# Andhra Pradesh State Council of Higher Education

**Notations :**

1.Options shown in green color and with ✔ icon are correct.

2.Options shown in red color and with ✖ icon are incorrect.

| | |
|---|---|
| **Question Paper Name :** | Mathematics 13th July 2022 Shift 1 |
| **Duration :** | 120 |
| **Total Marks :** | 150 |
| **Display Marks:** | No |
| **Share Answer Key With Delivery Engine :** | Yes |
| **Calculator :** | None |
| **Magnifying Glass Required? :** | No |
| **Ruler Required? :** | No |
| **Eraser Required? :** | No |
| **Scratch Pad Required? :** | No |
| **Rough Sketch/Notepad Required? :** | No |
| **Protractor Required? :** | No |
| **Show Watermark on Console? :** | Yes |
| **Highlighter :** | No |
| **Auto Save on Console?** | Yes |
| **Change Font Color :** | No |
| **Change Background Color :** | No |
| **Change Theme :** | No |
| **Help Button :** | No |
| **Show Reports :** | No |
| **Show Progress Bar :** | No |
| **Is this Group for Examiner? :** | No |
| **Examiner permission :** | Cant View |
| **Show Progress Bar? :** | No |

# General English

| | |
|---|---|
| **Section Id :** | 264490587 |
| **Section Number :** | 1 |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 21 |
| **Section Marks :** | 25 |
| **Enable Mark as Answered Mark for Review and Clear Response :** | Yes |
| **Maximum Instruction Time :** | 0 |

**Question Id : 26449017819 Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

**Question Numbers : (1 to 5)**

Read the following passage and answer the questions based on it.

Many great inventions are initially greeted with ridicule and disbelief. The invention of the airplane was no exception. Although many people who heard about the first powered flight on December 17, 1903 were excited and impressed, others reacted with peals of laughter. The idea of flying an aircraft was repulsive to some people. Such people called Wilbur and Orville Wright, the inventors of the first flying machine, impulsive fools. Negative reactions, however, did not stop the Wrights. Impelled by their desire to succeed, they continued their experiments in aviation.

Orville and Wilbur Wright had always had a compelling interest in aeronautics and mechanics. As young boys they earned money by making and selling kites and mechanical toys. Later, they designed a newspaper-folding machine, built a printing press, and operated a bicycle-repair shop. In 1896, when they read about the death of Otto Lilienthal, the brothers' interest in flight grew into a compulsion.

Lilienthal, a pioneer in hang-gliding, had controlled his gliders by shifting his body in the desired direction. This idea was repellent to the Wright brothers, however, and they searched for more efficient methods to control the balance of airborne vehicles. In 1900 and 1901, the Wrights tested numerous gliders and developed control techniques. The brothers' inability to obtain enough lift power for the gliders almost led them to abandon their efforts.

**Sub questions**

**Question Number : 1 Question Id : 26449017820 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

According to the passage, the idea of flying an aircraft was _____ to some people.

**Options :**

1. ✗ needless

2. ✗ uninteresting

3. ✓ distasteful

4. ✗ unacceptable

**Question Number : 2 Question Id : 26449017821 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

People of their days thought that the Wright brothers had

**Options :**

1. ✗ acted in a negative way

2. ✗ acted under negative influence

3. ✗ acted irresponsibly

4. ✓ acted without thinking

**Question Number : 3 Question Id : 26449017822 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

By the end of the 18th century, the Wright brothers' interest in flight grew into

**Options :**

1. ✗ an Action Plan

2. ✗ a foolish thought

3. ✓ a need to act

4. ✗ an unfulfilled desire

**Question Number : 4 Question Id : 26449017823 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Lilienthal's idea about controlling airborne vehicles was _____ the Wrights.

**Options :**

1. ✓ disliked by

2. ✗ accepted by

3. ✗ disproved by

4. ✗ proved by

**Question Number : 5 Question Id : 26449017824 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The wright brothers almost abandoned their efforts on the gliders due to their

**Options :**

1. ✗ Ablity to design new gliders

2. ✗ Inability to test the power of the glides

3. ✗ Ability to develop control techniques

4. ✓ Inability to obtain required life power for the gliders

**Question Number : 6 Question Id : 26449017825 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

He has been working for the company _____ January, 2005

**Options :**

1. ✗ during

2. ✓ since

3. ✗ before

4. ✗ after

**Question Number : 7 Question Id : 26449017826 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

_____ the last rainy season, many houses collapsed in the hilly areas.

**Options :**

1. ✗ In

2. ✖ Around

3. ✔ During

4. ✖ By

**Question Number : 8 Question Id : 26449017827 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

John's elderly parents always prefer to travel ____ car.

**Options :**

1. ✔ by

2. ✖ inside

3. ✖ in

4. ✖ on

**Question Number : 9 Question Id : 26449017828 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Tilak is ____ university student.

**Options :**

1. ✖ the

2. ✓ a

3. ✗ an

4. ✗ No article required.

**Question Number : 10 Question Id : 26449017829 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Sarojini Naidu is ____ Nightingale of India.

**Options :**

1. ✓ the

2. ✗ an

3. ✗ a

4. ✗ No article required.

**Question Number : 11 Question Id : 26449017830 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the synonym for the word INDOLENT from the below given words.

**Options :**

1. ✗ mindful

2. ✓ lazy

3. ✖ deadly

4. ✖ significant

**Question Number : 12 Question Id : 26449017831 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Add appropriate question tag to the given below sentence.
She attends the meeting

**Options :**

1. ✖ Isn't She?

2. ✖ Does She?

3. ✖ Isn't it ?

4. ✔ Doesn't she?

**Question Number : 13 Question Id : 26449017832 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Rekha reached the airport after the flight _____.

**Options :**

1. ✖ has departed

2. ✖ was departed

3. ✓ had departed

4. ✗ have departed

**Question Number : 14 Question Id : 26449017833 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The principal _____ for a walk in the school ground every day.

**Options :**

1. ✗ is going

2. ✗ gone

3. ✓ goes

4. ✗ went

**Question Number : 15 Question Id : 26449017834 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

When the tourists _____ themselves the flower show yesterday, it started to rain.

**Options :**

1. ✗ enjoyed

2. ✗ have been enjoying

3. ✗ have enjoyed

4. ✓ were enjoying

**Question Number : 16 Question Id : 26449017835 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The Governor _____ the national flag at 8 a.m. tomorrow and _____ the awardees.

**Options :**

1. ✓ hoists, honors

2. ✗ will hoist, will honor

3. ✗ is hoisting, is honoring

4. ✗ would hoist, would honor

**Question Number : 17 Question Id : 26449017836 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

A number of soldiers _____ during the war last month.

**Options :**

1. ✓ were injured

2. ✗ are injured

3. ✗ have injured

4. ✗ have been injured

**Question Number : 18 Question Id : 26449017837 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

The Minister, along with his officials _____ the press every Saturday.

**Options :**

1. ✗ is meeting

2. ✗ are meeting

3. ✓ meets

4. ✗ meet

**Question Number : 19 Question Id : 26449017838 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

One of the doors of the bank _____ by the thief who attempted a burglary.

**Options :**

1. ✖ is damaged

2. ✔ was damaged

3. ✖ are damaged

4. ✖ were damaged

**Question Number : 20 Question Id : 26449017839 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Choose the most appropriate from the options to fill the gaps in the following statement

Neither John nor Peter _____ this book.

**Options :**

1. ✔ has read

2. ✖ have read

3. ✖ were reading

4. ✖ have been reading

**Question Number : 21 Question Id : 26449017840 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following options best expresses the given sentence in Active/Passive Voice?
Sentence: The invigilator was reading out the instructions clearly.

**Options :**

1. ✗ The instructions have been read out by the invigilator clearly.

2. ✗ The instructions are being read out by the invigilator clearly.

3. ✓ The instructions were being read out by the invigilator clearly.

4. ✗ The instructions has been read out by the invigilator clearly.

**Question Number : 22 Question Id : 26449017841 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following options best expresses the given sentence in Active/Passive Voice?
Sentence: A small boy could not have carried this big parcel.

**Options :**

1. ✗ This big parcel could not be carried by a small boy.

2. ✗ This big parcel could not been carried by a small boy.

This big parcel could not have been carried by a small boy.

3. ✓

This big parcel could not being carried by a small boy.

4. ✗

**Question Number : 23 Question Id : 26449017842 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following options best expresses the given sentence in Direct/Indirect Speech?
Sentence: The teacher told the boy that he was not studying well.

**Options :**

1. ✓ The teacher said to the boy," You are not studying well".

2. ✗ The teacher told to the boy," You are not studying well".

3. ✗ The teacher said to the boy," He is not studying well".

4. ✗ The teacher told to the boy," He was not studying well".

**Question Number : 24 Question Id : 26449017843 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following options best expresses the given sentence in Direct/Indirect Speech?
Sentence: The manager said to the clerk, "Have you completed the work?"

**Options :**

1. ✗ The manager asked the clerk if he has completed the work.

2. ✓ The manager asked the clerk if he had completed the work.

3. ✗ The manager asked the clerk if the work has been completed.

4. ✗ The manager asked the clerk if he have completed the work.

**Question Number : 25 Question Id : 26449017844 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following words best expresses the meaning of the underlined words in the given sentence?
Sentence: It rained <u>cats and dogs</u> last night.

**Options :**

1. ✗ moderately

2. ✗ lightly

3. ✗ intermittently

4. ✓ heavily

# General Knowledge

| | |
|---|---|
| **Section Id :** | 264490588 |
| **Section Number :** | 2 |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 15 |
| **Section Marks :** | 15 |
| **Enable Mark as Answered Mark for Review and Clear Response :** | Yes |
| **Maximum Instruction Time :** | 0 |

**Question Number : 26 Question Id : 26449017845 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

On which day of the year is the National Education Day observed in India?
భారతదేశంలో ఏ రోజును జాతీయ విద్యాదినోత్సవంగా పాటిస్తున్నారు?

**Options :**

1. ✗ March 6
మార్చి, 6

2. ✗ January 14
జనవరి, 14

3. ✗ September 8
సెప్టెంబరు, 8

4. ✓ November 11
నవంబరు, 11

**Question Number : 27 Question Id : 26449017846 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The Internet is a

ఇంటర్‌నెట్ అనేది

**Options :**

1. ✗ Network
ఒక నెట్‌వర్క్

2. ✓ Network of Networks
నెట్‌వర్క్స్ యొక్క నెట్‌వర్క్

3. ✗ Software
ఒక సాఫ్ట్‌వేర్

4. ✗ Server
ఒక సర్వర్

**Question Number : 28 Question Id : 26449017847 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

When was India's capital shifted from Calcutta to Delhi?

భారతదేశపు రాజధాని ఏ సంవత్సరంలో కలకత్తానుంచి ఢిల్లీకి మార్చబడింది?

**Options :**

1. ✗ 1935

2. ✗ 1900

3. ✓ 1911

4. ✗ 1929

**Question Number : 29 Question Id : 26449017848 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

MOOC stands for
MOOC అనేది దీనికి సంక్షిప్తరూపం

**Options :**

1. ✗ Mobile Open and Online Course
మొబైల్ ఓపెన్ అండ్ ఆన్‌లైన్‌కోర్స్

2. ✓ Massive Open Online Course
మాసివ్ ఓపెన్ ఆన్‌లైన్ కోర్స్

3. ✗ Media-based Open Online Course
మీడియా బేస్డ్ ఓపెన్ ఆన్‌లైన్ కోర్స్

4. ✗ Machine-based Open Online Course
మెషిన్ బేస్డ్ ఓపెన్ ఆన్‌లైన్ కోర్స్

**Question Number : 30 Question Id : 26449017849 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Kangaroo's abdominal pouch is known as
కంగారు జంతువు యొక్క సంచిలాంటి పొట్ట భాగం మనకు ఇలా తెలుసు

**Options :**

1. ✗ Placenta Pouch
ప్లెసెంటా సంచి

2. ✗ Guttural Pouch
గుట్టూరల్ సంచి

3. ✓ Marsupium
మరసూపియం

4. ✗ Synovial Membrane
సినోవియల్ పొర

**Question Number : 31 Question Id : 26449017850 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

"One class one TV Channel" programme of PM e-vidya expanded from 12 to.
పి.యం. ఇ-విద్యకు సంబంధించిన 'ఒన్ క్లాస్ ఒన్ టివి చానెల్' 12 నుండి ఎన్ని చానెల్స్‌కు

పెంచబడింది

**Options :**

1. ✗ 120

2. ✓ 200

3. ✗ 140

4. ✗ 150

**Question Number : 32 Question Id : 26449017851 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The Gateway of India in Mumbai was built in honor of
ముంబాయిలోని భారత ముఖద్వారం ఎవరి గౌరవార్థం నిర్మించబడింది?

**Options :**

1. ✓ King George
జార్జి చక్రవర్తి

2. ✗ Lord Mountbatten
లార్డ్ మౌంట్ బాటన్

3. ✗ Queen Elizabeth
ఎలిజబెత్ రాణి

4. ✗ Lord Macaulay
లార్డ్ మెకాలె

**Question Number : 33 Question Id : 26449017852 Display Question Number : Yes Is Question Mandatory : No Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The book "Origin of Species' was authored by
"అరిజిన్ అఫ్ స్పేసిస్" గ్రంథ కర్త.

**Options :**

1. ✗ Charles Dickens
చార్లెస్ డికెన్స్

2. ✓ Charles Darwin
చార్లెస్ డార్విన్

3. ✗ Charles Babbage
చార్లెస్ బాబ్బేజ్

4. ✗ Charles Lamb
చార్లెస్ లాంబ్

**Question Number : 34 Question Id : 26449017853 Display Question Number : Yes Is Question Mandatory : No Calculator : None**
**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The name of the virus that caused Covid-19 in the early days of the pandemic is
ప్రారంభిక దశలో తీవ్ర ఆందోళన కలిగించిన కోవిడ్-19 కి కారణభూతమైన వైరస్ -

**Options :**

1. ✓ SARS-CoV-2

2. ✖ SARS-Covid19-2

3. ✖ Cov-SARS-1

4. ✖ SARS-Covi-D2

**Question Number : 35 Question Id : 26449017854 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Who among the following was given the Oscar Honorary for Life Time Achievement in 1992?

1992లో జీవిత సాఫల్య పురస్కారంగా ఆస్కార్ గౌరవాన్ని పొందినవారు?

**Options :**

1. ✖ Dadasaheb Phalke
దాదాసాహెబ్ ఫాల్కే

2. ✔ Satyajit Ray
సత్యజిత్ రే

3. ✖ Aparna Sen
అపర్ణాసేన్

4. ✖ Rituparno Ghosh
రీతుపర్నో ఘోష్

**Question Number : 36 Question Id : 26449017855 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Union Budget 2022 focuses on how many areas
కేంద్ర 2022 బడ్జెట్ ఎన్ని రంగాలపై దృష్టి పెట్టినది.

**Options :**

1. ✖ 1

2. ✖ 2

3. ✖ 3

4. ✔ 4

**Question Number : 37 Question Id : 26449017856 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Who is considered the inventor of World Wide Web (www)?
వరల్డ్ వైడ్ వెబ్ (www) సృష్టికర్తగా ఎవరిని గుర్తిస్తున్నాము?

**Options :**

1. ✔ Tim Berners-Lee
టిమ్ బెర్నర్స్ లీ

2. ✖ Bill Gates
బిల్‌గేట్స్

3. ✖ Larry Page
లారీ గేట్స్

4. ✗ Jimmy Wales
జిమ్మీ వేల్స్

**Question Number : 38 Question Id : 26449017857 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The term Grand Slam is associated with
గ్రాండ్ స్లామ్ అనే పదం దీనికి సంబంధించింది.

**Options :**

1. ✓ Lawn Tennis
లాన్ టెన్నిస్

2. ✗ Billiards
బిలియర్డ్స్

3. ✗ Chess
చదరంగం

4. ✗ Basket Ball
బాస్కెట్ బాల్

**Question Number : 39 Question Id : 26449017858 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The Sardar Sarovar Dam is a terminal dam built on the river
ఈ నదిపైన 'సర్దార్ సరోవర్ డ్యామ్' నిర్మించబడింది.

**Options :**

1. ✖ Sutlej
సట్లెజ్

2. ✖ Ganga
గంగా

3. ✔ Narmada
నర్మద

4. ✖ Brahmaputra
బ్రహ్మపుత్ర

**Question Number : 40 Question Id : 26449017859 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

What is the theme of the 'Earth Day 2022'?
'ఎర్త్‌డే 2022' యొక్క ప్రధానాంశం ఏమిటి?

**Options :**

1. ✖ Covid and Planet
కోవిడ్ మరియు గ్రహం

2. ✖ No to Pollution
కాలుష్య రహితం

3. ✖ Sustainable Living
శక్తివంతమైన జీవితం

4. ✔ Invest in our Planet
మన గ్రహంలో పెట్టుబడి

# Teaching Aptitude

| | |
|---|---|
| **Section Id :** | 264490589 |
| **Section Number :** | 3 |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 10 |
| **Section Marks :** | 10 |
| **Enable Mark as Answered Mark for Review and Clear Response :** | Yes |
| **Maximum Instruction Time :** | 0 |

**Question Number : 41 Question Id : 26449017860 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Good Classroom Communication will ensure a
సమాచారాన్ని అందించే మంచి తరగతి గది - దీనిని నిర్ధారిస్తుంది.

**Options :**

1. ✔ supportive classroom climate
తరగతిగది వాతావరణానికి ఇచ్చే మద్దతును

good learning environment
2. ✖ మంచి పర్యావరణ అధ్యయనాన్ని

activity-based classroom
3. ✖ కార్యాచరణ ఆధారిత తరగతి గదిని

joyful learning experiences
4. ✖ ఆనందంగా నేర్చుకుంటున్నామన్న అనుభవాన్ని

**Question Number : 42 Question Id : 26449017861 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

A teacher discussing the academic problems of students with other colleagues in the school is

పాఠశాలలోని ఒక ఉపాధ్యాయుడు తన విద్యార్థులకు సంబంధించిన విద్యా సమస్యలను తనతో పని చేసే ఇతర ఉపాధ్యాయులతో చర్చించుకోవడాన్ని ఈ విధమైన కమ్యూనికేషన్ అంటారు.

**Options :**

Upward Communication
1. ✖ అభివృద్ధి పరిచే కమ్యూనికేషన్

Downward Communication
2. ✖ న్యూనపరిచే కమ్యూనికేషన్

Horizontal Communication
3. ✔ అడ్డముగా ఉండే కమ్యూనికేషన్

Grapevine Communication
గ్రేప్‌వైన్ కమ్యూనికేషన్
4. ✗

**Question Number : 43 Question Id : 26449017862 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

One can become a popular teacher among students by
దీనిద్వారా ఒక వ్యక్తి విద్యార్థులచేత 'మంచి ఆదరణ పొందిన ఉపాధ్యాయుడు' అనిపించుకుంటాడు.

**Options :**

awarding good marks
మంచి మార్కులు ఇవ్వడం ద్వారా
1. ✗

handling special classes
ప్రత్యేకమైన తరగతులను చేపట్టడం ద్వారా
2. ✗

helping them solve their problems
విద్యార్థుల సమస్యలను పరిష్కరించడంలో సహాయపడటం ద్వారా
3. ✓

giving learning materials
అభ్యాసానికి సంబంధించిన సామగ్రిని ఇవ్వడం ద్వారా
4. ✗

**Question Number : 44 Question Id : 26449017863 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The best way to maintain discipline in the class is to deal with the students
విద్యార్థులు మంచి క్రమశిక్షణతో ఉండాలంటే ఉపాధ్యాయులు వారితో ప్రవర్తించవలసిన ఉత్తమ మార్గం -

**Options :**

1. ✗ affectionately
అప్యాయంగా ఉండటం

2. ✗ strictly and friendly
ఖచ్చితంగానూ మరియు స్నేహపూరితంగానూ ఉండటం

3. ✗ strictly and authoritatively
ఖచ్చితంగానూ మరియు అధికారికంగానూ ఉండటం

4. ✓ politely, but firmly
మర్యాదగానూ, దృఢంగానూ కూడా ఉండటం

**Question Number : 45 Question Id : 26449017864 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The most important element of teaching is
బోధనలో అతిముఖ్యమైన అంశం -

**Options :**

1. ✗ Teacher's Knowledge in the subject
ఉపాధ్యాయుల విషయ పరిజ్ఞానం

Teacher-Student Relationship
ఉపాధ్యాయునికి విద్యార్థికి మధ్యగల సంబంధం

2. ✓

Teaching Techniques
బోధనలో అవలంబించే పద్ధతులు

3. ✗

Technological Aids for Teaching
బోధనకు వినియోగించే సాంకేతిక పరికరాలు

4. ✗

**Question Number : 46 Question Id : 26449017865 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Effective classroom environment can be ensured by
సమర్థవంతమైన తరగతిగది వాతావరణాన్ని నిర్ధారించేది -

**Options :**

lively student-teacher interactions
విద్యార్థులు - ఉపాధ్యాయుల మధ్య పరస్పరం ఉండే ఆహ్లాదకరమైన చర్యలు

1. ✓

advanced technological gadgets
అధునాతనమైన సాంకేతిక పరికరాలు

2. ✗

pin-drop silence in the class
తరగతిగదిలోని నిశ్శబ్ద వాతావరణం

3. ✗

high-cost infrastructure
అతి ముఖ్యమైన మౌలిక సదుపాయాలు

4. ✗

**Question Number : 47 Question Id : 26449017866 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If one wants to become the best teacher, he or she should
ఎవరైనా ఉత్తమ ఉపాధ్యాయుడు లేదా ఉత్తమ ఉపాధ్యాయురాలు కావాలనుకుంటే వారు –

**Options :**

control the class effectively
తరగతిగదిని సమర్థవంతంగా తన అదుపులో ఉంచుకోవాలి.

1. ✗

correct the test papers and assignments strictly
విద్యార్థుల జవాబు పత్రాలను కఠినంగా మూల్యాంకనం చేయాలి.

2. ✗

handle the classes humorously
తరగతిగదిని హాస్యభరితంగా నిర్వహించాలి.

3. ✗

motivate the students to learn
విద్యార్థులను నేర్చుకొనేలా ప్రేరేపించాలి.

4. ✓

**Question Number : 48 Question Id : 26449017867 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The primary purpose of punishing a student is to
విద్యార్థులను శిక్షించడంలో ప్రాథమిక ఉద్దేశం ఏమిటంటే -

**Options :**

1. ✗ show the teacher's authority
ఉపాధ్యాయులు తమ అధికారాన్ని ప్రదర్శించడం

2. ✓ correct the offender
నేర స్వభావం కలిగిన వారిని సరిదిద్దడానికి

3. ✗ threaten the other students
ఇతర విద్యార్థులను బెదిరించడానికి

4. ✗ enforce discipline in the class
తరగతిగదిలో క్రమశిక్షణను అమలు చేయడానికి

**Question Number : 49 Question Id : 26449017868 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If the students show lack of interest in the subject, a teacher should
పాఠ్యాంశం విషయమై విద్యార్థులు ఆసక్తిని కనబరచక పోయినపుడు ఉపాధ్యాయులు ఏం చేయాలి?

**Options :**

1. ✗ make his or her teaching more interesting
మరింత ఆసక్తి కరంగా బోధన చేయాలి

teach with real life examples
వాస్తవిక జీవితంలోంచి ఉదాహరణలు చెప్పాలి

2. ✗

attempt to find out the reason for lack of interest
విద్యార్థులలో ఆసక్తి లేకపోవడానికి కారణాలను గుర్తించాలి

3. ✓

teach with stories and songs
కథల ద్వారా, పాటలద్వారా బోధన చేయాలి

4. ✗

**Question Number : 50 Question Id : 26449017869 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

A teacher can learn the nuances of teaching the subject and dealing with students from
ఒక ఉపాధ్యాయుడు విషయాన్ని ఎలా బోధించాలి, విద్యార్థులతో ఎలా వ్యవహరించాలి అనే సూక్ష్మ
నైపుణ్యాలను వీరి నుంచి నేర్చుకోవచ్చు.

**Options :**

Students
విద్యార్థులనుంచి

1. ✓

Fellow Teachers
సహ ఉపాధ్యాయుల నుంచి

2. ✗

Senior Teachers
సీనియర్ ఉపాధ్యాయుల నుంచి

3. ✗

Principals
4. ✖ ప్రిన్సిపాల్స్ నుంచి

# Mathematics

| | |
|---|---|
| **Section Id :** | 264490590 |
| **Section Number :** | 4 |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 100 |
| **Section Marks :** | 100 |
| **Enable Mark as Answered Mark for Review and Clear Response :** | Yes |
| **Maximum Instruction Time :** | 0 |

**Question Number : 51 Question Id : 26449017870 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The solution of $x\frac{dy}{dx} = y\,(\log y - \log x + 1)$ is

$x\frac{dy}{dx} = y\,(\log y - \log x + 1)$ యొక్క సాధన -

**Options :**

1. ✖ $v = cx$

2. ✔ $log\ v = cx$

3. ✖ $v = \frac{c}{x}$

4. ✖ $log\ v = \log cx$

**Question Number : 52 Question Id : 26449017871 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The solution of ydx-xdy = $3x^2e^{x^3}y^2dx$ *is*

ydx-xdy = $3x^2e^{x^3}y^2dx$ యొక్క సాధన

**Options :**

1. ✔ $x=ye^{x^3}+cy$

2. ✖ $y= ye^{x^3}+cx$

3. ✖ $y=xe^{x^3}+cx$

4. ✖ $xy=ce^{x^3} + cx$

**Question Number : 53 Question Id : 26449017872 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The integrating factor of $x\frac{dy}{dx} + 2y - x^2logx = 0$ _____

$x\frac{dy}{dx} + 2y - x^2logx = 0$ యొక్క సమాకలన గుణకము

**Options :**

1. ✓ $x^2$

2. ✗ $\frac{1}{x^2}$

3. ✗ $\frac{1}{x}$

4. ✗ $x^3$

**Question Number : 54 Question Id : 26449017873 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The singular solution of $y = Px + (a/p)$ is

$y = Px + (a/p)$ యొక్క ఏకైక సాధన?

**Options :**

1. ✗ $y = x$

2. ✗ $y^2 = 2ax$

3. ✓ $y^2 = 4ax$

4. ✗ $y = 2ax$

**Question Number : 55 Question Id : 26449017874 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following equation is not in Clairaut's form?

కింది సమీకరణాలలో ఒకటి క్లైనాట్ రూపంలో లేదు. అది ఏది?

**Options :**

1. ✗ $y = px + p - p^2$

2. ✓ $(1 - x^2y^2)dx = ydx + xdy$

3. ✗ $(xp - y)^2 = p^2 - 1$

4. ✗ $sinpxcosy = cospxsiny + p$

**Question Number : 56 Question Id : 26449017875 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The general solution of p=log(px-y) where $p=\frac{dy}{dx}$ is _____

p=log(px-y) అయితే $p=\frac{dy}{dx}$ కు సాధారణ సాధన

**Options :**

1. ✖ $y = cx + e^c$

2. ✖ $y = cx^2 - e^c$

3. ✔ $y = cx - e^c$

4. ✖ $y = cx^2 + e^c$

**Question Number : 57 Question Id : 26449017876 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The solution of $(D^2 + 1)y = 0$ is

$(D^2 + 1)y = 0$ దీనిని సాధించండి

**Options :**

1. ✔ $Acosx + Bsinx$

2. ✖ $e^x(Acosx + Bsinx)$

3. ✖ $(A_1 + A_2)\cos x + (A_3 + A_4)sinx$

$(A_1 + A_2)\cos x + (A_3 + A_4 x)sinx$

4. ✗

**Question Number : 58 Question Id : 26449017877 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The differential equation $x(1+y^2)dx + y(1+x)dy = 0$ is

$x(1+y^2)dx + y(1+x)dy = 0$ అనే అవకలన సమీకరణము

**Options :**

Homogeneous equation

సమఘాతము

1. ✗

Linear equation

రేఖీయ సమీ॥

2. ✗

Bernouli equation

బెర్నోలి సమీ॥

3. ✗

Exact equation

యదార్థ సమీ॥

4. ✓

**Question Number : 59 Question Id : 26449017878 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The complementary function on of $\frac{d^3x}{dt^3} - 2\frac{d^2x}{dt^2} - 3\frac{dx}{dt} = e^x$ is

$\frac{d^3x}{dt^3} - 2\frac{d^2x}{dt^2} - 3\frac{dx}{dt} = e^x$ యొక్క పూరక ప్రమేయం

**Options :**

1. ✓ $c_1+c_2 e^{3t} +c_3e^{-t}$

2. ✗ $c_1+c_2 e^{2t}+c_3 e^{3t}$

3. ✗ $c_1 e^{t}+c_2 e^{-2t}+c_3 e^{-3t}$

4. ✗ $c_1+c_2 e^{-2t}+c_3 e^{3t}$

**Question Number : 60 Question Id : 26449017879 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The particular integral of $(D^2 - 2D + 5)y = e^{-x}$ is

$(D^2 - 2D + 5)y = e^{-x}$ యొక్క ప్రత్యేక సమాకలనము

**Options :**

1. ✓ $\frac{1}{8}e^{-x}$

2. ✖ $\frac{1}{4}e^{-x}$

3. ✖ $\frac{1}{8}e^{x}$

4. ✖ $\frac{1}{4}e^{x}$

**Question Number : 61 Question Id : 26449017880 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The two linearly independent solutions of $(D^2 - 3D + 2)y = sine^{-x}$ are

$(D^2 - 3D + 2)y = sine^{-x}$ యొక్క రెండు సరళ స్వతంత్ర పరిష్కారాలు -

**Options :**

1. ✖ $y_1 = e^{-2x}, y_2 = e^{x}$

2. ✖ $y_1 = e^{x}, y_2 = xe^{x}$

3. ✔ $y_1 = e^{x}, y_2 = e^{2x}$

$y_1 = e^x, y_2 = xe^{2x}$

4. ✗

**Question Number : 62 Question Id : 26449017881 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The particular integral of $(D^3 - D^2 - D + 1)y = 1+x^2$ is _____

$(D^3 - D^2 - D + 1)y = 1+x^2$ యొక్క ప్రత్యేక సమాకలని

**Options :**

$x^2 + 2x + 5$

1. ✓

$x^2 - 2x + 5$

2. ✗

$x^2 + 3x + 4$

3. ✗

$x^2 - 2x - 5$

4. ✗

**Question Number : 63 Question Id : 26449017882 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The homogenous differential equation $M(x,y)dx + N(x,y)dy = 0$ can be reduced to a Differential equation in which the variables are separated by the substitution

సజాతీయ అవకలన సమీకరణం $M(x,y)dx + N(x,y)dy = 0$ వేరియబుల్ ప్రత్యామ్నాయం ద్వారా వేరుచేయబడిన అవకలన సమీకరణానికి ఈ విధంగా తగ్గించబడుతుంది.

**Options :**

1. ✓ $Y = Vx$

2. ✗ $xy = v$

3. ✗ $x + y = v$

4. ✗ $x - y = v$

**Question Number : 64 Question Id : 26449017883 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The intercept on the x-axis of the plane $x + y + z = 1$ is

$x + y + z = 1$ ప్లేన్ యొక్క x అక్షం యొక్క అంతరఖండము

**Options :**

1. ✗ 4

2. ✗ 3

3. ✗ 2

4. ✓ 1

**Question Number : 65 Question Id : 26449017884 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Angle between the planes $x+y+z=1$ and $x-y=2$ is

ప్లేన్‌ల మధ్య కోణం $x+y+z=1$ మరియు $x-y=2$ అవి -

**Options :**

1. ✗ 0

2. ✓ $\frac{\pi}{2}$

3. ✗ $\frac{\pi}{3}$

$\frac{\pi}{4}$

4. ✗

**Question Number : 66 Question Id : 26449017885 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The equation of the plane passing through the point $(-2,-2,2)$ and containing the line joining the points $(1,1,1)$ and $(1,-1,2)$ is

$(-2,-2,2)$ బిందువుగుండా వెళుతున్న ప్లేన్ యొక్క సమీకరణం మరియు $(1,1,1)$, మరియు $(1,-1,2)$ బిందువులను కలిపే ఏ రేఖను కలిగి ఉంటుంది?

**Options :**

1. ✗ $x+2y-3z+4=0$

2. ✗ $3x-4y+1=0$

3. ✗ $5x+2y-3z-17=0$

4. ✓ $x-3y-6z+8=0$

**Question Number : 67 Question Id : 26449017886 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The equation of the plane through the points (1,-2,4) and (3,-4,5) and parallel to x axis is

(1,-2,4) మరియు & (3,-4,5) అనే బిందువుల గుండా పోతూ మరియు x అక్షానికి సమాంతరంగా ఉండే తలము సమీకరణము

**Options :**

1. ✓ $y+2z=6$

2. ✗ $y-2z=6$

3. ✗ $2y+z=6$

4. ✗ $y+2z=6$

**Question Number : 68 Question Id : 26449017887 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Two planes represented by $ax^2+by^2+cz^2+2fyz+2gzx+2hxy=0$ will be perpendicular if

$ax^2+by^2+cz^2+2fyz+2gzx+2hxy=0$ ద్వారా సూచించబడిన రెండు ప్లేన్‌లు లంబంగా ఉంటే -

**Options :**

1. ✓ $a+b+c=0$

2. ✖ $abc = 0$

3. ✖ $ab + bc + ca = 0$

4. ✖ $a + b + c = 1$

**Question Number : 69 Question Id : 26449017888 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The equation of the plane passing through the intersection of the planes x+2y+3z=4, 2x+y-z+5=0 and perpendicular to the plane 6z+5x+3y+8=0 is

---

x+2y+3z=4, 2x+y-z+5=0 అనే తలాల చేదనము గుండా పోతూ 6z+5x+3y+8=0

అనే తలానికి లంబంగా ఉండే తల సమీకరణము

**Options :**

1. ✖ 51x-15y+50z+173=0

2. ✔ 51x-15y-50z+173=0

3. ✖ 51x-15y-50z-173=0

4. ✖ None

**Question Number : 70 Question Id : 26449017889 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The angle between the line $\frac{x+1}{3}=\frac{y-1}{2}=\frac{z-2}{4}$ and the plane $2x-y-3z-4=0$ is

లైన్ $\frac{x+1}{3}=\frac{y-1}{2}=\frac{z-2}{4}$ మరియు ప్లేన్ $2x-y-3z-4=0$ లమధ్య కోణం -

**Options :**

1. ✖ $\cos^{-1}\left(\frac{-4}{\sqrt{406}}\right)$

2. ✔ $\sin^{-1}\left(\frac{-4}{\sqrt{406}}\right)$

3. ✖ $30^{\circ}$

4. ✖ $60^{\circ}$

**Question Number : 71 Question Id : 26449017890 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The distance of the point (1,-2,3) from the plane x-y+z=5 measured parallel to the line where they are proportional to 2,3,-6 is _____

2,3,-6 దిక్ సంఖ్యలు గల రేఖకు సమాంతరంగా ఉంటూ (1,-2,3) అనే బిందువు గుండా

పోయే రేఖ నుండి x-y+z=5 తలానికి గల దూరము

**Options :**

1. ✓ 1

2. ✗ 2

3. ✗ $\sqrt{3}$

4. ✗ $\sqrt{2}$

**Question Number : 72 Question Id : 26449017891 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The lines $\frac{x}{1}=\frac{y}{2}=\frac{z}{3}$ and $\frac{x-1}{-2}=\frac{y-2}{-4}=\frac{z-3}{-6}$ are

$\frac{x}{1}=\frac{y}{2}=\frac{z}{3}$ మరియు $\frac{x-1}{-2}=\frac{y-2}{-4}=\frac{z-3}{-6}$ అనే లైన్‌లు ఇలా ఉన్నాయి.

**Options :**

1. ✓ parallel
సమాంతరంగా

2. ✗ intersecting
అసక్తికరంగా

3. ✗ skew
వక్రంగా

4. ✗ coincident
యాదృచ్ఛికంగా

**Question Number : 73 Question Id : 26449017892 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The shortest distance between the line $\frac{x-1}{2}=\frac{y-2}{3}=\frac{z-3}{4}$ and $\frac{x-2}{3}=\frac{y-4}{4}=\frac{z-5}{4}$ is

$\frac{x-1}{2}=\frac{y-2}{3}=\frac{z-3}{4}$ మరియు $\frac{x-2}{3}=\frac{y-4}{4}=\frac{z-5}{4}$ ఈ రెండు లైన్‌లమధ్య అత్యంత

దగ్గర దూరం –

**Options :**

1. ✔ $\frac{1}{6}$

2. ✖ $\frac{1}{\sqrt{6}}$

3. ✖ $\frac{1}{\sqrt{3}}$

4. ✖ $\frac{1}{3}$

**Question Number : 74 Question Id : 26449017893 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following equation does not represent sphere _____

ఈ క్రింది వాటిలో ఏది గోళమును సూచించదు

**Options :**

1. ✖ $x^2 + y^2 + z^2 - 6x + 8y - 10z + 1 = 0$

2. ✖ $x^2 + y^2 + z^2 + 6x - 4y + 2z + 14 = 0$

3. ✔ $x^2 + y^2 + z^2 + 4x - 2y + 8z + 25 = 0$

4. ✗ $x^2 + y^2 + z^2 + 2x - 4y - 6z - 2 = 0$

**Question Number : 75 Question Id : 26449017894 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The two spheres $x^2 + y^2 + z^2$=25 and $x^2 + y^2 + z^2 - 24x - 40y + 225 = 0$ are __

$x^2 + y^2 + z^2$=25 మరియు $x^2 + y^2 + z^2 - 24x - 40y + 225 = 0$ అనే గోళము

**Options :**

1. ✗ Touches internally

అంతరంగ స్పర్శించుకుంటాయి

2. ✓ Touches externally

బాహ్యంగా స్పర్శించుకుంటాయి

3. ✗ Intersection two points

రెండు బిందువులలో ఖండించుకొనుట

4. ✗ Do not intersect

ఖండించుకోవు

**Question Number : 76 Question Id : 26449017895 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The plane $2x-2y+z+12=0$ touches the sphere $x^2+y^2+z^2-2x-4y+2z-3=0$ at the point

ప్లేన్ $2x-2y+z+12=0$, $x^2+y^2+z^2-2x-4y+2z-3=0$ గోళాన్ని ఈ బిందువు

దగ్గర తాకుతుంది.

**Options :**

1. ✗ (1,-4,-2)

2. ✓ (-1,4,-2)

3. ✗ (-1,-4,2)

4. ✗ (1,4,-2)

**Question Number : 77 Question Id : 26449017896 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The point of contact of the spheres $x^2+y^2+z^2+2x-4y-4z-7=0$,

$x^2+y^2+z^2+2x-4y-16z+65=0$ is

$x^2+y^2+z^2+2x-4y-4z-7=0$,

$x^2+y^2+z^2+2x-4y-16z+65=0$ గోళాల సంపర్క స్థానం

**Options :**

1. ✗ (1,2,6)

2. ✖ (1,2,-6)

3. ✖ (1,-2,6)

4. ✔ (-1,2,6)

**Question Number : 78 Question Id : 26449017897 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The pole of the plane x-y+2z-9=0 with respect to the sphere $x^2 + y^2 + z^2 - 9 = 0$ is _____

$x^2 + y^2 + z^2 - 9 = 0$ అనే గోళము ధృష్ట్యా x-y+2z-9=0 తలము యొక్క ధృవము

**Options :**

1. ✖ (1,2,3)

2. ✖ (2,3,-1)

3. ✖ (2,1,2)

4. ✔ (1,-1,2)

**Question Number : 79 Question Id : 26449017898 Display Question Number : Yes Is Question Mandatory : No Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If two spheres of radius $r_1$ and $r_2$ cut orthogonally, then the radius of the common circle is

$r_1$ మరియు $r_2$ వ్యాసార్థం యొక్క రెండు గోళాలు ఆర్థోగోనల్‌గా కత్తిరించినట్లయితే, అప్పుడు సాధారణ వృత్తం యొక్క వ్యాసార్థం –

**Options :**

1. ✖ $r_1 r_2$

2. ✖ $\sqrt{r_1^2 + r_2^2}$

3. ✖ $r_1 r_2 \sqrt{r_1^2 + r_2^2}$

4. ✔ $\frac{r_1 r_2}{\sqrt{r_1^2 + r_2^2}}$

**Question Number : 80 Question Id : 26449017899 Display Question Number : Yes Is Question Mandatory : No Calculator : None**
**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The angle of intersection of the spheres $x^2 + y^2 + z^2 - 2x - 4y - 6z + 10 = 0$ and

$x^2 + y^2 + z^2 - 6x - 2y + 2z + 2 = 0$ is

$x^2 + y^2 + z^2 - 2x - 4y - 6z + 10 = 0$ మరియు $x^2 + y^2 + z^2 - 6x - 2y + 2z + 2 = 0$

గోళాల ఖండన కోణం –

**Options :**

1. ✗ $\frac{\pi}{2}$

2. ✓ $\cos^{-1}\left(\frac{2}{3}\right)$

3. ✗ $\cos^{-1}\left(\frac{1}{3}\right)$

4. ✗ $\frac{\pi}{3}$

**Question Number : 81 Question Id : 26449017900 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The vertex of the cone $x^2 - 2y^2 + 3z^2 - 4xy + 5yz - 6zx + 8x - 19y - 2z - 20 = 0$ is

$x^2 - 2y^2 + 3z^2 - 4xy + 5yz - 6zx + 8x - 19y - 2z - 20 = 0$ అనే శంఖువు యొక్క శీర్షము

**Options :**

1. ✓ $(1,-2,3)$

2. ✗ $(1,2,3)$

3. ✖ (1,2,-3)

4. ✖ (-1,2,3)

**Question Number : 82 Question Id : 26449017901 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The locus of the lines through the vertex of a cone normal to the tangent planes is called

టాంజెంట్ ప్లేన్‌లకు సాధారణమైన ఈ కోన్ యొక్క శీర్షం ద్వారా పంక్తుల స్థానం ఉంటుంది.

**Options :**

right circular cone

1. ✖ కుడి వృత్తాకార కోన్

enveloping cone

2. ✖ ఆవరించే కోన్

reciprocal cone

3. ✔ పరస్పర కోన్

quadratic cone

4. ✖ చతుర్భుజి కోన్

**Question Number : 83 Question Id : 26449017902 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Equation to the right circular cone whose vertex is at origin the axis along x-axis and semi-vertical angle $\alpha$ is

కుడి వృత్తాకార కోన్‌కి సమీకరణం, దీని శీర్షం మూలం x అక్షం, మరియు సెమీ లంబకోణం $\alpha$ అనేది -

**Options :**

1. ✖ $x^2 + y^2 = z^2 \tan\alpha$

2. ✔ $y^2 + z^2 = x^2 \tan^2\alpha$

3. ✖ $y^2 \tan^2\alpha$

4. ✖ $x^2 \tan\alpha$

**Question Number : 84 Question Id : 26449017903 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f=(13256) (23) (46512) is a permutation then the order of f is

If f=(13256) (23) (46512) ప్రస్తారము అయితే f యొక్క పరిమాణం

**Options :**

1. ✖ 5

2. ✔ 6

3. ✖ 4

4. ✖ 12

**Question Number : 85 Question Id : 26449017904 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f=(2 3 6), g=(1 4 6) then gf=

**Options :**

1. ✖ (1 4 2 3 6)

2. ✖ (1 4 3 6 2)

3. ✖ (4 1 2 3 6)

4. ✔ (1 4 6 2 3)

**Question Number : 86 Question Id : 26449017905 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In the group $\{Z_7 - \{0\}, \odot\}$, the inverse of the element 5 is

$\{Z_7 - \{0\}, \odot\}$ సమూహంలో మూలకం 5 యొక్క విలోమం –

**Options :**

1. ✓ 3

2. ✗ 2

3. ✗ 1

4. ✗ 4

**Question Number : 87 Question Id : 26449017906 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The order of 3 in $(Z, +)$ is

$(Z, +)$ లో 3 యొక్క క్రమము

**Options :**

1. ✗ 2

2. ✗ 1

3. ✗ 4

Infinite

4. ✓ అనంతం

**Question Number : 88 Question Id : 26449017907 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The number of automorphism of a cyclic group of order $n$ is

అర్డర్ $n$ యొక్క చక్ర సమూహం వద్ద అటోమార్ఫిజంల సంఖ్య –

**Options :**

1. ✖ $n$

2. ✖ $n^2$

3. ✔ $\varphi(n)$

4. ✖ $1$

**Question Number : 89 Question Id : 26449017908 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following is a Boolean ring?

కింది వాటిలో బూలియన్ రింగ్ ఏది?

**Options :**

1. ✖ $(R,+,.)$

2. ✖ $(Z,+,.)$

3. ✖ $(C,+,.)$

4. ✔ $(\rho(s),+,.)$

**Question Number : 90 Question Id : 26449017909 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The binary operations in $N$ are

$N$ లోని బైనరి పరిక్రియలు -

**Options :**

1. ✗ $-,\div$

2. ✓ $+,\cdot$

3. ✗ $+,-$

4. ✗ $-,\cdot$

**Question Number : 91 Question Id : 26449017910 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following is not a semi group?

కింది వాటిలో సెమి గ్రూపు కానిది?

**Options :**

1. ✓ $(Q,-)$

2. ✗ $(N,+)$

3. ✗ $(R,+)$

4. ✗ $(Z,+)$

**Question Number : 92 Question Id : 26449017911 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Let $H,K$ be subgroup of a group $G$, then

$H,K$ లు ఒక సమూహం $G$ యొక్క ఉప సమూహంలు అయినప్పుడు

**Options :**

1. ✗ $H \cup K$ is a subgroup of $G$

$H \cup K$ అనేది $G$ యొక్క ఉపసమూహం

2. ✓ $H \cap K$ is a subgroup of $G$

$H \cap K$ అనేది $G$ యొక్క ఉపసమూహం

3. ✗ $H \times K$ is a subgroup of $G$

$H \times K$ అనేది $G$ యొక్క ఉపసమూహం

4. ✗ $HK$ is a subgroup of $G$

$HK$ అనేది $G$ యొక్క ఉపసమూహం

**Question Number : 93 Question Id : 26449017912 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following is false _____

ఈ క్రింది వాటిలో ఏది అసత్యము

**Options :**

Every abelian group is cyclic

1. ✔ ప్రతి ఎబీలియన్ సమూహము అనేది చక్రీయము

Every sub group of a cyclic group is cyclic

2. ✖ ప్రతి ఉపసమూహము అనేది చక్రీయము

Every cyclic group is abelian

3. ✖ ప్రతి చక్రీయ సమూహము అనేది ఎబీలియన్

Every group of prime order is cyclic

ప్రతి సమూహము క్రమపరిమాణ చక్రీయము

4. ✖

**Question Number : 94 Question Id : 26449017913 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Every group of prime order is

ప్రతి సమూహం యొక్క ప్రైమ్ ఆర్డర్ -

**Options :**

Cyclic

చక్రీయం

1. ✔

non-abelian

2. ✖ చక్రీయం కాని

subgroup

3. ✖ ఉప సమూహం

normal group

4. ✖ సాధారణ సమూహం

**Question Number : 95 Question Id : 26449017914 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The inverse of the permutation $\begin{pmatrix}1 & 2 & 3 & 4 & 5\\ 3 & 1 & 2 & 5 & 4\end{pmatrix}$

$\begin{pmatrix}1 & 2 & 3 & 4 & 5\\ 3 & 1 & 2 & 5 & 4\end{pmatrix}$ ఈ ప్రస్తారం యొక్క విలోమం

**Options :**

1. ✖ $\begin{pmatrix}1 & 2 & 3 & 4 & 5\\ 2 & 3 & 5 & 4 & 1\end{pmatrix}$

2. ✔ $\begin{pmatrix}1 & 2 & 3 & 4 & 5\\ 2 & 3 & 1 & 5 & 4\end{pmatrix}$

3. ✖ $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 4 & 5 & 3 & 1 & 2 \end{pmatrix}$

4. ✖ $\begin{pmatrix} 1 & 2 & 3 & 4 & 5 \\ 5 & 4 & 2 & 3 & 1 \end{pmatrix}$

**Question Number : 96 Question Id : 26449017915 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The order of the element 13 in U(14) is

U(14) లో 13 అనే మూలకము యొక్క తరగతి

**Options :**

1. ✖ 5

2. ✖ 10

3. ✖ 1

4. ✔ 2

**Question Number : 97 Question Id : 26449017916 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If H is a subgroup of G, m is the distinct right cosets of H in G, n is the number of distinct left cosets of H in G, then

H అనేది G యొక్క ఉపసమూహం అయితే, m అనేది G లోని H యొక్క విభిన్న కుడి కోసెట్‌ల సంఖ్య. n అనేది G లోని H యొక్క విభిన్న ఎడమ కోసెట్ల సంఖ్య. అపుడు -

**Options :**

1. ✗ $m = 2n$

2. ✗ $n = 2m$

3. ✓ $m = n$

4. ✗ $m = 3n$

**Question Number : 98 Question Id : 26449017917 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

A homomorphism $G \to G'$ is an isomorphism iff the kernel consists of

ఒక హోమోమార్ఫిజం $G \to G'$ అనేది ఒక ఐసోమార్ఫిజం కావాలంటే కార్నల్‌లో కలిగి ఉండేది

**Options :**

1. ✗ the identity 'e' only

గుర్తింపు 'e' మాత్రమే

a normal subgroup of G

2. ✓ G యొక్క ఒక సాధారణ ఉపసమూహం

a factor group of G

3. ✗ G యొక్క కారక సమూహం

quotient group of G

4. ✗ G యొక్క గుణాత్మకమైన సమూహం

**Question Number : 99 Question Id : 26449017918 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

An ideal of $Z_4$ is

$Z_4$ యొక్క ఆదర్శము

**Options :**

1. ✓ $\{0,2\}$

2. ✗ $\{0,1\}$

3. ✗ $\{0,3\}$

4. ✗ $\{3\}$

**Question Number : 100 Question Id : 26449017919 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

$\emptyset : Z_{12} \rightarrow Z_{12}$ defined by $\emptyset(x) = 3x \; \forall \; x \in Z_{12}$ is a homomorphism then $k(\gamma\emptyset) =$

$\emptyset : Z_{12} \rightarrow Z_{12}$ కి $\emptyset(x) = 3x \; \forall \; x \in Z_{12}$ అనేది సమరూపత అయితే $k(\gamma\emptyset) =$

**Options :**

1. ✘ $\{0,4\}$

2. ✔ $\{0,4,8\}$

3. ✘ $\{0,2,4\}$

4. ✘ $\{0,2,6\}$

**Question Number : 101 Question Id : 26449017920 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

$\lim_{n\to\infty}\left(1+\frac{1}{n}\right)^n$ is equal to

$\lim_{n\to\infty}\left(1+\frac{1}{n}\right)^n$ దీనికి సమానమైనది -

**Options :**

1. ✘ 1

2. ✘ $\infty$

3. ✖ 0

4. ✔ e

**Question Number : 102 Question Id : 26449017921 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following is false _____

ఈ క్రింది వాటిలో ఏద అసత్యము

**Options :**

1. ✖ Every group of order 4 is abelian
4వ తరగతి గల ప్రతి సమూహము ఏబీలియన్

2. ✖ Every group of order 5 is abelian
5వ తరగతి గల ప్రతి సమూహము ఏబీలియన్

3. ✔ Every group of order 6 is abelian
6వ తరగతి గల ప్రతి సమూహము ఏబీలియన్

4. ✖ Every group of order 11 is abelian
11వ తరగతి గల ప్రతి సమూహము అనేది ఏబీలియన్

**Question Number : 103 Question Id : 26449017922 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Any non-empty subset of real numbers which is bounded below has

దిగువ బద్ధమైన వాస్తవ సంఖ్యల యొక్క శూన్యేతర ఉప సమితి క్రింది వాటిలో దేనిని కలిగి ఉంటుంది

**Options :**

1. ✓ infimum

ఇన్‌ఫిమమ్

2. ✗ both infimum and supremum

ఇన్‌ఫిమమ్ మరియు సుప్రిమమ్ రెండూ

3. ✗ supremum

సుప్రిమమ్

4. ✗ neither infimum nor supremum

ఇన్‌ఫిమమ్ లేదా సుప్రిమమ్ కాదు

**Question Number : 104 Question Id : 26449017923 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The number of units in the ring $Z_{14}$ is _____

$Z_{14}$ వలయములోని యూనిట్ల సంఖ్య

**Options :**

1. ✗ 4

2. ✔ 6

3. ✖ 10

4. ✖ 12

**Question Number : 105 Question Id : 26449017924 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

$\sum\left(\frac{1}{n^p}\right)$ is convergent if

$\sum\left(\frac{1}{n^p}\right)$ అనేది అభిసరణ చెందాలంటే

**Options :**

1. ✖ $P<1$

2. ✔ $P>1$

3. ✖ $P=1$

4. ✖ $P\leq 1$

**Question Number : 106 Question Id : 26449017925 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which of the following is Integral Domain

ఈ క్రింది వానిలో ఏది పూర్ణాంక ప్రదేశము

**Options :**

1. ✖ $Z \times Z$

2. ✖ $M_2(Z)$

3. ✔ $Z_{11}$

4. ✖ $Z_{12}$

**Question Number : 107 Question Id : 26449017926 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $f(x)=\begin{cases} x & 0<x<1 \\ 3-x & 1\le x\le 2 \end{cases}$ then

$f(x)=\begin{cases} x & 0<x<1 \\ 3-x & 1\le x\le 2 \end{cases}$ అయితే

**Options :**

1. ✖ $\lim_{x\to 1^-} f(x)=1$

2. ✖ $\lim_{x\to 1^-} f(x)=2$

3. ✖ $\lim_{x \to 1} f(x) = 2$

4. ✔ both (a) & (b)

**Question Number : 108 Question Id : 26449017927 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In a polynomial ring $z_2[x], (1+x)^3 =$

బహుపదుల వలయం $z_2[x], (1+x)^3 =$

**Options :**

1. ✖ $x+x^2+x^3$

2. ✖ $1+x^2+x^3$

3. ✖ $1+x+x^3$

4. ✔ $1+x+x^2+x^3$

**Question Number : 109 Question Id : 26449017928 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In the ring of integers (Z, +, ·) which of the following is a maximal ideal

(Z, +, ·) పూరక వలయంలో ఈ క్రింది వాటిలో ఏది గరిష్ట ఆదర్శము అవుతుంది

**Options :**

1. ✖ $\{0\}$

2. ✖ $12\mathbb{Z}$

3. ✔ $11\mathbb{Z}$

4. ✖ $14\mathbb{Z}$

**Question Number : 110 Question Id : 26449017929 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f and g are continuous on $[a,b]$ and have equal finite derivatives in $[a,b]$ then f-g is

f మరియు g లు $[a,b]$ పై అవిచ్ఛిన్నంగా ఉండి $[a,b]$ లో సమాన పరిమిత ఉత్పన్నాలను కలిగి ఉంటే f-g అనేది

**Options :**

1. ✔ constant

స్థిరమైనది

2. ✖ $\frac{f}{g}$

3. ✖ g

4. ✖ f

**Question Number : 111 Question Id : 26449017930 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The number of proper ideals of a field F is ____

క్షేత్రము F లోని శుద్ధ అదర్శాల సంఖ్య

**Options :**

1. ✖ 2

2. ✔ 0

3. ✖ 4

Infinite

4. ✖ అనంతము

**Question Number : 112 Question Id : 26449017931 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The function for which Rolle's theorem is true is

రోల్స్ సిద్ధాంతము ఈ క్రిందివానిలో దేనికి నిజమవుతుంది

**Options :**

$f(x) = \log x$ in the interval $\left[\frac{1}{2}, 2\right]$

1. ✔ $f(x) = \log x$ విరామంలో $\left[\frac{1}{2}, 2\right]$

$f(x) = |x+1|$ in the interval $[-2, 2]$

2. ✖ $f(x) = |x+1|$ విరామంలో $[-2, 2]$

$f(x) = |x|$ in the interval $[-1, 1]$

3. ✖ $f(x) = |x|$ విరామంలో $[-1, 1]$

$f(x) = |x-1|$ in the interval $[-2, 2]$

4. ✖ $f(x) = |x-1|$ విరామంలో $[-2, 2]$

**Question Number : 113 Question Id : 26449017932 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f be a bounded function defined on $[a,b]$ and $P_1, P_2$ be two partitions of $[a,b]$ such that

$P_2$ is refinement of $P_1$ then

$[a,b]$ పై నిర్వచించబడిన ఒక పరిబద్ధప్రమేయము f అయితే, మరియు $P_1, P_2$లు $[a,b]$ యొక్క రెండు

విభజనలు అయి $P_2$ అనేది $P_1$ యొక్క శుద్ధీకరణ అయినప్పుడు

**Options :**

1. ✗ $L(P_2,f) \le L(P_1,f)$

2. ✓ $L(P_2,f) \ge U(P_1,f)$

3. ✗ $U(P_2,f) \ge U(P_1,f)$

4. ✗ $L(P_2,f) = L(P_1,f)$

**Question Number : 114 Question Id : 26449017933 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f is Riemann integrable on $[a,b]$ then

$[a,b]$ మీద f అనేది రీమాన్ సమాకలని అయితే అప్పుడు

**Options :**

1. ✔ $\left|\int_a^b f(x)\,dx\right| \leq \int_a^b |f(x)|dx$

2. ✖ $\left|\int_a^b f(x)\,dx\right| \geq \int_a^b |f(x)|dx$

3. ✖ $\left|\int_a^b f(x)\,dx\right| = \int_a^b |f(x)|dx$

4. ✖ $\left|\int_a^b f(x)\,dx\right| > \int_a^b |f(x)|dx$

**Question Number : 115 Question Id : 26449017934 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The number of associates of (2-i) in the ring of Gaussian integers is

గాసియన్ పూరక వలయము (2-i) లోని సహచర వలయాల సంఖ్య

**Options :**

1. ✖ 0

2. ✖ 2

3. ✓ 4

4. ✗ 3

**Question Number : 116 Question Id : 26449017935 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $\phi(x,y,z) = 3x^2y - y^3z^2$ then $grad\ \phi$ at the point (1, -2, -1) is

$\phi(x,y,z) = 3x^2y - y^3z^2$ అయితే (1, -2, -1) పాయింట్ వద్ద $grad\ \phi$ అనేది

**Options :**

1. ✓ $(-12,-9,-16)$

2. ✗ $(12,9,16)$

3. ✗ $(12,-6,9)$

4. ✗ $(12,6,-9)$

**Question Number : 117 Question Id : 26449017936 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $\vec{r} = x\vec{i} + y\vec{j} + z\vec{k}$ then $div\ \vec{r}$ is

If $\vec{r} = x\vec{i} + y\vec{j} + z\vec{k}$ అయితే $div\ \vec{r}$ అనేది

**Options :**

1. ✓ 3

2. ✗ 2

3. ✗ 0

4. ✗ 1

**Question Number : 118 Question Id : 26449017937 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The directional derivative of f = xy+yz+zx in the direction of the vector i+2j+2k at the point (1,2,0) is

(1,2,0) బిందువు వద్ద f = xy+yz+zx యొక్క దిశాత్మక అవకలనము i+2j+2k సదిశా వెంబడి

**Options :**

1. ✓ $\frac{10}{3}$

2. ✗ $\frac{11}{3}$

3. ✗ 12

4. ✗ 14

**Question Number : 119 Question Id : 26449017938 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $\bar{V} = x^2y\vec{i} - 2zx\vec{j} + 2yz\vec{k}$ then $curl\,\bar{V}$ is

$\bar{V} = x^2y\vec{i} - 2zx\vec{} + 2yz\vec{}$ అయితే $curl\,\bar{V}$ అనేది

**Options :**

1. ✖ $(x+z)\vec{i} - (z+x^2)\vec{j}$

2. ✖ $(x+z)\vec{i} + (z+x^2)\vec{j}$

3. ✔ $(2x+2z)\vec{i} - (2z+x^2)\vec{k}$

4. ✖ $(2x+2z)\vec{i} + (2z+x^2)\vec{k}$

**Question Number : 120 Question Id : 26449017939 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

A vector $\bar{F}$ is called irrotational if

వెక్టార్ $\bar{F}$ అనేది ఇరోటేషనల్ అయితే అది

**Options :**

1. ✖ $div\,\bar{F} = 0$

2. ✖ $curl\,\bar{F} = 1$

3. ✖ $div\,\bar{F} = 1$

4. ✔ $curl\,\bar{F} = 0$

**Question Number : 121 Question Id : 26449017940 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If F= $3x^2\bar{i} + (2xz - y)\bar{j} + z\bar{k}$ along the straight line 'c' from (0,0,0) to (2,1,3) then

$\int_c F.dr$ is

F= $3x^2\bar{i} + (2xz - y)\bar{j} + z\bar{k}$ అయితే అప్పుడు రేఖీయ సమాకలనము $\int_c F.dr =$ _____ ఇక్కడ 'c'

అనేది (0,0,0) నుండి (2,1,3) వరకు ఒక సరళరేఖ

**Options :**

1. ✖ 10

2. ✖ -12

3. ✖ 14

4. ✔ 16

**Question Number : 122 Question Id : 26449017941 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If S is the surface of the cylinder $x^2 + y^2 = 16$ then the unit normal vector to the surface $\hat{n}$ is

S అనేది సిలిండర్ యొక్క ఉపరితలం $x^2 + y^2 = 16$ అయితే, ఉపరితలం $\hat{n}$ కి యూనిట్ సాధారణ వెక్టార్

**Options :**

1. ✗ $2x\vec{i} - 2y\vec{j}$

2. ✓ $\frac{x}{4}\vec{i} + \frac{y}{4}\vec{j}$

3. ✗ $2x\vec{i} - \vec{j}$

4. ✗ $\frac{2x}{7}\vec{i} + \frac{y}{7}\vec{j}$

**Question Number : 123 Question Id : 26449017942 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Gauss divergence theorem connects

గాస్ అపసరణ సిద్ధాంతం వీటిని కలుపుతుంది?

**Options :**

1. ✗ Line integral and Surface integral

రేఖా సమాకలని మరియు వక్రతలీయ సమాకలని

Surface integral and Volume integral

వక్రతలీయ సమాకలని మరియు ఘనపరిమాణ సమాకలని

2. ✔

Line integral and Volume integral

రేఖా సమాకలని మరియు ఘనపరిమాణ సమాకలని

3. ✖

all the above

పైవి అన్నీ

4. ✖

**Question Number : 124 Question Id : 26449017943 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If 'C' curve $x^2 + y^2 = 1$ $z = y^2$ and $F = yz\bar{i} + zx\bar{j} + xy\bar{k}$ then $\int_c F.dr$ is

$F = yz\bar{i} + zx\bar{j} + xy\bar{k}$ అయితే అప్పుడు $x^2 + y^2 = 1$ $z = y^2$ అనే వక్రము 'C' వెంబడి $\int_c F.dr$

**Options :**

1. ✔ 0

2. ✖ 1

3. ✖ -1

4. ✖ 2

**Question Number : 125 Question Id : 26449017944 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The value of $\oint_c \ y(2xy-1)dx + x(2xy+1)dy$ where c is the circle $x^2+y^2=1$ is

C అనేది వృత్తం $x^2+y^2=1$ అయితే, $\oint_c \ y(2xy-1)dx + x(2xy+1)dy$ విలువ ఎంత?

**Options :**

1. ✗ $\pi$

2. ✗ $\frac{\pi}{2}$

3. ✗ $\frac{\pi}{3}$

4. ✓ $2\pi$

**Question Number : 126 Question Id : 26449017945 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The series $\sum_{n=1}^{\infty} \frac{1}{n(logx)}$ $P$ *is* converges if

శ్రేణ $\sum_{n=1}^{\infty} \frac{1}{n(logx)}$ అభిసరిస్తే అప్పుడు

**Options :**

1. ✓ P>1

2. ✗ P<1

3. ✖ $P \geq 1$

4. ✖ $P \leq 1$

**Question Number : 127 Question Id : 26449017946 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

$Z_n$ is an integral domain if and only if n is

$Z_n$ అనేది ఒక పూర్ణాంక ప్రదేశము అయితే, అపుడు n అనేది –

**Options :**

1. ✖ cyclic
చక్రీయము

2. ✖ identity
సర్వసమీకరణము

3. ✔ prime
ప్రధానము

4. ✖ zero divisor
శూన్య భాజకము

**Question Number : 128 Question Id : 26449017947 Display Question Number : Yes Is Question Mandatory : No Calculator : None**

**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The series $\sum_{n=1}^{\infty} (\sqrt{n+1} - \sqrt{n})$ is_____

$\sum_{n=1}^{\infty} (\sqrt{n+1} - \sqrt{n})$ అనే శ్రేణి

**Options :**

1. ✘ Convergence
అభిసరణ

2. ✔ Divergence
అవిసరణ

3. ✘ Conditioned
నియత అభిసరణ

4. ✘ Absolute convergence
సంపూర్ణ అభిసరణ

**Question Number : 129 Question Id : 26449017948 Display Question Number : Yes Is Question Mandatory : No Calculator : None**
**Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The characteristics of the ring $(Z_6, \oplus, \odot)$ is

వలయం $(Z_6, \oplus, \odot)$ యొక్క లాక్షణికము

**Options :**

1. ✔ 6

2. ✖ 3

3. ✖ 12

4. ✖ 0

**Question Number : 130 Question Id : 26449017949 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The Principal ideal (3) is a

ప్రధాన ఆదర్శం (3) అనేది –

**Options :**

1. ✖ prime ideal of Z
Z యొక్క ప్రధాన ఆదర్శం

2. ✖ maximal ideal of Z
Z యొక్క గరిష్ట ఆదర్శం

3. ✔ both (a)&(b)
a మరియు b రెండూ

4. ✖ neither (a) nor (b)
a, b లు రెండూ కాదు

**Question Number : 131 Question Id : 26449017950 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Any finite cyclic group of order n is isomorphic to

ఆర్డర్ n గల పరిమిత చక్రీయ సమూహం దేనికి తుల్యరూపంగా ఉంటుంది

**Options :**

1. ✓ $(Z_n, \oplus)$

2. ✗ $(Z_n, \odot)$

3. ✗ $(Z, +)$

4. ✗ $(Z, \cdot)$

**Question Number : 132 Question Id : 26449017951 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $S_1 = \sqrt{2}$ and $S_{n+1} = \sqrt{2}\, S_1 \ \forall\, n \in N$ then the sequence {Sn} convergence to _____

$S_1 = \sqrt{2}$ మరియు $S_{n+1} = \sqrt{2}\, S_1 \ \forall\, n \in N$ అయితే అప్పుడు అనుక్రమము {Sn} కు అభిసరిస్తుంది

**Options :**

1. ✓ $2$

2. ✗ $\sqrt{2}$

3. ✖ -2

4. ✖ $\frac{-1}{\sqrt{2}}$

**Question Number : 133 Question Id : 26449017952 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Which one of the following statement is not correct?

క్రింది ప్రకటనలో ఏది సరైన స్టేట్‌మెంట్ కాదు?

**Options :**

1. ✖ any ideal of R is a subring of R

R యొక్క ఏదైనా ఆదర్శం R యొక్క ఉపవలయం

2. ✔ a subring of R is an ideal of R

R యొక్క ఉపవలయం R యొక్క ఆదర్శం

3. ✖ the union of two subrings of a ring need not be a subring

రింగ్ యొక్క రెండు ఉపవలయాల కలయిక ఉపవలయం కానవసరం లేదు

4. ✖ the intersection of two subrings of R is a subring of R

R యొక్క రెండు ఉపవలయాల ఖండన R యొక్క ఉపవలయం

**Question Number : 134 Question Id : 26449017953 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

f and g be real valued functions that are continuous at $x_0$ in R then _____

f మరియు g లు వాస్తవ మూల్య ప్రమేయము మరియు f, g లు $x_0$ వద్ద అవిచ్ఛిన్నము అయితే అప్పుడు

**Options :**

1. ✖ f+g is continuous at $x_0$

(f+g అనేది $x_0$ వద్ద అవిచ్ఛిన్నము

2. ✖ fg is continuous at $x_0$

fg లు $x_0$ వద్ద అవిచ్ఛిన్నము

3. ✖ $\frac{f}{g}$ continuous $x_0$

4. ✔ All the above

పైవన్ని

**Question Number : 135 Question Id : 26449017954 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If {0} is a zero subspace of inner product space V then $\{0\}^{\perp}$ is equal to

{0} అనేది అంతరలంబ అంతరాళము V యొక్క శూన్య ఉపాంతరాళము అయితే $\{0\}^{\perp}$ కి ఇది సమానం.

**Options :**

1. ✖ $\{0\}$

2. ✔ $\{V\}$

3. ✖ $\phi$

4. ✖ $W$

**Question Number : 136 Question Id : 26449017955 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If f(x) = |x|+|x-1|+|x-2| then which of the following is true _____

f(x) = |x|+|x-1|+|x-2| అయితే అప్పుడు ఈ క్రింది వాటిలో ఏది సత్యము

**Options :**

1. ✔ f is continuous at x=1,2,3

x=1,2,3 లవద్ద f అవిచ్ఛిన్నము

2. ✖ f is continuous and derivable at x=1,2,3

x=1,2,3 లవద్ద f అవిచ్ఛిన్నము మరియు అవకలనీయము

3. ✖ f is continuous at x= 1,2 and derivable at 1,2,3

x=1,2 లవద్ద f అవిచ్ఛిన్నము మరియు x=1,2,3 వద్ద అవకలనీయము

All the above

4. ✖ పైవన్నీ

**Question Number : 137 Question Id : 26449017956 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Let $T : V \to W$ be a linear transformation. Then $T$ is a non-singular if

$T : V \to W$ ఒక సరళ పరివర్తనగా ఉండనివ్వండి. అపుడు, $T$ అనేది అసాధారణము కావాలంటే

**Options :**

$T$is 1-1

1. ✔ $T$ అనేది 1-1

$T$ is onto

2. ✖ $T$ మీద

$T$ is 1-1 & onto

3. ✖ $T$ అనేది 1-1 మరియు మీద

$\text{Ker}\, T \neq \{0\}$

4. ✖

**Question Number : 138 Question Id : 26449017957 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The value of C in Cauchy's Mean value theorem for $f(x) = e^x, g(x) = e^{-x}$ in [a,b] is _____

$f(x) = e^x, g(x) = e^{-x}$ లకు కోషీ మధ్యము మూల్య సిద్ధాంతము ద్వారా C విలువ

**Options :**

1. ✗ $\frac{a}{2}$

2. ✗ $\frac{b}{2}$

3. ✓ $\frac{a+b}{2}$

4. ✗ $\sqrt{ab}$

**Question Number : 139 Question Id : 26449017958 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The sum of the eigen values of the matrix $\begin{bmatrix} 3 & -4 & 4 \\ 1 & -2 & 4 \\ 1 & -1 & 3 \end{bmatrix}$ is

మాట్రిక్ $\begin{bmatrix} 3 & -4 & 4 \\ 1 & -2 & 4 \\ 1 & -1 & 3 \end{bmatrix}$ యొక్క ఐగన్ విలువల మొత్తం

**Options :**

1. ✓ 4

2. ✖ 3

3. ✖ 8

4. ✖ 2

**Question Number : 140 Question Id : 26449017959 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If A is a square matrix then $A-A^T$ is

A చతురస్ర మాత్రిక అయితే $A-A^T$ అనేది

**Options :**

1. ✖ Symmetric matrix
సిమెట్రిక్ మాత్రిక

2. ✔ Skew Symmetric matrix
స్క్యూ సిమెట్రిక్ మాత్రిక

3. ✖ Hermitian matrix
హెర్మిటియన్ మాత్రిక

4. ✖ Skew Hermitian matrix
స్క్యూ హెర్మిటియన్ మాత్రిక

**Question Number : 141 Question Id : 26449017960 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The inverse of the matrix $A=\begin{pmatrix}1 & 2\\ 3 & 1\end{pmatrix}$ is

$A=\begin{pmatrix}1 & 2\\ 3 & 1\end{pmatrix}$ యొక్క విలోమ మాత్రిక

**Options :**

1. ✔ $\frac{1}{5}\begin{pmatrix}-1 & 2\\ 3 & -1\end{pmatrix}$

2. ✘ $\frac{1}{5}\begin{pmatrix}-1 & 2\\ -3 & 1\end{pmatrix}$

3. ✘ $\frac{1}{5}\begin{pmatrix}1 & -2\\ 3 & -1\end{pmatrix}$

4. ✘ $\frac{1}{5}\begin{pmatrix}-1 & -2\\ 3 & 1\end{pmatrix}$

**Question Number : 142 Question Id : 26449017961 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

Rank of the matrix $\begin{bmatrix}1 & 2 & 3\\3 & 4 & 5\\4 & 5 & 6\end{bmatrix}$ is

$\begin{bmatrix}1 & 2 & 3\\3 & 4 & 5\\4 & 5 & 6\end{bmatrix}$ మాత్రిక యొక్క కోటి

**Options :**

1. ✓ 2

2. ✗ 3

3. ✗ 1

4. ✗ 0

**Question Number : 143 Question Id : 26449017962 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The nullity of the linear transformation $T: V \to V$ defined by $T(v) = v$ for all $v \in V$ is

అన్ని $v \in V$ కోసం $T(v) = v$ ద్వారా నిర్వచించబడిన ఏకఘాత పరివర్తన $T: V \to V$ యొక్క శూన్యత్వము

**Options :**

1. ✗ 1

2. ✗ 2

3. ✓ 0

4. ✖ 3

**Question Number : 144 Question Id : 26449017963 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

A linear transformation $T: V \to F$ is called a

ఒక ఏకఘాత పరివర్తన $T: V \to F$ ను ఇలా అంటారు.

**Options :**

1. ✖ trivial linear transformation

ట్రివియల్ ఏకఘాత పరివర్తన

2. ✖ identity linear transformation

ఐడింటిటి ఏకఘాత పరివర్తన

3. ✖ natural linear transformation

సహజ ఏకఘాత పరివర్తన

4. ✔ linear functional

ఏకఘాత ప్రమేయము

**Question Number : 145 Question Id : 26449017964 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If U= {(1,2,1), (0,1,2)}, W={(1,0,0), (0,1,0)} then dim (U+W) =

U= {(1,2,1), (0,1,2)}, W={(1,0,0), (0,1,0)} అయితే dim (U+W) =

**Options :**

1. ✖ 0

2. ✖ 1

3. ✔ 3

4. ✖ 4

**Question Number : 146 Question Id : 26449017965 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

In $V_3(R)$, $A = \{(a, b, 0)/a, b \in R\}$ and $B = \{(0, 0, c)/c \in R\}$ are subspace of V then $A \cap B$=

$V_3(R)$ లో $A = \{(a, b, 0)/a, b \in R\}$ మరియు $B = \{(0, 0, c)/c \in R\}$ లు

V యొక్క ఉపాంతరాళాలు అయినప్పుడు $A \cap B$=

**Options :**

1. ✖ $\{(a, b, c)/a, b, c \in R\}$

2. ✔ $\{0\}$

3. ✖ $\{(a, 0, c)/a, c \in R\}$

4. ✗ $\{(a,b,0)/a,b \in R\}$

**Question Number : 147 Question Id : 26449017966 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If a 3x8 matrix A has rank 3 then dim Nul A = _____

3x8 తరగతి గల మాత్రిక యొక్క కోటి 3 అయితే అప్పుడు dim Nul A =

**Options :**

1. ✗ 4

2. ✗ 3

3. ✓ 5

4. ✗ 8

**Question Number : 148 Question Id : 26449017967 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If $S = \{(1,0,0)(2,0,0)(3,0,0)\}$ then $L(S)$ in $V_3(R)$ is

$S = \{(1,0,0)(2,0,0)(3,0,0)\}$ అయితే, $V_3(R)$ లో $L(S)$ అనేది –

**Options :**

1. ✗ $\{(0,x,0)/x \in R\}$

2. ✓ $\{(x,0,0)/x \in R\}$

3. ✖ $\{(x, y, 0)/x, y \in R\}$

4. ✖ $\{(x, y, z)/x, y, z \in R\}$

**Question Number : 149 Question Id : 26449017968 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

The only vector orthogonal to every vector in $V$ is

$V$ లోని ప్రతి సదిశకు లంబ కోణీయంగా వుండే ఒకే ఒక సదిశ

**Options :**

1. ✖ 1

2. ✖ (1, 1)

3. ✖ (0, 0)

4. ✔ 0

**Question Number : 150 Question Id : 26449017969 Display Question Number : Yes Is Question Mandatory : No Calculator : None Response Time : N.A Think Time : N.A Minimum Instruction Time : 0**

If W is a subspace of $R^4$ given by W={(a, b, c, d) / b-2c+d=0}, then dim W=

$R^4$యొక్క ఒక ఉప అంతరాళము W={(a, b, c, d) / b-2c+d=0}గా యిస్తే అప్పుడు dim W=

**Options :**

1. ✖ 2

2. ✔ 3

3. ✖ 4

4. ✖ 1