PREVIEW QUESTION BANK

Module Name : Farm Machinery and Power Engineering - 39-ENG
Exam Date : 29-Jun-2024 Batch : 14:30-16:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	201	Movement of DNA from one bacterium to another through a tubular bridge or pilus: 1. Conjugation 2. Transposition 3. Transfection 4. Transduction A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	202	Which of the following is responsible for eliminating toxic oxygen by-products from cells? 1. Mitochondria 2. Golgi complex 3. Peroxisomes 4. Chloroplasts A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
3	203	A form of multiple parasitism in which a parasite preferentially attacks a host that is already parasitized by another species is known as 1. Cleptoparasitism 2. Ectoparasitoid 3. Obligate parasitism 4. Superparasitism A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
4	204	For mass multiplication of DD-136 nematode, the common host used is 1. Silk moth 2. Fruit sucking moth 3. Codling moth 4. Lesser wax moth A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
5	205	Chlorpyriphos methyl is effective against stored product insects except 1. *Rhizopertha dominica* 2. *Tribolium castaneum* 3. *Caryedon serratus* 4. *Oryzaephilus surinamensis* A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
6	206	Which of the following insects often cause inhalational allergies in human following large emergence of adult insects 1. Stick insects 2. May flies 3. Ear wigs 4. Preying mantis A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
7	207	Given below are two statements: Statement (I): Climate is a weather condition related to smaller areas at a given place and at a given time, Statement (II): Weather is a condition of atmosphere at a given place and at a given time 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
8	208	The local name of cyclone in Phillippines is 1. Hurricane 2. Cyclone 3. Baquio 4. Typhoon A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
9	209		4.0	1.00

		Which one of the following are secondary tillage implements? (A).Subsoiler (B).Cultivator (C).Disc harrow (D).Wetland plough Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (B) and (C) only. 3. (B), (C) and (D). 4. (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
10	210	_____ is the most suitable, drought resistant and persistant grass? 1. *Atylosia sp.* 2. *Cenchrus ciliaris* 3. *Stylosanthes hamata* 4. *Sorghum bicolor* A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
11	211	The rainfed area in India is aproximately 1. 30 mha 2. 40 mha 3. 57 mha 4. 70 mha A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
12	212	Which nutrient is often a limiting factor in agricultural production? 1. Nitrogen 2. Carbon 3. Oxygen 4. Hydrogen A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
13	213	What is a potential disadvantage of agroforestry systems? 1. Increased soil erosion 2. Decreased carbon sequestration 3. Reduced biodiversity 4. Enhanced susceptibility to pests A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
14	214	Pungency in mustard oil is due to 1. Amino acid 2. Allyl isothiocyanate 3. Erusic acid 4. Oxalic acid A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
15	215	Sesamum belongs to the family 1. Chenopodiaceae 2. Papilionaceae 3. Leguminosae 4. Pedaliaceae A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
16	216	Dark period is critical in which type of plant? 1. Short day plant 2. Long day plant 3. Day neutral plant 4. All the options A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
17	217	Which of the following is NOT a significant contributor to greenhouse gas emissions from livestock farming? 1. Carbon dioxide 2. Methane 3. Nitrous oxide 4. Ammonia A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
18	218	Fe deficiency is mostly seen in crops growing on 1. Calcareous or alkaline soils 2. Salt affected soils 3. Acidic soils 4. Neutral soils A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
19	219	EDV (Essentially Derived Varieties) are those which are derived from: 1. crossing two commercially known varieties 2. hybrid introduced from other countries 3. existing variety through genetic engineering or mutation 4. crossing commercially known variety with its wild relative A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
20	220	What is the role of "companion planting" in agriculture? 1. Enhancing soil fertility through crop rotation 2. Growing different crop species together to deter pests 3. Cultivating plants in hydroponic system 4. Increasing soil compaction through cover cropping A1 : 1 A2 : 2 A3 : 3	4.0	1.00

A4 : 4

Objective Question

21 | 2001 | 4.0 | 1.00

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : A fluidised bed gasifier is most versatile and can handle biomass with high ash content.

Reason (R) : Fluidised bed generally contains either inert material or reactive material.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

22 | 2002 | 4.0 | 1.00

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Noise Induced Hearing Loss (NIHL) is irreversible.

Reason (R) : NIHL is even, being greater in lower frequency than higher frequency.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

23 | 2003 | 4.0 | 1.00

		Given below are two statements: Statement (I): The top of the piston heats much more than does the lower skirt Statement (II): The pistons are made larger at the top to absorb excessive heat released during compression stroke, and are said to have skirt taper. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
24	2004	Given below are two statements: Statement (I): Premixed combustion is smoother and quieter than diffusion combustion. Statement (II): The longer the ignition delay, the higher percentage of the fuel that burns in premixed combustion and lower the percentage that burns in diffusion combustion. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
25	2005		4.0	1.00

Given below are two statements:

Statement (I): Hydrodynamic lubrication occurs when oil film is thick enough to prevent projections on one surface from contacting those projections on the mating surface.

Statement (II): All bearings in an engine are in hydrodynamic lubrication when the engine is started from rest or when it is coasting to a stop.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26	2006		4.0	1.00

Most of the gears fail from

(A). bending fatigue

(B). surface wear

(C). stiff housing

(D). pitting

(E). curved surfaces

Choose the ***correct*** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

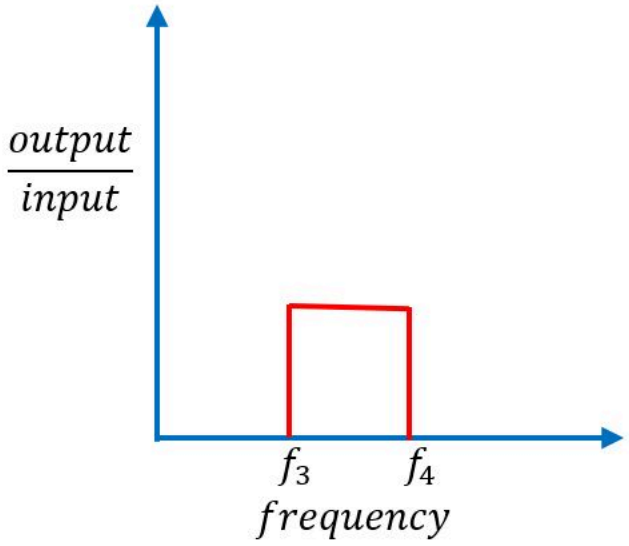
A4 : 4

Objective Question

27	2007		4.0	1.00

		Machine parameters those influence the performance of a combine harvester are (A). speed of reel (B). speed of threshing cylinder (C). extent of vibration (D). height of cut (E). speed of straw rack Choose the ***correct*** answer from the options given below: 1. (A), (B) and (E) only. 2. (A) and (E) only. 3. (A), (B), (C) and (E) only. 4. (A), (B), (D) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
28	2008	Choose the correct characteristics of the Darrieus rotor. (A). low starting torque (B). self-starting (C). high speed (D). potentially high capital cost (E). high efficiency Choose the ***correct*** answer from the options given below: 1. (A), (B), (C) and (D) only. 2. (A), (D) and (E) only. 3. (A), (C) and (E) only. 4. (A), (B), (C), (D) and (E). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
29	2009		4.0	1.00

		Which of the following are air heat plate collectors based on absorbing surface? (A). flat plate absorber (B). sandwich type absorber (C). corrugated plate absorber (D). overlapped transparent plate absorber (E). transpiration absorber Choose the ***correct*** answer from the options given below: 1. (A), (B), (C) and (D) only. 2. (A), (C) and (D) only. 3. (B), (C) and (D) only. 4. (A), (C), (D) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
30	2010	Among the different type of combustion chambers, the peak pressure is the lowest for the 1. Open chamber 2. Precombustion chamber 3. Swirl combustion chamber 4. Auxiliary chamber A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
31	2011	Range of aspect ratio for high molded tyres 1. 0.50 or less 2. 0.50-0.75 3. 0.75-1.00 4. 1.00 or higher A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
32	2012	In the given figure, the amplitude ratio of output of a filter to the input is plotted against frequency. What is the type of the filter?  1. Low pass filter 2. High pass filter 3. Band pass filter 4. Notch type filter A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
33	2013	Which of the following is not a type of solar still? 1. Single effect solar still 2. Multiple effect solar still 3. Tilted tray solar still 4. Wick type solar still A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
34	2014	To minimize ride vibrations, the location of the operator's seat should be 1. Closer to steering wheel 2. Near to the centre of gravity 3. Directly above the rear axle 4. Slightly ahead of the rear axle A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
35	2015	Which of the following is an obtuse angle-type furrow opener? 1. Shovel type 2. Pointed shoe type 3. Stub runner type 4. Hoe type A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
36	2016	What is the terminal velocity for the wheat chaff? 1. $1.5 - 2.5\ \mathrm{m.s^{-1}}$ 2. $2.5 - 6.0\ \mathrm{m.s^{-1}}$ 3. $6.0 - 9.5\ \mathrm{m.s^{-1}}$ 4. $9.5 - 11.5\ \mathrm{m.s^{-1}}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question				
37	2017	Which of the following threshing cylinder is used for producing very fine wheat straw? 1. Spike tooth type 2. Hammer mill type 3. Rasp-bar type 4. Axial flow type A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
38	2018	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Concave end of the disc harrow gang tends to penetrate more deeply than the convex end. Reason (R) : The radial force, which includes the vertical support force on the disc blade, must pass slightly to the rear of the disc centerline. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
39	2019		4.0	1.00

		Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : The power requirement of a rotary mower is much higher than that of a sickle bar mower of the same width. Reason (R) : The knives of rotary mower are hinged to the disc or drum so that they can swing back if they hit a rock or other obstruction; centrifugal force keeps the knives in cutting position during normal operation. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
40	2020	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : The rotating counterweight commonly provided on the flywheel of a mower pitman drive does not give complete balancing Reason (R) : Inertia force of the knife varies as the square of crank speed and as the first power of stroke. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
41	2021		4.0	1.00

Match **List-I** with **List-II**

List-I	**List-II**
Structure Type	Return Period (Years)
(A). Earth dams having natural spillways	(I). 25
(B). Stock water dams	(II). 25-50
(C). Terrace outlets and vegetated waterways	(III). 15
(D). Field diversions	(IV). 10
	(V). 50-100

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

42 | 2022 | 4.0 | 1.00

A linear reservoir is one in which storage is directly proportional to:

1. Inflow
2. Outflow
3. Reservoir dimensions
4. Stage

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

43 | 2023 | 4.0 | 1.00

Match **List-I** with **List-II**

List-I	**List-II**
(A). Percussion (cable tool) drilling	(I). Unconsolidated formations
(B). Rotary drilling	(II). Consolidated formations
(C). Artesian well	(III). Unconfined aquifer
(D). Perched aquifer	(IV). Confined aquifer
	(V). Semi-confined aquifer

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

44 2024 4.0 1.00

Given below are two statements:

Statement (I): Specific speed of the pump is directly proportional to the square root of head.

Statement (II): The specific speed for a single impeller centrifugal pump varies between 300 to 5000.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

45 | 2025 | 4.0 | 1.00

Given below are two statements:

Statement (I): Water requirement of the crops is lesser than the field irrigation requirement.

Statement (II): Field irrigation requirement does not include contribution from other sources except irrigation.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

46 | 2026 | 4.0 | 1.00

Match **List-I** with **List-II**

List-I	**List-II**
(A). $I=Kt^{-n}$	(I). Philip's equation
(B). $y=at+b(1-e^{-rt})$	(II). USSCS,1964
(C). $St^{1/2}+At$	(III). Kostiakov's equation
(D). $y=at^{q}+b$	(IV). Lewis and Milne equation
	(V). Horton equation

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

47 | 2027 | 4.0 | 1.00

Given below are two statements:

Statement (I): Single crop coefficient approach is used for surface irrigation methods.

Statement (II): Dual crop coefficient approach is used for micro irrigation methods.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 | 2028 | 4.0 | 1.00

Given below are two statements:

Statement (I): Blaney-Criddle method uses mean temperature and monthly percentage day time hours.

Statement (II): Blaney-Criddle method was developed for the humid condition for consumptive use computation.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

49 | 2029 | 4.0 | 1.00

Concrete mixture (Cement: Sand: Gravel or broken stone) usually recommended for lining of canals is:

1. 1:2:3
2. 1:3:2
3. 1:3:5
4. 1:3:4

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
50	2030	Given below are two statements: Statement (I): A channel section is most economical when maximum discharge is obtained for a given cost of construction. Statement (II): Discharge is maximum when the flow velocity is minimum. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
51	2031	Drip emission uniformity (EU) is calculated using: 1. $100(1.5-\frac{1.27C_v}{\sqrt{n}})\frac{q_a}{q_m}$ 2. $100(1.0-\frac{1.27C_v}{\sqrt{n}})\frac{q_m}{q_a}$ 3. $100(2.0-\frac{1.27C_v}{\sqrt{\sqrt[3]{n}}})\frac{q_a}{q_m}$ 4. $100(2.0-\frac{1.27C_v}{\sqrt{\sqrt[3]{n}}})\frac{q_m}{q_a}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
52	2032		4.0	1.00

		Leaching requirement (LR) is estimated using 1. $\frac{D_d}{D_i}$ 2. $\frac{EC_d}{EC_i}$ 3. $\frac{D_i}{D_d}$ 4. $\frac{2EC_i}{EC_d}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
53	2033	Light soils can be irrigated successfully across slope up to: 1. 2 % 2. 3 % 3. 5 % 4. 10 % A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
54	2034	Following are the statements regarding irrigation efficiencies: (A). Water conveyance efficiency is associated with the canal network. (B). Water application efficiency is related with the irrigation method. (C). Economic efficiency is related with the overall performance of the irrigation system. Choose the ***correct*** answer from the options given below: 1. (A) and (B) only. 2. (B) and (C) only. 3. (A) and (C) only. 4. (A), (B) and (C). A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
55	2035	Following are the statements regarding sediment loads: (A). Bed load is associated with the movement of coarse particles along the bed surface through sliding, rolling and saltation. (B). Bed load forms less than 25 % portion of total load. (C). Suspended load of a stream is not measured by sampling the stream flow. Choose the ***correct*** answer from the options given below: 1. (A) and (B) only. 2. (B) and (C) only. 3. (A) and (C) only. 4. (A), (B) and (C). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
56	2036	Time of concentration (T_c) is expressed by the following equation: 1. $0.0195\ L^{0.77}\ S^{-0.385}$ 2. $0.0195\ L^{0.77}\ S^{0.385}$ 3. $0.0195\ L^{0.5}\ S^{0.5}$ 4. $0.0195\ L^{0.6}\ S^{0.5}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
57	2037		4.0	1.00

		Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : The lower and upper limit of the curve number corresponds to 0 and 100 Reason (R) : The lower curve number corresponds to highest runoff potential and indicates an impermeable surface. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
58	2038	Following are the statements regarding grassed waterways: (A). The Manning's coefficient of roughness is 0.04 for design. (B). These are designed to carry maximum runoff from a storm of 10 years recurrence interval. (C). These are constructed across the land slope to remove excess water. Choose the ***correct*** answer from the options given below: 1. (A) and (B) only. 2. (B) and (C) only. 3. (A) and (C) only. 4. (A), (B) and (C) . A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
59	2039	The minimum length of shelter belt should be how many times of its height? 1. 12 2. 24 3. 36 4. 48	4.0	1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

60 2040 4.0 1.00

Compute drainage coefficient if 1 hectare of land is drained and the drainage canal discharges 1 cubic meter of discharge per hour.

1. 1.2 mm
2. 2.4 mm
3. 4.8 mm
4. 7.2 mm

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

61 2041 4.0 1.00

Match **List-I** with **List-II**

List-I	**List-II**
(A). Janssen's theory	(I). Convection
(B). CAP	(II). Bag storage
(C). Newton's law	(III). Constant humidity
(D). Sensible heating	(IV). Storage structure

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

		A3 : 3 A4 : 4		
Objective Question				
62	2042	Equation for predicting EMC of agricultural products is given by (A). Kelvin (B). Harkins-Jura (C). Henderson (D). Janssen Choose the ***correct*** answer from the options given below: 1. (A) and (C) only. 2. (C) only. 3. (A), (B) and (C) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
63	2043	Given below are two statements: Statement (I): In a deep bin, plane of rupture strikes the opposite side of structure before it meets the grain surface. Statement (II): A grain bin can be classified as deep bin when the depth of grain is greater than the equivalent diameter. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
64	2044		4.0	1.00

		Thermal vapour compression is used in (A). Evaporator (B). Homogenizer (C). Pasteurizer (D). Blancher Choose the ***correct*** answer from the options given below: 1. (A) and (B) only. 2. (A) and (C) only. 3. (D) only. 4. (A) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
65	2045	Given below are two statements: Statement (I): Majority of the drying of agricultural produce fall under falling rate regime. Statement (II): Spray dryers are commonly used for liquid foods. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
66	2046		4.0	1.00

		Ideal elastic behaviour of a material can be explained by 1. Newtonian liquid 2. St. Venant body 3. Hookean body 4. Janssen equation A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
67	2047	In comparison to other types of conveyors, screw conveyors 1. Require relatively low power and are more susceptible to wear 2. Require relatively high power and are more susceptible to wear 3. Require relatively low power and are less susceptible to wear 4. Require relatively high power and are less susceptible to wear A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
68	2048	Major functions of blanching of fruits and vegetables before dehydration and canning include (A). Inactivation of enzymes (B). Killing of pathogenic microbes (C). Softening of tissue (D). Cleaning of raw material Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A) only. 3. (A), (C) and (D) only. 4. (C) and (D) only. A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
69	2049	Glazing is related to which of the following crop processing? 1. Paddy 2. Wheat 3. Maize 4. Soybean A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
70	2050	Capacity of an air screen cleaner depends on which of the following parameters? (A). Grain bed depth (B). Size of screen surface (C). Feeding mechanism (D). Percentage opening area of screen Choose the ***correct*** answer from the options given below: 1. (A), (C) and (D) only. 2. (A) and (C) only. 3. (A), (B), (C) and (D). 4. (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
71	1002001		4.0	1.00

		Calculate the biomass requirement per hour to replace 50 kg of Light Diesel Oil (LDO) operated steam generator. Assume calorific value of LDO and biomass are 40 $\mathbf{MJ.kg^{-1}}$, and 20 $\mathbf{MJ.kg^{-1}}$ respectively. The overall efficiency for both gasification and LDO operated steam generated system is about 20%. 1. 100 $\mathbf{kg.h^{-1}}$ 2. 500 $\mathbf{kg.h^{-1}}$ 3. 2000 $kg.h^{-1}$ 4. 2500 $kg.h^{-1}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
72	1002002	The sensitivity of a non-linear type thermocouple is found to be maximum at 400$\mathbf{^{o}C}$ and is 100 $\mu\mathbf{V^{o}C^{-1}}$. What is the deflection factor of the thermocouple? 1. $\mathbf{4.0 \times 10^{-2}}\ V$ 2. $\mathbf{0.25 \times 10^{2}}\ V^{-1}$ 3. $\mathbf{1.0 \times 10^{4}}\ ^{o}C.V^{-1}$ 4. $\mathbf{0.25 \times 10^{-2}}\ ^{o}C^{-1}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
73	1002003	A 30-year agricultural male worker of 180 cm height and 81 kg weight has the following physiological parameters. Resting metabolic rate: 95 W Work demand: 25 W Steady-state energy expenditure: 210 W What is the Quetelet Index of the worker? 1. 21.73 2. 22.50 3. 25.00 4. 26.31 A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
74	1002004	What is the hour angle at 3.30 PM local solar time in India? 1. 130.5° 2. 127.5º 3. -49.5º 4. -52.5º A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
75	1002005	The leanest and richest combustible mixtures have air to fuel ratios of approximately 25:1 and 8:1, respectively. If the ambient temperature allows only 10% of the fuel to vaporize in the manifold, what fuel to air ratio must the carburetor deliver to start the engine? 1. 2.5 : 1 2. 2.0 : 1 3. 0.8 : 1 4. 0.4 : 1 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
76	1002006		4.0	1.00

		Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Exhaust temperature of a gasoline engine is lower than equal sized diesel engine. Reason (R) : The excess air supplied to the diesel and its higher compression ratio, both help to increase thermal efficiency. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
77	1002007	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Use of excessively cold plugs promotes sluggish combustion and spark plug fouling. Reason (R) : Electric glow plugs are typically used for cold weather starting of IDI engines. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
78	1002008		4.0	1.00

		Given below are two statements: Statement (I): The force of adhesion is due to the moisture content of the soil and does not depend upon surface tension of water. Statement (II): As the moisture content increases, the apparent coefficient of friction increases due to increased adhesion. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
79	1002009	Given below are two statements: Statement (I): Mounting the drive unit on the outer shoe of the cutterbar eliminates the problem of maintaining alignment and register. Statement (II): The problem of cutterbar alignment does not occur in tractor front mounted vertical conveyor reapers. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
80	1002010		4.0	1.00

		Given below are two statements: Statement (I): In thermosiphon solar water heaters, the density difference between hot and cold water provides the driving force for the circulation of water through the collector and storage tank. Statement (II): To avoid reverse flow after sunset, the top heater of the absorber is kept 0.3 m above the cold leg fitting on the storage tank. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
81	1002011	Given below are two statements: Statement (I): Bimetallic strip is a self-generating type instrument. Statement (II): Bimetallic strip is mostly used for measuring rapidly changing temperatures. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
82	1002012		4.0	1.00

		Rocking vibrations is not a problem in (A). one-cylinder engines (B). two-cylinder engines (C). three-cylinder engines (D). four-cylinder engines (E). six-cylinder engines Choose the ***correct*** answer from the options given below: 1. (A), (D) and (E) only. 2. (A), (B), (C) and (D) only. 3. (B) and (C) only. 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
83	1002013	Choose different types of headers available for the precision-cut harvesters. (A). drop type headers (B). pickup headers (C). nondirectional sensitive headers (D). direct-cut headers (E). indirect-cut headers Choose the ***correct*** answer from the options given below: 1. (A), (B) and (E) only. 2. (B), (C) and (D) only. 3. (B), (C), (D) and (E) only. 4. (A), (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
84	1002014		4.0	1.00

		Choose the correct characteristics of the pitot-static tube. (A). measures the local velocity (B). suitable for measuring low velocities (C). low-cost device (D). produces no appreciable pressure loss in the flow system (E). suitable for measuring highly fluctuating velocities Choose the ***correct*** answer from the options given below: 1. (A), (B), (C) and (D) only. 2. (A), (C) and (E) only. 3. (A), (C) and (D) only. 4. (A), (C), (D) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
85	1002015	The electrolyte composition in a discharged lead-acid battery is 1. 50% H_2SO_4 and 50% H_2O 2. 36% H_2SO_4 and 64% H_2O 3. 18% H_2SO_4 and 82% H_2O 4. 12% H_2SO_4 and 88% H_2O A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
86	1002016	The conditions conducive to cold smoke formation in a diesel engine are 1. High air temperatures, heavy loads, high-cetane fuels, and high air-to-fuel ratios 2. Low air temperatures, heavy loads, high-cetane fuels, and high air-to-fuel ratios 3. Low air temperatures, light loads, low-cetane fuels, and high air-to-fuel ratios 4. High air temperatures, heavy loads, low-cetane fuels, and low air-to-fuel ratios A1 : 1	4.0	1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
87	1002017	As per IS 6813:2000, the draft of an animal drawn drill shall not be more than 1. 100 kgf 2. 125 kgf 3. 150 kgf 4. 175 kgf A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
88	1002018	If the values of the Index of tuber shape range from 240 to 340, the shape of the tubers is 1. Round 2. Oval 3. Long 4. Very long A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
89	1002019	The delivery rate at maximum discharge setting of a duster should not be less than 1. $100\ g.min^{-1}$ 2. $150\ g.min^{-1}$ 3. $200\ g.min^{-1}$ 4. $250\ g.min^{-1}$ A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
90	1002020	Electromagnetic frequency domain transducer is used for the measurement of 1. Force 2. Torque 3. Speed 4. Vibration A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
91	1002021	The Motor Method (ASTM D2700) is used for measuring which propery of a fuel? 1. Cetane number 2. Octane number 3. Volatility 4. Vapour pressure A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
92	1002022	The efficiency of an ideal air-standard otto cycle is dependent on 1. Compression ratio 2. Fuel cut-off ratio 3. Both compression ratio and fuel cut-off ratio 4. Heat liberated by the fuel A1 : 1 A2 : 2 A3 : 3	4.0	1.00

A4 : 4

Objective Question

93 | 1002023 | 4.0 | 1.00

Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).

Assertion (A) : Mouldboard plough is a primary tillage implement used for seed bed preparation. Most MB ploughs are designed to turn the furrow slices only to the right. Two way ploughs are advantageous for terraced fields or contour ploughing.

Reason (R) : In two-way plough, furrows can be turned towards the opposite side of the field by using two sets of opposite bottoms which eliminates the back and dead furrows.

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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

94 | 1002024 | 4.0 | 1.00

Given below are two statements:

Statement (I): The selection of cultivating tools being influenced by factors such as type and size of crop plants, soil type and field condition. Sweeps are used extensively for weed control but crop residue tends to clog sweeps and prevent penetration under mulch cultivation.

Statement (II): Sweeps are preferred for weed control in shallow cultivation while disk hillers have given good results under mulch cultivation.

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

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95	1002025	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Hydraulic field sprayers have horizontal booms with nozzles attached directly to the boom. Hydraulic-type spray nozzles may be classified as hollow-cone, solid-cone, fan, impact, and solid-stream. Fan spray nozzles are widely used for field sprayers. Reason (R) : Hollow cone nozzles are preferred for fungicides because of greater degree of atomization. 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
96	1002026	Ledger plate is a part of which machine? 1. Laser leveller 2. Multi crop thresher 3. Happy seeder 4. Reaper cum binder A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
97	1002027		4.0	1.00

		Arrange the following operations of a Corn harvester in a sequence (A). Feeding the stalks into the snapping rolls using lugged gathering chains (B). Guide the stalks into the machine using gathering unit. (C). Removal of trash and broken stalks by means of husking rolls (D). Remove the ears from the stalks using snapping rolls (E). Shells the corn from the cobs, and separates the shelled corn from the cobs and trash Choose the **correct** answer from the options given below: 1. (A), (B), (C), (D), (E). 2. (B), (C), (E), (D), (A). 3. (B), (A), (D), (E), (C). 4. (B), (A), (D), (C), (E). A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
98	1002028	The threshed grains passing out in the straw is known as 1. Shoe loss 2. Header loss 3. Rack loss 4. Collectable loss A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
99	1002029		4.0	1.00

Match **List-I** with **List-II**

List-I	**List-II**
(Test/equipment)	**(Used for measurement of)**
(A). Procter Test	(I). Nitrogen content
(B). Kjeddahl's apparatus	(II). Relative humidity
(C). Assmann psychrometer	(III). Blood pressure
(D). Sphygmomanometer	(IV). Soil Compaction

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question					
100	1002030			4.0	1.00

Match **List-I** with **List-II**

List-I	**List-II**
(Soil properties)	**(Measuring methods)**
(A). Shear stress	(I). Cone index
(B). Soil texture	(II). Bekker equation
(C). Soil strength	(III). USDA soil triangle
(D). Tractive force	(IV). Tri-axial test
(E). Shear strength	(V). Mohr-Coulomb theory

Choose the **correct** answer from the options given below:

1. (A) - (I), (B) - (III), (C) - (V), (D) - (IV), (E)- (II)
2. (A) - (V), (B) - (III), (C) - (I), (D) - (II), (E)- (IV)
3. (A) - (I), (B) - (IV), (C) - (III), (D) - (II), (E)- (V)
4. (A) - (V), (B) - (III), (C) - (IV), (D) - (I), (E)- (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

101	1002031	These nozzles are most suited for directed spray in row-crop applications when drift is not a concern, as these nozzles are operated at 40 to 80 psi pressures. Since the droplets are small, these nozzles are most suited for contact herbicides, insecticides, and fungicides where full coverage of plant foliage is essential. Which type of nozzles are these? 1. Regular flat-fan nozzles 2. Flooding flat-fan nozzles 3. Hollow-cone spray nozzles 4. Even flat-fan spray nozzles A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

102	1002032		4.0	1.00

Given below are two statements:

Statement (I): Differential of a tractor consists of planetary gear system which has four bevel gears. It also has a pair of bevel gears consisting of a pinion and crown wheel fitted at right angle to each other to transmit power received from the gearbox to the rear axles.

Statement (II): When the tractor is moving straight ahead, the bevel pinions of differential unit rotate on their carrier shafts and both the side gears rotate at different speed.

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

1. Both Statement (I) and Statement (II) are true.
2. Both Statement (I) and Statement (II) are false.
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

103	1002033		4.0	1.00

The human workload has been categorized between light work and extremely heavy work depending upon heart rate or oxygen consumption. During field operation, the oxygen consumption rate of an operator was found as 2.5 lit/min. Based on O_2 consumption, what is the cateogry of workload?

1. Light work
2. Extremely heavy work
3. Moderate work
4. Heavy work

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

104	1002034		4.0	1.00

ISO 9000 standard is for

1. Quality
2. Reliability
3. Safety
4. ROPS

A1 : 1

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
105	1002035	Which type of load acts in the lower link of the 3-point linkage system? (A). Axial (B). Bending (C). Shear (D). Torsional Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (A), (C) and (D) only. 3. (A), (B), (C) and (D). 4. (A), (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
106	1002036	Given below are two statements: Statement (I): A rotary cutter has knives rotating in a horizontal plane whereas a flail shredder has knives rotating in vertical planes perpendicular with the direction of travel. Statement (II): Both rotary cutter and flail shredder work on the principle of Impact cutting. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

107	1002037	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : To ensure complete closing of the engine valve, a certain amount of clearance between the tappets and the valve stems is necessary. Reason (R) : If the clearance is insufficient, the valve will be held open and the leaking valve will burn. If the clearance is too large, the valve range will be decreased and the operation of the valve will be noisy 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. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

108	1002038	Rankine's theory or the maximum principal/ normal stress theory is based on failure in tension or compression and ignores the possibility of failure due to shearing stress. So, Rankine formula is used for the design of which engine component? 1. Piston pin 2. Piston 3. Connecting rod 4. Flywheel A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

109	1002039	A process where a survey plan or hard copy is a map and is represented in digital medium using geo-referencing capabilities and CAD tool is called which technique? 1. Modulation 2. Digitization 3. Demodulation 4. Computing	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
110	1002040	Center-to-center circumferential spacing of similar lugs on one side of the center line of the tire as measured at the lug face is known as 1. Lug length 2. Lug height 3. Lug circumferance 4. Lug pitch A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
111	1002041	Arrange the given fuel in ascending order of their calorific value (A). Butane (C_4H_{10}) (B). Methanol (CH_4O) (C). Ethanol (C_2H_6O) (D). Diesel ($C_{16}H_{34}$) Choose the **correct** answer from the options given below: 1. (A), (B), (C), (D). 2. (B), (D), (C), (A). 3. (B), (C), (D), (A). 4. (D), (C), (B), (A). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
112	1002042		4.0	1.00

		Gasification is a physicochemical process in which chemical transformations occur along with the conversion of energy. The combustible gases produced in a gasifier unit are (A). Hydrogen (H_2) (B). Carbon monoxide (CO) (C). Methane (CH_4) (D). Sulphur dioxide (SO_2) Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only 2. (A), (B) and (C) only 3. (B), (C) and (D) only 4. (A), (B), (C) and (D) A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
113	1002043	Given below are two statements: Statement (I): Belts designed for variable-speed drives are shorter than standard V -belts in relation to their thickness. Statement (II): The extra width is necessary to obtain reasonable ranges of speed ratio as well as increased load capacities. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
114	1002044		4.0	1.00

		It is a tin-based alloy with small amount of copper (7-8%), antimony (8-9%) and tin (80-84%) and used for making bearings. What is the name of alloy? 1. Bronze 2. Brass 3. Babbit 4. Boron Steel A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
115	1002045	Forces that act upon stabilizing surfaces such as the landside and sole of plow or upon supporting runners or wheels is known as 1. Useful soil force 2. Parasitic force 3. Draft of the implement 4. Pull of implement A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
116	1002046	A turbocharger is ineffective when the engine is 1. Fully loaded 2. At full speed 3. Near governor's maximum 4. Idling A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

117	1002047	Given below are two statements: Statement (I): Torque reserve is defined as the difference between the peak torque of the engine and the torque at rated speed. Statement (II): Large torque reserve is desirable to prevent the engine from stalling during momentary overloads. In light of the above statements,choose the *most appropriate* answer from the options given below. 1. Both Statement (I) and Statement (II) are true. 2. Both Statement (I) and Statement (II) are false. 3. Statement (I) is true but Statement (II) is false. 4. Statement (I) is false but Statement (II) is true. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

118	1002048	Semi-mounted implements are attached to the tractor and the ground provides part of the implement support. Which power outlet is used for attaching semi-mounted implements in a tractor? 1. Drawbar 2. Three point hitch 3. Two lower links 4. Power take off A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

119	1002049	Rear furrow wheel in a disc plough is used to 1. Stabilize the plough and take side thrust 2. Effect lateral adjustment of plough relative to line of pull 3. Control the depth and adjust the line of pull 4. Cut the proper width of furrow slice A1 : 1 A2 : 2	4.0	1.00

		A3 : 3 A4 : 4		
Objective Question				
120	1002050	Carbon steel is used very extensively in the manufacture of farm implements as compared to alloy steels because of (A). Great versatility (B). Relatively low cost (C). More resistant to corrosion (D). Less brittleness Choose the ***correct*** answer from the options given below: 1. (A), (B) and (D) only. 2. (B), (C) and (D) only. 3. (A), (C) and (D) only. 4. (A), (B), and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00