द्वारा प्रस्ताव को अनुमोदित कराना

(i) अनिवार्य पाठ्यक्रम कार्य में भाग लेना

कूट :

Options :

91394345797. (a), (d), (e), (h) और (i)

91394345798. (b), (c), (f) और (i)

91394345799. (c), (e), (g) और (h)

91394345800. (d), (f), (h) और (i)

	Paper II
Group Number :	2
Group Id :	913943154
Group Maximum Duration :	120
Group Minimum Duration :	120
Revisit allowed for view? :	No
Revisit allowed for edit? :	No

Break time:	0
Group Marks:	200

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Section Id :	913943154
Section Number :	1
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	96
Number of Questions to be attempted:	96
Section Marks:	200
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	913943590
Question Shuffling Allowed :	Yes

Question Number : 51 Question Id : 91394311659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A transistor with $\beta = 100$ is to be used in the emitter feedback bias configuration. If $R_e = 2\ k\Omega$, $R_b = 370\ k\Omega$ the stability factor is

Options :

91394345801. **1**

91394345802. **1·57**

91394345803. **65**

91394345804. **32·5**

Question Number : 51 Question Id : 91394311659 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A transistor with $\beta = 100$ is to be used in the emitter feedback bias configuration. If $R_e = 2\ k\Omega$, $R_b = 370\ k\Omega$ the stability factor is

Options :

91394345801. **1**

91394345802. **1·57**

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91394345803. **65**

91394345804. **32·5**

Question Number : 52 Question Id : 91394311660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

An exact position of Fermi level in an n-type semiconductor is

Options :

91394345805. $E_C - kT\, ln\, \frac{N_C}{N_D}$

91394345806. $E_C + kT\, ln\, \frac{N_C}{N_D}$

91394345807. $E_C + \frac{N_C + N_D}{N_C\, N_D}$

91394345808. $E_C - kT\, ln\, \frac{N_C}{N_V}$

Question Number : 52 Question Id : 91394311660 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

An exact position of Fermi level in an n-type semiconductor is

Options :

91394345805. $E_C - kT\, ln\, \frac{N_C}{N_D}$

91394345806. $E_C + kT\, ln\, \frac{N_C}{N_D}$

91394345807. $E_C + \frac{N_C + N_D}{N_C\, N_D}$

91394345808. $E_C - kT\, ln\, \frac{N_C}{N_V}$

Question Number : 53 Question Id : 91394311661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The Fourier transform of the signal $x(t) = e^{-at^2}$, $a > 0$ will be

Options :

91394345809. $\sqrt{\frac{\pi}{\omega}}\ e^{-\frac{\omega^2}{4a}}$

91394345810. $\sqrt{\frac{\pi}{a}}\ e^{-\frac{\omega^2}{2a^2}}$

91394345811. $\sqrt{\frac{\pi}{a}}\ e^{-\frac{\omega^2}{4a}}$

91394345812. $\sqrt{\frac{\pi}{\omega}}\ e^{-\frac{\omega^2}{2a}}$

Question Number : 53 Question Id : 91394311661 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The Fourier transform of the signal $x(t) = e^{-at^2}$, $a > 0$ will be

Options :

91394345809. $\sqrt{\frac{\pi}{\omega}}\ e^{-\frac{\omega^2}{4a}}$

91394345810. $\sqrt{\frac{\pi}{a}}\ e^{-\frac{\omega^2}{2a^2}}$

91394345811. $\sqrt{\frac{\pi}{a}}\ e^{-\frac{\omega^2}{4a}}$

91394345812. $\sqrt{\frac{\pi}{\omega}}\ e^{-\frac{\omega^2}{2a}}$

Question Number : 54 Question Id : 91394311662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If $x(t) = e^{-t}\,u(t)$ and $y(t) = e^{-3t}\,u(t)$, then $y(t) * x(t)$ will be

Options :

91394345813. $(e^{-t} - e^{-3t})\,u(t)$

91394345814. $\frac{e^{-3t} - e^{-t}}{2}\,u(t)$

91394345815. $\frac{e^{-t} + e^{-3t}}{2}\,u(t)$

91394345816. $\frac{e^{-t} - e^{-3t}}{2}\,u(t)$

Question Number : 54 Question Id : 91394311662 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If $x(t) = e^{-t}\,u(t)$ and $y(t) = e^{-3t}\,u(t)$, then $y(t) * x(t)$ will be

Options :

91394345813. $(e^{-t} - e^{-3t})\,u(t)$

91394345814. $\frac{e^{-3t} - e^{-t}}{2}\,u(t)$

91394345815. $\frac{e^{-t} + e^{-3t}}{2}\,u(t)$

91394345816. $\frac{e^{-t} - e^{-3t}}{2}\,u(t)$

Question Number : 55 Question Id : 91394311663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If density of states in conduction band and density of states in valence band are not equal, then the Fermi level in intrinsic semiconductor is

Options :

91394345817. $\frac{E_C + E_V}{2}$

91394345818. $\frac{E_C - E_V}{2} + \frac{N_C + N_V}{2}$

91394345819. $\frac{E_C + E_V}{2} - \frac{kT}{2} ln \frac{N_C}{N_V}$

91394345820. $\frac{E_C + E_V}{2} + \frac{kT}{2} ln \frac{N_C}{N_V}$

Question Number : 55 Question Id : 91394311663 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If density of states in conduction band and density of states in valence band are not equal, then the Fermi level in intrinsic semiconductor is

Options :

91394345817. $\frac{E_C + E_V}{2}$

91394345818. $\frac{E_C - E_V}{2} + \frac{N_C + N_V}{2}$

91394345819. $\frac{E_C + E_V}{2} - \frac{kT}{2} ln \frac{N_C}{N_V}$

91394345820. $\frac{E_C + E_V}{2} + \frac{kT}{2} ln \frac{N_C}{N_V}$

Question Number : 56 Question Id : 91394311664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In an n-p-n transistor operating in saturated mode, the output voltage V_{CE} is

Options :

91394345821. Greater than $2V_{BE}$

91394345822. Between $2V_{BE}$ and V_{BE}

91394345823. Less than V_{BE}

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91394345824. Equal to V_{BE}

Question Number : 56 Question Id : 91394311664 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In an n-p-n transistor operating in saturated mode, the output voltage V_{CE} is

Options :

91394345821. Greater than $2V_{BE}$

91394345822. Between $2V_{BE}$ and V_{BE}

91394345823. Less than V_{BE}

91394345824. Equal to V_{BE}

Question Number : 57 Question Id : 91394311665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For equation of continuity which of the following is *true* (for steady state currents) ?

Options :

91394345825. $\nabla \cdot \bar{J} = 0$

91394345826. $\nabla \cdot \bar{J} = -2$

91394345827. $\nabla \cdot \bar{J} = 1$

91394345828. $\nabla \cdot \bar{J} = \infty$

Question Number : 57 Question Id : 91394311665 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For equation of continuity which of the following is *true* (for steady state currents) ?

Options :

91394345825. $\nabla \cdot \bar{J} = 0$

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91394345826. $\nabla \cdot \bar{J} = -2$

91394345827. $\nabla \cdot \bar{J} = 1$

91394345828. $\nabla \cdot \bar{J} = \infty$

Question Number : 58 Question Id : 91394311666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The junction capacitance of a thyristor in the state of reverse blocking is 20 pF. For a charging current of 5 mA, the value of $\frac{dv}{dt}$ capability of thyristor to make it ON is

Options :

91394345829. **225 V/μs**

91394345830. **200 V/μs**

91394345831. **250 V/μs**

91394345832. **500 V/μs**

Question Number : 58 Question Id : 91394311666 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The junction capacitance of a thyristor in the state of reverse blocking is 20 pF. For a charging current of 5 mA, the value of $\frac{dv}{dt}$ capability of thyristor to make it ON is

Options :

91394345829. **225 V/μs**

91394345830. **200 V/μs**

91394345831. **250 V/μs**

91394345832. **500 V/μs**

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Question Number : 59 Question Id : 91394311667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following functions implements the Karnaugh map shown below ? 'X' being don't care condition.

CD \ AB	00	01	11	10
00	0	0	1	0
01	X	X	1	X
11	0	1	1	0
10	0	1	1	0

Options :

91394345833. $\bar{A}\,B + CD$

91394345834. $D\,(C + A)$

91394345835. $AD + \bar{A}\,B$

91394345836. $(C + D)\,(\bar{C} + D)\,(A + B)$

Question Number : 59 Question Id : 91394311667 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following functions implements the Karnaugh map shown below ? 'X' being don't care condition.

CD \ AB	00	01	11	10
00	0	0	1	0
01	X	X	1	X
11	0	1	1	0
10	0	1	1	0

Options :

91394345833. $\bar{A}\,B + CD$

91394345834. $D\,(C + A)$

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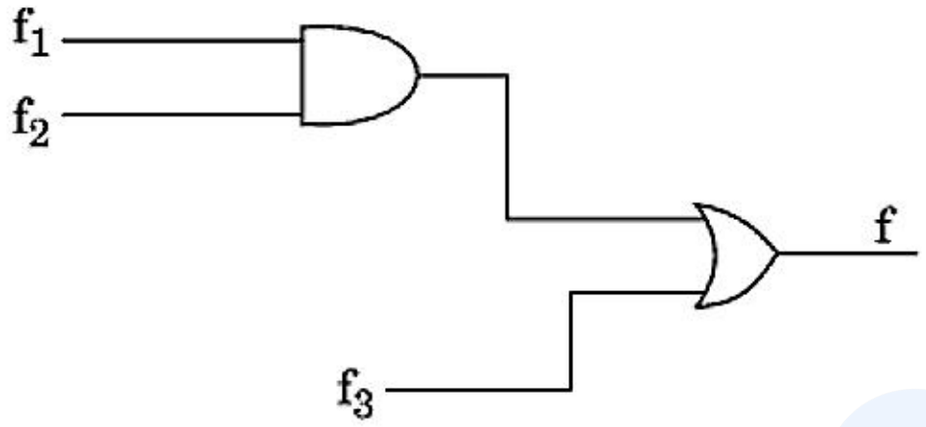
91394345835. $AD + \bar{A}B$

91394345836. $(C + D)(\bar{C} + D)(A + B)$

Question Number : 60 Question Id : 91394311668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the logic circuit shown in the figure below, the function f_1, f_2 and f (in canonical sum of products form in decimal notation) are



$f_1(w, x, y, z) = \sum(8, 9, 10)$

$f_2(w, x, y, z) = \sum(7, 8, 12, 13, 14, 15)$

$f(w, x, y, z) = \sum(8, 9)$

The function f_3 is

Options :

91394345837. $\sum(9, 10)$

91394345838. $\sum(9)$

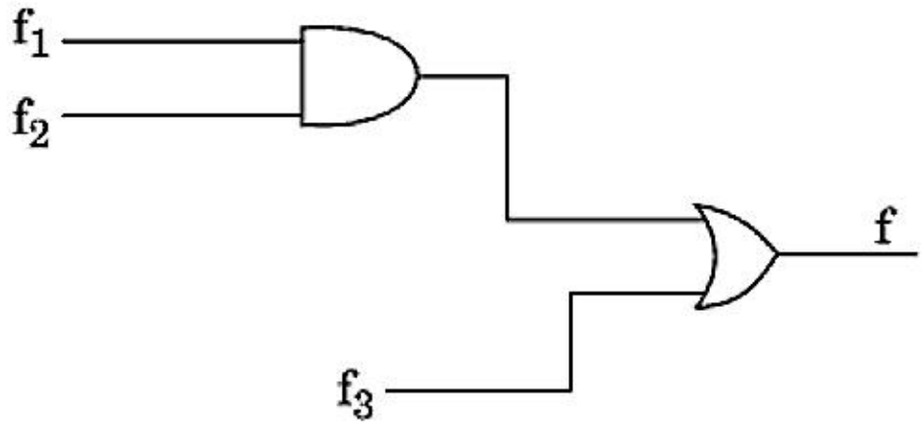
91394345839. $\sum(1, 8, 9)$

91394345840. $\sum(8, 10, 18)$

Question Number : 60 Question Id : 91394311668 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the logic circuit shown in the figure below, the function f_1, f_2 and f (in canonical sum of products form in decimal notation) are



$f_1(w, x, y, z) = \sum(8, 9, 10)$

$f_2(w, x, y, z) = \sum(7, 8, 12, 13, 14, 15)$

$f(w, x, y, z) = \sum(8, 9)$

The function f_3 is

Options :

91394345837. $\sum(9, 10)$

91394345838. $\sum(9)$

91394345839. $\sum(1, 8, 9)$

91394345840. $\sum(8, 10, 18)$

Question Number : 61 Question Id : 91394311669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

RAL is an example of

Options :

91394345841. Immediate Addressing mode

91394345842. Implicit Addressing mode

91394345843. Register Indirect Addressing mode

91394345844. Register Addressing mode

Question Number : 61 Question Id : 91394311669 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

RAL is an example of

Options :

91394345841. Immediate Addressing mode

91394345842. Implicit Addressing mode

91394345843. Register Indirect Addressing mode

91394345844. Register Addressing mode

Question Number : 62 Question Id : 91394311670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Two machine codes 3EH and 32H are stored in memory locations 2000H and 2001H respectively. The first machine code (3EH) represents the opcode to load a data byte in the accumulator, and the second code (32H) represents the data byte to be loaded in the accumulator. The time required to execute the Opcode Fetch and the Memory Read Cycles and the entire instruction cycle is, (if clock frequency is 2 MHz).

Options :

91394345845. 3·5 μs

91394345846. 3·5 ms

91394345847. 1·5 μs

91394345848. 0·5 μs

Question Number : 62 Question Id : 91394311670 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Two machine codes 3EH and 32H are stored in memory locations 2000H and 2001H respectively. The first machine code (3EH) represents the opcode to load a data byte in the accumulator, and the second code (32H) represents the data byte to be loaded in the accumulator. The time required to execute the Opcode Fetch and the Memory Read Cycles and the entire instruction cycle is, (if clock frequency is 2 MHz).

Options :

91394345845. 3·5 μs

91394345846. 3·5 ms

91394345847. 1·5 μs

91394345848. 0·5 μs

Question Number : 63 Question Id : 91394311671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The output of the program

```
main ( )
{
    int i = 1;
    {
        {
            {
                printf("\n%d", i);
            }
            printf("%d", i);
        }
        printf("%d", i);
    }
}
```

is

Options :

91394345849. **1**

91394345850. **11**

91394345851. **111**

91394345852. **3**

Question Number : 63 Question Id : 91394311671 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The output of the program

```
main ( )
{
    int i = 1;
    {
        {
            {
                printf("\n%d", i);
            }
            printf("%d", i);
        }
        printf("%d", i);
    }
```

is

Options :

91394345849. **1**

91394345850. **11**

91394345851. **111**

91394345852. **3**

Question Number : 64 Question Id : 91394311672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What is the output of the statement ?

```
int x, y;
scanf ("%d", &x);
y = (x > 5 ? 3 : 4);
```

Options :

91394345853. **This statement will store 3 in y if x is greater than 5, otherwise it will store 4 in y.**

91394345854. **This statement will store 4 in y if x is greater than 5, otherwise it will store 3 in y.**

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91394345855. This statement will store 3 in y if x is smaller than 5, otherwise it will store 4 in y.

91394345856. This statement will store 4 in y if x is smaller than 5, otherwise it will store 3 in y.

Question Number : 64 Question Id : 91394311672 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What is the output of the statement ?

```
int x, y;
scanf ("%d", &x);
y = (x > 5 ? 3 : 4);
```

Options :

91394345853. This statement will store 3 in y if x is greater than 5, otherwise it will store 4 in y.

91394345854. This statement will store 4 in y if x is greater than 5, otherwise it will store 3 in y.

91394345855. This statement will store 3 in y if x is smaller than 5, otherwise it will store 4 in y.

91394345856. This statement will store 4 in y if x is smaller than 5, otherwise it will store 3 in y.

Question Number : 65 Question Id : 91394311673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The positive RF peaks of an amplitude modulated voltage rise to a maximum value of 12 V and drop to a minimum value of 4 V. The modulating index (m_a) assuming single tone modulation is

Options :

91394345857. 3

91394345858. $\frac{1}{3}$

91394345859. $\frac{1}{4}$

91394345860. $\frac{1}{2}$

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Question Number : 65 Question Id : 91394311673 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The positive RF peaks of an amplitude modulated voltage rise to a maximum value of 12 V and drop to a minimum value of 4 V. The modulating index (m_a) assuming single tone modulation is

Options :

91394345857. 3

91394345858. $\frac{1}{3}$

91394345859. $\frac{1}{4}$

91394345860. $\frac{1}{2}$

Question Number : 66 Question Id : 91394311674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The plot of modulating index versus carrier amplitude yields a

Options :

91394345861. Horizontal line

91394345862. Vertical line

91394345863. Parabola

91394345864. Hyperbola

Question Number : 66 Question Id : 91394311674 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The plot of modulating index versus carrier amplitude yields a

Options :

91394345861. Horizontal line

91394345862. Vertical line

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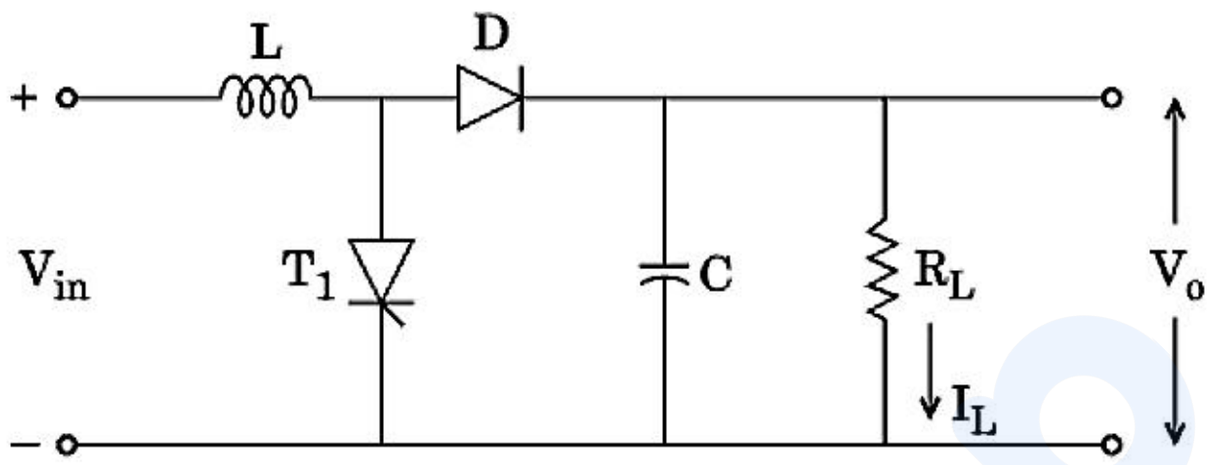
91394345863. **Parabola**

91394345864. **Hyperbola**

Question Number : 67 Question Id : 91394311675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If 'α' is the duty cycle, the output of the following circuit is given by



Options :

91394345865. $V_{out} = \alpha V_{in}$

91394345866. $V_{out} = \frac{V_{in}}{1+\alpha}$

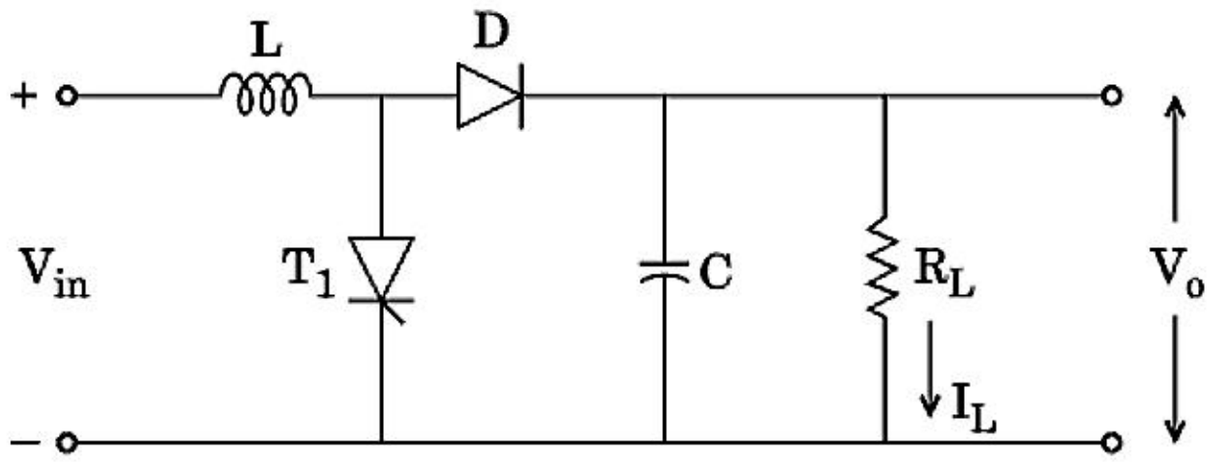
91394345867. $V_{out} = \frac{1}{\alpha} . V_{in}$

91394345868. $V_{out} = \frac{V_{in}}{1-\alpha}$

Question Number : 67 Question Id : 91394311675 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

If 'α' is the duty cycle, the output of the following circuit is given by



Options :

91394345865. $V_{out} = \alpha V_{in}$

91394345866. $V_{out} = \frac{V_{in}}{1+\alpha}$

91394345867. $V_{out} = \frac{1}{\alpha} . V_{in}$

91394345868. $V_{out} = \frac{V_{in}}{1-\alpha}$

Question Number : 68 Question Id : 91394311676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In a single mode fiber, the power received is 1% that of the transmitted power. The attenuation of a single mode fiber is of the order of

Options :

91394345869. **– 10 dBm**

91394345870. **– 20 dBm**

91394345871. **– 30 dBm**

91394345872. **– 2 dBm**

Question Number : 68 Question Id : 91394311676 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In a single mode fiber, the power received is 1% that of the transmitted power. The attenuation of a single mode fiber is of the order of

Options :

91394345869. **– 10 dBm**

91394345870. **– 20 dBm**

91394345871. **– 30 dBm**

91394345872. **– 2 dBm**

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Question Number : 69 Question Id : 91394311677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following is ***not*** correct in respect of a phase-lead compensation network ?

Options :

91394345873. It increases system bandwidth

91394345874. It increases gain at higher frequencies

91394345875. It is used when fast transient response is required

91394345876. It is used when phase decreases rapidly near crossover frequency

Question Number : 69 Question Id : 91394311677 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following is ***not*** correct in respect of a phase-lead compensation network ?

Options :

91394345873. It increases system bandwidth

91394345874. It increases gain at higher frequencies

91394345875. It is used when fast transient response is required

91394345876. It is used when phase decreases rapidly near crossover frequency

Question Number : 70 Question Id : 91394311678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A Hall-effect element is used for the measurement of magnetic field of 0·8 Wb/m^2. The thickness of the element is 2·5 mm and is of bismuth material. If the current passed through the element is 4A, then the Hall emf developed will be : (Hall coefficient is 5×10^{-7})

Options :

91394345877. $1{\cdot}4 \times 10^{-4}\ V$

91394345878. $6{\cdot}4 \times 10^{-4}\ V$

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91394345879. 2×10^{-7} V

91394345880. $3{\cdot}2 \times 10^{-4}$ V

Question Number : 70 Question Id : 91394311678 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A Hall-effect element is used for the measurement of magnetic field of 0·8 Wb/m^2. The thickness of the element is 2·5 mm and is of bismuth material. If the current passed through the element is 4A, then the Hall emf developed will be : (Hall coefficient is 5×10^{-7})

Options :

91394345877. $1{\cdot}4 \times 10^{-4}$ V

91394345878. $6{\cdot}4 \times 10^{-4}$ V

91394345879. 2×10^{-7} V

91394345880. $3{\cdot}2 \times 10^{-4}$ V

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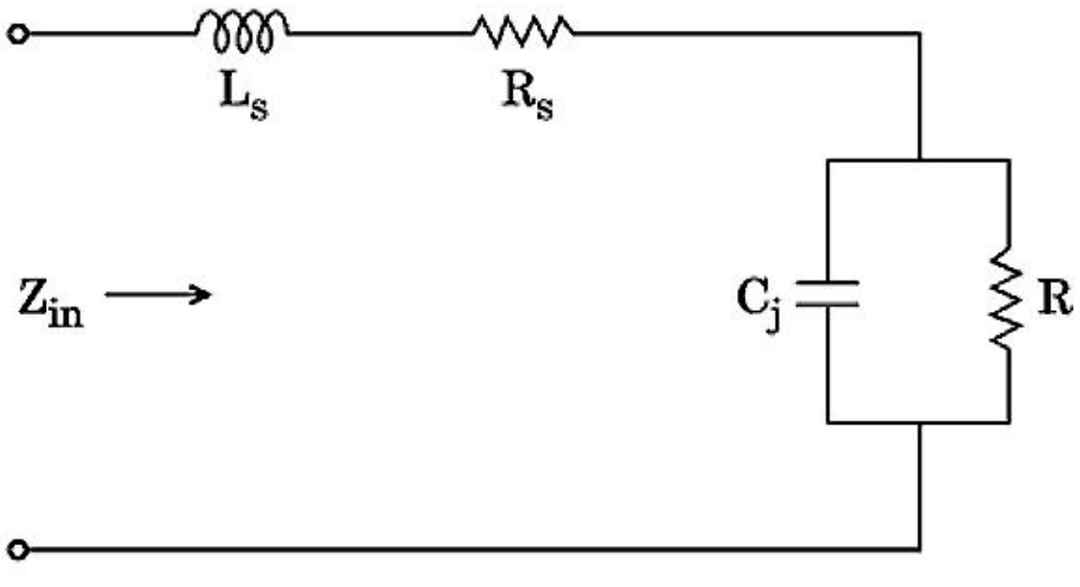
Sub-Section Number: 2
Sub-Section Id: 913943591
Question Shuffling Allowed : Yes

Question Number : 71 Question Id : 91394311679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The equivalent circuit of a tunnel diode shown below has the total input impedance



(i) $\left[R_s + \frac{-R}{1+(\omega RC_j)^2}\right] + j\left[\omega L_s + \frac{-\omega C_j R^2}{1+(\omega RC_j)^2}\right]$

(ii) $R_s + \omega RC_j$

(iii) $\left[R_S + \frac{-R}{(1+\omega RC_j)}\right] + \left[\omega L_s + \frac{\omega C_j R^2}{1-(\omega RC_j)^2}\right]$

(iv) $\omega L_s + \frac{\omega C_j R^2}{1+(\omega RC_j)^2}$

Choose the correct answer from the code given below :

Code :

Options :

91394345881. **(i) and (iii) are correct**

91394345882. **(i) is correct, but (iii) is wrong**

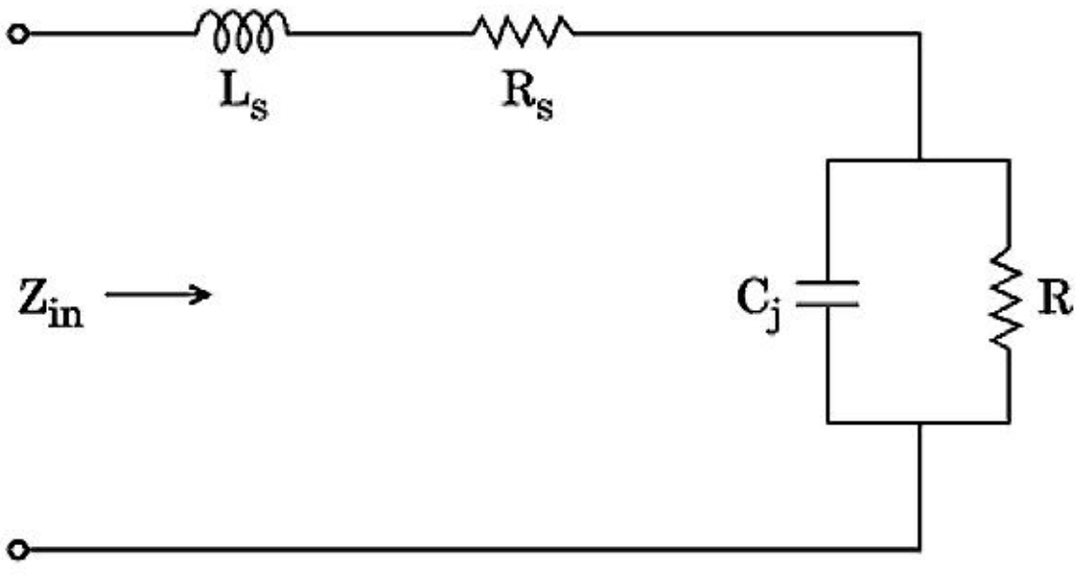
91394345883. **(ii) is correct, but (i) is wrong**

91394345884. **(iii) is correct, but (iv) is wrong**

Question Number : 71 Question Id : 91394311679 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The equivalent circuit of a tunnel diode shown below has the total input impedance



(i) $\left[R_s + \frac{-R}{1+(\omega RC_j)^2}\right] + j\left[\omega L_s + \frac{-\omega C_j R^2}{1+(\omega RC_j)^2}\right]$

(ii) $R_s + \omega RC_j$

(iii) $\left[R_S + \frac{-R}{(1+\omega RC_j)}\right] + \left[\omega L_s + \frac{\omega C_j R^2}{1-(\omega RC_j)^2}\right]$

(iv) $\omega L_s + \frac{\omega C_j R^2}{1+(\omega RC_j)^2}$

Choose the correct answer from the code given below :

Code :

Options :

91394345881. **(i) and (iii) are correct**

91394345882. **(i) is correct, but (iii) is wrong**

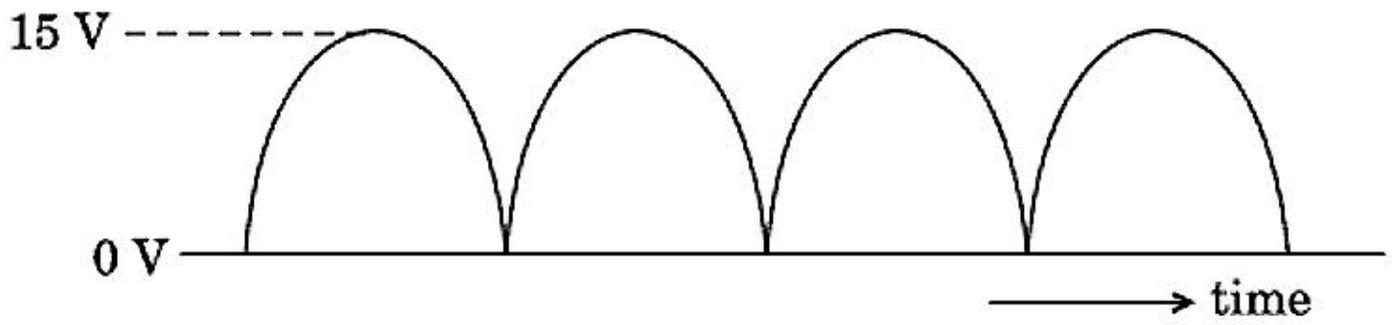
91394345883. **(ii) is correct, but (i) is wrong**

91394345884. **(iii) is correct, but (iv) is wrong**

Question Number : 72 Question Id : 91394311680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The average value of the full wave rectified voltage shown below is



(i) 7·5 V

(ii) 9·55 V

(iii) 10·0 V

(iv) 5·0 V

Choose the correct answer from the code given below :

Code :

Options :

91394345885. **(i) and (ii) are correct**

91394345886. **(ii) is correct, but (iv) is wrong**

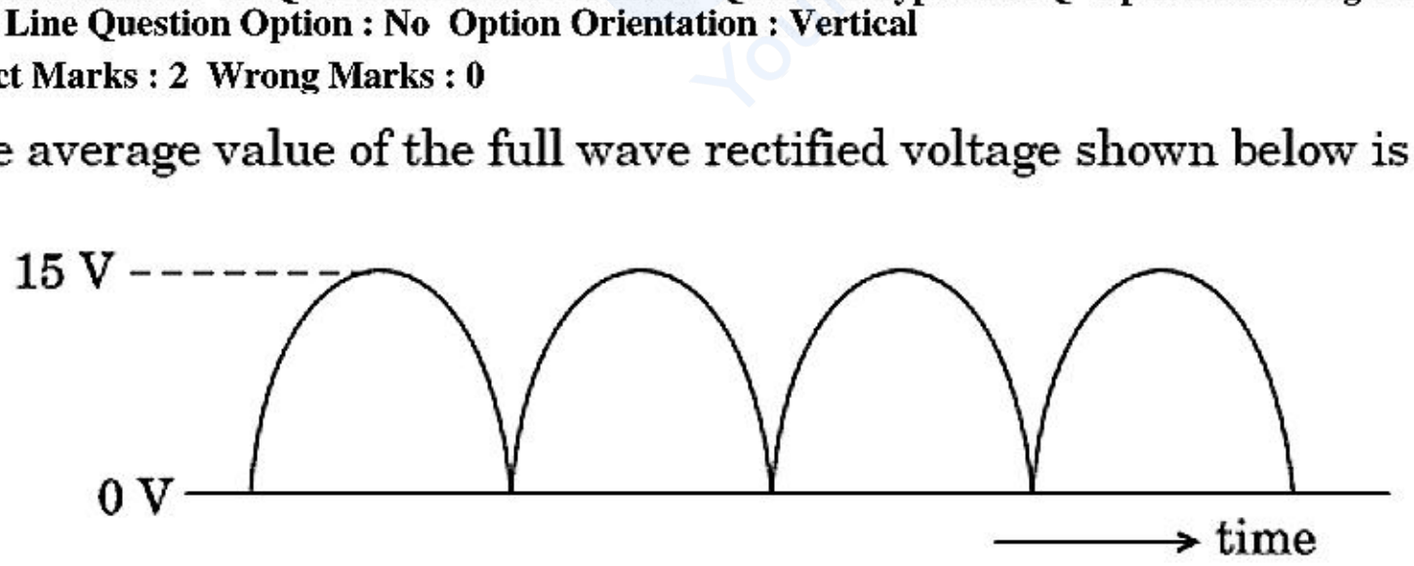
91394345887. **(i) is correct, but (iii) is wrong**

91394345888. **(iii) is correct, but (ii) is wrong**

Question Number : 72 Question Id : 91394311680 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The average value of the full wave rectified voltage shown below is



(i) 7·5 V

(ii) 9·55 V

(iii) 10·0 V

(iv) 5·0 V

Choose the correct answer from the code given below :

Code :

Options :

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91394345885. (i) and (ii) are correct

91394345886. (ii) is correct, but (iv) is wrong

91394345887. (i) is correct, but (iii) is wrong

91394345888. (iii) is correct, but (ii) is wrong

Question Number : 73 Question Id : 91394311681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding state variable analysis.

(i) A purely resistive network has no states at all.

(ii) A purely resistive network has more states than a reactive network.

(iii) Only a reactive network can have states.

(iv) A network with energy storing elements has no states at all.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345889. (i) and (iii)

91394345890. (i) and (iv)

91394345891. (ii) and (iii)

91394345892. (ii) and (iv)

Question Number : 73 Question Id : 91394311681 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding state variable analysis.

(i) A purely resistive network has no states at all.

(ii) A purely resistive network has more states than a reactive network.

(iii) Only a reactive network can have states.

(iv) A network with energy storing elements has no states at all.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345889. **(i) and (iii)**

91394345890. **(i) and (iv)**

91394345891. **(ii) and (iii)**

91394345892. **(ii) and (iv)**

Question Number : 74 Question Id : 91394311682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding a constant-k low pass filter.

(i) The cut-off frequency of the filter is $f_c = \frac{1}{2\pi\sqrt{LC}}$

(ii) The cut-off frequency of the filter is $f_c = \frac{1}{\pi\sqrt{LC}}$

(iii) The phase shift in stopband is π.

(iv) The phase shift in passband is 2π.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345893. **(i) and (iii)**

91394345894. **(i) and (iv)**

91394345895. **(ii) and (iii)**

91394345896. **(ii) and (iv)**

Question Number : 74 Question Id : 91394311682 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding a constant-k low pass filter.

(i) The cut-off frequency of the filter is $f_c = \frac{1}{2\pi\sqrt{LC}}$

(ii) The cut-off frequency of the filter is $f_c = \frac{1}{\pi\sqrt{LC}}$

(iii) The phase shift in stopband is π.

(iv) The phase shift in passband is 2π.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345893. **(i) and (iii)**

91394345894. **(i) and (iv)**

91394345895. **(ii) and (iii)**

91394345896. **(ii) and (iv)**

Question Number : 75 Question Id : 91394311683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A basic equivalent circuit of a tunnel diode consists of series inductance L_s, the series resistance R_s, the diode capacitance C_j and the negative resistance – R. The reactive cut-off frequency is

(i) $\frac{1}{2\pi RC_j}\sqrt{\frac{R}{R_s}-1}$

(ii) $\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}-\frac{1}{(RC_j)^2}}$

(iii) $\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}+\frac{1}{(RC_j)^2}}+\frac{1}{2\pi}\sqrt{\frac{1}{RC_j}}$

(iv) $\frac{1}{2\pi RC_j}\sqrt{\frac{R}{R_s}-1}+\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}+\frac{1}{(RC_j)^2}}$

Choose the correct answer from the code given below :

Code :

Options :

91394345897. **(i) is wrong but (ii) is correct**

91394345898. **(iii) and (iv) are correct**

91394345899. **(iv) is correct but (ii) is wrong**

91394345900. **(iii) is correct but (iv) is wrong**

Question Number : 75 Question Id : 91394311683 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A basic equivalent circuit of a tunnel diode consists of series inductance L_s, the series resistance R_s, the diode capacitance C_j and the negative resistance – R. The reactive cut-off frequency is

(i) $\frac{1}{2\pi RC_j}\sqrt{\frac{R}{R_s}-1}$

(ii) $\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}-\frac{1}{(RC_j)^2}}$

(iii) $\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}+\frac{1}{(RC_j)^2}}+\frac{1}{2\pi}\sqrt{\frac{1}{RC_j}}$

(iv) $\frac{1}{2\pi RC_j}\sqrt{\frac{R}{R_s}-1}+\frac{1}{2\pi}\sqrt{\frac{1}{L_sC_j}+\frac{1}{(RC_j)^2}}$

Choose the correct answer from the code given below :

Code :

Options :

91394345897. **(i) is wrong but (ii) is correct**

91394345898. **(iii) and (iv) are correct**

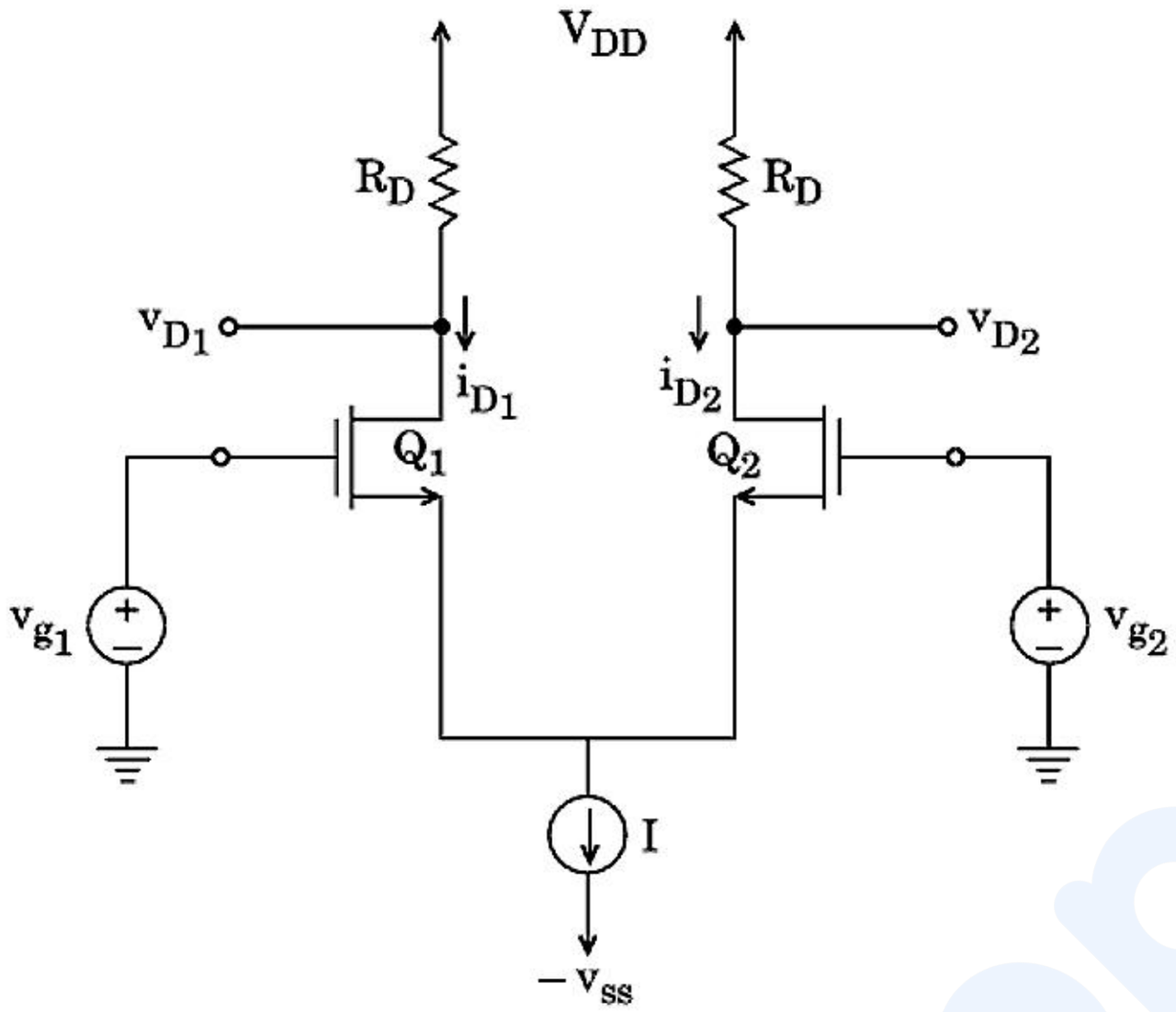
91394345899. **(iv) is correct but (ii) is wrong**

91394345900. **(iii) is correct but (iv) is wrong**

Question Number : 76 Question Id : 91394311684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In a circuit shown below, the voltage at each drain terminal is



(i) $V_{DD} - \frac{IR_D}{2}$

(ii) $V_{DD} + \frac{IR_D}{2}$

(iii) $V_{DD} - IR_D$

(iv) $V_{DD} + IR_D$

Choose the correct answer from the code given below :

Code :

Options :

91394345901. **(i) is correct but (iv) is wrong**

91394345902. **(ii) is correct but (iii) is wrong**

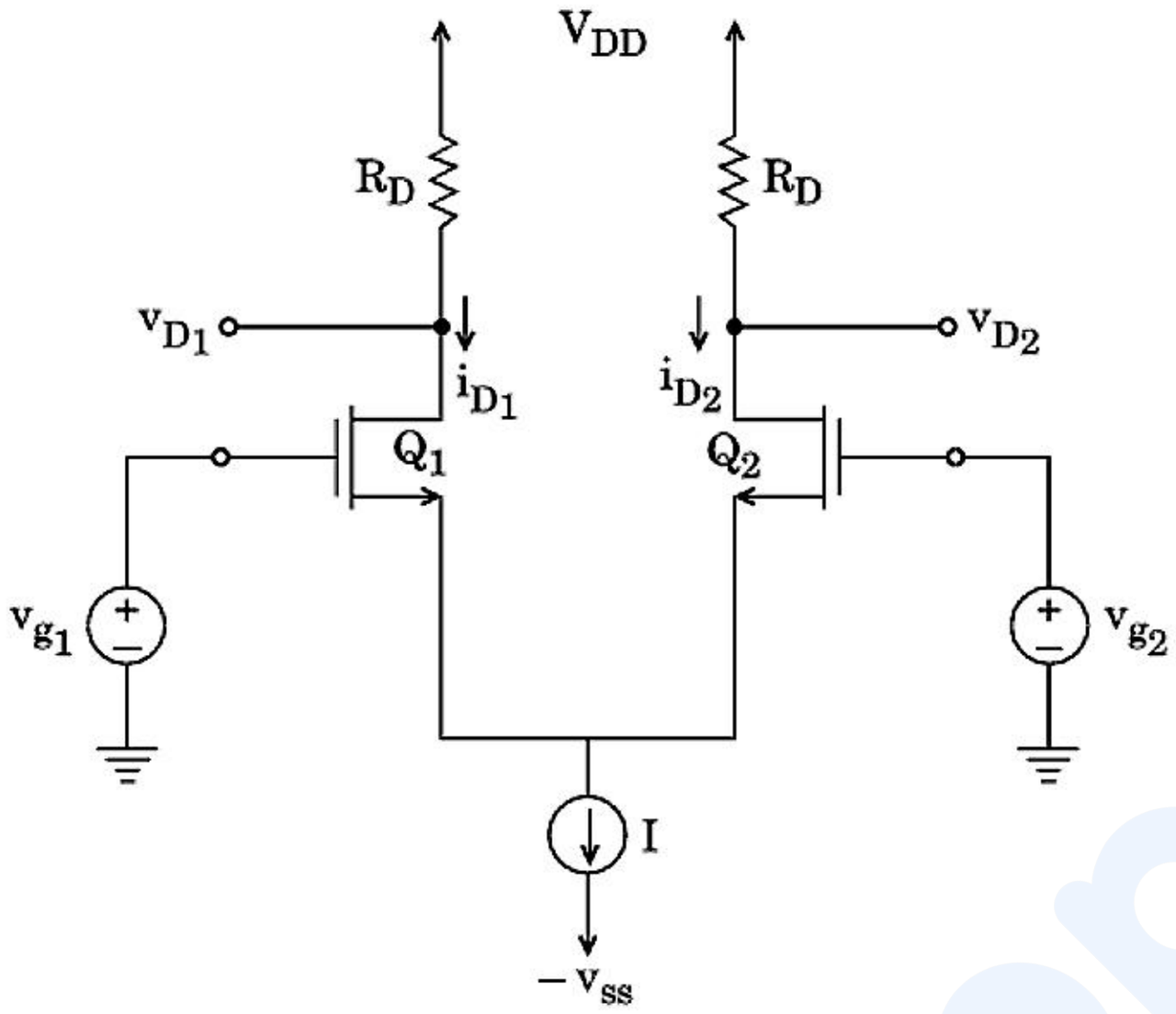
91394345903. **(iv) is correct but (ii) is wrong**

91394345904. **(iii) is correct but (i) is wrong**

Question Number : 76 Question Id : 91394311684 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In a circuit shown below, the voltage at each drain terminal is



(i) $V_{DD} - \frac{IR_D}{2}$

(ii) $V_{DD} + \frac{IR_D}{2}$

(iii) $V_{DD} - IR_D$

(iv) $V_{DD} + IR_D$

Choose the correct answer from the code given below :

Code :

Options :

91394345901. **(i) is correct but (iv) is wrong**

91394345902. **(ii) is correct but (iii) is wrong**

91394345903. **(iv) is correct but (ii) is wrong**

91394345904. **(iii) is correct but (i) is wrong**

Question Number : 77 Question Id : 91394311685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which of the below mentioned logic families, the transistors operate between cut-off and active (non-saturation) states ?

(i) Transistor-Transistor Logic (TTL)

(ii) Schottky TTL

(iii) Diode Transistor Logic (DTL)

(iv) Emitter Coupled Logic (ECL)

Choose the correct answer from the code given below :

Code :

Options :

91394345905. (i) and (iii) are correct

91394345906. (ii) and (iii) are correct

91394345907. (i) and (iv) are correct

91394345908. (ii) and (iv) are correct

Question Number : 77 Question Id : 91394311685 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In which of the below mentioned logic families, the transistors operate between cut-off and active (non-saturation) states ?

(i) Transistor-Transistor Logic (TTL)

(ii) Schottky TTL

(iii) Diode Transistor Logic (DTL)

(iv) Emitter Coupled Logic (ECL)

Choose the correct answer from the code given below :

Code :

Options :

91394345905. (i) and (iii) are correct

91394345906. (ii) and (iii) are correct

91394345907. (i) and (iv) are correct

91394345908. (ii) and (iv) are correct

Question Number : 78 Question Id : 91394311686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

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Correct Marks : 2 Wrong Marks : 0

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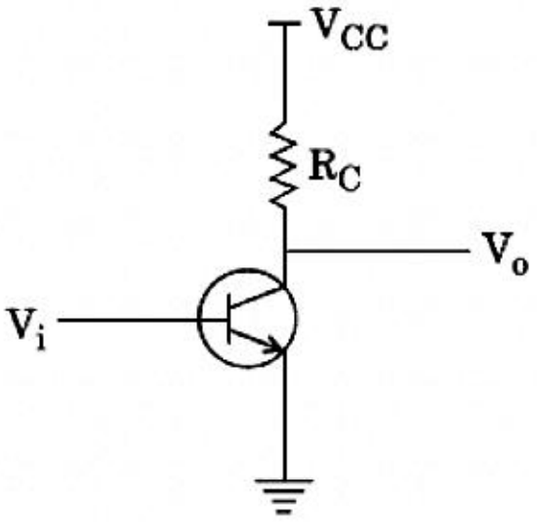
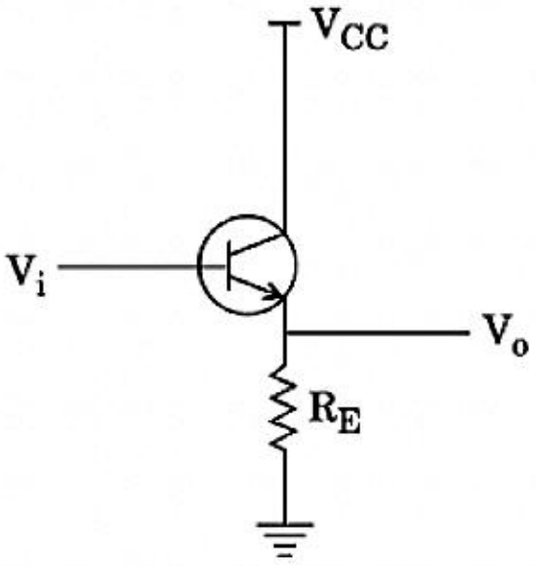
Which of the following circuits are correct with reference to the inverter ?

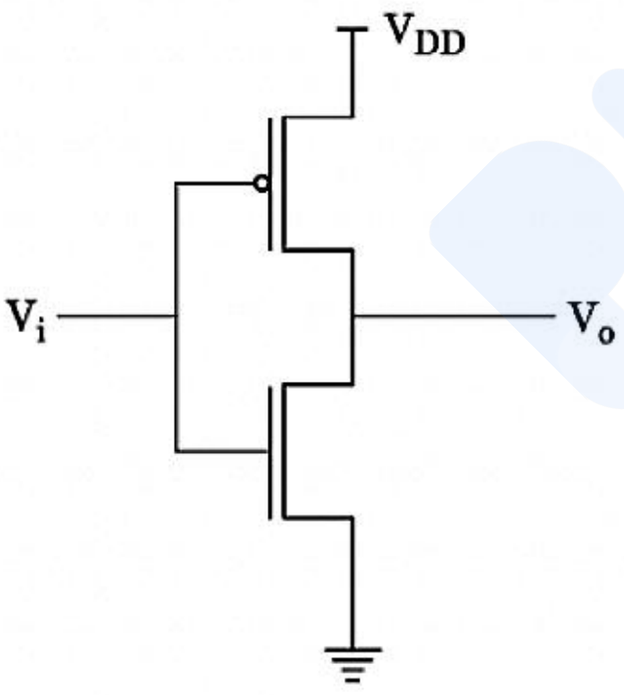
(i)



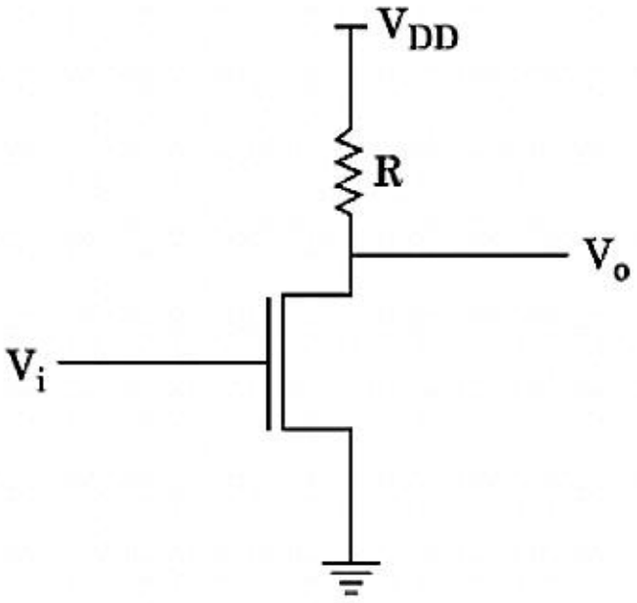
(ii)



(iii)



(iv)



Which of the above are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345909. **(i), (ii), (iii) and (iv) are correct**

91394345910. **(i), (ii) and (iv) are correct**

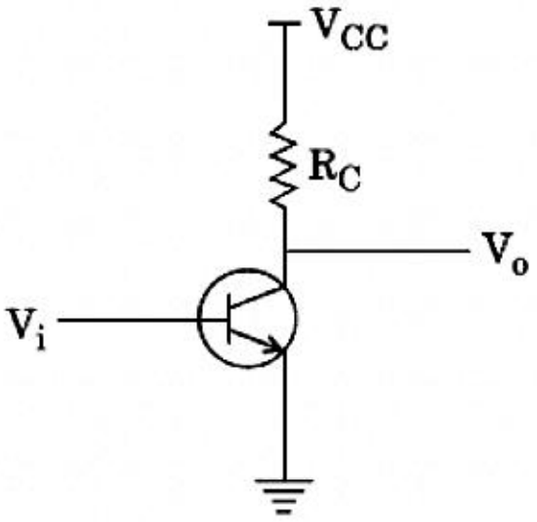
91394345911. **(i), (iii) and (iv) are correct**

91394345912. **(ii), (iii) and (iv) are correct**

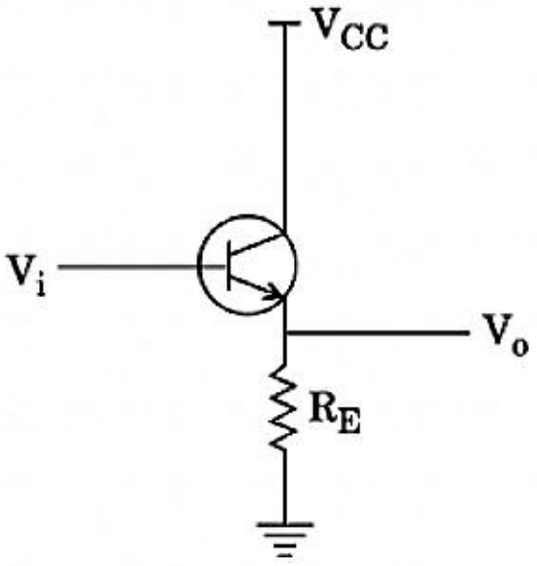
Question Number : 78 Question Id : 91394311686 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Which of the following circuits are correct with reference to the inverter ?

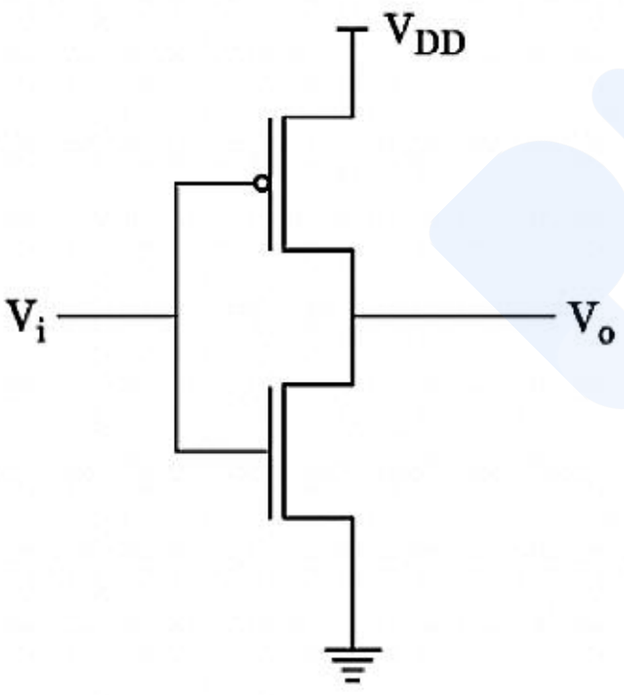
(i)



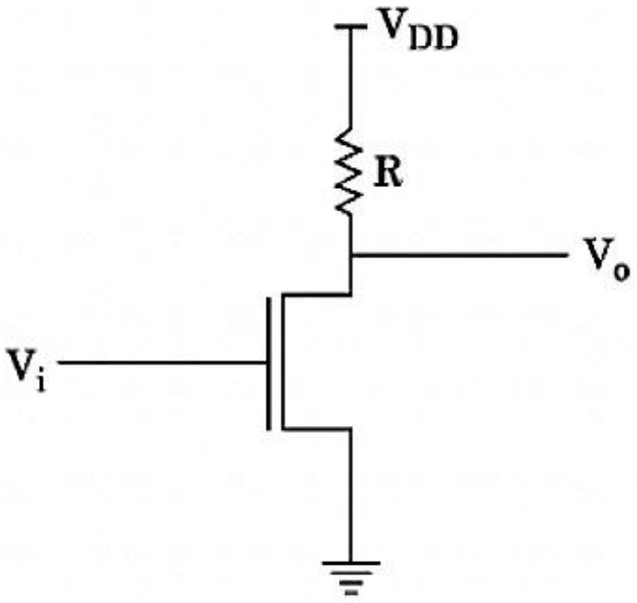
(ii)



(iii)



(iv)



Which of the above are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345909. (i), (ii), (iii) and (iv) are correct

91394345910. (i), (ii) and (iv) are correct

91394345911. (i), (iii) and (iv) are correct

91394345912. (ii), (iii) and (iv) are correct

Question Number : 79 Question Id : 91394311687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In minimum mode 8086 microprocessor

(i) all control signals are given by microprocessor chip itself

(ii) the remaining components in the system are latches, transreceivers clock generator, memory and I/O devices

(iii) it has more than one microprocessor

(iv) facilities are provided for implementing allocation of global resources

Choose the correct answer from the code given below :

Code :

Options :

91394345913. (i) and (iii) are correct

91394345914. (i), (iii) and (iv) are correct

91394345915. (i) and (ii) are correct

91394345916. (i) and (iv) are correct

Question Number : 79 Question Id : 91394311687 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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In minimum mode 8086 microprocessor

(i) all control signals are given by microprocessor chip itself

(ii) the remaining components in the system are latches, transreceivers clock generator, memory and I/O devices

(iii) it has more than one microprocessor

(iv) facilities are provided for implementing allocation of global resources

Choose the correct answer from the code given below :

Code :

Options :

91394345913. (i) and (iii) are correct

91394345914. (i), (iii) and (iv) are correct

91394345915. (i) and (ii) are correct

91394345916. (i) and (iv) are correct

Question Number : 80 Question Id : 91394311688 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In Register Indirect Addressing mode the offset address of data is in

(i) BX

(ii) SI

(iii) DI

(iv) DX

Choose the correct answer from the code given below :

Code :

Options :

91394345917. (i) and (iv) are correct

91394345918. (i), (ii) and (iii) are correct

91394345919. (ii), (iii) and (iv) are correct

91394345920. (i), (iii) and (iv) are correct

Question Number : 80 Question Id : 91394311688 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In Register Indirect Addressing mode the offset address of data is in

(i) BX

(ii) SI

(iii) DI

(iv) DX

Choose the correct answer from the code given below :

Code :

Options :

91394345917. (i) and (iv) are correct

91394345918. (i), (ii) and (iii) are correct

91394345919. (ii), (iii) and (iv) are correct

91394345920. (i), (iii) and (iv) are correct

Question Number : 81 Question Id : 91394311689 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What is the output of this program ?

```
main ( )
{
        int s [5] [2] = {
                                {1234, 56},
                                {1212, 33},
                                {1434, 80},
                                {1312, 78}
                        };
        int i, j;
        for (i = 0; i < = 3; i ++)
        {
                printf ("\n");
                for (j = 0; j < = 1; j++)
                printf ("%d",  *(*(s + i) + j));
        }
}
```

Options :

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91394345921.

1234 56

1212 33

1434 80

1312 78

91394345922.

1235 57

1213 34

1435 81

1313 79

91394345923.

1312 78

1434 80

1212 33

1234 56

91394345924.

1212 33

1234 56

1312 78

1434 80

Question Number : 81 Question Id : 91394311689 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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What is the output of this program ?

```
main ( )
{
        int s [5] [2] = {
                                {1234, 56},
                                {1212, 33},
                                {1434, 80},
                                {1312, 78}
                        };
        int i, j;
        for (i = 0; i < = 3; i ++)
        {
                printf ("\n");
                for (j = 0; j < = 1; j++)
                printf ("%d",  *(*(s + i) + j));
        }
}
```

Options :

91394345921. **1234 56**
1212 33
1434 80
1312 78

91394345922. **1235 57**
1213 34
1435 81
1313 79

91394345923. **1312 78**
1434 80
1212 33
1234 56

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1212 33

1234 56

1312 78

1434 80

91394345924.

Question Number : 82 Question Id : 91394311690 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What will be the output of the program ?

```
main ( )
{
        char s[ ] = "AWb what the heck";
        printf ("n%s",  s);
        printf ("%s", s[3]);

}
```

Options :

91394345925. **AWbWhat the heck**

91394345926. **AWbWhat the heckb**

91394345927. **W**

91394345928. **AWbWhat the heckW**

Question Number : 82 Question Id : 91394311690 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

What will be the output of the program ?

```
main ( )
{
        char s[ ] = "AWb what the heck";
        printf ("n%s",  s);
        printf ("%s", s[3]);

}
```

Options :

91394345925. **AWbWhat the heck**

91394345926. **AWbWhat the heckb**

91394345927. **W**

91394345928. **AWbWhat the heckW**

Question Number : 83 Question Id : 91394311691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For an optical fiber, following statements are given :

(i) Propagation constant is dependent on wavelength

(ii) Propagation constant is independent of wavelength

(iii) $GVD = -\frac{2\pi C}{\lambda}\beta_2$

(iv) $GVD = -\frac{2\pi C}{\lambda^2}\beta_2$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345929. **(ii) and (iii)**

91394345930. **(i) and (iii)**

91394345931. **(i) and (iv)**

91394345932. **(ii) and (iv)**

Question Number : 83 Question Id : 91394311691 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For an optical fiber, following statements are given :

(i) Propagation constant is dependent on wavelength

(ii) Propagation constant is independent of wavelength

(iii) $GVD = -\frac{2\pi C}{\lambda}\beta_2$

(iv) $GVD = -\frac{2\pi C}{\lambda^2}\beta_2$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345929. **(ii) and (iii)**

91394345930. **(i) and (iii)**

91394345931. **(i) and (iv)**

91394345932. **(ii) and (iv)**

Question Number : 84 Question Id : 91394311692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For thyristor operation, following statements are given :

(i) The supply voltage must be greater than the forward break over voltage.

(ii) The supply voltage must be less than the forward break over voltage.

(iii) $I_{Latching} < I_{holding}$

(iv) $I_{Latching} > I_{holding}$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345933. **(i) and (iii)**

91394345934. **(ii) and (iv)**

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91394345935. **(ii) and (iii)**

91394345936. **(i) and (iv)**

Question Number : 84 Question Id : 91394311692 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

For thyristor operation, following statements are given :

(i) The supply voltage must be greater than the forward break over voltage.

(ii) The supply voltage must be less than the forward break over voltage.

(iii) $I_{Latching} < I_{holding}$

(iv) $I_{Latching} > I_{holding}$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345933. **(i) and (iii)**

91394345934. **(ii) and (iv)**

91394345935. **(ii) and (iii)**

91394345936. **(i) and (iv)**

Question Number : 85 Question Id : 91394311693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct with reference to superheterodyne receivers ?

(i) The main advantage of superheterodyne receiver is its better tracking

(ii) The main advantage of superheterodyne receiver is improvement in sensitivity

(iii) The image channel rejection in superheterodyne receiver comes from IF stages only

(iv) The image channel rejection in superheterodyne receiver comes from RF stage only

Choose the correct answer from the code given below :

Code :

Options :

91394345937. **(i) and (ii) are correct**

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91394345938. (ii) and (iii) are correct

91394345939. (ii) and (iv) are correct

91394345940. (i) and (iv) are correct

Question Number : 85 Question Id : 91394311693 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct with reference to superheterodyne receivers ?

(i) The main advantage of superheterodyne receiver is its better tracking

(ii) The main advantage of superheterodyne receiver is improvement in sensitivity

(iii) The image channel rejection in superheterodyne receiver comes from IF stages only

(iv) The image channel rejection in superheterodyne receiver comes from RF stage only

Choose the correct answer from the code given below :

Code :

Options :

91394345937. (i) and (ii) are correct

91394345938. (ii) and (iii) are correct

91394345939. (ii) and (iv) are correct

91394345940. (i) and (iv) are correct

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Question Number : 86 Question Id : 91394311694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct w.r.t. the vestigial sideband modulation ?

(i) As compared to SSB-Sc, the bandwidth of vestigial sideband becomes larger

(ii) The filter required needs to have a sharp cut-off

(iii) The transmitted vestige of the undesired sideband compensates the loss of wanted sideband

(iv) Vestigial sideband is used in TV for transmission of the picture and sound signals

Choose the correct answer from the code given below :

Code :

Options :

91394345941. (i) and (ii) are correct

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91394345942. (i) and (iv) are correct

91394345943. (i) and (iii) are correct

91394345944. (iii) and (iv) are correct

Question Number : 86 Question Id : 91394311694 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following statements are correct w.r.t. the vestigial sideband modulation ?

(i) As compared to SSB-Sc, the bandwidth of vestigial sideband becomes larger

(ii) The filter required needs to have a sharp cut-off

(iii) The transmitted vestige of the undesired sideband compensates the loss of wanted sideband

(iv) Vestigial sideband is used in TV for transmission of the picture and sound signals

Choose the correct answer from the code given below :

Code :

Options :

91394345941. (i) and (ii) are correct

91394345942. (i) and (iv) are correct

91394345943. (i) and (iii) are correct

91394345944. (iii) and (iv) are correct

Question Number : 87 Question Id : 91394311695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A lossless air dielectric cylindrical waveguide of inside diameter 2 cm is operated at 10 GHz. For TM_{11} mode propagating in +z direction, following has been evaluated :

(i) Cut-off frequency = 9·148 GHz

(ii) Cut-off frequency = 8·814 GHz

(iii) Wave impedance = 152·269 Ω

(iv) Wave impedance = 15·26 Ω

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345945. **(i) and (iii)**

91394345946. **(ii) and (iii)**

91394345947. **(ii) and (iv)**

91394345948. **(i) and (iv)**

Question Number : 87 Question Id : 91394311695 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A lossless air dielectric cylindrical waveguide of inside diameter 2 cm is operated at 10 GHz. For TM_{11} mode propagating in +z direction, following has been evaluated :

(i) Cut-off frequency = 9·148 GHz

(ii) Cut-off frequency = 8·814 GHz

(iii) Wave impedance = 152·269 Ω

(iv) Wave impedance = 15·26 Ω

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345945. **(i) and (iii)**

91394345946. **(ii) and (iii)**

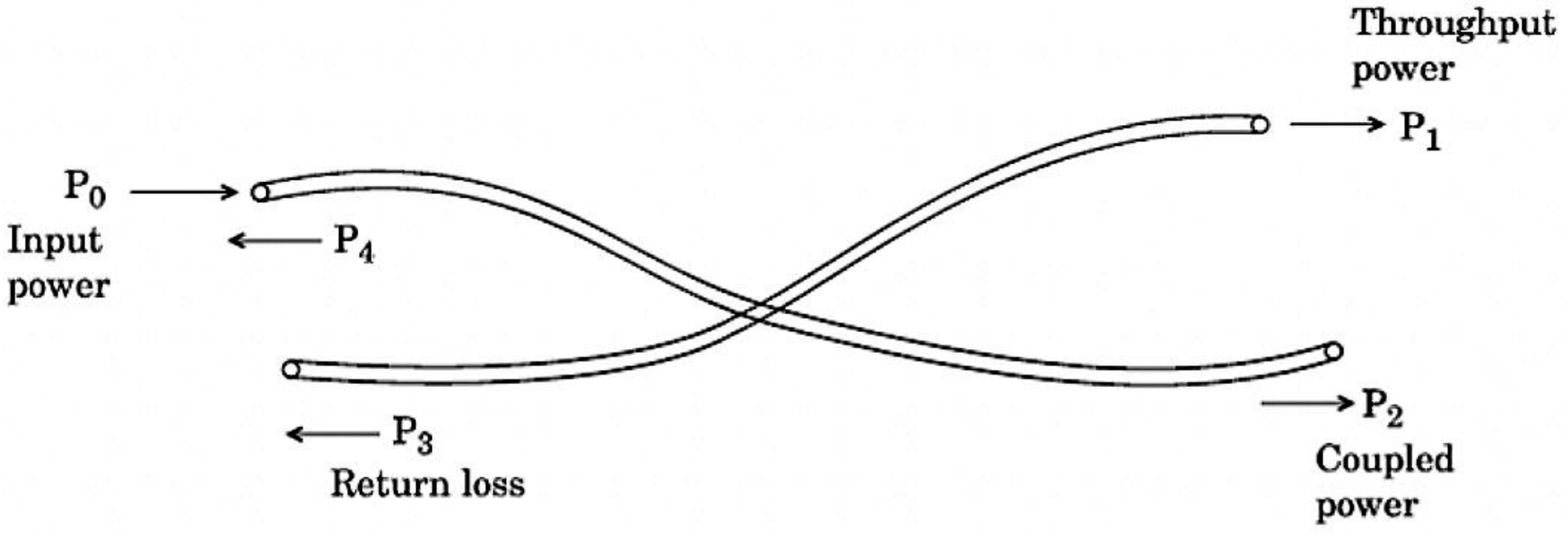
91394345947. **(ii) and (iv)**

91394345948. **(i) and (iv)**

Question Number : 88 Question Id : 91394311696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In an optical coupler :



following statements are given

(i) Splitting ratio = $\frac{P_2}{P_1 + P_2} \times 100\%$

(ii) Splitting ratio = $\frac{P_1}{P_2} \times 100\%$

(iii) Return loss = $10 \log \left(\frac{P_3}{P_0} \right)$

(iv) Return loss = $10 \log \left(\frac{P_3}{P_1 + P_2} \right)$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345949. **(ii) and (iii)**

91394345950. **(i) and (iv)**

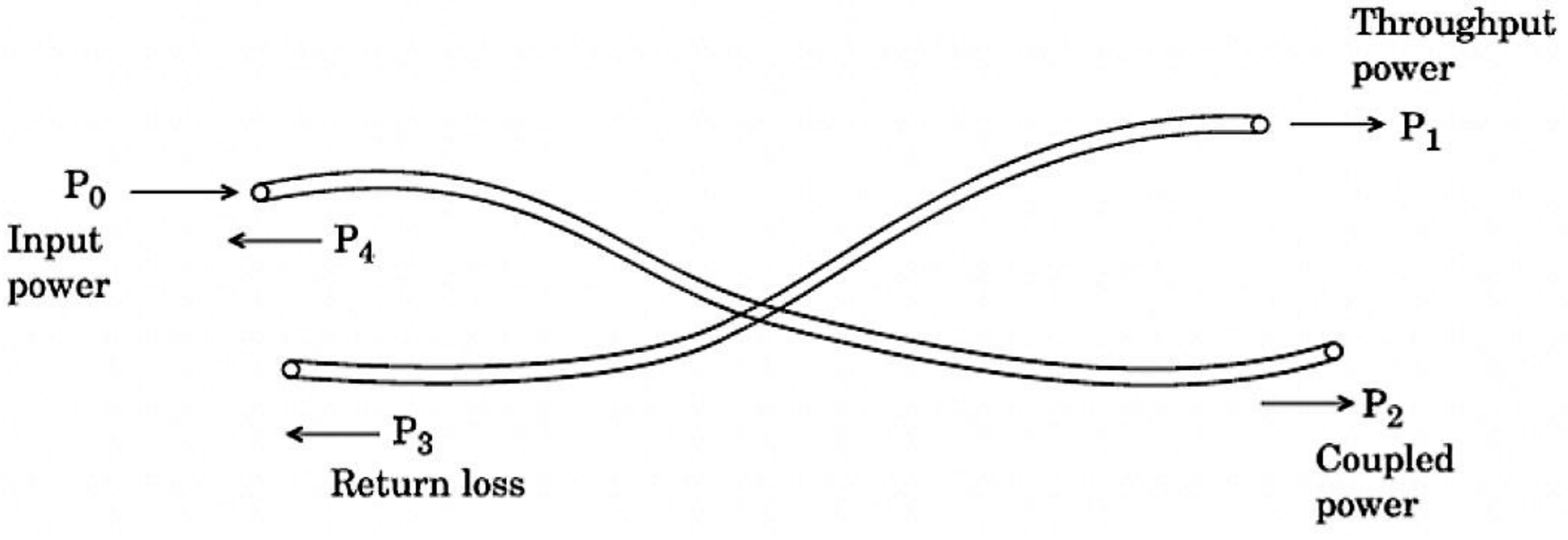
91394345951. **(ii) and (iv)**

91394345952. **(i) and (iii)**

Question Number : 88 Question Id : 91394311696 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In an optical coupler :



following statements are given

(i) Splitting ratio = $\frac{P_2}{P_1 + P_2} \times 100\%$

(ii) Splitting ratio = $\frac{P_1}{P_2} \times 100\%$

(iii) Return loss = $10 \log \left(\frac{P_3}{P_0} \right)$

(iv) Return loss = $10 \log \left(\frac{P_3}{P_1 + P_2} \right)$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345949. **(ii) and (iii)**

91394345950. **(i) and (iv)**

91394345951. **(ii) and (iv)**

91394345952. **(i) and (iii)**

Question Number : 89 Question Id : 91394311697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding the strain gauge transducer system.

(i) It has negligible loading effect on the primary transducer.

(ii) It has advantage of formation of push-pull systems for temperature compensation.

(iii) It has maximum loading effect on the primary transducer.

(iv) It has very large size and hence increases the size of primary elastic transducer.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345953. (i) and (ii)

91394345954. (i) and (iii)

91394345955. (ii) and (iii)

91394345956. (ii) and (iv)

Question Number : 89 Question Id : 91394311697 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding the strain gauge transducer system.

(i) It has negligible loading effect on the primary transducer.

(ii) It has advantage of formation of push-pull systems for temperature compensation.

(iii) It has maximum loading effect on the primary transducer.

(iv) It has very large size and hence increases the size of primary elastic transducer.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345953. (i) and (ii)

91394345954. (i) and (iii)

91394345955. (ii) and (iii)

91394345956. (ii) and (iv)

Question Number : 90 Question Id : 91394311698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Consider the following statements with respect to the characteristic polynomial defined as $q(s) = s^4 + s^3 + s^2 + s + k$.

(i) The system is stable for $k > 0$

(ii) The system is unstable for $k > 0$

(iii) The system is unstable for $k \leq 0$

(iv) The system is stable for $k \leq 0$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345957. **(i) and (iii)**

91394345958. **(i) and (iv)**

91394345959. **(ii) and (iii)**

91394345960. **(ii) and (iv)**

Question Number : 90 Question Id : 91394311698 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the following statements with respect to the characteristic polynomial defined as $q(s) = s^4 + s^3 + s^2 + s + k$.

(i) The system is stable for $k > 0$

(ii) The system is unstable for $k > 0$

(iii) The system is unstable for $k \leq 0$

(iv) The system is stable for $k \leq 0$

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394345957. **(i) and (iii)**

91394345958. **(i) and (iv)**

91394345959. **(ii) and (iii)**

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91394345960. **(ii) and (iv)**

Sub-Section Number: 3
Sub-Section Id: 913943592
Question Shuffling Allowed : Yes

Question Number : 91 Question Id : 91394311699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	Deal and Grove model	(i)	Proximity printing
(b)	MOS capacitor	(ii)	Geometrical consideration
(c)	Optical lithography	(iii)	$\frac{\varepsilon_i}{d}$
(d)	X-ray lithography	(iv)	Silicon oxidation

Code :

Options :

91394345961. **(a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)**

91394345962. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394345963. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

91394345964. **(a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)**

Question Number : 91 Question Id : 91394311699 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	Deal and Grove model	(i)	Proximity printing
(b)	MOS capacitor	(ii)	Geometrical consideration
(c)	Optical lithography	(iii)	$\frac{\varepsilon_i}{d}$
(d)	X-ray lithography	(iv)	Silicon oxidation

Code :

Options :

91394345961. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394345962. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345963. (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

91394345964. (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Question Number : 92 Question Id : 91394311700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Input resistance with output short-circuited	(i) h_f
(b) Reverse open circuit voltage amplification	(ii) h_r
(c) Output short-circuited current transfer ratio	(iii) h_o
(d) Output conductance with input open-circuited	(iv) h_i

Code :

Options :

91394345965. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345966. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345967. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394345968. (a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)

Question Number : 92 Question Id : 91394311700 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	Input resistance with output short-circuited	(i)	h_f
(b)	Reverse open circuit voltage amplification	(ii)	h_r
(c)	Output short-circuited current transfer ratio	(iii)	h_o
(d)	Output conductance with input open-circuited	(iv)	h_i

Code :

Options :

91394345965. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394345966. **(a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)**

91394345967. **(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)**

91394345968. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

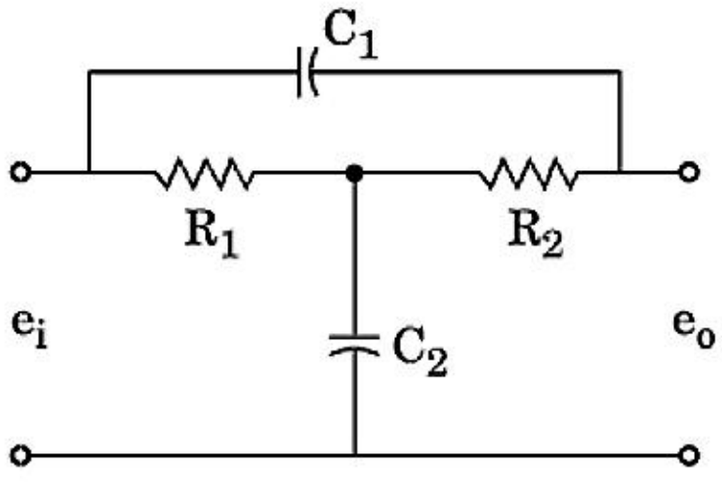
Question Number : 93 Question Id : 91394311701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

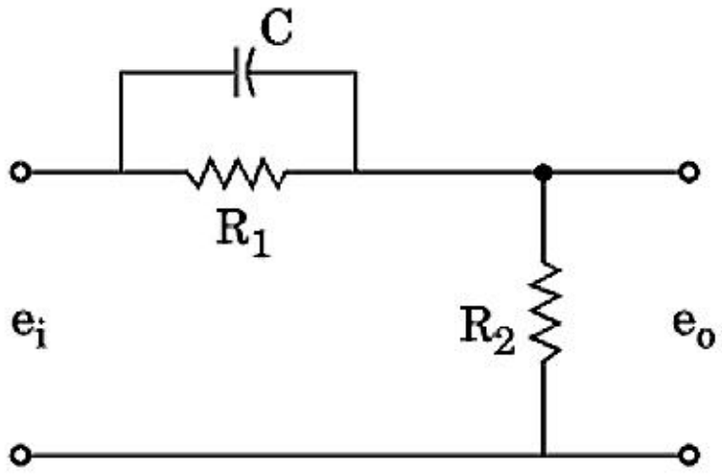
Match the two lists and choose the correct answer from the code given below :

List I

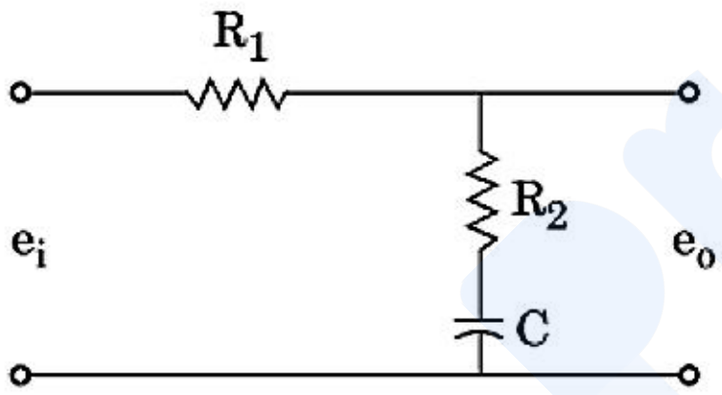
(a)



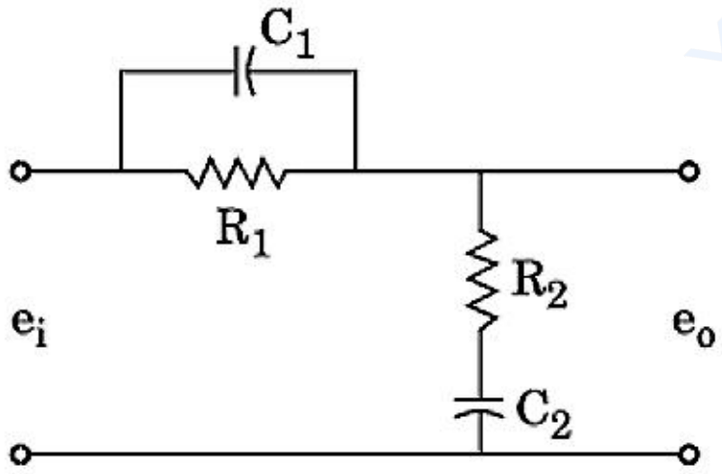
(b)



(c)



(d)



List II

(i) A lead-lag network

(ii) A lag network

(iii) A bridge-T filter network

(iv) A lead network

Code :

Options :

91394345969. **(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)**

91394345970. **(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)**

91394345971. **(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)**

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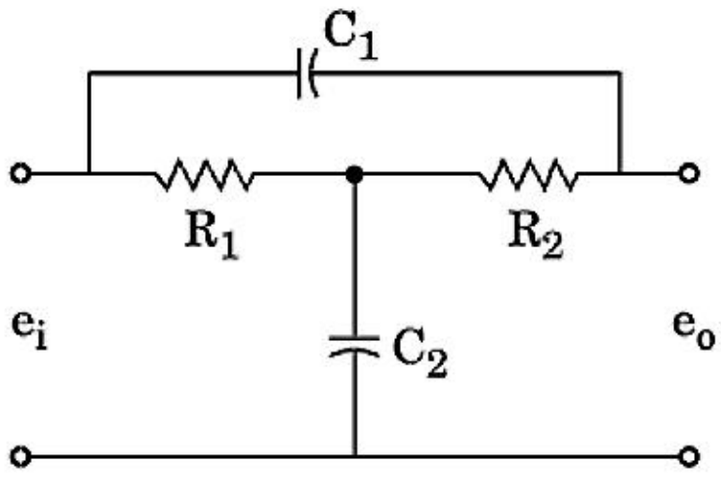
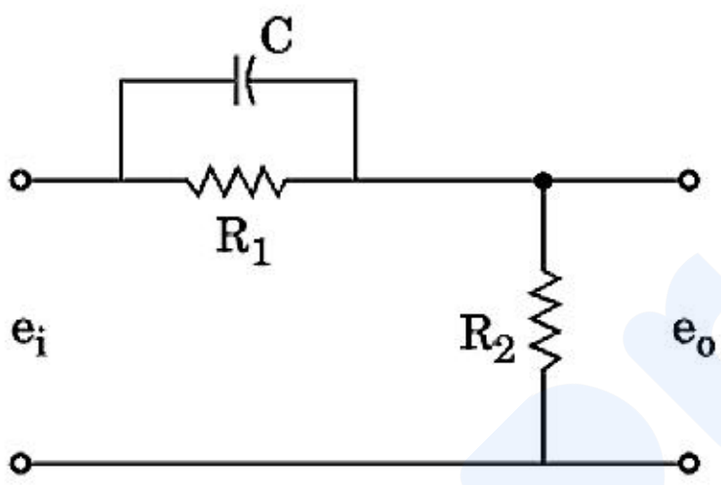
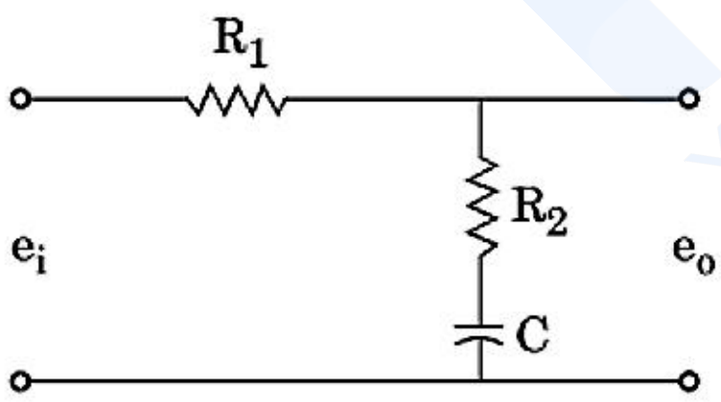
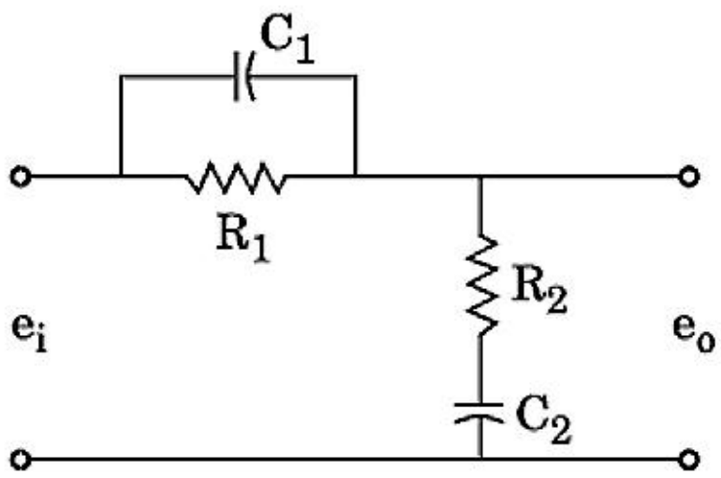
91394345972. **(a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)**

Question Number : 93 Question Id : 91394311701 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	**List II**
(a) 	(i) A lead-lag network
(b) 	(ii) A lag network
(c) 	(iii) A bridge-T filter network
(d) 	(iv) A lead network

Code :

Options :

91394345969. **(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)**

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91394345970. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394345971. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345972. (a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

Question Number : 94 Question Id : 91394311702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I (Quantity)	List II (Transducer system)
(a) Temperature	(i) Cantilever
(b) Force	(ii) Manometer
(c) Liquid level	(iii) Dynamometer
(d) Torque	(iv) Bimetallic element

Code :

Options :

91394345973. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394345974. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345975. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394345976. (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

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Question Number : 94 Question Id : 91394311702 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I (Quantity)	List II (Transducer system)
(a) Temperature	(i) Cantilever
(b) Force	(ii) Manometer
(c) Liquid level	(iii) Dynamometer
(d) Torque	(iv) Bimetallic element

Code :

Options :

91394345973. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

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91394345974. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394345975. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394345976. (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

Question Number : 95 Question Id : 91394311703 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Current gain in common base	(i) 1 (ONE)
(b) Input impedance in common base	(ii) Less than unity
(c) Voltage gain in common collector	(iii) Very high ($\simeq 2\ M\Omega$)
(d) Output impedance in common base	(iv) Lowest

Code :

Options :

91394345977. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345978. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345979. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345980. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Question Number : 95 Question Id : 91394311703 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Current gain in common base	(i) 1 (ONE)
(b) Input impedance in common base	(ii) Less than unity
(c) Voltage gain in common collector	(iii) Very high ($\simeq 2\ M\Omega$)
(d) Output impedance in common base	(iv) Lowest

Code :

Options :

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91394345977. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345978. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345979. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345980. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Question Number : 96 Question Id : 91394311704 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Concentration of holes in n-type semiconductor	(i) $\frac{n_i^2}{N_A}$
(b) Concentration of electrons in p-type semiconductor	(ii) $\frac{kT}{q} ln \frac{N_D N_A}{n_i^2}$
(c) Fermi level in n-type material	(iii) $\frac{n_i^2}{N_D}$
(d) Contact potential	(iv) $E_C - kT\, ln \frac{N_C}{N_D}$

Code :

Options :

91394345981. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345982. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

91394345983. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394345984. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Question Number : 96 Question Id : 91394311704 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Concentration of holes in n-type semiconductor	(i) $\frac{n_i^2}{N_A}$
(b) Concentration of electrons in p-type semiconductor	(ii) $\frac{kT}{q} ln \frac{N_D N_A}{n_i^2}$
(c) Fermi level in n-type material	(iii) $\frac{n_i^2}{N_D}$
(d) Contact potential	(iv) $E_C - kT\, ln \frac{N_C}{N_D}$

Code :

Options :

91394345981. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394345982. **(a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)**

91394345983. **(a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)**

91394345984. **(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)**

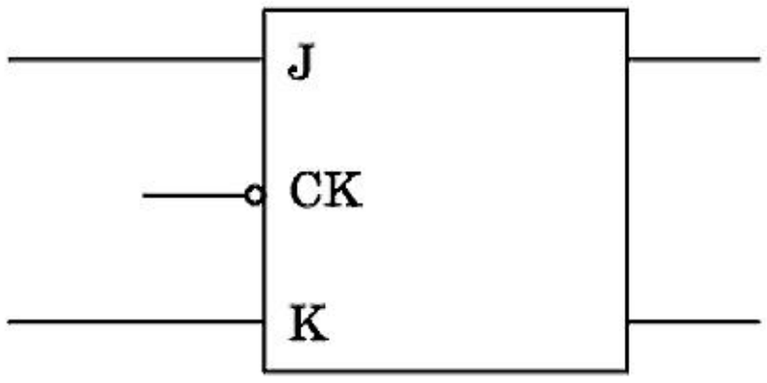
Question Number : 97 Question Id : 91394311705 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

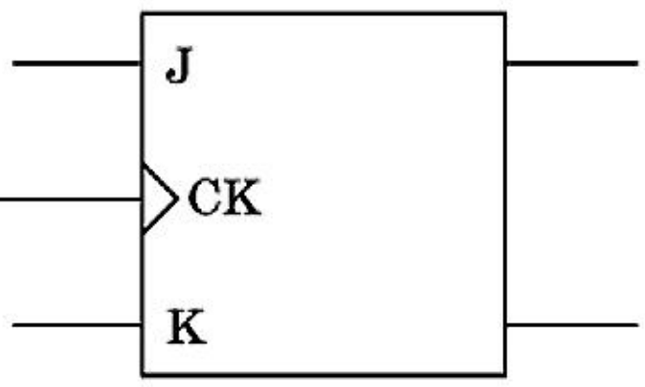
Match the two lists and choose the correct answer from the code given below :

List I

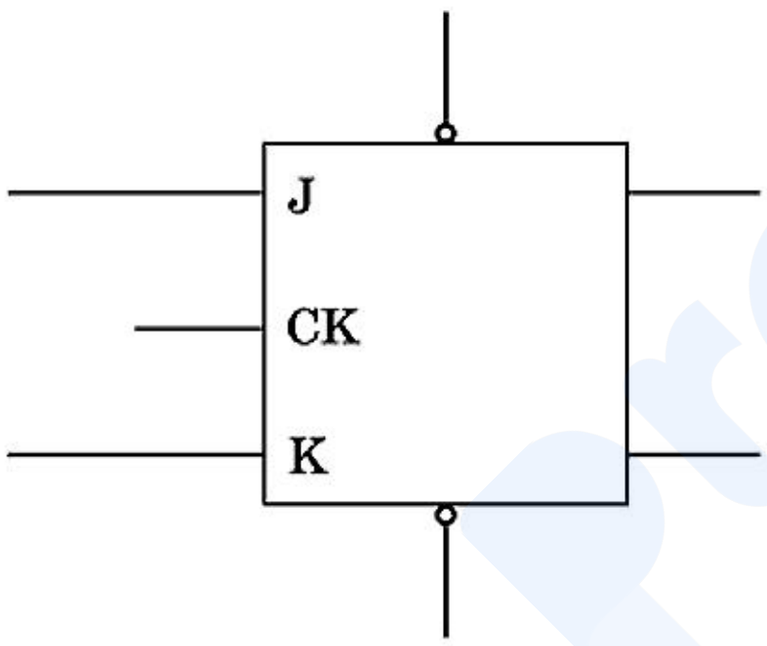
(a)



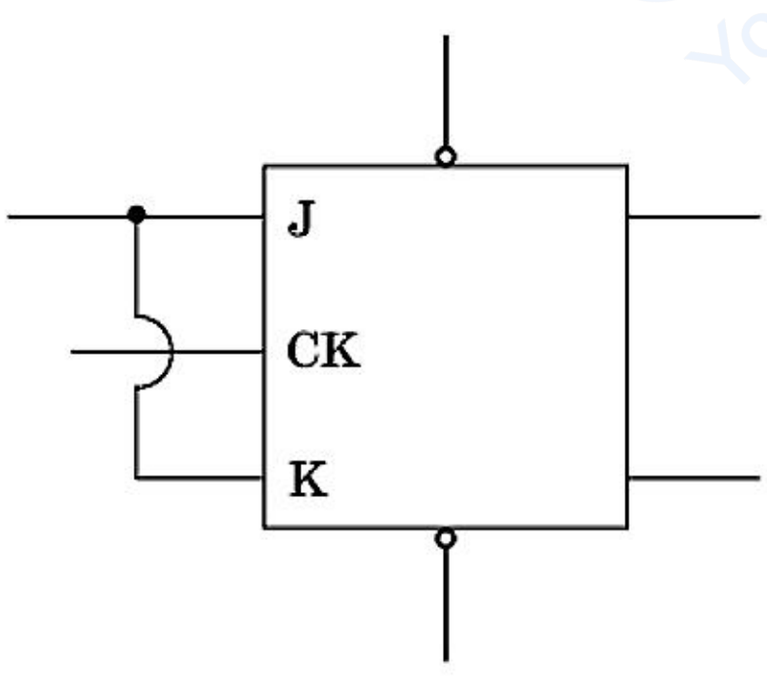
(b)



(c)



(d)



List II

(i) Positive edge-triggered flip-flop

(ii) T-flip-flop

(iii) Clocked flip-flop with clear an preset

(iv) Negative level triggered flip-flop

Code :

Options :

91394345985. **(a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)**

91394345986. **(a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)**

91394345987. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345988. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

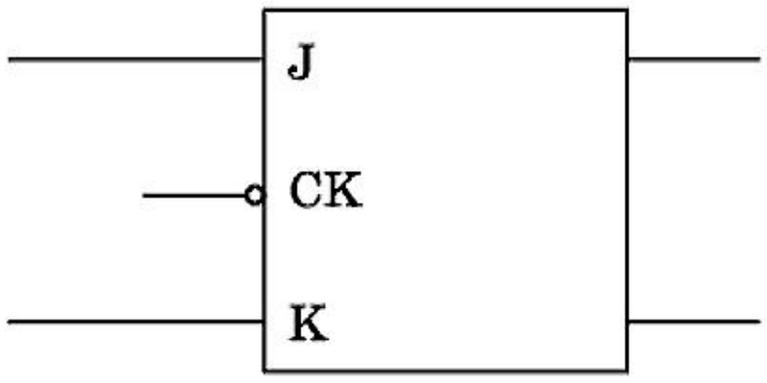
Question Number : 97 Question Id : 91394311705 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

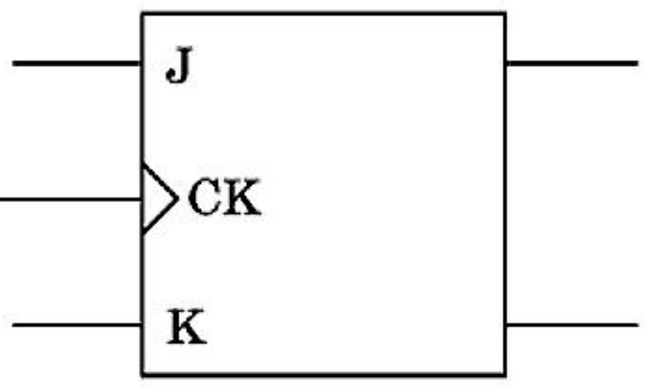
Match the two lists and choose the correct answer from the code given below :

List I

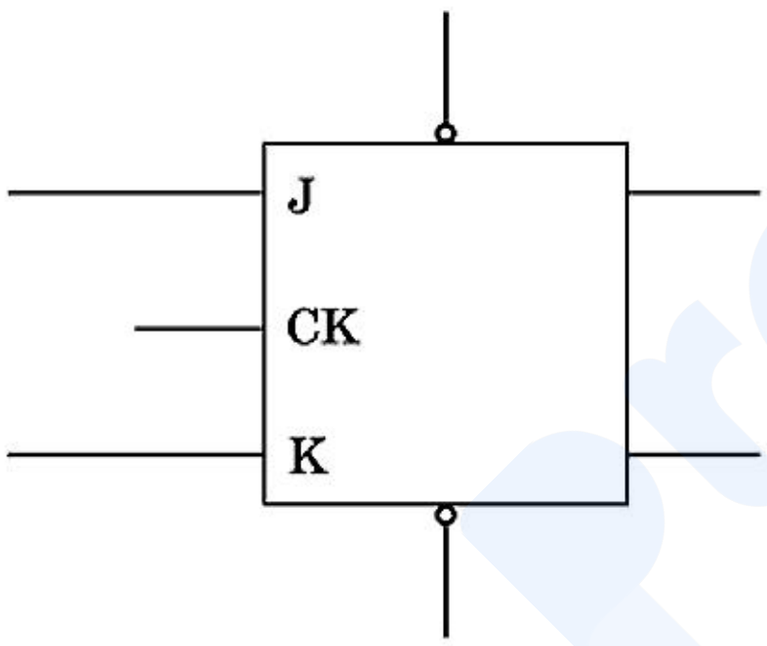
(a)



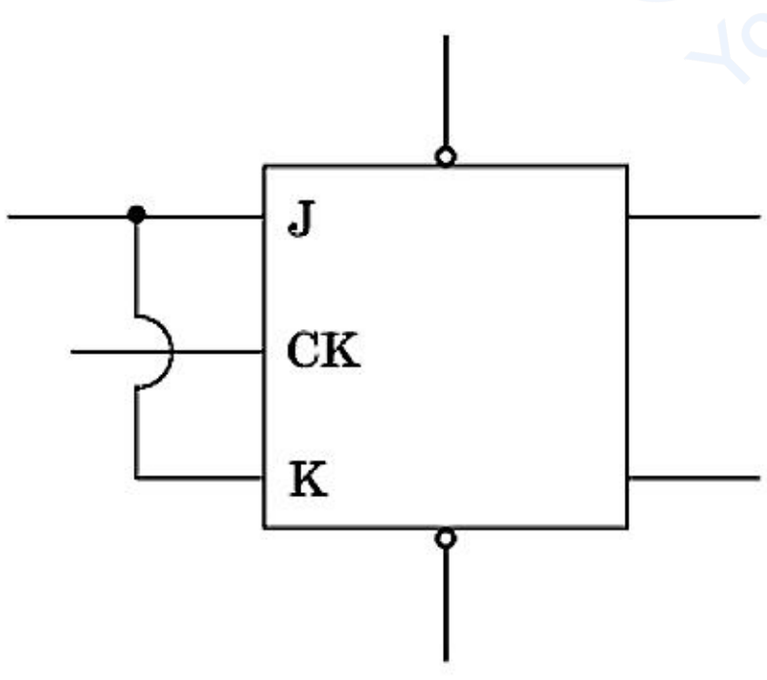
(b)



(c)



(d)



List II

(i) Positive edge-triggered flip-flop

(ii) T-flip-flop

(iii) Clocked flip-flop with clear an preset

(iv) Negative level triggered flip-flop

Code :

Options :

91394345985. **(a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)**

91394345986. **(a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)**

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91394345987. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394345988. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Question Number : 98 Question Id : 91394311706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Flash – ADC	(i) Higher resolution and good noise immunity
(b) SAC – ADC	(ii) Low noise immunity and medium speed
(c) RAMP – ADC	(iii) Low speed and good noise immunity
(d) Dual Slope – ADC	(iv) Faster speed and low noise immunity

Code :

Options :

91394345989. (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

91394345990. (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394345991. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394345992. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Question Number : 98 Question Id : 91394311706 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Flash – ADC	(i) Higher resolution and good noise immunity
(b) SAC – ADC	(ii) Low noise immunity and medium speed
(c) RAMP – ADC	(iii) Low speed and good noise immunity
(d) Dual Slope – ADC	(iv) Faster speed and low noise immunity

Code :

Options :

91394345989. (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

91394345990. (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394345991. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

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91394345992. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

Question Number : 99 Question Id : 91394311707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) LDA addr	(i) Arithmetic group
(b) ACI data	(ii) Data transfer group
(c) ORI data	(iii) Logical group
(d) JZ addr	(iv) Branch control group

Code :

Options :

91394345993. (a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)

91394345994. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345995. (a)–(iii), (b)–(ii), (c)–(i), (d)–(iv)

91394345996. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Question Number : 99 Question Id : 91394311707 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) LDA addr	(i) Arithmetic group
(b) ACI data	(ii) Data transfer group
(c) ORI data	(iii) Logical group
(d) JZ addr	(iv) Branch control group

Code :

Options :

91394345993. (a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)

91394345994. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394345995. (a)–(iii), (b)–(ii), (c)–(i), (d)–(iv)

91394345996. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

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Question Number : 100 Question Id : 91394311708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

	List I			**List II**
	S_0	S_1		
(a)	0	0	(i)	Opcode fetch
(b)	0	1	(ii)	Write
(c)	1	0	(iii)	Read
(d)	1	1	(iv)	Halt

Code :

Options :

91394345997. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394345998. **(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)**

91394345999. **(a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)**

91394346000. **(a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)**

Question Number : 100 Question Id : 91394311708 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

	List I			**List II**
	S_0	S_1		
(a)	0	0	(i)	Opcode fetch
(b)	0	1	(ii)	Write
(c)	1	0	(iii)	Read
(d)	1	1	(iv)	Halt

Code :

Options :

91394345997. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394345998. **(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)**

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91394345999. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346000. (a)–(ii), (b)–(i), (c)–(iii), (d)–(iv)

Question Number : 101 Question Id : 91394311709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	$a \times b - c \times d$	(i)	3*x*x + 2*x + 5
(b)	$(m + n)(a + b)$	(ii)	a*b – c*d
(c)	$3x^2 + 2x + 5$	(iii)	(a + b * c)/(d + e)
(d)	$\frac{(a + b \times c)}{d + e}$	(iv)	(m + n) * (a + b)

Code :

Options :

91394346001. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394346002. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394346003. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346004. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

Question Number : 101 Question Id : 91394311709 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	$a \times b - c \times d$	(i)	3*x*x + 2*x + 5
(b)	$(m + n)(a + b)$	(ii)	a*b – c*d
(c)	$3x^2 + 2x + 5$	(iii)	(a + b * c)/(d + e)
(d)	$\frac{(a + b \times c)}{d + e}$	(iv)	(m + n) * (a + b)

Code :

Options :

91394346001. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

91394346002. (a)–(iv), (b)–(ii), (c)–(iii), (d)–(i)

91394346003. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346004. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

Question Number : 102 Question Id : 91394311710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) x ! = y	(i) x is less than y
(b) x < y	(ii) x is greater than y
(c) x > y	(iii) x is less than or equal to y
(d) x <= y	(iv) x is not equal to y

Code :

Options :

91394346005. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346006. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346007. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346008. (a)–(iii), (b)–(ii), (c)–(iv), (d)–(i)

Question Number : 102 Question Id : 91394311710 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) x ! = y	(i) x is less than y
(b) x < y	(ii) x is greater than y
(c) x > y	(iii) x is less than or equal to y
(d) x <= y	(iv) x is not equal to y

Code :

Options :

91394346005. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

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91394346006. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346007. (a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)

91394346008. (a)–(iii), (b)–(ii), (c)–(iv), (d)–(i)

Question Number : 103 Question Id : 91394311711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) TE mode	(i) No magnetic field in the direction of propagation
(b) TM mode	(ii) No electric, no magnetic field in the direction of propagation
(c) TEM mode	(iii) Both electric and magnetic field present in the direction of propagation
(d) Hybrid mode	(iv) No electric field in the direction of propagation

Code :

Options :

91394346009. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346010. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346011. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346012. (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Question Number : 103 Question Id : 91394311711 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) TE mode	(i) No magnetic field in the direction of propagation
(b) TM mode	(ii) No electric, no magnetic field in the direction of propagation
(c) TEM mode	(iii) Both electric and magnetic field present in the direction of propagation
(d) Hybrid mode	(iv) No electric field in the direction of propagation

Code :

Options :

91394346009. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

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91394346010. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346011. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346012. (a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)

Question Number : 104 Question Id : 91394311712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Travelling wave tube	(i) kW – MW output power
(b) Magnetron	(ii) Low frequency operation
(c) Triodes	(iii) Low power output
(d) Gunn diode	(iv) Slow wave circuits

Code :

Options :

91394346013. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346014. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

91394346015. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346016. (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

Question Number : 104 Question Id : 91394311712 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Travelling wave tube	(i) kW – MW output power
(b) Magnetron	(ii) Low frequency operation
(c) Triodes	(iii) Low power output
(d) Gunn diode	(iv) Slow wave circuits

Code :

Options :

91394346013. (a)–(iv), (b)–(ii), (c)–(i), (d)–(iii)

91394346014. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

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91394346015. (a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)

91394346016. (a)–(i), (b)–(iv), (c)–(iii), (d)–(ii)

Question Number : 105 Question Id : 91394311713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Foster Seeley discriminator	(i) Optical fibre
(b) Envelope detector	(ii) Microwave
(c) APD detector	(iii) AM wave
(d) PIN detector	(iv) FM signal

Code :

Options :

91394346017. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346018. (a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

91394346019. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346020. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Question Number : 105 Question Id : 91394311713 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) Foster Seeley discriminator	(i) Optical fibre
(b) Envelope detector	(ii) Microwave
(c) APD detector	(iii) AM wave
(d) PIN detector	(iv) FM signal

Code :

Options :

91394346017. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346018. (a)–(ii), (b)–(iii), (c)–(i), (d)–(iv)

91394346019. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

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91394346020. (a)–(ii), (b)–(iv), (c)–(i), (d)–(iii)

Question Number : 106 Question Id : 91394311714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) AM-modulator	(i) Phase discrimination
(b) VSB	(ii) Balanced modulator
(c) SSB	(iii) Chopper type
(d) DSB	(iv) Phase cancellation method

Code :

Options :

91394346021. (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394346022. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346023. (a)–(i), (b)–(iii), (c)–(ii), (d)–(iv)

91394346024. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

Question Number : 106 Question Id : 91394311714 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) AM-modulator	(i) Phase discrimination
(b) VSB	(ii) Balanced modulator
(c) SSB	(iii) Chopper type
(d) DSB	(iv) Phase cancellation method

Code :

Options :

91394346021. (a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)

91394346022. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346023. (a)–(i), (b)–(iii), (c)–(ii), (d)–(iv)

91394346024. (a)–(iii), (b)–(i), (c)–(iv), (d)–(ii)

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Question Number : 107 Question Id : 91394311715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) V_{rms} of half wave rectifier output	(i) $\frac{2V_m}{\pi}$
(b) V_{rms} of bridge rectifier output	(ii) $\frac{V_m}{\pi}$
(c) V_{dc} (half wave rectifier output)	(iii) V
(d) V_{dc} (full wave output of full wave rectifier)	(iv) $\frac{V}{\sqrt{2}}$

Code :

Options :

91394346025. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

91394346026. **(a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)**

91394346027. **(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)**

91394346028. **(a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)**

Question Number : 107 Question Id : 91394311715 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) V_{rms} of half wave rectifier output	(i) $\frac{2V_m}{\pi}$
(b) V_{rms} of bridge rectifier output	(ii) $\frac{V_m}{\pi}$
(c) V_{dc} (half wave rectifier output)	(iii) V
(d) V_{dc} (full wave output of full wave rectifier)	(iv) $\frac{V}{\sqrt{2}}$

Code :

Options :

91394346025. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

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91394346026. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346027. (a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)

91394346028. (a)–(iv), (b)–(iii), (c)–(ii), (d)–(i)

Question Number : 108 Question Id : 91394311716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I		List II	
(a)	V-number	(i)	$V^2/2$
(b)	Birefringence	(ii)	$x_1 \sqrt{2\Delta}$
(c)	No. of modes	(iii)	$k_0 (n_y - n_x)$
(d)	N.A.	(iv)	$\frac{2\pi a}{\pi} \sqrt{n_1^2 - n_2^2}$

Code :

Options :

91394346029. (a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)

91394346030. (a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)

91394346031. (a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)

91394346032. (a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)

Question Number : 108 Question Id : 91394311716 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

	List I		List II
(a)	V-number	(i)	$V^2/2$
(b)	Birefringence	(ii)	$x_1\sqrt{2\Delta}$
(c)	No. of modes	(iii)	$k_0(n_y - n_x)$
(d)	N.A.	(iv)	$\frac{2\pi a}{\pi}\sqrt{n_1^2 - n_2^2}$

Code :

Options :

91394346029. **(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)**

91394346030. **(a)–(iv), (b)–(iii), (c)–(i), (d)–(ii)**

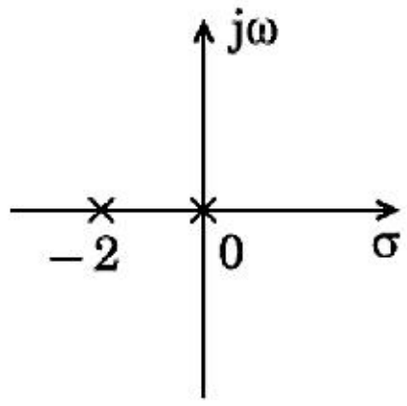
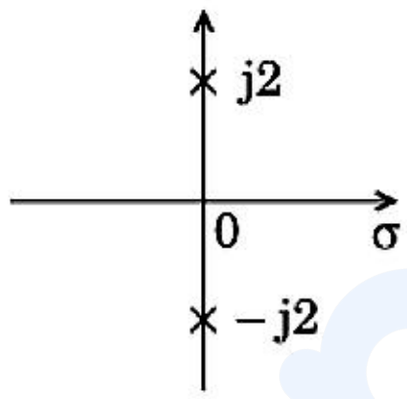
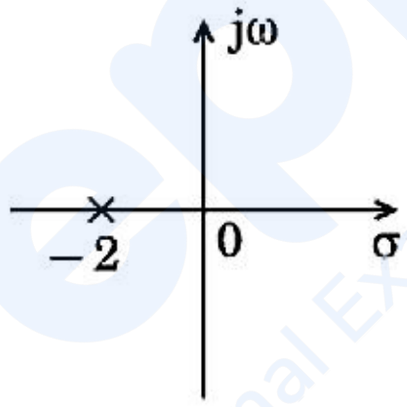
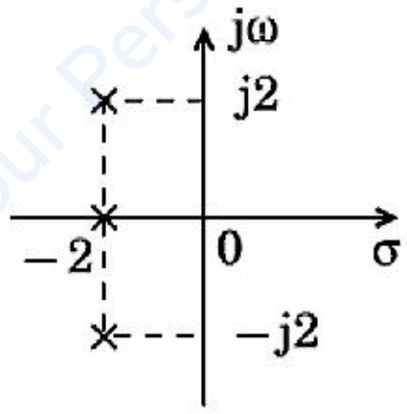
91394346031. **(a)–(i), (b)–(ii), (c)–(iv), (d)–(iii)**

91394346032. **(a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)**

Question Number : 109 Question Id : 91394311717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	List II
(a) $\sin 2t$	(i) 
(b) e^{-2t}	(ii) 
(c) $e^{-2t} \sin 2t$	(iii) 
(d) $1 - e^{-2t}$	(iv) 

Code :

Options :

91394346033. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

91394346034. **(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)**

91394346035. **(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)**

91394346036. **(a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)**

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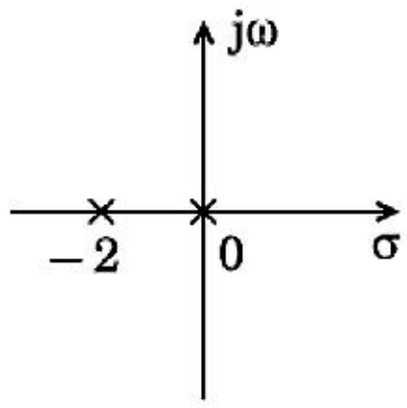
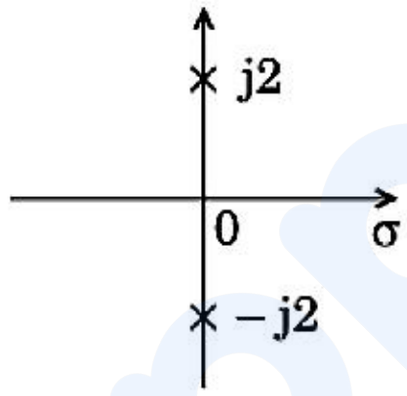
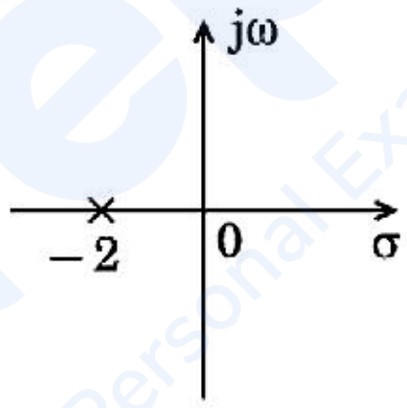
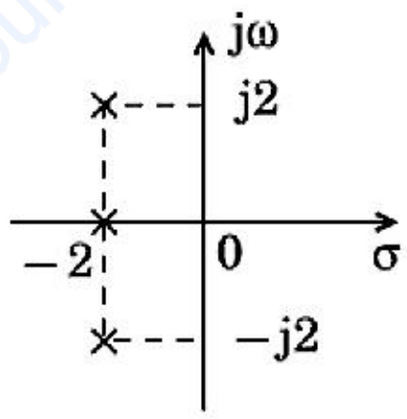
Question Number : 109 Question Id : 91394311717 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

List I	**List II**
(a) $\sin 2t$	(i) 
(b) e^{-2t}	(ii) 
(c) $e^{-2t} \sin 2t$	(iii) 
(d) $1 - e^{-2t}$	(iv) 

Code :

Options :

91394346033. **(a)–(ii), (b)–(iii), (c)–(iv), (d)–(i)**

91394346034. **(a)–(iii), (b)–(iv), (c)–(i), (d)–(ii)**

91394346035. **(a)–(iii), (b)–(iv), (c)–(ii), (d)–(i)**

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91394346036. **(a)–(ii), (b)–(i), (c)–(iv), (d)–(iii)**

Question Number : 110 Question Id : 91394311718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Match the two lists and choose the correct answer from the code given below :

	List I (Function)		**List II (Laplace transform)**
(a)	$tx(t)$	(i)	$\int_s^\infty x(s)\,ds$
(b)	$\frac{x(t)}{t}$	(ii)	$\lim_{s \to \infty} s\,x(s)$
(c)	$x(0^-)$	(iii)	$\lim_{s \to 0} s\,x(s)$
(d)	$x(\infty)$	(iv)	$\frac{-dx(s)}{ds}$

Code :

Options :

91394346037. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394346038. **(a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)**

91394346039. **(a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)**

91394346040. **(a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)**

Question Number : 110 Question Id : 91394311718 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Match the two lists and choose the correct answer from the code given below :

	List I (Function)		List II (Laplace transform)
(a)	$tx(t)$	(i)	$\int_{s}^{\infty} x(s)\,ds$
(b)	$\frac{x(t)}{t}$	(ii)	$\lim_{s \to \infty} s\,x(s)$
(c)	$x(0^-)$	(iii)	$\lim_{s \to 0} s\,x(s)$
(d)	$x(\infty)$	(iv)	$\frac{-dx(s)}{ds}$

Code :

Options :

91394346037. **(a)–(i), (b)–(ii), (c)–(iii), (d)–(iv)**

91394346038. **(a)–(iv), (b)–(i), (c)–(ii), (d)–(iii)**

91394346039. **(a)–(iv), (b)–(i), (c)–(iii), (d)–(ii)**

91394346040. **(a)–(i), (b)–(iv), (c)–(ii), (d)–(iii)**

Sub-Section Number: 4
Sub-Section Id: 913943593
Question Shuffling Allowed : Yes

Question Number : 111 Question Id : 91394311719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

In bipolar I.C. technology, the n-p-n transistors have the following regions :

(i) Emitter

(ii) Base

(iii) Collector

(iv) Substrate

Arrange them in ascending order of their resistance offered.

Options :

91394346041. **(i), (ii), (iii), (iv)**

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91394346042. (ii), (iii), (iv), (i)

91394346043. (iii), (iv), (i), (ii)

91394346044. (iv), (i), (ii), (iii)

Question Number : 111 Question Id : 91394311719 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

In bipolar I.C. technology, the n-p-n transistors have the following regions :

(i) Emitter

(ii) Base

(iii) Collector

(iv) Substrate

Arrange them in ascending order of their resistance offered.

Options :

91394346041. (i), (ii), (iii), (iv)

91394346042. (ii), (iii), (iv), (i)

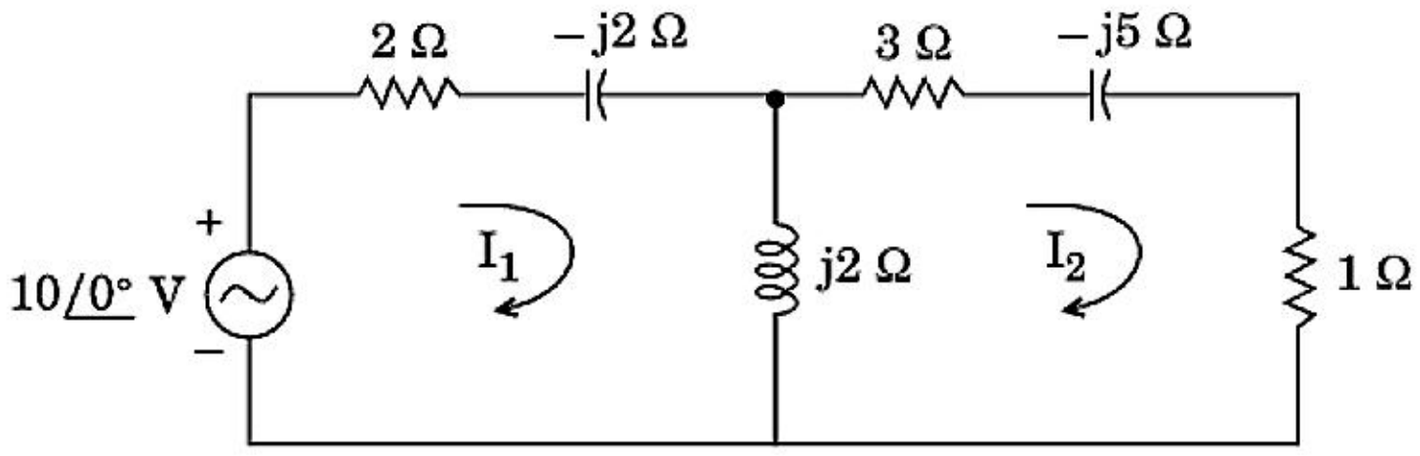
91394346043. (iii), (iv), (i), (ii)

91394346044. (iv), (i), (ii), (iii)

Question Number : 112 Question Id : 91394311720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the following two-mesh network :



(i) The power dissipated in 1 Ω resistor is P_1

(ii) The power dissipated in 2 Ω resistor is P_2

(iii) The power dissipated in 3 Ω resistor is P_3

(iv) The power supplied by the source is P

Arrange above in increasing order of power.

Options :

91394346045. **(i), (ii), (iii), (iv)**

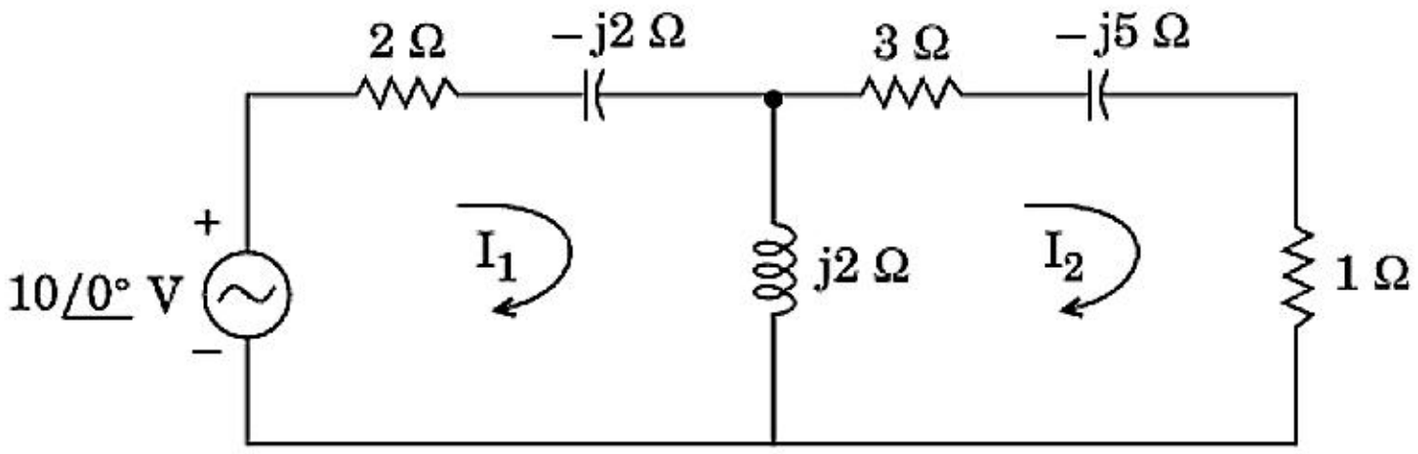
91394346046. **(i), (iii), (ii), (iv)**

91394346047. **(iii), (i), (ii), (iv)**

91394346048. **(ii), (iii), (i), (iv)**

Question Number : 112 Question Id : 91394311720 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Consider the following two-mesh network :



(i) The power dissipated in 1 Ω resistor is P_1

(ii) The power dissipated in 2 Ω resistor is P_2

(iii) The power dissipated in 3 Ω resistor is P_3

(iv) The power supplied by the source is P

Arrange above in increasing order of power.

Options :

91394346045. **(i), (ii), (iii), (iv)**

91394346046. **(i), (iii), (ii), (iv)**

91394346047. **(iii), (i), (ii), (iv)**

91394346048. **(ii), (iii), (i), (iv)**

Question Number : 113 Question Id : 91394311721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

A 120 V, 20 Hz source supplies a series circuit consisting of a 5 Ω capacitive reactance, a 1·6 Ω resistor, and a coil with resistance and inductive reactance of 3 Ω and 1·2 Ω respectively.

(i) The input impedance is Z

(ii) The circuit current is I

(iii) The voltage across the coil is V_L

(iv) The resonant frequency f_r

Arrange the above in increasing order of their numerical values.

Options :

91394346049. **(i), (ii), (iv), (iii)**

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91394346050. (iv), (iii), (ii), (i)

91394346051. (iv), (ii), (iii), (i)

91394346052. (i), (ii), (iii), (iv)

Question Number : 113 Question Id : 91394311721 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A 120 V, 20 Hz source supplies a series circuit consisting of a 5 Ω capacitive reactance, a 1·6 Ω resistor, and a coil with resistance and inductive reactance of 3 Ω and 1·2 Ω respectively.

(i) The input impedance is Z

(ii) The circuit current is I

(iii) The voltage across the coil is V_L

(iv) The resonant frequency f_r

Arrange the above in increasing order of their numerical values.

Options :

91394346049. (i), (ii), (iv), (iii)

91394346050. (iv), (iii), (ii), (i)

91394346051. (iv), (ii), (iii), (i)

91394346052. (i), (ii), (iii), (iv)

Question Number : 114 Question Id : 91394311722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following materials are given :

(i) Carbon

(ii) Silicon carbide

(iii) Silicon nitride

(iv) Gallium nitride

Arrange them in ascending order of their dielectric consistent.

Options :

91394346053. (i), (iii), (ii), (iv)

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91394346054. (ii), (iii), (iv), (i)

91394346055. (iii), (iv), (i), (ii)

91394346056. (iv), (i), (ii), (iii)

Question Number : 114 Question Id : 91394311722 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following materials are given :

(i) Carbon

(ii) Silicon carbide

(iii) Silicon nitride

(iv) Gallium nitride

Arrange them in ascending order of their dielectric consistent.

Options :

91394346053. (i), (iii), (ii), (iv)

91394346054. (ii), (iii), (iv), (i)

91394346055. (iii), (iv), (i), (ii)

91394346056. (iv), (i), (ii), (iii)

Question Number : 115 Question Id : 91394311723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange the following materials in ascending order of their diffusivity in Silicon.

(i) Li

(ii) Na

(iii) K

(iv) Ag

Options :

91394346057. (i), (ii), (iii), (iv)

91394346058. (iii), (ii), (iv), (i)

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91394346059. (iv), (iii), (i), (ii)

91394346060. (ii), (i), (iv), (iii)

Question Number : 115 Question Id : 91394311723 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange the following materials in ascending order of their diffusivity in Silicon.

(i) Li

(ii) Na

(iii) K

(iv) Ag

Options :

91394346057. (i), (ii), (iii), (iv)

91394346058. (iii), (ii), (iv), (i)

91394346059. (iv), (iii), (i), (ii)

91394346060. (ii), (i), (iv), (iii)

Question Number : 116 Question Id : 91394311724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are the intercepts for SIM instruction :

(i) Serial Output Data (SOD)

(ii) Mark Set Enable (MSE)

(iii) SOD Enable (SDE)

(iv) Reset RST 7·5 (R7·5)

Arrange them in ascending order.

Options :

91394346061. (ii), (iv), (iii), (i)

91394346062. (iv), (ii), (iii), (i)

91394346063. (i), (ii), (iii), (iv)

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91394346064. (ii), (iii), (iv), (i)

Question Number : 116 Question Id : 91394311724 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are the intercepts for SIM instruction :

(i) Serial Output Data (SOD)

(ii) Mark Set Enable (MSE)

(iii) SOD Enable (SDE)

(iv) Reset RST 7·5 (R7·5)

Arrange them in ascending order.

Options :

91394346061. (ii), (iv), (iii), (i)

91394346062. (iv), (ii), (iii), (i)

91394346063. (i), (ii), (iii), (iv)

91394346064. (ii), (iii), (iv), (i)

Question Number : 117 Question Id : 91394311725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following operations on pointers would never work out ?

(i) Pointer variables can be compared provided both variables point to objects of the same data type

(ii) Addition of two pointers

(iii) Division of a pointer with a constant

(iv) Multiplication of a pointer with a constant

Options :

91394346065. (i), (ii) and (iii)

91394346066. (i), (ii) and (iv)

91394346067. (ii), (iii) and (iv)

91394346068. (i), (iii) and (iv)

Question Number : 117 Question Id : 91394311725 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following operations on pointers would never work out ?

(i) Pointer variables can be compared provided both variables point to objects of the same data type

(ii) Addition of two pointers

(iii) Division of a pointer with a constant

(iv) Multiplication of a pointer with a constant

Options :

91394346065. (i), (ii) and (iii)

91394346066. (i), (ii) and (iv)

91394346067. (ii), (iii) and (iv)

91394346068. (i), (iii) and (iv)

Question Number : 118 Question Id : 91394311726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following are correct ?

(i) All elements of an array are ints

(ii) All elements of an array are floats

(iii) Some elements of an array can be ints and other floats

(iv) All elements of an array are chars

Options :

91394346069. (i), (ii) and (iii)

91394346070. (i), (ii) and (iv)

91394346071. (ii), (iii) and (iv)

91394346072. (i), (iii) and (iv)

Question Number : 118 Question Id : 91394311726 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Which of the following are correct ?

(i) All elements of an array are ints

(ii) All elements of an array are floats

(iii) Some elements of an array can be ints and other floats

(iv) All elements of an array are chars

Options :

91394346069. (i), (ii) and (iii)

91394346070. (i), (ii) and (iv)

91394346071. (ii), (iii) and (iv)

91394346072. (i), (iii) and (iv)

Question Number : 119 Question Id : 91394311727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Following are the light transmission mediums :

(i) Glass

(ii) GaAs

(iii) Diamond

(iv) Water

Arrange their refractive index in descending order. The correct sequence is given by

Options :

91394346073. (iv), (ii), (i), (iii)

91394346074. (ii), (i), (iii), (iv)

91394346075. (i), (ii), (iv), (iii)

91394346076. (ii), (iii), (i), (iv)

Question Number : 119 Question Id : 91394311727 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Following are the light transmission mediums :

(i) Glass

(ii) GaAs

(iii) Diamond

(iv) Water

Arrange their refractive index in descending order. The correct sequence is given by

Options :

91394346073. (iv), (ii), (i), (iii)

91394346074. (ii), (i), (iii), (iv)

91394346075. (i), (ii), (iv), (iii)

91394346076. (ii), (iii), (i), (iv)

Question Number : 120 Question Id : 91394311728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of their transmission distance without using repeater.

(i) Metal wired transmission

(ii) Wireless transmission

(iii) Frequency modulated wave transmission

(iv) Ground waves transmission

Options :

91394346077. (ii), (i), (iv), (iii)

91394346078. (ii), (iii), (i), (iv)

91394346079. (i), (ii), (iii), (iv)

91394346080. (ii), (i), (iii), (iv)

Question Number : 120 Question Id : 91394311728 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of their transmission distance without using repeater.

(i) Metal wired transmission

(ii) Wireless transmission

(iii) Frequency modulated wave transmission

(iv) Ground waves transmission

Options :

91394346077. (ii), (i), (iv), (iii)

91394346078. (ii), (iii), (i), (iv)

91394346079. (i), (ii), (iii), (iv)

91394346080. (ii), (i), (iii), (iv)

Question Number : 121 Question Id : 91394311729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of Null-to-Null RF bandwidth (Hz) of the following binary bandpass signals.

(i) QPSK

(ii) MSK

(iii) Sunde's FSK

(iv) ASK

Options :

91394346081. (iii), (iv), (ii), (i)

91394346082. (iv), (i), (ii), (iii)

91394346083. (i), (ii), (iv), (iii)

91394346084. (iv), (ii), (i), (iii)

Question Number : 121 Question Id : 91394311729 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of Null-to-Null RF bandwidth (Hz) of the following binary bandpass signals.

(i) QPSK

(ii) MSK

(iii) Sunde's FSK

(iv) ASK

Options :

91394346081. (iii), (iv), (ii), (i)

91394346082. (iv), (i), (ii), (iii)

91394346083. (i), (ii), (iv), (iii)

91394346084. (iv), (ii), (i), (iii)

Question Number : 122 Question Id : 91394311730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of the transistors used in the below mentioned circuits.

(i) TTL NAND (Totem Pole Circuit)

(ii) DTL NAND Gate

(iii) ECL NOR Gate

(iv) CMOS inverter

Options :

91394346085. (i), (ii), (iii), (iv)

91394346086. (ii), (iv), (iii), (i)

91394346087. (iii), (iv), (i), (ii)

91394346088. (iv), (ii), (iii), (i)

Question Number : 122 Question Id : 91394311730 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

Arrange in increasing order of the transistors used in the below mentioned circuits.

(i) TTL NAND (Totem Pole Circuit)

(ii) DTL NAND Gate

(iii) ECL NOR Gate

(iv) CMOS inverter

Options :

91394346085. (i), (ii), (iii), (iv)

91394346086. (ii), (iv), (iii), (i)

91394346087. (iii), (iv), (i), (ii)

91394346088. (iv), (ii), (iii), (i)

Question Number : 123 Question Id : 91394311731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the unit step response of the system defined as $G(s) = \frac{g}{(s+10)}$

and read the following.

(i) K_g is the gain of the system

(ii) R_t is the transient response of the system

(iii) E_{ss} is the steady-state error of the system

Arrange the above in increasing order of their numerical values for the given system.

Options :

91394346089. (i), (ii), (iii)

91394346090. (i), (iii), (ii)

91394346091. (iii), (ii), (i)

91394346092. (ii), (iii), (i)

Question Number : 123 Question Id : 91394311731 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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Consider the unit step response of the system defined as $G(s) = \frac{g}{(s+10)}$

and read the following.

(i) K_g is the gain of the system

(ii) R_t is the transient response of the system

(iii) E_{ss} is the steady-state error of the system

Arrange the above in increasing order of their numerical values for the given system.

Options :

91394346089. **(i), (ii), (iii)**

91394346090. **(i), (iii), (ii)**

91394346091. **(iii), (ii), (i)**

91394346092. **(ii), (iii), (i)**

Question Number : 124 Question Id : 91394311732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are the modulation schemes :

(i) AM

(ii) FM

(iii) DWDM

(iv) CWDM

Arrange their adjacent channel band gap in ascending order. The correct sequence is :

Options :

91394346093. **(i), (ii), (iv), (iii)**

91394346094. **(i), (ii), (iii), (iv)**

91394346095. **(iv), (i), (ii), (iii)**

91394346096. **(ii), (i), (iv), (iii)**

Question Number : 124 Question Id : 91394311732 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Following are the modulation schemes :

(i) AM

(ii) FM

(iii) DWDM

(iv) CWDM

Arrange their adjacent channel band gap in ascending order. The correct sequence is :

Options :

91394346093. (i), (ii), (iv), (iii)

91394346094. (i), (ii), (iii), (iv)

91394346095. (iv), (i), (ii), (iii)

91394346096. (ii), (i), (iv), (iii)

Question Number : 125 Question Id : 91394311733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the following materials :

(i) Quartz

(ii) Ammonium dihydrogen phosphate

(iii) Lithium sulphate

Arrange the above materials in decreasing order of their dielectric constants.

Options :

91394346097. (i), (ii), (iii)

91394346098. (ii), (iii), (i)

91394346099. (iii), (ii), (i)

91394346100. (i), (iii), (ii)

Question Number : 125 Question Id : 91394311733 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Consider the following materials :

(i) Quartz

(ii) Ammonium dihydrogen phosphate

(iii) Lithium sulphate

Arrange the above materials in decreasing order of their dielectric constants.

Options :

91394346097. (i), (ii), (iii)

91394346098. (ii), (iii), (i)

91394346099. (iii), (ii), (i)

91394346100. (i), (iii), (ii)

Sub-Section Number: 5
Sub-Section Id: 913943594
Question Shuffling Allowed : Yes

Question Number : 126 Question Id : 91394311734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Nyquist rate of sampling is the theoretical minimum sampling rate at which signal can be sampled and still be reconstructed from its samples.

Reason (R) : When the Nyquist rate sampling is used, only an ideal low pass filter can be used to extract signal x(t) from sampled signal $x_s(t)$.

Code :

Options :

91394346101. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346102. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346103. (A) is true, but (R) is false.

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91394346104. (A) is false, but (R) is true.

Question Number : 126 Question Id : 91394311734 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Nyquist rate of sampling is the theoretical minimum sampling rate at which signal can be sampled and still be reconstructed from its samples.

Reason (R) : When the Nyquist rate sampling is used, only an ideal low pass filter can be used to extract signal x(t) from sampled signal $x_s(t)$.

Code :

Options :

91394346101. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346102. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346103. (A) is true, but (R) is false.

91394346104. (A) is false, but (R) is true.

Question Number : 127 Question Id : 91394311735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : A sphygmomanometer is always used in conjunction with a means to determine at what pressure, blood flow is just starting, and at what pressure it is unimpeded.

Reason (R) : Manual sphygmomanometers are used in conjunction with a stethoscope.

Code :

Options :

91394346105. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346106. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346107. (A) is true, but (R) is false.

91394346108. (A) is false, but (R) is true.

Question Number : 127 Question Id : 91394311735 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : A sphygmomanometer is always used in conjunction with a means to determine at what pressure, blood flow is just starting, and at what pressure it is unimpeded.

Reason (R) : Manual sphygmomanometers are used in conjunction with a stethoscope.

Code :

Options :

91394346105. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346106. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346107. (A) is true, but (R) is false.

91394346108. (A) is false, but (R) is true.

Question Number : 128 Question Id : 91394311736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The total capacitance of a MOS system is a series combination of insulator capacitance and semiconductor depletion layer capacitance.

Reason (R) : MOS structure is an integral part of MOSFET.

Code :

Options :

91394346109. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346110. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346111. (A) is true, but (R) is false.

91394346112. (A) is false, but (R) is true.

Question Number : 128 Question Id : 91394311736 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The total capacitance of a MOS system is a series combination of insulator capacitance and semiconductor depletion layer capacitance.

Reason (R) : MOS structure is an integral part of MOSFET.

Code :

Options :

91394346109. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346110. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346111. (A) is true, but (R) is false.

91394346112. (A) is false, but (R) is true.

Question Number : 129 Question Id : 91394311737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Silicon devices can be used up to 150°C.

Reason (R) : The energy band gap of Silicon is 1·1 eV.

Code :

Options :

91394346113. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346114. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346115. **(A) is true, but (R) is false.**

91394346116. **(A) is false, but (R) is true.**

Question Number : 129 Question Id : 91394311737 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Silicon devices can be used up to 150°C.

Reason (R) : The energy band gap of Silicon is 1·1 eV.

Code :

Options :

91394346113. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346114. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346115. **(A) is true, but (R) is false.**

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91394346116. **(A) is false, but (R) is true.**

Question Number : 130 Question Id : 91394311738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The inductor behaves as a short circuit at s = 0 and as an open circuit at s = ∞.

Reason (R) : The driving point impedance of an inductor has a zero at s = 0 and a pole at s = ∞.

Code :

Options :

91394346117. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346118. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346119. **(A) is true, but (R) is false.**

91394346120. **(A) is false, but (R) is true.**

Question Number : 130 Question Id : 91394311738 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The inductor behaves as a short circuit at s = 0 and as an open circuit at s = ∞.

Reason (R) : The driving point impedance of an inductor has a zero at s = 0 and a pole at s = ∞.

Code :

Options :

91394346117. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346118. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346119. (A) is true, but (R) is false.

91394346120. (A) is false, but (R) is true.

Question Number : 131 Question Id : 91394311739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : It is not possible to increase the overall voltage amplification by cascading common collector stages.

Reason (R) : The voltage gain of a common collector configuration is less than unity.

Code :

Options :

91394346121. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346122. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346123. (A) is true, but (R) is false.

91394346124. (A) is false, but (R) is true.

Question Number : 131 Question Id : 91394311739 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : It is not possible to increase the overall voltage amplification by cascading common collector stages.

Reason (R) : The voltage gain of a common collector configuration is less than unity.

Code :

Options :

91394346121. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346122. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346123. (A) is true, but (R) is false.

91394346124. (A) is false, but (R) is true.

Question Number : 132 Question Id : 91394311740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The drain induced barrier lowering and channel length modulation are some of the short channel effects in MOSFET.

Reason (R) : The cut-off frequency of a MOSFET is independent of gate to source and gate to drain capacitance.

Code :

Options :

91394346125. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346126. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346127. (A) is true, but (R) is false.

91394346128. (A) is false, but (R) is true.

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Question Number : 132 Question Id : 91394311740 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The drain induced barrier lowering and channel length modulation are some of the short channel effects in MOSFET.

Reason (R) : The cut-off frequency of a MOSFET is independent of gate to source and gate to drain capacitance.

Code :

Options :

91394346125. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346126. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346127. (A) is true, but (R) is false.

91394346128. (A) is false, but (R) is true.

Question Number : 133 Question Id : 91394311741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The output of a bipolar transistor inverter does not respond instantaneously to the input signal and exhibits finite time lag.

Reason (R) : The load gate(s) and junction capacitance of bipolar transistor inverter offer a certain amount of capacitance to the driving inverter.

Code :

Options :

91394346129. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346130. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346131. (A) is true, but (R) is false.

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91394346132. (A) is false, but (R) is true.

Question Number : 133 Question Id : 91394311741 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The output of a bipolar transistor inverter does not respond instantaneously to the input signal and exhibits finite time lag.

Reason (R) : The load gate(s) and junction capacitance of bipolar transistor inverter offer a certain amount of capacitance to the driving inverter.

Code :

Options :

91394346129. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346130. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346131. (A) is true, but (R) is false.

91394346132. (A) is false, but (R) is true.

Question Number : 134 Question Id : 91394311742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Thyristor is a switching device. It is required to turn it ON and OFF according to the requirement.

Reason (R) : During reverse conduction, gate current is to be supplied through the gate in SCRs.

Code :

Options :

91394346133. Both (A) and (R) are true and (R) is the correct explanation of (A).

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91394346134. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346135. (A) is true, but (R) is false.

91394346136. (A) is false, but (R) is true.

Question Number : 134 Question Id : 91394311742 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **Thyristor is a switching device. It is required to turn it ON and OFF according to the requirement.**

Reason (R) : **During reverse conduction, gate current is to be supplied through the gate in SCRs.**

Code :

Options :

91394346133. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346134. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346135. (A) is true, but (R) is false.

91394346136. (A) is false, but (R) is true.

Question Number : 135 Question Id : 91394311743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **There are many applications in which digital outputs are required to be generated in accordance to the sequence in which input signals are received.**

Reason (R) : **These belong to such applications which only depend on the present input state.**

Code :

Options :

91394346137. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346138. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346139. (A) is true, but (R) is false.

91394346140. (A) is false, but (R) is true.

Question Number : 135 Question Id : 91394311743 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : There are many applications in which digital outputs are required to be generated in accordance to the sequence in which input signals are received.

Reason (R) : These belong to such applications which only depend on the present input state.

Code :

Options :

91394346137. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346138. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346139. (A) is true, but (R) is false.

91394346140. (A) is false, but (R) is true.

Question Number : 136 Question Id : 91394311744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : In microprocessor, the control buses and address buses are multiplexed. They can be demultiplexed by using ALE signals.

Reason (R) : The 8085 microprocessor signals can be classified in various groups, namely address bus, data bus, control bus and status signals, externally initiated signals and acknowledgement, power and frequency, serial I/O signals.

Code :

Options :

91394346141. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346142. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346143. (A) is true, but (R) is false.

91394346144. (A) is false, but (R) is true.

Question Number : 136 Question Id : 91394311744 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : In microprocessor, the control buses and address buses are multiplexed. They can be demultiplexed by using ALE signals.

Reason (R) : The 8085 microprocessor signals can be classified in various groups, namely address bus, data bus, control bus and status signals, externally initiated signals and acknowledgement, power and frequency, serial I/O signals.

Code :

Options :

91394346141. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346142. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346143. (A) is true, but (R) is false.

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91394346144. (A) is false, but (R) is true.

Question Number : 137 Question Id : 91394311745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : A multiplexer (MUX) is a device which selects one of the many inputs to a single output.

Reason (R) : A digital multiplexer is a sequential circuit that selects binary information from one of the many input lines and directs it to a single output line.

Code :

Options :

91394346145. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346146. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346147. (A) is true, but (R) is false.

91394346148. (A) is false, but (R) is true.

Question Number : 137 Question Id : 91394311745 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : A multiplexer (MUX) is a device which selects one of the many inputs to a single output.

Reason (R) : A digital multiplexer is a sequential circuit that selects binary information from one of the many input lines and directs it to a single output line.

Code :

Options :

91394346145. Both (A) and (R) are true and (R) is the correct explanation of (A).

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91394346146. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346147. (A) is true, but (R) is false.

91394346148. (A) is false, but (R) is true.

Question Number : 138 Question Id : 91394311746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **A short linear conductor is often called a short dipole.**

Reason (R) : **In a short dipole, the length is much lesser than the wavelength and the diameter of the dipole is also much lesser than the length.**

Code :

Options :

91394346149. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346150. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346151. (A) is true, but (R) is false.

91394346152. (A) is false, but (R) is true.

Question Number : 138 Question Id : 91394311746 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **A short linear conductor is often called a short dipole.**

Reason (R) : **In a short dipole, the length is much lesser than the wavelength and the diameter of the dipole is also much lesser than the length.**

Code :

Options :

91394346149. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346150. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346151. **(A) is true, but (R) is false.**

91394346152. **(A) is false, but (R) is true.**

Question Number : 139 Question Id : 91394311747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : In magnetron, each cavity with its input gap acts as an open circuit transmission line of length half wavelength long.

Reason (R) : In magnetrons, usual mode employed is the 'π' mode, where the phase change between the adjacent cavities is π radians.

Code :

Options :

91394346153. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346154. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346155. **(A) is true, but (R) is false.**

91394346156. **(A) is false, but (R) is true.**

Question Number : 139 Question Id : 91394311747 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : In magnetron, each cavity with its input gap acts as an open circuit transmission line of length half wavelength long.

Reason (R) : In magnetrons, usual mode employed is the 'π' mode, where the phase change between the adjacent cavities is π radians.

Code :

Options :

91394346153. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346154. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346155. **(A) is true, but (R) is false.**

91394346156. **(A) is false, but (R) is true.**

Question Number : 140 Question Id : 91394311748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **A necessary and sufficient condition for a feedback system to be stable is that all the poles of the system transfer function have negative real parts.**

Reason (R) : **To obtain a bounded response, the poles of the closed loop system must be in the left half portion of the splan.**

Code :

Options :

91394346157. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346158. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

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91394346159. (A) is true, but (R) is false.

91394346160. (A) is false, but (R) is true.

Question Number : 140 Question Id : 91394311748 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : A necessary and sufficient condition for a feedback system to be stable is that all the poles of the system transfer function have negative real parts.

Reason (R) : To obtain a bounded response, the poles of the closed loop system must be in the left half portion of the splan.

Code :

Options :

91394346157. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346158. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346159. (A) is true, but (R) is false.

91394346160. (A) is false, but (R) is true.

Question Number : 141 Question Id : 91394311749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : At the output of a two-port network, the total noise is due to the contribution of several, more than two noise sources.

Reason (R) : The message signal at the input of the port is accompanied by noise sources, and while passing through the two-port network, additional noise is added to the signal.

Code :

Options :

91394346161. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346162. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346163. (A) is true, but (R) is false.

91394346164. (A) is false, but (R) is true.

Question Number : 141 Question Id : 91394311749 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : At the output of a two-port network, the total noise is due to the contribution of several, more than two noise sources.

Reason (R) : The message signal at the input of the port is accompanied by noise sources, and while passing through the two-port network, additional noise is added to the signal.

Code :

Options :

91394346161. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346162. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346163. (A) is true, but (R) is false.

91394346164. (A) is false, but (R) is true.

Question Number : 142 Question Id : 91394311750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The problem of interference is solved by translating the message signals to different radio frequencies.

Reason (R) : The signals from various sources transmitted through open space cause interference and no useful message is passed to the receiver.

Code :

Options :

91394346165. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346166. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346167. (A) is true, but (R) is false.

91394346168. (A) is false, but (R) is true.

Question Number : 142 Question Id : 91394311750 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The problem of interference is solved by translating the message signals to different radio frequencies.

Reason (R) : The signals from various sources transmitted through open space cause interference and no useful message is passed to the receiver.

Code :

Options :

91394346165. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346166. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346167. (A) is true, but (R) is false.

91394346168. (A) is false, but (R) is true.

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Question Number : 143 Question Id : 91394311751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Polarization preserving fibers have a special core design that maintains the state of polarization.

Reason (R) : In polarization preserving fibers, there is a stress applying part, which creates slow and fast axes in the core.

Code :

Options :

91394346169. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346170. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346171. (A) is true, but (R) is false.

91394346172. (A) is false, but (R) is true.

Question Number : 143 Question Id : 91394311751 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : Polarization preserving fibers have a special core design that maintains the state of polarization.

Reason (R) : In polarization preserving fibers, there is a stress applying part, which creates slow and fast axes in the core.

Code :

Options :

91394346169. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346170. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

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91394346171. (A) is true, but (R) is false.

91394346172. (A) is false, but (R) is true.

Question Number : 144 Question Id : 91394311752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **A cyclo converter is a converter used for the conversion from AC to AC at different frequency levels.**

Reason (R) : **At lower frequency, the total harmonic distortion is higher in cycloconverters than usual dc link inverters.**

Code :

Options :

91394346173. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346174. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346175. **(A) is true, but (R) is false.**

91394346176. **(A) is false, but (R) is true.**

Question Number : 144 Question Id : 91394311752 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as "Assertion (A)" and the other labelled as the "Reason (R)". You are to examine the two statements carefully and decide if the Assertion (A) and the Reason (R) are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : **A cyclo converter is a converter used for the conversion from AC to AC at different frequency levels.**

Reason (R) : **At lower frequency, the total harmonic distortion is higher in cycloconverters than usual dc link inverters.**

Code :

Options :

91394346173. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346174. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346175. (A) is true, but (R) is false.

91394346176. (A) is false, but (R) is true.

Question Number : 145 Question Id : 91394311753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The storage oscilloscope enables the capture and storage of a transient signal that occurs only once.

Reason (R) : The trace of the signal cannot be reproduced later for sufficiently long time so as to be visually analyzed or for photographic recording.

Code :

Options :

91394346177. Both (A) and (R) are true and (R) is the correct explanation of (A).

91394346178. Both (A) and (R) are true, but (R) is not the correct explanation of (A).

91394346179. (A) is true, but (R) is false.

91394346180. (A) is false, but (R) is true.

Question Number : 145 Question Id : 91394311753 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

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The following items consist of two statements, one labelled as **"Assertion (A)"** and the other labelled as the **"Reason (R)"**. You are to examine the two statements carefully and decide if the **Assertion (A)** and the **Reason (R)** are individually true and if so whether the reason is a correct explanation of the assertion. Select your answer to these items using the codes given below and mark your answer accordingly.

Assertion (A) : The storage oscilloscope enables the capture and storage of a transient signal that occurs only once.

Reason (R) : The trace of the signal cannot be reproduced later for sufficiently long time so as to be visually analyzed or for photographic recording.

Code :

Options :

91394346177. **Both (A) and (R) are true and (R) is the correct explanation of (A).**

91394346178. **Both (A) and (R) are true, but (R) is not the correct explanation of (A).**

91394346179. **(A) is true, but (R) is false.**

91394346180. **(A) is false, but (R) is true.**

Sub-Section Number: 6
Sub-Section Id: 913943595
Question Shuffling Allowed : Yes

Question Id : 91394311754 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (146 to 150)

Question Label : Comprehension

Read the passage and answer the following five questions.

A digital filter uses a digital processor to perform numerical calculations on sampled values of the signal. The processor may be a general purpose such as a PC or specialised DSP chip. The analog input signal must first be sampled and digitised using an ADC. The resulting binary numbers, representing successive sampled values of the signal, are transferred to the processor, which carries out numerical calculations on them. These calculations typically involve multiplying the input values by constants and adding the products together. The results of these calculations, which now represent sampled values of the filtered signal, are converted back to the signal using a DAC.

Sub questions

Question Number : 146 Question Id : 91394311755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The order of a digital filter is defined as

Options :

91394346181. The number of previous outputs used to calculate the current output of the filter

91394346182. The number of previous inputs used to calculate the current output of the filter

91394346183. The number of previous inputs and outputs used to calculate the current output of the filter

91394346184. The number of coefficients in the current output of the filter

Question Number : 147 Question Id : 91394311756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

An n^{th} order recursive filter generally requires

Options :

91394346185. n-previous inputs and (n – 1) previous outputs.

91394346186. (n – 1) previous inputs and n-previous outputs.

91394346187. (n – 1) previous inputs and (n – 1) previous outputs.

91394346188. n previous inputs and n previous outputs

Question Number : 148 Question Id : 91394311757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding digital filters :

(i) Its operation is determined by a program stored in the processor's memory.

(ii) It cannot handle low frequency signal accurately.

(iii) It can only be changed by redesigning the circuitry.

(iv) It is extremely stable with respect to both time and temperature.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394346189. (i) and (ii)

91394346190. (ii) and (iii)

91394346191. (iii) and (iv)

91394346192. (i) and (iv)

Question Number : 149 Question Id : 91394311758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A digital filter is characterized by the equation

$y[n] + y[n-1] = x[n] + x[n-2]$. The filter is

Options :

91394346193. Linear and Time variant

91394346194. Causal and Stable

91394346195. Non-causal and Time invariant

91394346196. Linear, Causal and Unstable

Question Number : 150 Question Id : 91394311759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The impulse response of a filter is defined as $h[n] = \begin{cases} -2; & n = 2, 4 \\ 2; & n = 1, 3 \\ 0; & \text{otherwise} \end{cases}$

This filter is a

Options :

91394346197. Non-recursive IIR filter

91394346198. Recursive IIR filter

91394346199. Non-recursive FIR filter

91394346200. Recursive FIR filter

Question Id : 91394311754 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No

Question Numbers : (146 to 150)

Question Label : Comprehension

Read the passage and answer the following five questions.

A digital filter uses a digital processor to perform numerical calculations on sampled values of the signal. The processor may be a general purpose such as a PC or specialised DSP chip. The analog input signal must first be sampled and digitised using an ADC. The resulting binary numbers, representing successive sampled values of the signal, are transferred to the processor, which carries out numerical calculations on them. These calculations typically involve multiplying the input values by constants and adding the products together. The results of these calculations, which now represent sampled values of the filtered signal, are converted back to the signal using a DAC.

Sub questions

Question Number : 146 Question Id : 91394311755 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The order of a digital filter is defined as

Options :

91394346181. **The number of previous outputs used to calculate the current output of the filter**

91394346182. **The number of previous inputs used to calculate the current output of the filter**

91394346183. **The number of previous inputs and outputs used to calculate the current output of the filter**

91394346184. **The number of coefficients in the current output of the filter**

Question Number : 147 Question Id : 91394311756 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

An n^{th} order recursive filter generally requires

Options :

91394346185. **n-previous inputs and (n – 1) previous outputs.**

91394346186. **(n – 1) previous inputs and n-previous outputs.**

91394346187. **(n – 1) previous inputs and (n – 1) previous outputs.**

91394346188. **n previous inputs and n previous outputs**

Question Number : 148 Question Id : 91394311757 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

Read the following statements regarding digital filters :

(i) Its operation is determined by a program stored in the processor's memory.

(ii) It cannot handle low frequency signal accurately.

(iii) It can only be changed by redesigning the circuitry.

(iv) It is extremely stable with respect to both time and temperature.

Which of the above statements are correct ?

Choose the correct answer from the code given below :

Code :

Options :

91394346189. (i) and (ii)

91394346190. (ii) and (iii)

91394346191. (iii) and (iv)

91394346192. (i) and (iv)

Question Number : 149 Question Id : 91394311758 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

A digital filter is characterized by the equation

$y[n] + y[n-1] = x[n] + x[n-2]$. The filter is

Options :

91394346193. Linear and Time variant

91394346194. Causal and Stable

91394346195. Non-causal and Time invariant

91394346196. Linear, Causal and Unstable

Question Number : 150 Question Id : 91394311759 Question Type : MCQ Option Shuffling : Yes Display Question Number : Yes Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 2 Wrong Marks : 0

The impulse response of a filter is defined as $h[n] = \begin{cases} -2; & n = 2, 4 \\ 2; & n = 1, 3 \\ 0; & \text{otherwise} \end{cases}$

This filter is a

Options :

91394346197. **Non-recursive IIR filter**

91394346198. **Recursive IIR filter**

91394346199. **Non-recursive FIR filter**

91394346200. **Recursive FIR filter**