National Testing Agency

Question Paper Name:

Farm Machinery and Power Engineering 23rd Sep 2020 Shift 2

Set 2

Subject Name: Farm Machinery and Power Engineering

Creation Date : 2020-09-23 19:33:41

Duration :120Total Marks :480Display Marks:YesShare Answer Key With Delivery Engine :YesActual Answer Key :Yes

Farm Machinery and Power Engineering

Group Number:

Group Id: 71087042

Group Maximum Duration:

Group Minimum Duration:

Show Attended Group?:

No
Edit Attended Group?:

No
Break time:

Group Marks:

480
Is this Group for Examiner?:

No

Part A General Knowledge

Section Id: 710870124

Section Number :

Section type: Online

Mandatory or Optional: Mandatory



Number of Questions:	20
Number of Questions to be attempted:	20
Section Marks:	80
Display Number Panel:	Yes
Group All Questions:	Yes
Mark As Answered Required?:	Yes
Sub-Section Number:	1

Sub-Section Id: 710870124

Question Shuffling Allowed: Yes

Question Number: 1 Question Id: 7108704981 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

- 1. Tea
- 2. Cotton
- 3. Rubber
- 4. Rice

Options:

71087019921.1

71087019922. 2

71087019923.3

71087019924.4

Question Number: 2 Question Id: 7108704982 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Which of the following are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

Choose the *correct* answer from the options below:

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

Options:

71087019925. 1

71087019926. 2

71087019927. 3

71087019928.4

Question Number: 3 Question Id: 7108704983 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

Options:



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71087019930. 2 71087019931. 3

71087019932.4

Question Number: 4 Question Id: 7108704984 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following countries is the main rival of India in tea export?

- 1. China
- 2. Japan
- 3. Germany
- 4. Sri Lanka

Options:

71087019933.1

71087019934. 2

71087019935.3

71087019936.4

Question Number: 5 Question Id: 7108704985 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements

Statement A: MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

Statement B: Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement A and Statement B are correct
- 2. Both Statement A and Statement B are incorrect
- 3. Statement A is correct but Statement B is incorrect
- 4. Statement A is incorrect but Statement B is correct

Options:

71087019937. 1

71087019938. 2

71087019939. 3

71087019940.4

Question Number: 6 Question Id: 7108704986 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following is a global association of nations of the world to help cooperation in international law, security, economic development and social equity?

- 1. United Nations Organization
- 2. International Monetary Fund
- 3. World Bank
- 4. World Health Organization



71087019941.1

71087019942. 2

71087019943. 3

71087019944. 4

Question Number: 7 Question Id: 7108704987 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

1.57

2.65

3.52

4.69

Options:

71087019945.1

71087019946. 2

71087019947. 3

71087019948. 4

Question Number: 8 Question Id: 7108704988 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following statements is incorrect?

- 1. The highest number of pigs in the world are found in India
- 2. Utter Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

Options:



71087019949. 1

71087019950. 2

71087019951.3

71087019952.4

Question Number: 9 Question Id: 7108704989 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is Question

Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which type of N-fertilizer is suitable for water-logged soils?

- 1. Zinc Phosphate
- 2. Ammonium Sulphate
- 3. Calcium
- 4. Potassium Nitrate

Options:

71087019953.1

71087019954. 2

71087019955.3

71087019956.4

Question Number: 10 Question Id: 7108704990 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

- 1. Bauxite deposits
- 2. Manganese deposits
- 3. Copper deposits
- 4. High-grade haematite deposits

Options:



71087019958. 2 71087019959. 3

71087019960.4

Question Number: 11 Question Id: 7108704991 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m

2. 20 m x 5 m

3. 30 m x 3.33 m

4. 40 m x 2.5 m

Options:

71087019961. 1

71087019962. 2

71087019963.3

71087019964.4

Question Number: 12 Question Id: 7108704992 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

In which one of the following industries, the consumption of natural rubber is the largest?

- 1. Auto tyres and tubes
- 2. Footwear
- 3. Dipped goods
- 4. Latex foam

Options:



71087019965.1

71087019966. 2

71087019967.3

71087019968.4

Question Number: 13 Question Id: 7108704993 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following countries was the partner country of 34th Surajkund International Crafts Fair held in Haryana?

- 1. China
- 2. Nepal
- 3. Bhutan
- 4. Uzbekistan

Options:

71087019969. 1

71087019970. 2

71087019971. 3

71087019972.4

Question Number: 14 Question Id: 7108704994 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

- 1. University of Delhi
- 2. University of Kolkata
- 3. University of Mumbai
- 4. University of Hyderabad



71087019973.1

71087019974. 2

71087019975.3

71087019976.4

Question Number: 15 Question Id: 7108704995 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

Options:

71087019977. 1

71087019978. 2

71087019979.3

71087019980.4

Question Number: 16 Question Id: 7108704996 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which of the following would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals



71087019981.1

71087019982. 2

71087019983.3

71087019984.4

Question Number: 17 Question Id: 7108704997 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Who was the first administrator-statesman to attempt planning as a means for economic development?

1. C. Rajagopalachari

2. V. T. Krishnamachari

3. M. Viswesvarayya

4. Sir C. P. Ramaswami Aiyyar

Options:

71087019985.1

71087019986. 2

71087019987. 3

71087019988.4

Question Number: 18 Question Id: 7108704998 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina



71087019989.1

71087019990. 2

71087019991.3

71087019992.4

Question Number: 19 Question Id: 7108704999 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Economic liberalization in India started with

1. Sustainable changes in industrial licensing policy

- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

Options:

71087019993.1

71087019994. 2

71087019995.3

71087019996.4

Question Number: 20 Question Id: 7108705000 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

Options:



71087019998. 2 71087019999. 3 71087020000. 4

Part B Core Agricultural Engineering and Technology

Section Id: 710870125

Section Number: 2

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions :50Number of Questions to be attempted :50Section Marks :200Display Number Panel :YesGroup All Questions :YesMark As Answered Required? :YesSub-Section Number :1

Sub-Section Id: 710870125

Question Shuffling Allowed: Yes

Question Number: 21 Question Id: 7108705001 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Major constituents of gunmetal are

- 1. Copper and Tin
- 2. Copper and Phosphorous
- 3. Phosphorous and Manganese
- 4. Copper and Cobalt

Options:

71087020001.1



71087020003. 3 71087020004. 4

Question Number: 22 Question Id: 7108705002 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The bevel angle of an agricultural disc is measured using a

- 1. Micrometer
- 2. Compass
- 3. Vernier Caliper
- 4. Combination set

Options:

71087020005.1

71087020006. 2

71087020007.3

71087020008.4

Question Number: 23 Question Id: 7108705003 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The biogas requirement per person per day for cooking is about

- 1.50 I
- 2. 100 l
- 3.225 |
- 4.500 I

Options:

71087020009. 1

71087020010. 2

71087020011.3



Question Number: 24 Question Id: 7108705004 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The dimension of angular acceleration is

1. LT⁻²

2. T-2

3. LT-1

4. L²T⁻²

Options:

71087020013.1

71087020014. 2

71087020015.3

71087020016.4

Question Number: 25 Question Id: 7108705005 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

A direct-acting pressure relief valve is used in the circuit operating at

1. High Volume Flow Rate

2. Low Pressure

3. High Pressure and High Volume

4. Low Volume Low Flow Rate

Options:

71087020017. 1

71087020018. 2

71087020019.3

71087020020.4

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Question Number: 26 Question Id: 7108705006 Question Type: MCQ Option Shuffling: No Display Questi

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The commonly used seed metering system on a maize planter is

- 1. Fluted roller
- 2. Internal double run
- 3. Inclined plate with cells
- 4. Cup feed mechanism

Options:

71087020021. 1

71087020022. 2

71087020023.3

71087020024. 4

Question Number: 27 Question Id: 7108705007 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

In an agricultural operation, UAV is most suitable for

- 1. Seeding
- 2. Mechanical weeding
- 3. Spaying
- 4. Land Levelling

Options:

71087020025.1

71087020026. 2

71087020027.3

71087020028.4

Question Number: 28 Question Id: 7108705008 Question Type: MCQ Option Shuffling: No Display Questi

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Feed capacity of a 3 bottom 35cm mould board plough operating at a speed of 3km per hour with a field efficiency of 70% is

- 1. 1.05 ha/hr
- 2. 0.22 ha/hr
- 3. 0.10 ha/hr
- 4. 0.70 ha/hr

Options:

71087020029. 1

71087020030. 2

71087020031.3

71087020032.4

Question Number: 29 Question Id: 7108705009 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Disc angle in a standard disc plough is

- 1. 12-15 degrees
- 2. 15-22 degrees
- 3. 32-40 degrees
- 4. 42-45 degrees

Options:

71087020033.1

71087020034. 2

71087020035.3

71087020036.4

Question Number: 30 Question Id: 7108705010 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Safe noise level (dB) for an agricultural worker is

- 1.80
- 2, 100
- 3.120
- 4.140

Options:

71087020037. 1

71087020038.2

71087020039.3

71087020040.4

Question Number: 31 Question Id: 7108705011 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which of the following statements is true with respect to sieve analysis of soil samples?

- 1. D₆₀ < D₁₀
- $2. D_{60} > D_{10}$
- 3. $D_{60} = D_{10}$
- 4. None of the above

Options:

71087020041.1

71087020042. 2

71087020043.3

71087020044.4

Question Number: 32 Question Id: 7108705012 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

On a specific energy diagram, two depths of flow for a particular specific energy are known as

- 1. Normal depth
- 2. Critical depth
- 3. Alternate depths
- 4. Variable depths

Options:

71087020045.1

71087020046. 2

71087020047.3

71087020048.4

Question Number: 33 Question Id: 7108705013 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

For a rectangular channel, 'd' is the depth and 'B' is the base width. The channel section will be the most hydraulically efficient when

1. B = 4d

2. B = 2d

3. B = d

4.2B = d

Options:

71087020049.1

71087020050.2

71087020051.3

71087020052.4

Question Number: 34 Question Id: 7108705014 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks : 4 Wrong Marks : 1

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Which of the following formulae is used to estimate the peak rate of runoff from an area?

- 1. William's formula
- 2. Manning's formula
- 3. Chézy's formula
- 4. Rational formula

Options:

71087020053.1

71087020054. 2

71087020055.3

71087020056.4

Question Number: 35 Question Id: 7108705015 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which of the following could be measured with lysimeters?

- 1. Interception losses
- 2. Flow velocity in a stream
- 3. Flow rate in pipes
- 4. Evapotranspiration

Options:

71087020057.1

71087020058.2

71087020059.3

71087020060.4

Question Number: 36 Question Id: 7108705016 Question Type: MCQ Option Shuffling: No Display Question Number: Vac Ia

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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The time of concentration in an area is determined by using the relationship proposed by

- 1. Wischmeier and Smith
- 2. Blaney and Criddle
- 3. Darcy and Weisbach
- 4. Kirpitch

Options:

71087020061.1

71087020062. 2

71087020063.3

71087020064.4

Question Number: 37 Question Id: 7108705017 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Contour bunds are recommended for areas where

- 1. Rainfall is low and soil is light
- 2. Rainfall is high and soil is light
- 3. Rainfall is light and soil is heavy
- 4. None of the above

Options:

71087020065.1

71087020066. 2

71087020067.3

71087020068.4

Question Number: 38 Question Id: 7108705018 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Soil taxonomy deals with which one of the following?

- 1. Principles of Soil Classification
- 2. Principles of Agricultural Taxation
- 3. Principles of Soil degradation
- 4. Principles of Soil Conservation

Options:

71087020069.1

71087020070.2

71087020071.3

71087020072.4

Question Number: 39 Question Id: 7108705019 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Which one of the following is NOT a type of storage in dams?

- 1. Regular storage
- 2. Temporary storage
- 3. Dead storage
- 4. Live storage

Options:

71087020073.1

71087020074. 2

71087020075.3

71087020076.4

Question Number: 40 Question Id: 7108705020 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Which one of the following is the most efficient method of irrigation?

- 1. Drip irrigation
- 2. Furrow irrigation
- 3. Check basin irrigation
- 4. Sprinkler Irrigation

Options:

71087020077.1

71087020078. 2

71087020079.3

71087020080.4

Question Number: 41 Question Id: 7108705021 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The sphericity of a grain having length, breadth, thickness (8mm, 4mm, 2mm respectively) is

- 1.0.4
- 2.0.5
- 3.0.6
- 4. 0.7

Options:

71087020081.1

71087020082.2

71087020083.3

71087020084.4

Question Number: 42 Question Id: 7108705022 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

The most important factor which affects the shelf-life of food products is

- 1. Moisture content
- 2. Water activity
- 3. Fat content
- 4. Protein content

Options:

71087020085.1

71087020086. 2

71087020087.3

71087020088.4

Question Number: 43 Question Id: 7108705023 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

What quantities of pineapple juice (having 15% sugar content) and sugar syrup (having 40% sugar content) are needed to produce 50 kg of fruit squash containing 20% sugar?

- 1. 40 kg pineapple juice and 10 kg sugar syrup
- 2. 30 kg pineapple juice and 20 kg sugar syrup
- 3. 25 kg pineapple juice and 25 kg sugar syrup
- 4. 20 kg pineapple juice and 30 kg sugar syrup

Options:

71087020089.1

71087020090. 2

71087020091.3

71087020092.4

Question Number: 44 Question Id: 7108705024 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Which of the following separators are used for separation of materials based on their relative length?

- 1. Disk separator and Indented cylinder separator
- 2. Spiral and Disk separator
- 3. Disk and Cyclone separator
- 4. Spiral and Specific gravity separator

Options:

71087020093.1

71087020094. 2

71087020095. 3

71087020096.4

Question Number: 45 Question Id: 7108705025 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

In stainless steel 316 (18/10), the 18/10 represents

1. 18% Ni and 10% Cr

2. 18% Cr and 10% Cu

3. 18% Cu and 10% Al

4. 18% Cr and 10% Ni

Options:

71087020097. 1

71087020098. 2

71087020099.3

71087020100.4

Question Number: 46 Question Id: 7108705026 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Index organism for commercial processing of canned products is

- 1. Campylobacter jejuni
- 2. Clostridium perfringens
- 3. Clostridium botulinum
- 4. Staphylococcus aureus

Options:

71087020101.1

71087020102. 2

71087020103.3

71087020104.4

Question Number: 47 Question Id: 7108705027 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

In cold regions, where could the deposition of water occur in metal storage containers?

- 1. Bottom
- 2. Top
- 3. Centre
- 4. Throughout the container

Options:

71087020105.1

71087020106. 2

71087020107.3

71087020108.4

Question Number: 48 Question Id: 7108705028 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Which one of the following is the most important objective of process control?

- 1. To reduce variability in final product
- 2. To utilize resources effectively
- 3. To maximize production
- 4. To reduce contamination

Options:

71087020109. 1

71087020110. 2

71087020111.3

71087020112.4

Question Number: 49 Question Id: 7108705029 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Inverse transducer converts

- 1. Solar energy to any form of energy
- 2. Electrical to any form of energy
- 3. Mechanical energy to electrical energy
- 4. Mechanical energy to light

Options:

71087020113.1

71087020114. 2

71087020115.3

71087020116.4

Question Number: 50 Question Id: 7108705030 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

In India, which of the following sets the permissible limits of additives in fruit beverages?

- A. FSSAI
- B. Fruit Products Order
- C. BIS

Select the most appropriate answer from the options given below?

- 1. A and B
- 2. B only
- 3. A only
- 4. C only

Options:

71087020117. 1

71087020118. 2

71087020119. 3

71087020120.4

Question Number: 51 Question Id: 7108705031 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements

Statement I: Biogas can be utilized effectively for cooking, lighting, operating engines and power generation applications.

Statement II: Bio digestion process can be done only on wet fermentation.

In light of the above statements, choose the **most appropriate** answer from the options given below:

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect.
- 3. Statement I is correct but Statement II is incorrect.
- 4. Statement I is incorrect but Statement II is correct.

Options:

71087020121.1

71087020122. 2

71087020123.3

71087020124. 4

Question Number: 52 Question Id: 7108705032 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements:

Statement I: Fluidized bed gasification system can handle a wide range of high moisture feedstocks.

Statement II: Fluidization is the key concept to high throughput and low turndown ratio (TDR).

In light of the above statements, choose the **most appropriate** answer from the given below:

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect.
- 3. Statement I is correct but Statement II is incorrect.
- 4. Statement I is incorrect but Statement II is correct.

Options:

71087020125.1

71087020126. 2

71087020127.3

71087020128.4

Question Number: 53 Question Id: 7108705033 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements:

Statement I: Temperature of carbonization plays an important role in deciding the quality of charcoal.

Statement II: The calorific value of producer gas can be affected by the chemical composition of the feedstock, air velocity, thickness of bed and particle size of the feed.

In light of the above statements, choose the **most appropriate** answer from the options given below:

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect.
- 3. Statement I is correct but Statement II is incorrect.
- 4. Statement I is incorrect but Statement II is correct.

Options:

71087020129. 1

71087020130. 2

71087020131.3

71087020132.4

Question Number: 54 Question Id: 7108705034 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Arrange in sequence the steps involved in designing a solar PV powered water pumping system.

- A. Determine the size and number of PV modules required.
- B. Determine the solar radiation available at the given location.
- C. Determine the total dynamic head.
- D. Determine the amount of water required per day.
- E. Determine the hydraulic energy required per day to pump the required amount of water.

Choose the correct answer from the options given below:

1. A, B, C, D & E

2. B, C, D, E & A

3. C, E, A, B & D

4. D, C, E, B & A

Options:

71087020133.1

71087020134. 2

71087020135.3

71087020136.4

Question Number: 55 Question Id: 7108705035 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Match List I with List II

List - I	List - II
A. Efficiency of flat plate collector	I. 6-10%
B. Optical efficiency of concentrating collector	II. 15-25%
C. Collection efficiency of solar pond	III. 40%
D. Efficiency of CdTe Solar cell	IV. 65%

Choose the correct answer from the options given below:

1. A-III, B-IV, C-II, D-I

2. A-I, B-II, C-III, D-IV

3. A-II, B-III, C-IV, D-I

4. A-IV, B-II, C-III, D-I

Options:

71087020137. 1

71087020138. 2

71087020139. 3

71087020140.4

Question Number: 56 Question Id: 7108705036 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The maximum theoretical power co-efficient in a wind rotor is

1. 0.593

2. 0.953

3. 27/16

4. 0.35

Options:

71087020141.1

71087020142. 2



71087020144.4

Question Number: 57 Question Id: 7108705037 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as

Reason R.

Assertion A: Enzymes are usually protein substances which act as biocatalysts.

Reason R: Enzymes lower the activation energy of the reaction.

In light of the above statements, choose the correct answer from the options given below:

- 1. Both A and R are true and R is the correct explanation of A.
- 2. Both A and R are true but R is NOT the correct explanation of A.
- 3. A is true but R is false.
- 4. A is false but R is true.

Options:

71087020145.1

71087020146. 2

71087020147. 3

71087020148.4

Question Number: 58 Question Id: 7108705038 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements:

Statement I: In primary batteries, the chemical reactions are non-reversible.

Statement II: For vehicle propulsion, lead-acid batteries are preferred due to their higher specific energy.

In light of the above statements, choose the **most appropriate** answer from the options given below:

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect.
- 3. Statement I is correct but Statement II is incorrect.
- 4. Satement I is incorrect but Statement I is correct.

Options:

71087020149.1

71087020150. 2

71087020151.3

71087020152.4

Question Number: 59 Question Id: 7108705039 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Match List I with List II

List - I	List - II	
A. Stroboscope	I. Flue gas analysis	
B. Psychrometer	II. Light	
C. Fyrite	III. R.P.M.	
D. Luxmeter	IV. Humidity	

Choose the correct answer from the options given below:

1. A-II, B-I, C-IV, D-III

2. A-III, B-I, C-IV, D-II

3. A-II, B-III, C-I, D-IV

4. A-III, B-IV, C-I, D-II

Options:

71087020153.1

71087020154. 2

71087020155.3

71087020156.4

Question Number: 60 Question Id: 7108705040 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Arrange the steps involved in the Critical Path Method in sequence

- A. Determine the sequence of activities
- B. Specify the individual activities
- C. Estimate activity completion time
- D. Draw the network diagram
- E. Identify the critical path

Choose the correct answer from the options given below:

- 1. A, B, D, E, C
- 2. B, A, D, C, E
- 3. C, B, A, E, D
- 4. D, B, A, C, E

Options:

71087020157. 1

71087020158. 2

71087020159.3

71087020160.4

Question Number: 61 Question Id: 7108705041 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Tensiometers installed are used for measuring

- 1. Wilting point
- 2. Capillary potential
- 3. Osmatic potential
- 4. Diffusivity



Options:

71087020161.1

71087020162. 2

71087020163.3

71087020164.4

Question Number: 62 Question Id: 7108705042 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Arrange the following crops in increasing order of effective root zone depth

A. Sugarcane

B. Rice

C. Maize

D. Wheat

Choose the correct answer from the options given below:

1. A, B, C, D

2. B, A, C, D

3. B, D, C, A

4. D, C, B, A

Options:

71087020165.1

71087020166. 2

71087020167.3

71087020168.4

Question Number: 63 Question Id: 7108705043 Question Type: MCQ Option Shuffling: No Display Question Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



In open channel flow, if the depth of flow is the same at every section of the channel, then the flow is known as

- 1. Unsteady flow
- 2. Uniform flow
- 3. Varied flow
- 4. Gradually varied flow

Options:

71087020169. 1

71087020170. 2

71087020171.3

71087020172.4

Question Number: 64 Question Id: 7108705044 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as

Reason R.

Assertion A: After 1978, irrigation projects in India are classified on the basis of culturable command area

Reason R: Major Irrigation projects have a culturable command area greater than 5000 ha.

In light of the above statements, choose the correct answer from the options given below:

- 1. Both A and R are true and R is the correct explanation of A.
- 2. Both A and R are true but R is NOT the correct explanation of A.
- 3. A is true but R is false.
- 4. A is false but R is true.

Options:

71087020173.1



71087020175. 3 71087020176. 4

Question Number: 65 Question Id: 7108705045 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The value of transmissibility (litres per day per meter) for an irrigation well must be equal to or greater than

1. 200

2.20

3.2000

4. 20,000

Options:

71087020177. 1

71087020178. 2

71087020179.3

71087020180. 4

Question Number: 66 Question Id: 7108705046 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The flow in a border strip is a case of spatially varied

- 1. steady open channel flow with decreasing discharge.
- 2. unsteady open channel flow with decreasing discharge.
- 3. steady open channel flow with increasing discharge.
- 4. unsteady open channel flow with increasing discharge.

Options:

71087020181.1

71087020182. 2



71087020184.4

Question Number: 67 Question Id: 7108705047 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The most common cladding/covering material used for a poly house is:

1, 100 micron PVC film.

2. 200 micron UV stabilized polyfilm.

3. 200 micron HDPE film.

4. 100 micron HDPE film.

Options:

71087020185.1

71087020186. 2

71087020187.3

71087020188.4

Question Number: 68 Question Id: 7108705048 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Secondary salinization occurs in:

- 1. Irrigated Command in Arid region only.
- 2. Irrigated Command in Semi-Arid Region only.
- 3. Both Irrigated command in Arid and Semi-arid Regions.
- 4. Irrigated Command in Humid region only.

Options:

71087020189. 1

71087020190. 2

71087020191.3



Question Number: 69 Question Id: 7108705049 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Match List I with List II

List - I	List - II	
A. Mass curve	I. Always a falling curve	
B. Thiessen method	II. Relationship between accumulated rainfall and time	
C. DAD curve	III. Average rainfall depth over an area	
D. Hyetograph	IV. Graph between rainfall intensity and time	

Choose the correct answer from the options below:

1. A-II, B-III, C-I, D-IV

2. A-III, B-II, C-IV, D-I

3. A-I, B-II, C-III, D-IV

4. A-III, B-I, C-II, D-IV

Options:

71087020193.1

71087020194. 2

71087020195.3

71087020196.4

Question Number: 70 Question Id: 7108705050 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Triangular Irrigaton Network (TIN) is a

- 1. Roster data
- 2. Vector data
- 3. Transportation data
- 4. None of the above

Options:

71087020197. 1

71087020198. 2

71087020199.3

71087020200.4

Part C Farm Machinery and Power Engineering

Section Id: 710870126

Section Number: 3

Section type: Online

Mandatory or Optional: Mandatory

Number of Questions: 50
Number of Questions to be attempted: 50
Section Marks: 200
Display Number Panel: Yes

Group All Questions:

Mark As Answered Required?:

Yes

Sub-Section Number:

Sub-Section Id: 710870126

Question Shuffling Allowed: Yes

Question Number: 71 Question Id: 7108705051 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Movement of soil without sticking to the tool surface is called

- 1. Grading
- 2. Scouring
- 3. Slipping
- 4. Cohesion

Options:

71087020201. 1

71087020202. 2

71087020203.3

71087020204.4

Question Number: 72 Question Id: 7108705052 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

A zero-till drill has which one of the following types of furrow openers?

- 1. Shoe type
- 2. Disc type
- 3. Inverted 'T' type
- 4. Reversible shovel

Options:

71087020205.1

71087020206. 2

71087020207.3

71087020208.4

Question Number: 73 Question Id: 7108705053 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

The relation between **shear force (F)** and **normal load (N)** for soil with **cohesion (c)**, angle of **internal friction (θ)** over an **area 'A**' is given by

1. $F = Ac + N \tan \theta$

2. F= c + AN $\tan \theta$

3. $F = A c tan \theta + N$

4. F= N c+ A tan θ

Options:

71087020209. 1

71087020210. 2

71087020211.3

71087020212.4

Question Number: 74 Question Id: 7108705054 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The horizontal component of pull, perpendicular to the direction of pull is called

1. Draft

- 2. Side draft
- 3. Pull
- 4. Vertical force

Options:

71087020213.1

71087020214. 2

71087020215.3

71087020216.4

Question Number: 75 Question Id: 7108705055 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Tilt angle in a standard disc plough is

- 1. 5-10 degrees
- 2. 15-25 degrees
- 3. 30-45 degrees
- 4. 45-55 degrees

Options:

71087020217. 1

71087020218. 2

71087020219.3

71087020220.4

Question Number: 76 Question Id: 7108705056 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The depth of operation of a trailed disc harrow can be adjusted by

- 1. Changing the tilt angle
- 2. Increasing the speed of operation
- 3. Changing the gang angle
- 4. Increasing the offset

Options:

71087020221.1

71087020222. 2

71087020223.3

71087020224. 4

Question Number: 77 Question Id: 7108705057 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Shear strength of puddled soil can be measured by

- 1. Direct shear test apparatus
- 2. Cone penetrometer
- 3. Tri axial shear test apparatus
- 4. Vane shear test apparatus

Options:

71087020225.1

71087020226. 2

71087020227. 3

71087020228.4

Question Number: 78 Question Id: 7108705058 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Average annual depreciation cost of a machine costing Rs 1.0 lakh and a life of 10 years will be (assume junk value to be 10% of total cost)

1. Rs. 10,000/-

2. Rs. 9,000/-

3. Rs. 11,000/-

4. Rs. 12,000/-

Options:

71087020229. 1

71087020230. 2

71087020231.3

71087020232.4

Question Number: 79 Question Id: 7108705059 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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The centre of resistance is the point

- 1. Through which the CG of tractor passes
- 2. Through which the centre line of tractor passes
- 3. At which centre line of the implement and line of draft intersect
- 4. At which the line of draft and the centre line of tractor intersect

Options:

71087020233.1

71087020234. 2

71087020235.3

71087020236.4

Question Number: 80 Question Id: 7108705060 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

In a kinematic pair, when the elements have surface contact while in motion, it is a

- 1. Higher pair
- 2. Closed pair
- 3. Lower pair
- 4. Open pair

Options:

71087020237. 1

71087020238. 2

71087020239.3

71087020240. 4

Question Number: 81 Question Id: 7108705061 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Cono weeders were designed for use in

- 1. Wheat crop
- 2. Rice crop in puddled soil
- 3. Direct seeded rice crop
- 4. Vegetable crops

Options:

71087020241.1

71087020242. 2

71087020243.3

71087020244.4

Question Number: 82 Question Id: 7108705062 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Threshing efficiency can be increased by

- 1. Increasing cylinder speed
- 2. Reducing cylinder speed
- 3. Increasing cylinder concave clearance
- 4. Reducing length of threshing cylinder

Options:

71087020245.1

71087020246. 2

71087020247.3

71087020248. 4

Question Number: 83 Question Id: 7108705063 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

In a flail harvester, the cutting operation is performed by

- 1. Knives mounted on a horizontal shaft
- 2. Knives mounted on a vertical shaft
- 3. Vertically rotating circular blades
- 4. Horizontally rotating circular blades

Options:

71087020249.1

71087020250. 2

71087020251.3

71087020252.4

Question Number: 84 Question Id: 7108705064 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

A manual operated knapsack sprayer works on the principle of

- 1. Hydraulic energy
- 2. Gaseous energy
- 3. Kinetic energy
- 4. Electrical energy

Options:

71087020253.1

71087020254. 2

71087020255.3

71087020256. 4

Question Number: 85 Question Id: 7108705065 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

The concavity of an agricultural disc is measured using a

- 1. Micrometer
- 2. Depth gauge
- 3. Screw gauge
- 4. Strain gauge

Options:

71087020257.1

71087020258. 2

71087020259.3

71087020260.4

Question Number: 86 Question Id: 7108705066 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The pressure override in hydraulic systems can be reduced by the use of

- 1. Throttling valve
- 2. Direct operated relief valve
- 3. Pilot operated relief valve
- 4. Control valve

Options:

71087020261.1

71087020262. 2

71087020263.3

71087020264.4

Question Number: 87 Question Id: 7108705067 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

To decide about a tractor power size for field operation, the essential factors to be considered are

- 1. Field size and type of soil
- 2. Type of soil and implement type
- 3. Time sensitivity and higher power requirement
- 4. Time sensitivity only

Options:

71087020265.1

71087020266. 2

71087020267. 3

71087020268.4

Question Number: 88 Question Id: 7108705068 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The category of hitch pin on an implement is decided based on

- 1. Brake power of tractor
- 2. Indicated power of tractor
- 3. PTO power of tractor
- 4. Drawbar power of tractor

Options:

71087020269. 1

71087020270. 2

71087020271.3

71087020272.4

Question Number: 89 Question Id: 7108705069 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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For a wheel tractor with mass 'M' and velocity 'V', the expression for total kinetic energy (KE) resulting from the linear motion of tractor is given by

1. KE = $\frac{1}{2}$ MV²

2. $KE = MV^2$

3. KE= $11/20 \text{ MV}^2$

4. KE= 1.2 MV²

Options:

71087020273.1

71087020274. 2

71087020275. 3

71087020276.4

Question Number: 90 Question Id: 7108705070 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The recommended illumination in an implement workshop is around

1. 100 lux

2. 161 lux

3. 151 lux

4. 201 lux

Options:

71087020277. 1

71087020278.2

71087020279.3

71087020280.4

Question Number: 91 Question Id: 7108705071 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Viscous damping refers to

- 1. Opposing force proportional to velocity
- 2. Opposing torque proportional to force
- 3. Opposing force proportional to acceleration due to gravity
- 4. Opposing force proportional to body mass

Options:

71087020281.1

71087020282. 2

71087020283.3

71087020284.4

Question Number: 92 Question Id: 7108705072 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The force that holds two particles of different kinds together, is called

- 1. Frictional force
- 2. Adhesion
- 3. Cohesion
- 4. Shear force

Options:

71087020285.1

71087020286. 2

71087020287. 3

71087020288.4

Question Number: 93 Question Id: 7108705073 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

An instrument used to measure global radiation falling on a horizontal surface over a hemispherical field of view is

- 1. Pyranometer
- 2. Radiometer
- 3. Tensiometer
- 4. Accelerometer

Options:

71087020289. 1

71087020290. 2

71087020291.3

71087020292.4

Question Number: 94 Question Id: 7108705074 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

The use of biodiesel in an engine tends to increase the emission of

- 1. Carbon monoxide
- 2. Oxides of nitrogen
- 3. Sulphur dioxide
- 4. Hydrogen sulphide

Options:

71087020293.1

71087020294. 2

71087020295.3

71087020296.4

Question Number: 95 Question Id: 7108705075 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

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Bio CNG refers to purified

- 1. Natural gas
- 2. Producer gas
- 3. Syn gas
- 4. Biogas

Options:

71087020297. 1

71087020298. 2

71087020299.3

71087020300.4

Question Number: 96 Question Id: 7108705076 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Given below are two statements: one is labelled as Assertion A and the other is labelled as

Reason R

Assertion A: The rear wheels of a general-purpose agricultural tractor are larger than front wheels to obtain better traction

Reason R: The tractive force developed by pneumatic tyres of drive wheels of a tractor solely depends on the number of lugs, lug spacing, lug height and lug angle only.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:



71087020302. 2

71087020303.3

71087020304.4

Question Number: 97 Question Id: 7108705077 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Correct Marks: 4 Wrong Marks: 1

Given below are two statements: one is labelled as Assertion 'A' and the other is labelled as

Reason 'R'

Assertion A: Oscillating tools perform better than rigid tools with low energy requirement in tillage operations

Reason R: The technology is not feasible due to increased cost and no saving in overall energy requirement.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020305.1

71087020306.2

71087020307.3

71087020308.4

Question Number: 98 Question Id: 7108705078 Question Type: MCQ Option Shuffling: No Display Question Vac Ia

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical

Assertion A: The cutter bar of a reaper binder is either driven by slider and crank or eccentric mechanism to obtain reciprocating action of the knife.

Reason R: The cutting of crop stem is achieved by the shearing action of blades in the cutter bar of a reaper binder.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020309.1

71087020310. 2

71087020311.3

71087020312.4

Question Number: 99 Question Id: 7108705079 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Assertion A: The fuel in a CI engine is injected at certain degrees before the piston reaches TDC for better combustion of fuel.

Reason R: The delay period which shows the time available for ignition of fuel in a CI engine is required for better combustion of fuel.

In the light of above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020313.1

71087020314. 2

71087020315.3

71087020316.4

Question Number: 100 Question Id: 7108705080 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Assertion A: The horizontal line of the draft should be a straight line from the centre of resistance to the point where the plough is attached to drawbar.

Reason R: This system reduces the side draft.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020317. 1

71087020318. 2

71087020319.3

71087020320. 4

Question Number: 101 Question Id: 7108705081 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Assertion A: The degree of atomization of liquid pesticide in a spinning disc type applicator depends on the rotating speed of the disc.

Reason R: The spinning disc type pesticide applicator works on the principle of hydraulic energy and atomization of liquid is achieved by the hydraulic pressure.

In light of above statements, choose the most appropriate answer from the options given

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020321.1

71087020322. 2

71087020323.3

71087020324.4

Question Number: 102 Question Id: 7108705082 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Assertion A: The diameter of the inlet valve of an engine is generally larger in size than the exhaust valve.

Reason R: The volumetric efficiency of an engine depends on the amount of inlet air inducted into the engine and therefore inlet valves are larger than exhaust valves.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both A and R are correct and R is the correct explanation of A
- 2. Both A and R are correct but R is NOT the correct explanation of A
- 3. A is correct but R is not correct
- 4. A is not correct but R is correct

Options:

71087020325.1

71087020326. 2

71087020327. 3

71087020328.4

Question Number: 103 Question Id: 7108705083 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



The correct sequence of farm operations is

- A. Levelling
- B. Weeding
- C. Primary tillage
- D. Seeding and fertilizer application
- E. Secondary tillage

Choose the correct answer from the options given below

- 1. D, A, C, E and B
- 2. A, B, C, D and E
- 3. B, C, D, A and E
- 4. C, E, A, D and B

Options:

71087020329.1

71087020330. 2

71087020331.3

71087020332.4

Question Number: 104 Question Id: 7108705084 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



In the calibration of a tractor operated sprayer, the following operations are involved. Arrange them in the correct sequence

A. Fill up the spray tank with water to the desired level

B. Make the tractor operator spray for a distance of 200m at the selected speed.

C. Calculate the amount of water required per ha.

D. Adjust the pressure as required for field spray.

Choose the *correct* answer from the options given below

1. D, C, A, B and E

2. A, D, B, E and C

3. B, C, D, A and E

4. A, E, D, B and C

Options:

71087020333.1

71087020334. 2

71087020335.3

71087020336.4

Question Number: 105 Question Id: 7108705085 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Arrange the following operations performed by a grain combine harvester in sequence

- A. Cutting of crop by cutter bar
- B. Conveying of the crop by the undershot feeder to the threshing mechanism
- C. Separation of straw by straw walker and discharge of grain and chaff to chaffer.
- D. Separation of grain and chaff, discharge of clean grain to grain tank and delivery of unthreshed grain by tailing auger to threshing unit
- E. Threshing of crop and discharge of threshed crop to the straw walker.

Choose the correct answer from the options given below

1. A, E, D, C and B

2. A, D, E, C and B

3. A, B, E, C and D

4. A, B, C, D and E

Options:

71087020337. 1

71087020338.2

71087020339.3

71087020340.4

Question Number: 106 Question Id: 7108705086 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Arrange the following major unit operations considered in the estimation of energy requirement in a wheat crop production system, in proper sequence.

- A. Sowing of crop
- B. Plant protection
- C. Harvesting and threshing
- D. Irrigation
- E. Seedbed preparation

Choose the correct answer from the options given below

- 1. E, A, D, B and C
- 2. A, D, B, E and C
- 3. E, D, A, B and C
- 4. E, B, A, D and C

Options:

71087020341.1

71087020342. 2

71087020343.3

71087020344.4

Question Number: 107 Question Id: 7108705087 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Arrange the following power requirements in an agricultural tractor in sequence

- A. Power from engine to clutch
- B. Power from differential unit to final drive
- C. Power from final drive to the rear axle
- D. Power from the gearbox to the differential unit
- E. Power from clutch to the gearbox

Choose the *correct* answer from the options given below

- 1. A, C, D, E and B
- 2. A, E, B, C and D
- 3. A, D, E, B and C
- 4. A, E, D, B and C

Options:

71087020345.1

71087020346. 2

71087020347. 3

71087020348.4

Question Number: 108 Question Id: 7108705088 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I. The time spent in the filling of a seed hopper during sowing operations is considered as unproductive time

Statement II. The time spent in the filling of seed hopper during a sowing operation does not have an effect on-field performance index of a seed drill.

In light of the above statements, choose the **most appropriate** answer from the options given

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020349.1

71087020350. 2

71087020351.3

71087020352.4

Question Number: 109 Question Id: 7108705089 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I. Vertical conveyor reaper is suitable for the maize crop.

Statement II. Vertical conveyor reaper is suitable for the wheat crop.

In light of the above statements, choose the most appropriate answer from the options given

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020353.1

71087020354. 2

71087020355.3

71087020356.4

Question Number: 110 Question Id: 7108705090 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I. The speed of operation and rated width of cut of an implement determines the drawbar power requirement of the tractor – implement combination.

Statement II. The type of soil and rated power of tractor determines the drawbar power requirement of a tractor implement combination.

In light of the above statements, choose the **most appropriate** answer from the options given

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020357.1

71087020358. 2

71087020359.3

71087020360.4

Question Number: 111 Question Id: 7108705091 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I. Mohr-Coulomb failure theory states that failure in a material occurs if the shear strain on any plane equals the shear stress of the material.

Statement II. Mohr-Coulomb failure theory states that failure in a material occurs if the shear stress on any plane equals the shear strength of the material.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020361.1

71087020362. 2

71087020363.3

71087020364.4

Question Number: 112 Question Id: 7108705092 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I: A vertical disc plough has zero degree tilt angle and the penetration of implement in the soil occurs due to disc angle.

Statement II: A vertical disc plough has zero degree tilt angle and the penetration of implement in the soil occurs due to gang angle.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020365.1

71087020366. 2

71087020367.3

71087020368.4

Question Number: 113 Question Id: 7108705093 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I: An axial flow thresher is most suitable for paddy crop threshing.

Statement II: An axial flow thresher is most suitable for pulse crop threshing

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020369.1

71087020370. 2

71087020371.3

71087020372.4

Question Number: 114 Question Id: 7108705094 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Statement I: Tandem wheels show improved performance compared to dual wheels in a tractor because they increase the total length of ground contact.

Statement II: Tandem wheels show improved performance compared to dual wheels in a tractor because they increase the total weight on drive wheels.

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are correct
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020373.1

71087020374. 2

71087020375.3

71087020376.4

Question Number: 115 Question Id: 7108705095 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Given below are two statements: **Statement I:** When the rate of doing work is 75 kg-m/s, it is equivalent to 736 Watts.

Statement II: When the rate of doing work is 736 N-m/s, it is equivalent to 736 Watts

In light of the above statements, choose the **most appropriate** answer from the options given below

- 1. Both Statement I and Statement II are correct.
- 2. Both Statement I and Statement II are incorrect
- 3. Statement I is correct but Statement II is incorrect
- 4. Statement I is incorrect but Statement II is correct

Options:

71087020377. 1

71087020378. 2

71087020379.3

71087020380.4

Question Number: 116 Question Id: 7108705096 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Accidents during threshing operation may be caused by

- A. High cylinder speed
- B. Improper design of hopper leading to exposure during feeding
- C. Loose dress
- D. Inadequate lighting
- E. Exposed rotating parts

Choose the correct answer from the options given below

- 1. A and B only
- 2. B, C, D and E only
- 3. B and D only
- 4. C and E only

Options:

71087020381.1

71087020382. 2

71087020383.3

71087020384.4

Question Number: 117 Question Id: 7108705097 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Tillage operations in dryland areas include

- A. Zero tillage
- B. Use of disc plough
- C. Subsurface tillage
- D. Conventional primary and secondary tillage under an irrigated system
- E. Mulch tillage

Choose the correct answer from the options given below

- 1. A, C and E only
- 2. A, B and C only
- 3. C and E only
- 4. C, D and E only

Options:

71087020385.1

71087020386. 2

71087020387.3

71087020388.4

Question Number: 118 Question Id: 7108705098 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



During threshing operation, the threshing cylinder was observed to be blocked. The possible cause for the same could be

- A. Speed of threshing cylinder is too low
- B. Concave clearance is high
- C. Moist crop
- D. Dry crop
- E. Overfeeding

Choose the correct answer from the options given below

- 1. A, B and C only
- 2. A, B and E only
- 3. A, C and E only
- 4. A, B, C, D and E

Options:

71087020389.1

71087020390. 2

71087020391.3

71087020392.4

Question Number: 119 Question Id: 7108705099 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Match List I and List II

List I	List II	
A. Arbor bolt	I. Planetary gear system	
B. Final drive	II. Tractor gear box	
C. Spur gears	III. Increase stability	
D. Ballasting	IV. Disc harrow gang	

Choose the correct answer from the options given below

1. A - IV, B - III, C - II, D - I

2. A - I, B- IV, C - II, D - III

3. A - IV, B - II, C - I, D - III

4. A - III, B - II, C - IV, D - I

Options:

71087020393.1

71087020394. 2

71087020395.3

71087020396.4

Question Number: 120 Question Id: 7108705100 Question Type: MCQ Option Shuffling: No Display Question Number: Yes Is

Question Mandatory: No Single Line Question Option: No Option Orientation: Vertical



Match List I and List II

List I	List II	
A. Fluted roller	I. Rice seeder	
B. Inclined plate	II. Potato planter	
C. Seed drum with holes	III. Wheat seed drill	
D. Ridger	IV. Maize planter	

Choose the correct answer from the options given below

- 1. A IV, B II, C III, D I
- 2. A I, B II, C III, D IV
- 3. A III, B IV, C I, D II
- 4. A II, B III, C IV, D I

Options:

- 71087020397. 1
- 71087020398. 2
- 71087020399.3
- 71087020400.4

