PREVIEW QUESTION BANK

Module Name : AGRICULTURAL ENGG AND TECHNOLOGY-ENG
Exam Date : 09-Jul-2023 Batch : 10:00-12:00

<table>
<tr><th>Sr. No.</th><th>Client Question ID</th><th>Question Body and Alternatives</th><th>Marks</th><th>Negative Marks</th></tr>
<tr><td colspan="5">Objective Question</td></tr>
<tr><td>1</td><td>1901</td><td>The following are the paddy yields (kg/plot) for 14 plots 30, 32, 35, 38, 40, 42, 48, 49, 52, 55, 58, 60, 62, 65. The 25th percentile (Q1) yield in kg/plot will be:
1. 37.25
2. 38.00
3. 40.00
4. 48.50

A1 : 1

A2 : 2

A3 : 3

A4 : 4</td><td>4.0</td><td>1.00</td></tr>
<tr><td colspan="5">Objective Question</td></tr>
<tr><td>2</td><td>1902</td><td>Match List-I with List-II
<table><tr><th>List-I</th><th>List-II</th></tr><tr><th>Nature of data</th><th>Most appropriate measure</th></tr><tr><td>(A) Qualitative data</td><td>(I) Geometric mean</td></tr><tr><td>(B) Raw data with extreme values</td><td>(II) Median and Mode</td></tr><tr><td>(C) Dealing with rates, speeds and prices</td><td>(III) Mode</td></tr><tr><td>(D) Calculating relative change</td><td>(IV) Harmonic mean</td></tr></table>Choose the correct answer from the options given below:
1. (A) - (IV), (B) - (II), (C) - (I), (D) - (III)
2. (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
3. (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
4. (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

A1 : 1

A2 : 2</td><td>4.0</td><td>1.00</td></tr>
</table>

		A3 : 3 A4 : 4		
Objective Question				
3	1903	Consider the following probability distributions. (A) Normal distribution (B) Binomial distribution (C) Poisson distribution (D) F-distribution (E) Chi-square distribution In which of the above distributions mean and variance are equal : 1. (A) only. 2. (B) only. 3. (C) only. 4. (D) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
4	1904	For two invertible matrices A and B of suitable orders, the value of $(AB)^{-1}$ is : 1. $(BA)^{-1}$ 2. $B^{-1} A^{-1}$ 3. $A^{-1} B^{-1}$ 4. $(AB')^{-1}$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
5	1905		4.0	1.00

		The angle between vectors A=2i-j+2k and B= 6i-3j+6k is : 1. 0 2. 30 3. 45 4. 60 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
6	1906	Synchronous Speed of an AC induction motor depends on : (A) Frequency of the supply voltage (B) Number of poles (C) Current (D) Voltage Choose the ***correct*** answer from the options given below: 1. (A) and (B) only. 2. (B) and (C) only. 3. (C) and (D) only. 4. (A) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
7	1907		4.0	1.00

Hydrometer readings are corrected for

(A) Temperature correction

(B) Meniscus correction

(C) Dispersing agent correction

(D) Pressure correction

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

8	1908	Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**. **Assertion (A) :** In case of soils compressive normal stresses are taken positive. **Reason (R) :** Most of the normal stresses acting on soils are compressive in nature. 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

9	1909		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 current drawn by the motor lags behind the voltage applied

Reason (R) : Motor is an inductive load

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

10	1910	Consider the following statements (A) Real power is expressed in kW (B) Apparent power is expressed in kV (C) Reactive power does not provide useful mechanical work. (D) A motor operating at a given load and supply voltage, draws active and reactive power. (E) Both Real power and Apparent power are expressed in kW Choose the ***correct*** answer from the options given below: 1. (A), (C), (D) and (E) only. 2. (A) and (B) only. 3. (B) and (D) only. 4. (A), (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

11	1911	Given below are two statements: **Statement (I) :** The porosity of a soil can not exceed 100 per cent. **Statement (II) :** The degree of saturation can not be zero per cent. 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

12	1912	Which of the following statements are true in case of electric fuse : (A) It is generally made of materials having low melting point (B) It is made of materials having high conductivity (C) It has inverse time-current characteristics (D) It is inserted in series with the circuit to be protected Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (A), (B) and (D) only. 3. (A), (C) and (D) only. 4. (A), (B), (C) and (D). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

13	1913		4.0	1.00

Consider the following statements :

(A) Absolute pressure is always positive.

(B) Vacuum can not exceed local atmospheric pressure.

(C) Gage pressure is the difference between absolute pressure and atmospheric pressure.

(D) Negative gauge pressure is same as vacuum.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

14	1914	Consider the following statements related to Mohr failure hypothesis: **Statement (I) :** Shear stress on the failure envelope is the maximum shear stress in the element. **Statement (II) :** The maximum shear stress acts on a plane inclined at 45^0 to major principle plane 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

15 1915

Which of the following Law's are based on gradient :

(A) Stefan -Boltzmann law

(B) Fourier's law

(C) Newton's law of cooling

(D) Fick's law

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

16 1916

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

List-I	**List-II**
Process	**Characteristic**
(A) Adiabatic	(I) No volume change takes place
(B Isochoric	(II) No pressure change takes place.
(C) Isobaric	(III) No temperature change takes place.
(D) Isothermal	(IV) No heat transfer takes place.

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

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

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

17 1917

A red brick wall of length 5 m, height 4 m and thickness 0.25 m has temperature on inner surface as 40 ^{0}C and outer surface as 110 ^{0}C. The thermal conductivity of red brick is k=0.70 W/mK. What will be the temperature at interior point of the wall, 20 cm from the inner wall.

1. 96 ^{o}C
2. 74 ^{o}C
3. 54 ^{o}C
4. 48 ^{o}C

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

18 1918

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

Assertion (A) : Counter flow heat exchanger is more effective than a parallel flow heat exchanger.

Reason (R) : For same temperature limits of hot and cold fluids , the overall heat transfer coefficient of counter flow heat exchanger is more than parallel flow heat exchanger.

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.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

19 | 1919 | 4.0 | 1.00

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

List-I	**List-II**
Property	**Fluid type**
(A) Apparent viscosity decreases with increasing deformation	(I) Dilatant fluids
(B) Shear stress is directly proportional to rate of deformation	(II) Newtonian fluids
(C) Behaves as a solid until a minimum yield stress is exceeded and subsequently exhibits a linear relation between stress and rate of deformation	(III) Pseudoplastic fluids
(D) Viscosity increases with increasing deformation rate	(IV) Bingham-plastic fluids
(E) Shear stress is not directly proportional to deformation rate	(V) Non-Newtonian fluids

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20 | 1920 | 4.0 | 1.00

Bernoulli's equation is conservation of

1. Mass
2. Energy
3. Momentum
4. Angular Momentum

A1 : 1

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
21	1921	If a body is in equilibrium, we may conclude that (A) No force is acting on the body (B) The resultant of all the horizontal forces acting on it is zero. (C) The resultant of all the vertical forces acting on it is zero. (D) The moments of the forces about any point is zero. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (A), (C) and (D) only. 4. (A), (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
22	1922	The centre of gravity of a right circular cone of diameter (d) and height (h) lies at a distance of _____ from the base measured along the vertical radius. 1. h/2 2. h/3 3. h/4 4. h/6 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
23	1923		4.0	1.00

If the moment of inertia of a body along a perpendicular axis passing through its centre of gravity is 50 $kg.m^2$ and the mass of the body is 30 kg. What will be the moment of inertia ($kg.m^2$) of the same body along another axis, which is 50 cm away from the current axis and parallel to it?

1. 80.0
2. 57.5
3. 110.0
4. 65.0

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

24	1924	The moment of inertia of a triangular section of base (b) and height (h) about an axis passing through its vertex and parallel to the base is _____ times as that passing through its centre of gravity and parallel to the base. 1. Twelve 2. Nine 3. Six 4. Four A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

25	1925		4.0	1.00

		Which of the following quantities have unit as Newton-meter (N-m) ? (A) Work (B) Energy (C) Torque (D) Power (E) Momentum Choose the ***correct*** answer from the options given below: 1. (C) only. 2. (A), (B) and (C) only. 3. (B) only. 4. (D) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
26	1926	A flywheel starts from rest and revolves with an acceleration of 0.5 rad/sec^2. What will be its angular displacement after 10 seconds. 1. 5 radians 2. 25 radians 3. 35 radians 4. 50 radians A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
27	1927		4.0	1.00

Which of the following constitute kinematic link?

(A) Piston, piston rod and crosshead

(B) Connecting rod with big and small end bearings

(C) Crank, crankshaft and flywheel

(D) Cylinder, engine frame and main bearings

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

28	1928	Given below are two statements: **Statement (I) :** A kinematic link may consist of several parts rigidly fastened together so that they do not move relative to one another. **Statement (II) :** A kinematic link need not to be rigid body but it must be a resistant body. 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

29	1929		4.0	1.00

		Kutzback equation between degrees of freedom (n), number of links (ℓ), number of joints (j) and number of higher pairs (h) of a mechanism having plane motion is given by 1. n= 3(ℓ-1)-2j-h 2. n = 3(ℓ+3) -2j-h 3. n = 3 (ℓ-3) -2(j-h) 4. n = 3 (ℓ+1) - j + 2h A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
30	1930	Select the correct sequence of increasing size (thickness) of clay minerals (A) Montmorillonite (B) Chlorite (C) Kalonite (D) Illite Choose the ***correct*** answer from the options given below: 1. (B), (A), (C), (D). 2. (A), (D), (B), (C). 3. (C), (B), (A), (D). 4. (D), (C), (A), (B). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
31	1931		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 good CI engine fuel, like diesel oil, is a bad SI engine fuel and a good SI engine fuel, like petrol, is a bad CI engine fuel.

Reason (R) : A good CI engine fuel requires high self-ignition temperature and good SI engine fuel requires low self-ignition temperature.

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

32	1932	Consider the following statements regarding C.I. engine and S.I engine (A) C.I. engines are more bulky than S.I. engines (B) C.I. engines are more efficient than S.I. engines (C) Lighter flywheels are required in C.I. engines Choose the ***correct*** answer from the options given below: 1. (A) and (C) only. 2. (B) and (C) only. 3. (A) and (B) only. 4. (A), (B) and (C). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

33	1933		4.0	1.00

		An engine has a swept volume of 300 cm^3, clearance volume of 25 cm^3. Its volumetric efficiency is 0.80 and mechanical efficiency is 0.90. The volume of mixture taken in per stroke is 1. 325 cm^3 2. 275 cm^3 3. 240 cm^3 4. 270 cm^3 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
34	1934	A two stroke cycle gives _____ the number of power strokes as compared to four stroke cycle engine at the same engine speed. 1. Half 2. Same 3. Double 4. Four times A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
35	1935	The overall mechanization level in India ranges from 1. 20-25 % 2. 40-45 % 3. 55-60 % 4. 75-80 % A1 : 1 A2 : 2 A3 : 3	4.0	1.00

A4 : 4

Objective Question

36 1936

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

List-I	**List-II**
Farm Equipment	**Action**
(A) Turn Wrest plough	(I) Moves all the soil towards same side.
(B) Disc plough	(II) Moves the soil in opposite directions.
(C) Disc harrow	(III) Used for shallow ploughing.
(D) Vertical disc plough	(IV) Has an arrangement that the plough bottom can be changed from right hand to left hand by rotating it approximately 180°.
(E) Off-set disc harrow	(V) Well suited for working under low hanging branches in orchards.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

37 1937

Which seed metering mechanism in a planter brushes out excess seeds from the cells of the feed mechanism ?

1. Edge drop
2. Cut off
3. Knock out
4. Flat drop

A1 : 1

4.0 1.00

		A2 : 2 A3 : 3 A4 : 4		
Objective Question				
38	1938	Which of the following is primary function of broadcaster? (A) Open the seed furrow to proper depth (B) Meter the seed (C) Distribute seed over a a given width of land. (D) Deposit the seed in the furrow in acceptable pattern. (E) Cover the seed and compact soil around it. Choose the ***correct*** answer from the options given below: 1. (A), (B), (C), (D) and (E). 2. (A), (B), (D) and (E) only. 3. (A), (D) and (E) only. 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
39	1939		4.0	1.00

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

List-I	**List-II**
Field operation	**Equipment used**
(A) Intercultural operation	(I) Rotavator
(B) Deep ploughing	(II) Cultivator
(C) Soil pulverization	(III) Sub-soiler
(D) Conservation tillage	(IV) Strip-till drill
(E) Soil Inversion	(V) MB plough

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

40	1940	A flat fan nozzle is most suitable for 1. Foliage spray 2. Insect control 3. Spot spray 4. Herbicide spray A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

41	1941		4.0	1.00

Given below are two statements:

Statement (I) : Drift is more serious problem with dusts compared to sprays.

Statement (II) : Drift can be minimized by producing sprays having small volume mean diameter (VMD).

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

42	1942	Registration and alignment are the cutting knife adjustments related to 1. Reaper 2. Mower 3. Combine harvester 4. Reaper binder A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

43	1943		4.0	1.00

Select the most appropriate sequence of involvement of different parts of combine harvester from crop interception to grain collection

(A) Cutter bar

(B) Auger

(C) Straw walker

(D) Cylinder and concave

(E) Reel

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

44	1944	As per BIS, for safe use of threshers (A) The minimum length of feeding chute should be 90 cm. (B) The feeding chute should be covered up to a minimum length of 45 cm. (C) The feeding chute should be inclined to the horizontal at an angle of 5-10 degree. (D) The feeding chute should be made of stainless steel. (E) The feeding chute should have an alarming system. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (B), (D) and (E) only. 4. (A), (B) and (E) only. A1 : 1 A2 : 2 A3 : 3	4.0	1.00

A4 : 4

Objective Question

45 1945

Maximum torque in a tractor is generated at speed

1. At which maximum power is generated
2. Lower than the speed at which maximum power is generated
3. Higher than the speed at which maximum power is generated.
4. At which minimum power is generated.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

46 1946

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

List-I	**List-II**
Harvesting machine	**Crop**
(A) Digger	(I) Cotton
(B) Reaper	(II) Potato
(C) Picker	(III) Cereal crops
(D) Snapper	(IV) Forage crops
(E) Mower	(V) Maize

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

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

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

Objective Question

47 | 1947 | 4.0 | 1.00

Which of the following is harvesting machine?

(A) Cotton picker

(B) Potato Digger

(C) Mower

(D) Tree shaker

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 | 1948 | 4.0 | 1.00

The acceptable work load for average Indian workers is about

1. 35 % of individual's maximum aerobic power (VO_{2max})
2. 50 % of individual's maximum aerobic power (VO_{2max})
3. 65 % of individual's maximum aerobic power (VO_{2max})
4. 80 % of individual's maximum aerobic power (VO_{2max})

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

49 | 1949 | 4.0 | 1.00

Consider the following statements related to biomass conversion techniques

Statement (I) : Thermo-chemical processes have higher efficiencies than bio-chemical processes.

Statement (II) : In comparison to bio-chemical conversion techniques, thermo-chemical conversion techniques have superior ability to decompose lignin.

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				
50	1950	Which country is having a full-fledged Ministry for Development of New and Renewable Resources ? 1. India 2. Bangladesh 3. Japan 4. China A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
51	1951		4.0	1.00

A tractor operated sprayer has 24 nozzles spaced 50 cm apart. Time lost in turning is 8% and filling to tank is 7%. If the sprayer is operated at a speed of 5km/h, calculate the coverage area in ha per hour.

1. 2.6
2. 3.0
3. 5.1
4. 6.0

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

52	1952	The major drawbacks of conventional tillages are categorized as : (A) Decrease of soil organic matter (B) Decrease of soil moisture (C) Short-term potential for soil compaction (D) Adversely affect the soil structure Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (A), (B) and (D) only. 4. (A), (B), (C) and (D). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

53	1953		4.0	1.00

Given below are two statements:

Statement (I) : The soil texture is defined as the relative proportion, by weight percentage of sand, silt and clay in soil.

Statement (II) : The aeration in fine textured soil is medium to poor.

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

54	1954	A 2-bottom, 50 cm MB plough is being operated at a speed of 5 km. h^{-1}. If time lost in turning is 8 per cent, how many hours will be required to plough 23 ha of land ? 1. 23 2. 46 3. 50 4. 100 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

55	1955		4.0	1.00

		A bullock drawn country plough cuts a trapezoidal furrow having 16 cm top width and 4 cm bottom width. The depth of ploughing is 15 cm. If the plogh forms an angle of 45° with horizontal and average soil resistance is 0.71 $kg.cm^{-2}$, calculate the pull exerted by the bullocks in kgf. 1. 107 2. 150 3. 211 4. 300 A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
56	1956	The tractor develops torque of 35 kg-m at an engine speed of 1350 RPM. Calculate the BHP of the tractor. 1. 45 2. 66 3. 90 4. 77 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
57	1957	The volume of tyre filled with water for ballasting purpose is: 1. 25% 2. 50% 3. 75% 4. 90% A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

58 1958

Which is the most appropriate method to measure soil tilth?

1. Chemical analysis
2. Aggregate analysis
3. Biological analysis
4. Observational analysis

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59 1959

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

List-I	**List-II**
Link	**Type of load**
(A) Rock shaft	(I) Bending and shear
(B) Lower link	(II) Axial
(C) Upper link	(III) Axial, bending and shear
(D) Lift arm	(IV) Torsion, bending and shear

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

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

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

60 1960

Which of the parameter is affected by the peripheral speed of cylinder in thresher?

1. Cleaning of grains
2. Threshing efficiency
3. Grain separation
4. Aspirating efficiency

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

61 1961

The undesirable components which need to be removed during refining of crude vegetable oils include -

(A) Colouring and odouring matters

(B) Free fatty acids

(C) Gums

(D) Waxes

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

62 1962

4.0 1.00

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

List-I	List-II
(A) Falling rate period	(I) Ratio of humidity with respect to humidity at saturation point
(B) Absolute humidity	(II) Critical moisture content
(C) Percent humidity	(III) Equilibrium moisture content
(D) Constant rate period	(IV) Ratio of kg of water vapour in kg of dry air

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

63 1963 4.0 1.00

When one ton of grain with 25% (wb) moisture content is to be dried to 20% (wb), then the amount of water to be evaporated will be ?

1. 100 kg
2. 150 kg
3. 75 kg
4. 125 kg

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

64 1964 4.0 1.00

Important functions of a septic tank includes -

(A) Storage of sludge and scum

(B) Removal of solids from the sewage

(C) Decomposition of solid sewage under aerobic conditions

(D) Decomposition of solid sewage under anerobic conditions

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65	1965	In the adiabatic drying process; if there is a decrease in the value of dry bulb temperature, then - 1. The values of humity ratio, relative humity increases and water-vapour pressure decreases 2. The values of humity ratio, relative humity decreases and water-vapour pressure increases 3. The values of humity ratio, relative humity and water-vapour pressure increases 4. The values of humity ratio, relative humity and water-vapour pressure decreases A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

66	1966		4.0	1.00

Destoner is a form of separator that separates the -

(A) Feed material into two fractions as per the difference in shape factor

(B) Feed material into heavy particles from the lighter particles

(C) Feed material into two fractions only as per the difference in specific gravity

(D) Feed material into multiple fractions as per the difference in specific gravity

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

67	1967	When a mass of grain having angle of internal friction of 30°C is stored in a bin; what will be the Rankine's earth pressure coefficient? 1. 1 2. 0.5 3. 0.33 4. 0.45 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

68	1968		4.0	1.00

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

Assertion (A) : Parboiled rice develops less rancidity than raw rice during storage.

Reason (R) : Process of parboiling destructs some of natural antioxidants present in rice.

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

69	1969	The COP of a refrigerator working on reverse Carnot cycle (T2 – higher temperature, T1 – lower temperature) is given by - 1. (T2-T1)/T1 2. (T2-T1)/T2 3. T2/(T2-T1) 4. T1/(T2-T1) A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

70	1970		4.0	1.00

Which among the following criteria is used for describing shape of an object?

(A) Roundness

(B) Sphericity

(C) Charted standards

(D) Resemblance of geometric bodies

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

71 1971

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

Assertion (A) : LSU dryer is considered as a continuous flow-mixing type of grain dryer.

Reason (R) : In LSU dryer, inverted V-shaped air channels are arranged in such a way that air is forced through the descending grain while moving from feed end to the discharge end.

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.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

72 | 1972 | 4.0 | 1.00

The uniformity of grind of a powdered sample is indicated by which of the following index ?

(A) Fineness modulus

(B) Bond's index

(C) Work index

(D) Uniformity index

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

73 | 1973 | 4.0 | 1.00

Which of the following statement(s) holds correct for a screw press?

(A) Compression ratio is the ratio of the volume displaced per revolution at feed end to that at discharge end.

(B) Volume displaced at feed end is considerably less than at the discharge end.

(C) Volume displaced at feed end is considerably greater than at the discharge end.

(D) Volume displaced at feed end is equal to that at the discharge end.

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

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

A1 : 1

A2 : 2

A3 : 3

		A4 : 4		
Objective Question				
74	1974	The effective tension of a belt conveyor - 1. Reduces with decrease in belt speed 2. Increases with increase in belt speed 3. Doesn't depend on belt speed 4. Reduces with increase in belt speed A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
75	1975	Cyclone separator design is based on - (A) High tangential velocity (B) Low radial velocity (C) Low tangential velocity (D) High radial velocity Choose the ***correct*** answer from the options given below: 1. (A) and (C) only. 2. (A) and (B) only. 3. (A) and (D) only. 4. (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
76	1976		4.0	1.00

		Which among the following is a bag storage structure? 1. Bhukari 2. PUSA bin 3. Silo 4. CAP A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
77	1977	Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**. **Assertion (A) :** Thermal conductivity of a single grain is always greater than that of bulk grain. **Reason (R) :** Thermal conductivity of air is comparatively less than that of food grain. 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	1978		4.0	1.00

		What is the amount of heat to be removed from 2 tons of apples when cooled from 25°C to 5°C? Specific heat of apple is 0.1 kcal/kg°C. 1. 4000 kcal 2. 1000 kcal 3. 2000 kcal 4. 40,000 kcal A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
79	1979	Frictional force of granular material is - (A) Proportional to normal load (B) Independent of the area of the sliding surface (C) Proportional to actual area of contact (D) Dependent on nature of material in contact Choose the ***correct*** answer from the options given below: 1. (A) and (C) only. 2. (A), (B), (C) and (D). 3. (A), (B) and (D) only. 4. (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
80	1980	Which of the following is related to international trade and promotion? 1. AGMARK 2. APEDA 3. PFA 4. FSSAI	4.0	1.00

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
81	1981	Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**. **Assertion (A) :** Falling film evaporators are most suitable for food that become thicker with concentration. **Reason (R) :** In falling film evaporator food film move downward under gravity instead of buoyancy force. 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				
82	1982		4.0	1.00

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

List-I	List-II
(A) Deep bin	(I) Pulse milling
(B) Shallow bin	(II) Janssen
(C) Break roll	(III) Rankine
(D) CFTRI method	(IV) Wheat milling

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 1983 4.0 1.00

Agricultural waste from which activated carbon can be manufactured include(s)

(A) Rice husk

(B) Groundnut shell

(C) Oil cake

(D) Mango stone

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

84 | 1984 | 4.0 | 1.00

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

Assertion (A) : In a rubber roll sheller, paddy is sheared and compressed between two rollers so that its husk is stripped off.

Reason (R) : Rollers in a rubber roll sheller rotate in same direction at different speed to increase contact of one roll longer than the other roll.

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

85 | 1985 | 4.0 | 1.00

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

Assertion (A) : Process of blanching minimises discolouration of food during dehydration.

Reason (R) : Blanching cleans raw material and reduced surface bacterial load of the produce.

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

86	1986	The diameter of largest inscribing circle of an object is observed to be 20 mm. What would be the sphericity of the object if diameter of smallest circumscribing circle is 30 mm? 1. 0.6 2. 1.5 3. 1 4. 0.5 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

87	1987	It is found that the energy required to reduce particle from a mean diameter of 10 mm to 5 mm is 1 kJ/kg. Using Rittinger's law, what is the energy requirement to reduce the same from a diameter of 1 mm to 0.5 mm? 1. 5 kJ/kg 2. 100 kJ/kg 3. 10 kJ/kg 4. 1 kJ/kg A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

88	1988		4.0	1.00

		Loose housing barn is one in which (A) Milking parlour is separately constructed (B) Animals move about freely in a covered or partially covered yard (C) Animals are housed and milked in same building (D) Permits changes in herd size without any difficulty Choose the ***correct*** answer from the options given below: 1. (A), (B), (C) and (D). 2. (B), (C) and (D) only. 3. (A) and (B) only. 4. (A), (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
89	1989	Process of freezing food below eutectic temperature and converting solid ice crystals directly into vapour form is known as - 1. Individual quick freezing (IQF) 2. Freeze drying 3. Freezing 4. Freeze encapsulation A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
90	1990		4.0	1.00

		Pyrolysis of biomass at a relatively low temperature produces - 1. Mixture of combustible gases having low calorific value 2. Combustible gas and carbon char 3. Carbonaceous char 4. Liquid fuel of very high calorific value A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
91	1991	Given below are two statements: **Statement (I) :** Soil and water conservation consists of prevention and control of soil erosion caused due to water. It also includes conserving rain water and soil moisture for the purpose of crop production . **Statement (II) :** Soil erosion severely affects hilly areas because of steep slopes . 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				
92	1992		4.0	1.00

The major activities of the command area development are :

(A) modernisation and efficient operation of irrigation systems as well as development of main drainage systems

(B) construction of field channels

(C) land shaping and levelling job are not required

(D) construction of field drains

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93	1993	Given below are two statements: **Statement (I) :** In the case of moderate rain at non uniform intensities, Φ -index will be somewhat higher than the W-index. **Statement (II) :** These indices vary with initial soil moisture , changes in the depression storage and interception capacity of the area and amount of precipitation. 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

94 | 1994 | 4.0 | 1.00

(A) H-flumes are well suited for runoff measurement as they have a high capacity and are accurate at different rates of flow.

(B) They are also well suited where sediment sampling of the runoff is done using automatic silt samplers.

(C) The H-flume is useful for flows ranging from 0.009 to 0.85 cumec.

(D) For smaller and greater flows the dimensions of the H-flume are modified and are known as HS flumes for smaller flows and HL flumes for larger flows.

(E) H-flumes need not require calibration and the rating tables are to be used for measuring discharges.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95 | 1995 | 4.0 | 1.00

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

List-I	List-II
(A) Venturimeter	(I) end of pipe
(B) Pitot tube	(II) inverted U-tube
(C) Orifice	(III) flow coefficient 0.63 to 0.83
(D) Elbow meter	(IV) discharge measurement

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

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

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
96	1996	Which instrument does not measure cumulative flow? 1. Propeller meter 2. Deathridge meter 3. Water meter 4. Venturimeter A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
97	1997	Given below are two statements: **Statement (I) :** The gravitational potential is independent on the relative elevation and is dependent on chemical and pressure conditions of soil water. **Statement (II) :** Osmotic potential can be defined as the amount of work that a unit quantity of water in an equilibrium soil water system is capable of doing when it moves to another equilibrium system identical in all respects except that there are no solutions 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

98 | 1998 | 4.0 | 1.00

Which parameter is not a soil moisture constant?

1. saturation capacity
2. field capacity
3. permanent wilting percentage
4. evapo-transpiration

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

99 | 1999 | 4.0 | 1.00

Which statements are incorrect ?

(A) In the field soil moisture content determined by the gravimetric method is used as the reference in calibrating the other soil moisture instruments.

(B) Resistance blocks are useful for saline soils, since the resistance reading is not affected by salt concentration.

(C) The principle of the neutron probe moisture meter is based on the measurement of the number of carbon nuclei that are present in a unit volume of soil.

(D) Tensiometer satisfactorily measure the entire range of available moisture in all soil types.

(E) In sprinkler irrigation the soil moisture measuring stations should be between the sprinkler heads and 3 to 4 m away from the lateral.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

100 | 2000 | 4.0 | 1.00

(A) The process of evaporation of water in nature is one of the fundamental components of the hydrological cycle.

(B) Transpiration is the process by which water vapour leaves the atmosphere and enters the plant body.

(C) Potential evapo-transpiration is the evapo-transpiration from a large vegetation covered the land surface with adequate moisture at all times.

(D) The soil and crop conditions in the lysimeters should be close to the natural conditions.

(E) Soil moisture depletion method is usually employed to determine the consumptive use of unirrigated field crops.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

101 | 2001 | 4.0 | 1.00

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

List-I	List-II
(A) Hygroscopic water	(I) no of hydrogen nuclei
(B) zapillary water	(II) mean monthly temperature
(C) Neutron moisture meter	(III) adsorption forces
(D) Blaney-Criddle	(IV) surface tension

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

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

		A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
102	2002	(A) Majority of red soils are loams with values of pH ranging between 5.0 to 8.0 (B) Laterite soils which are generally acidic have an average pH range between 6.0 to 7.0 (C) Red and yellow soils have a pH around neutrality or else slightly on the acidic side. (D) Desert soils have fairly high pH and varying amounts of calcium carbonate . (E) The alkali soils have a high pH which may range between 7.0 and 8.0 Choose the ***correct*** answer from the options given below: 1. (A), (C) and (D) only. 2. (A), (B) and (C) only. 3. (C), (D), and (E) only 4. (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
103	2003		4.0	1.00

Given below are two statements:

Statement (I) : Penman proposed an equation for evaporation from open water surface based on a combination of energy balance and sink strength.

Statement (II) : For converting PET into ET, suitable crop coefficients should be evolved for different crops, soils and climatic conditions and also for different stages of growth for the same crop.

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

104	2004		4.0	1.00

Given below are two statements:

Statement (I) : In small catchments the overland flow phase is predominant over the channel flow. Hence the land use and the intensity of rainfall have important role on the peak flood.

Statement (II) : On large catchments the effects of land use and intensity of rainfall are suppressed as the channel flow phase is more predominant .

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

105 | 2005 | 4.0 | 1.00

The limitations to the use of unit hydrographs are:

(A) Snow melt runoff cannot be satisfactorily represented by unit hydrograph.

(B) The catchment should not have unusually large storages in terms of tanks , ponds , large flood bank storages ,etc. which affect the linear relationship between storage and discharge .

(C) If the precipitation is decidedly uniform, unit hydrographs can not be expected to give good results.

(D) The rainfall intensity is assumed constant for the duration of the rainfall excess.

(E) The duration of rainfall should be 1/6 to 1/2 of the basin lag.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

106 | 2006 | 4.0 | 1.00

A 12-h unit hydrograph of a catchment is triangular in shape with a base width of 144h and a peak discharge of 23 cumec. This unit hydrograph refers to a catchment area of

1. $786km^2$
2. $596km^2$
3. $900km^2$
4. $1200km^2$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

107 | 2007 | 4.0 | 1.00

(A) Floods are exceedingly complex natural events. they are resultant of a number of component parameters and are therefore very difficult to model them analytically .

(B) In the regions having same climatological characteristics, if the available flood data are quite insufficient , the enveloping curve technique can be used to develop a relationship between the minimum flood flow and drainage area .

(C) For design purposes , extreme rainfall situations are used to obtain the design storm.

(D) The rational formula is found to be suitable for a peak flow prediction in small catchments upto 75 km^2 in an area.

(E) The rational formula assumes a homogeneous catchment surface.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108	2008		4.0	1.00

Given below are two statements:

Statement (I) : Chute spillways carry the flow down the steep slopes through a lined channel rather than by dropping the water in a free overfall.

Statement (II) : On steep slopes, chutes are more economical than series of drop structures to take the flow down the slope.

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

109 2009 4.0 1.00

(A) The plan inspection method of land levelling design is adapted for moderate to flat land slopes.

(B) The profile method of land levelling design consists of plotting the profiles of the grid lines and then laying the desired grade on the profiles.

(C) The contour adjustment method of land levelling design consists of a trial and error adjustment of the contour lines on a plan map.

(D) The contour adjustment method is especially adapted to the smoothening of flat lands that are to be irrigated.

(E) The plane method is rarely used for land levelling design.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

110 2010 4.0 1.00

Given below are two statements:

Statement (I) : Water storage efficiency becomes important when water supplies are limited or when excessive time is required to secure adequate penetration of water into the soil.

Statement (II) : Water application efficiency decreases as the amount of water applied during each irrigation increases.

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				
111	2011	Given below are two statements: **Statement (I) :** Isotropic and homogeneous aquifers seldom occur in nature. **Statement (II) :** Water level measurements during pumping test are made in observation wells installed close to the well or at some distance away from it. 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				
112	2012		4.0	1.00

(A) In levelling, datum surface is an arbitary surface with reference to which the elevations of the points are measured and compared.

(B) The line of collimation or the line of sight is the line joining the intersection of the cross - hairs to the optical centre of the object glass and its continuation.

(C) A foresight is the first staff reading taken after setting up the instrument in any position.

(D) The height of instrument is the elevation of the plane of collimation when the instrument is levelled.

(E) A change point indicates the shifting of the instrument, both back sight and intermediate sight are taken on this change point.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

113 2013

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

List-I	List-II
(A) Close contour lines	(I) foot hill
(B) Wider contour lines	(II) higher contour values outside
(C) Depression	(III) at right angles
(D) Crossing of ridge lines	(IV) top of hill

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

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

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

114	2014	Which points should be kept in mind while selecting the stations? (A) The survey lines should be as few as possible. (B) If possible, a base line should be run roughly through the middle of the area on which the framework of triangles covering the major portions of area may be built up. (C) Offsets should be long particularly for locating the important features . (D) All the triangles should be well conditioned. (E) The main principle of surveying is to work from the part to the whole. Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (A), (B) and (D) only. 4. (C), (D) and (E) only.	4.0	1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

115	2015		4.0	1.00

		The design of bench terraces consists in determining the (A) type of bench terraces (B) terrace spacing (C) terrace cross section (D) terrace length (E) terrace alignment Choose the ***correct*** answer from the options given below: 1. (A), (B) and (C) only. 2. (B), (C) and (D) only. 3. (C), (D) and (E) only. 4. (A), (B) and (E) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
116	2016	Which land capability classes are suitable for pastures? 1. class I and class II 2. class II and class III 3. class III and class IV 4. class V and class VI A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
117	2017		4.0	1.00

		Orchard benched terraces has a width of about 1. 2m 2. 3m 3. 0.5m 4. 1m A1 : 1 A2 : 2 A3 : 3 A4 : 4		
Objective Question				
118	2018	A quantity of 100ml gypsum solution having 36 meq/l concentration as calcium, on reacting with 5gm of an alkali soil showed 32 meq/l of Ca+Mg concentration in the filtrate. Estimate the gypsum requirement in meq/100gm of soil. 1. 6 2. 8 3. 12 4. 16 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
119	2019	Convert 1300 ppm sodium chloride salt concentration into meq/l 1. 22.22 2. 20.22 3. 18.75 4. 23.25 A1 : 1 A2 : 2 A3 : 3	4.0	1.00

		A4 : 4		
Objective Question				
120	2020	Given below are two statements: **Statement (I) :** The axis of the bubble tube should be perpendicular to the vertical axis in dumpy level. **Statement (II) :** The line of collimation of the telescope of the dumpy level should be perpendicular to the axis of the bubble tube. 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