

## PREVIEW QUESTION BANK

Module Name : Irrigation and Drainage Engineering-ENG  
Exam Date : 14-Jul-2023 Batch : 14:30-16:30

| Sr. No.            | Client Question ID | Question Body and Alternatives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Marks | Negative Marks |
|--------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|----------------|
| Objective Question |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                |
| 1                  | 2001               | <p>Choose the incorrect statement regarding the composition of election commission.</p> <ol style="list-style-type: none"> <li>1. Appointment of the chief election commissioner and other election commissioners shall be made by the president.</li> <li>2. President can also appoint regional commissioners after consultation with the election commission.</li> <li>3. Conditions of service and tenure of office of the election commissioners and regional commissioners shall not be determined by the president.</li> <li>4. Article 324 under constitution of India is dealing with the composition of election commission.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0   | 1.00           |
| Objective Question |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                |
| 2                  | 2002               | <p>Which one of the following amendment acts is referred to as the 'mini constitution'?</p> <ol style="list-style-type: none"> <li>1. 42<sup>nd</sup></li> <li>2. 44<sup>th</sup></li> <li>3. 46<sup>th</sup></li> <li>4. 48<sup>th</sup></li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>                                                                                                                                                                                                                                                                                                                                                                                              | 4.0   | 1.00           |
| Objective Question |                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |       |                |
| 3                  | 2003               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 4.0   | 1.00           |

With regard to the jurisdiction and powers of high court, disputes relating to the election of members of parliament and state legislatures, comes under the ambit of which one of the following jurisdictions?

1. Original
2. Writ
3. Appellate
4. Supervisory

A1 : 1

A2 : 2

A3 : 3

A4 : 4

#### Objective Question

4 2004

Which of the following is formed when the moisture is deposited in the form of water droplets on cooler surfaces of solid objects?

1. Frost
2. Fog
3. Mist
4. Dew

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

5 2005

Which of the following is the correct reason for the occurrence of best fishing grounds in the mixing zones (the mixing of warm and cold currents)?

1. It has the moderate temperature
2. It has the slowest sea waves
3. It has the high growth of planktons.
4. It has the sunrays perpendicular to the sea level.

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

6 2006

Eisenhower Cup is associated with which among the following sports?

1. Tennis
2. Chess
3. Football
4. Golf

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

7 2007

Who was the first woman President of the Indian National Congress?

1. Kasturba Gandhi
2. Sarojini Naidu
3. Annie Besant
4. Aruna Ali

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

8 2008

The dockyard was found in which of the following sites in Indus Valley Civilization?

1. Chanhudaro
2. Lothal
3. Kalibangan
4. Banawali

A1 : 1

4.0 1.00

|                    |      |                                                                                                                                                                                                                                                                 |     |      |
|--------------------|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
|                    |      | A2 : 2                                                                                                                                                                                                                                                          |     |      |
|                    |      | A3 : 3                                                                                                                                                                                                                                                          |     |      |
|                    |      | A4 : 4                                                                                                                                                                                                                                                          |     |      |
| Objective Question |      |                                                                                                                                                                                                                                                                 |     |      |
| 9                  | 2009 | <p>Who built the famous Charminar of Hyderabad?</p> <ol style="list-style-type: none"> <li>1. Krishndev Rai</li> <li>2. Muhammad Quli Qutb Shah</li> <li>3. Nadir Shah</li> <li>4. Aurangzeb</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
| Objective Question |      |                                                                                                                                                                                                                                                                 |     |      |
| 10                 | 2010 | <p>Who discovered the right triangle?</p> <ol style="list-style-type: none"> <li>1. Pythagoras</li> <li>2. Ancient Egyptians</li> <li>3. Archimedes</li> <li>4. Michelangelo</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>                 | 4.0 | 1.00 |
| Objective Question |      |                                                                                                                                                                                                                                                                 |     |      |
| 11                 | 2011 | <p>Citrus canker is caused by .....</p> <ol style="list-style-type: none"> <li>1. Virus</li> <li>2. Viriod</li> <li>3. Bacteria</li> <li>4. Fungus</li> </ol>                                                                                                   | 4.0 | 1.00 |

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | A1 : 1 |  |  |
|  |  | A2 : 2 |  |  |
|  |  | A3 : 3 |  |  |
|  |  | A4 : 4 |  |  |

## Objective Question

|    |      |                                                                                                                                                                                                                               |     |      |
|----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 12 | 2012 | <p>DBM is a specific insect of .....</p> <ol style="list-style-type: none"> <li>1. Brinjal</li> <li>2. Tomato</li> <li>3. Cabbage</li> <li>4. Bottle gourd</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |      |                                                                                                                                                                                                                                                                        |     |      |
|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 13 | 2013 | <p>What is the scientific name of mulberry silkworm?</p> <ol style="list-style-type: none"> <li>1. Bombyx mori</li> <li>2. Antherea paphia</li> <li>3. Antheraea assama</li> <li>4. Attacus Ricinii</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |      |  |     |      |
|----|------|--|-----|------|
| 14 | 2014 |  | 4.0 | 1.00 |
|----|------|--|-----|------|

Subject matter of economics are want, effort and .....

1. Wealth
2. Growth
3. Satisfaction
4. Income

A1 : 1

A2 : 2

A3 : 3

A4 : 4

#### Objective Question

15 2015

The National Bureau of Animal Genetic Resources (NBAGR) is located in .....

1. Karnal
2. Bengaluru
3. Hisar
4. Jind

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

16 2016

The oldest known agroforestry systems is .....

1. Alley cropping
2. Taungya systems
3. Home Gardening
4. Shifting cultivation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

|    |      |                                                                                                                                                                                                                                                                                                                   |     |      |
|----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 17 | 2017 | <p>The effect or requirement of the relative length of day and night on flowering is called .....</p> <ol style="list-style-type: none"> <li>1. Photomechanics</li> <li>2. Transpiration</li> <li>3. Photoperiodism</li> <li>4. Phytoperiodism</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |     |      |
|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 18 | 2018 | <p>Which of the following statements are true?</p> <p>(A) Small pores in epidermis of leaves is called stomata.</p> <p>(B) Guard cells present in the stomata are helpful in exchange of gases with atmosphere</p> <p>(C) Transpiration takes place through stomata</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <ol style="list-style-type: none"> <li>1. (A) and (B) only.</li> <li>2. (B) and (C) only.</li> <li>3. (A) and (C) only.</li> <li>4. (A), (B) and (C).</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |      |  |     |      |
|----|------|--|-----|------|
| 19 | 2019 |  | 4.0 | 1.00 |
|----|------|--|-----|------|

Water holding capacity is highest in which of the following soils?

1. Silt soil
2. Clayey soil
3. Chalk soil
4. Peat soil

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20 2020

Certified seed is the progeny of .....

1. Nucleus seed
2. Foundation seed
3. Breeder's seed
4. Registered seed

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

21 101001

The effective field capacity of an agricultural implement is a function of:

- (A) Speed of travel
- (B) Time lost during field operation
- (C) Percentage of rated width actually utilized
- (D) Rated width of the machine

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. (B), (C) and (D) only.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

22 101002

4.0 1.00

Given below are two statements:

**Statement (I) :** Fixed costs per hour are inversely proportional to the amount of annual use.

**Statement (II) :** Operating costs are directly related to the amount of use

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

23 101003

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 efficiency of updraft gasifier is higher than the downdraft gasifier

**Reason (R) :** In updraft gasifier hot gases pass through entire fuel bed and leave at lower temperatures

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

24 101004

A cultivator of size 11 X 30 cm is being operated at a depth of 10 cm. The shape of furrow cross section is a triangle with tip angle of  $90^\circ$ . If the unit draft for the soil is  $25 \text{ kN.m}^{-2}$ , determine the draft required for the cultivator.

1. 2.20 kN
2. 2.50 kN
3. 2.75 kN
4. 3.33 kN

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

25 101005

Given below are two statements:

**Statement (I) :** Chisel type tillage tools break up the soil without inverting it.

**Statement (II) :** Disc blades sharpened from the concave side penetrate more readily than disc blades sharpened from convex side.

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

26 101006

4.0 1.00

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

| List-I              | List-II                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------|
| Moul board type     | Characteristics                                                                                          |
| (A) General purpose | (I) Short and relatively broad mould board curved abruptly near the top and gives thorough pulverization |
| (B) Stubble         | (II) Preferred for more sticky soils where it is difficult for mould board to scour well                 |
| (C) Sod             | (III) Medium curvature, turns the soil gentle and gives medium pulverization                             |
|                     | (IV) Long mould board and gives thorough turning but less pulverization                                  |

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

- (A) - (IV), (B) - (I), (C) - (III)
- (A) - (II), (B) - (IV), (C) - (I)
- (A) - (III), (B) - (I), (C) - (IV)
- (A) - (III), (B) - (IV), (C) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

27 101007

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 diesel tractor engine will normally have less speed variation for a given change in torque than a comparable gasoline engine

**Reason (R) :** Diesel tractors are heavier than comparable gasoline engine

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

- Both (A) and (R) are true and (R) is the correct explanation of (A).
- Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
- (A) is true but (R) is false.
- (A) is false but (R) is true.

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | A1 : 1 |  |  |
|  |  | A2 : 2 |  |  |
|  |  | A3 : 3 |  |  |
|  |  | A4 : 4 |  |  |

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |      |
|----|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 28 | 101008 | <p>Liquefaction is dry process of biomass conversion in which liquids are maximized by:</p> <ol style="list-style-type: none"> <li>1. Slow heating of feed stock at comparatively high temperature</li> <li>2. Rapid heating of feed stock at comparatively low temperature</li> <li>3. Slow heating of feed stock at low temperature</li> <li>4. Rapid heating of feed stock at comparatively high temperature</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |     |      |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 29 | 101009 | <p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> Retention period of biogas digester should not be less than 2-4 days</p> <p><b>Reason (R) :</b> Methanogenic bacteria multiply at the slower rate and become double in 2-4 days or even in more days</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>1. Both (A) and (R) are true and (R) is the correct explanation of (A).</li> <li>2. Both (A) and (R) are true but (R) is NOT the correct explanation of (A).</li> <li>3. (A) is true but (R) is false.</li> <li>4. (A) is false but (R) is true.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |      |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 30 | 101010 | <p>The correct sequence of steps for ethanol production from ligno-cellulologic material is:</p> <p>(A) Hydrolysis</p> <p>(B) Pre-treatment</p> <p>(C) Distillation</p> <p>(D) Fermentation</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <p>1. (A), (B), (C), (D).</p> <p>2. (D), (C), (A), (B).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (C), (B), (D), (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |      |
|----|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 31 | 101011 | <p>Consider the following statements</p> <p>(A) Rayleigh scattering of solar radiation takes place when size of particles is much smaller than the wavelength of incident light</p> <p>(B) Total radiation is lesser than global radiation</p> <p>(C) Pyrheliometer is used to measure global solar radiation</p> <p>(D) Angular distance of the sun's rays to the north or south of the equator is known as Zenith angle</p> <p>(E) On equinox days, the sun's declination is <math>90^\circ</math></p> <p>Choose the <b>correct</b> answer from the options given below:</p> <p>1. (A) only.</p> <p>2. (C) only.</p> <p>3. (A), (B) and (E) only.</p> <p>4. (C), (D) and (E) only.</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> | 4.0 | 1.00 |
|----|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

|                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
|--------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
|                    |        | A4 : 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |      |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 32                 | 101012 | <p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> Down wind turbines are typically noisier than their upwind counterparts</p> <p><b>Reason (R) :</b> Down wind rotors encounter tower shadow once per revolution</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both (A) and (R) are correct and (R) is the correct explanation of (A).</li> <li>Both (A) and (R) are correct but (R) is NOT the correct explanation of (A).</li> <li>(A) is correct but (R) is not correct.</li> <li>(A) is not correct but (R) is correct.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 33                 | 101013 | <p>What will be the total power from a wind turbine of 100 m diameter, if the total power density in wind stream is <math>500 \text{ W.m}^{-3}</math> and maximum efficiency is 40 per cent?</p> <ol style="list-style-type: none"> <li>6280 kW</li> <li>2000 kW</li> <li>1570 kW</li> <li>1250 kW</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>                                                                                                                                                                                                                                                                                                                                                                                                                                            | 4.0 | 1.00 |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 34                 | 101014 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.0 | 1.00 |

The tool used for performance assessment and logical evaluation of avenues for improvement in energy management and audit is:

1. Monitoring and verification
2. Energy pricing
3. Energy budgeting
4. Bench marking

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

35 101015

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

**Assertion (A) :** A soil is at its liquid limit if the consistency index of the soil is equal to zero

**Reason (R) :** The consistency index of a soil is defined as the ratio of liquid limit minus the natural water content to plasticity index of a soil

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

36 101016

4.0 1.00

Given below are two statements:

**Statement (I) :** Weight transfer from drawbar pull increases the soil reaction against front wheels and decreases the reaction against rear wheels

**Statement (II) :** For towed wheel axle torque is zero and for self-propelled wheel pull is zero

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

37 101017

High speed cutting elements/ tools are made from:

1. Boron steel
2. High speed steel
3. Stainless steel
4. Malleable cast iron

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

38 101018

A spherical drop of molten metal of radius 2 mm was found to solidify in 10 seconds. A similar drop of radius 4 mm will solidify in how many seconds?

1. 20
2. 31
3. 40
4. 62

4.0 1.00

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | A1 : 1 |  |  |
|  |  | A2 : 2 |  |  |
|  |  | A3 : 3 |  |  |
|  |  | A4 : 4 |  |  |

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                       |     |      |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 39 | 101019 | <p>In a petrol engine, the voltage required to jump spark in a given spark-plug gap does not depend on:</p> <ol style="list-style-type: none"> <li>1. Compression ratio of the engine</li> <li>2. Indicated mean effective pressure</li> <li>3. Speed of the engine</li> <li>4. Size of the engine</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                |     |      |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 40 | 101020 | <p>The air flow rate through the radiator core of an agricultural tractor engine is usually in the range of:</p> <ol style="list-style-type: none"> <li>1. <math>1-5 \text{ m.s}^{-1}</math></li> <li>2. <math>5-10 \text{ m.s}^{-1}</math></li> <li>3. <math>10-15 \text{ m.s}^{-1}</math></li> <li>4. <math>15-20 \text{ m.s}^{-1}</math></li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |  |     |      |
|----|--------|--|-----|------|
| 41 | 101021 |  | 4.0 | 1.00 |
|----|--------|--|-----|------|

Given below are two statements:

**Statement (I) :** An instantaneous unit hydrograph is a direct runoff hydrograph of unit rainfall excess precipitating instantaneously over the catchment.

**Statement (II) :** In instantaneous unit hydrograph, the intensity of rainfall excess increases and the unit hydrograph becomes more skewed.

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

42 101022

Combination with 1 correct option

- (A) Infiltration is the movement of water through the soil surface.
- (B) The runoff process is not affected by infiltration.
- (C) Infiltration helps in natural ground water recharge.
- (D) Sandy soil will have a larger infiltration capacity than a clay soil.
- (E) The land use does not have influence on infiltration capacity.

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), (D) and (E) only.
4. (A), (C) and (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                       |     |      |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 43 | 101023 | <p>The probability P of an event equalled to or exceeded for N number of years record by Weibull formula is given by</p> <ol style="list-style-type: none"> <li>1. <math>P = m/n</math></li> <li>2. <math>P = \{m/(N+1)\}</math></li> <li>3. <math>P = \{(m+1)/N\}</math></li> <li>4. <math>P = (m+1)/(N+1)</math></li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

44101024

4.01.00

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

| <b>List-I</b>                                                      | <b>List-II</b>                               |
|--------------------------------------------------------------------|----------------------------------------------|
| <b>(Book/Theory proposed/Characteristic, etc.)</b>                 | <b>(Author/Thinker/Name of Theory, etc.)</b> |
| (A) Rainfall data of a station                                     | (I) Plotting position                        |
| (B) Exceedence probability of event by an empirical formula        | (II) Attenuation                             |
| (C) Reduction in peak between inflow and outflow hydrograph        | (III) Unit hydrograph                        |
| (D) Direct runoff hydrograph resulting from unit depth of rainfall | (IV) Point rainfall                          |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)
- (A) - (IV), (B) - (III), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |     |      |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 45 | 101025 | <p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> The dilution method of flow measurement depend upon the continuity principle applied to a tracer.</p> <p><b>Reason (R) :</b> Dilution method of gauging is based on steady flow and if the flow is unsteady, there will be a change in storage volume in the channel reach and the steady-state continuity equation technique becomes invalid.</p> <p>In light of the above statements, choose the <b>correct</b> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both (A) and (R) are true and (R) is the correct explanation of (A).</li> <li>Both (A) and (R) are true but (R) is NOT the correct explanation of (A).</li> <li>(A) is true but (R) is false.</li> <li>(A) is false but (R) is true.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                              |     |      |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 46 | 101026 | <p>Which are the layouts of file drainage system ?</p> <p>(A) Grid iron</p> <p>(B) Herringbone</p> <p>(C) Bedding system</p> <p>(D) Interceptor</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <ol style="list-style-type: none"> <li>(A), (B) and (D) only.</li> <li>(A), (C) and (D) only.</li> <li>(A), (B) and (C) only.</li> <li>(B), (C) and (D) only.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> | 4.0 | 1.00 |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

A4 : 4

## Objective Question

47 101027

4.0 1.00

Sequencing type.

Which is the correct sequence of process for unit hydrograph derivation.

- (A) Storm hydrograph preparation
- (B) ER determination
- (C) DRH determination
- (D) Baseflow separation
- (E) UH determination

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

48 101028

4.0 1.00

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

| <b>List-I</b>                                           | <b>List-II</b>                                    |
|---------------------------------------------------------|---------------------------------------------------|
| <b>(Book/Theory proposed/<br/>Characteristic, etc.)</b> | <b>(Author/Thinker/<br/>Name of Theory, etc.)</b> |
| (A) Profile method                                      | (I) Seepage control                               |
| (B) Channel lining                                      | (II) Volume of cut or fill                        |
| (C) Drop structure                                      | (III) Land grading                                |
| (D) Four point method                                   | (IV) Conveyance system                            |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

49 101029

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

**Assertion (A) :** A straight drop spillway stilling basin completely prevents the soil scour in the downstream channel.

**Reason (R) :** The stilling basins are normally used when flows are too less than the design value and occur for short duration.

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

- Both (A) and (R) are true and (R) is the correct explanation of (A).
- Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
- (A) is true but (R) is false.
- (A) is false but (R) is true.

A1 : 1

4.0 1.00

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | A2 : 2 |  |  |
|  |  | A3 : 3 |  |  |
|  |  | A4 : 4 |  |  |

## Objective Question

|    |        |                                                                                                                                                                                                                                                                         |     |      |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 50 | 101030 | <p>The capacity of drop spillway is controlled by</p> <ol style="list-style-type: none"> <li>1. Size of drop</li> <li>2. Size of inlet</li> <li>3. Size of inlet and apron</li> <li>4. Size of apron</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |      |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 51 | 101031 | <p>Given below are two statements:</p> <p><b>Statement (I) :</b> Shelterbelt is used for controlling wind erosion.</p> <p><b>Statement (II) :</b> Shelterbet constitutes the barriers of trees or shrubs.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>1. Both <b>Statement (I)</b> and <b>Statement (II)</b> are correct.</li> <li>2. Both <b>Statement (I)</b> and <b>Statement (II)</b> are incorrect.</li> <li>3. <b>Statement (I)</b> is correct but <b>Statement (II)</b> is incorrect.</li> <li>4. <b>Statement (I)</b> is incorrect but <b>Statement (II)</b> is correct.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |  |     |      |
|----|--------|--|-----|------|
| 52 | 101032 |  | 4.0 | 1.00 |
|----|--------|--|-----|------|

Combination with 1 correct answer

- (A) Hooghoudt's equation gives the relation between the spacing of drains and the height of the water table built up between the drains due to constant rate of irrigation.
- (B) In derivation of Hooghoudt's equation the flow follows the Darcy's law.
- (C) The Hooghoudt's equation holds good for rainfall only.
- (D) The soil is considered to be homogenous in the derivation of Hooghoudt's equation.
- (E) The Hooghoudt's equation is meant for irrigation water only.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

53 101033

4.0 1.00

## Match List-I with List-II

| List-I                                      | List-II                                                                     |
|---------------------------------------------|-----------------------------------------------------------------------------|
| (Book/Theory proposed/Characteristic, etc.) | (Author/Thinker/Name of Theory, etc.)                                       |
| (A) Isohyet                                 | (I) A line joining places of same air pressure at a particular time         |
| (B) Isopleth                                | (II) Line joining the points on the area having equal time of travel        |
| (C) Isobar                                  | (III) Line joining points of equal rainfall magnitude                       |
| (D) Isochrone                               | (IV) Line on a map through places having equal depths of evapotranspiration |

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

- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

54 101034

Which method of irrigation is suitable for wheat?

- Furrow method
- Check basin method
- Border method
- Sub-surface method

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |     |      |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 55 | 101035 | <p>Given below are two statements:</p> <p><b>Statement (I) :</b> An aquifer found between two impermeable layers is called confined aquifer.</p> <p><b>Statement (II) :</b> The water in the pores of a confined aquifer is at atmospheric pressure.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both <b>Statement (I)</b> and <b>Statement (II)</b> are correct.</li> <li>Both <b>Statement (I)</b> and <b>Statement (II)</b> are incorrect.</li> <li><b>Statement (I)</b> is correct but <b>Statement (II)</b> is incorrect.</li> <li><b>Statement (I)</b> is incorrect but <b>Statement (II)</b> is correct.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                   |     |      |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 56 | 101036 | <p>Which is not the objectives of watershed management programme?</p> <ol style="list-style-type: none"> <li>Control damaging runoff</li> <li>Enhance groundwater recharge</li> <li>Reduce the rainfall intensity</li> <li>Moderate floods in downstream area.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |  |     |      |
|----|--------|--|-----|------|
| 57 | 101037 |  | 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 reclamation of alkali soils is achieved by leaching the products of reaction after amendments are added.

**Reason (R) :** The main objective in alkali soils is to reduce the exchangeable sodium percentage and remove the released sodium salts.

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 | 101038 | Which of the crops are not generally grown under green house?                                                             | 4.0 | 1.00 |
|    |        | <ol style="list-style-type: none"> <li>1. Tomato</li> <li>2. Capsicum</li> <li>3. Sugarcane</li> <li>4. Potato</li> </ol> |     |      |
|    |        | A1 : 1                                                                                                                    |     |      |
|    |        | A2 : 2                                                                                                                    |     |      |
|    |        | A3 : 3                                                                                                                    |     |      |
|    |        | A4 : 4                                                                                                                    |     |      |

#### Objective Question

|    |        |  |     |      |
|----|--------|--|-----|------|
| 59 | 101039 |  | 4.0 | 1.00 |
|    |        |  |     |      |
|    |        |  |     |      |
|    |        |  |     |      |
|    |        |  |     |      |

The sequence of stages of gully development is

- (A) Initiation
- (B) Healing
- (C) Development
- (D) Stabilisation

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

60 101040

Which is not a passive heating system in the greenhouse?

- 1. Rock bed storage
- 2. North wall
- 3. Latent heat storage material
- 4. Water storage

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

61 101041

4.0 1.00

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

| <b>List-I</b> | <b>List-II</b>              |
|---------------|-----------------------------|
| (A) Length    | (I) Spiral separator        |
| (B) Density   | (II) Indented cylinder      |
| (C) Shape     | (III) Velvet roll separator |
| (D) Texture   | (IV) Destoner               |

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

- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)
- (A) - (II), (B) - (I), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (IV), (C) - (I), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

62 101042

A cream separator is used to separate milk into which of the following components?

- Skim milk
- Milk solids
- Water
- Cream

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

- (A) and (C) only.
- (A), (B) and (D) only.
- (A) and (D) only.
- (D) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |     |      |
|----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 63 | 101043 | <p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> When the material is dried under constant rate condition, the material temperature exceeds wet bulb temperature of the drying air.</p> <p><b>Reason (R) :</b> During constant rate period, moisture is available on the entire surface of the material being dried.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both (A) and (R) are true and (R) is the correct explanation of (A).</li> <li>Both (A) and (R) are true but (R) is NOT the correct explanation of (A).</li> <li>(A) is true but (R) is false.</li> <li>(A) is false but (R) is true.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |      |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 64 | 101044 | <p>Ultra High Temperature (UHT) processing of milk is performed at :</p> <p>(A) Elevated temperature</p> <p>(B) Elevated pressure</p> <p>(C) Below eutectic temperature</p> <p>(D) Reduced pressure conditions</p> <p>Choose the <i>correct</i> answer from the options given below:</p> <ol style="list-style-type: none"> <li>(A) and (B) only.</li> <li>(A) and (C) only.</li> <li>(D) only.</li> <li>(A) only.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> | 4.0 | 1.00 |
|----|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

|                    |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
|--------------------|--------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
|                    |        | A4 : 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |      |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 65                 | 101045 | <p>Rice bran, once detached from brown rice, deteriorate at a faster rate due to which of the following reason(s)?</p> <p>(A) Breakdown of starch by amylase</p> <p>(B) Hydrolysis of oil by lipase</p> <p>(C) Conversion of FFA into fatty acids</p> <p>(D) Gelatinization of oil by lipase</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <ol style="list-style-type: none"> <li>(B) and (C) only.</li> <li>(B) only.</li> <li>(A), (B), (C) and (D).</li> <li>(C) and (D) only.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 66                 | 101046 | <p>Transient heat flow method is used to determine -</p> <ol style="list-style-type: none"> <li>Thermal conductivity</li> <li>Specific heat</li> <li>Roundness</li> <li>Latent heat</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>                                                                                                                                                                                                                                                                                                                           | 4.0 | 1.00 |
| Objective Question |        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |     |      |
| 67                 | 101047 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 4.0 | 1.00 |

The antifriction bearings used in belt conveyors results in -

1. High throughput capacity
2. High mechanical efficiency
3. Low stability
4. High friction

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

68 101048

Which among the following are/is a temporary grain storage structure?

- (A) Bunker
- (B) Shed
- (C) Silo
- (D) CAP Structure

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

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

69 101049

Critical speed is related to which of the following size reduction equipment?

1. Burr mill
2. Hammer mill
3. Jaw crusher
4. Ball mill

4.0 1.00

|  |  |        |  |  |
|--|--|--------|--|--|
|  |  | A1 : 1 |  |  |
|  |  | A2 : 2 |  |  |
|  |  | A3 : 3 |  |  |
|  |  | A4 : 4 |  |  |

## Objective Question

|    |        |                                                                                                                                                                                                                                                                                                                                                                                             |     |      |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 70 | 101050 | <p>Rubber roll shellers are used for -</p> <p>(A) Paddy dehusking</p> <p>(B) Paddy polishing</p> <p>(C) Millet polishing</p> <p>(D) Wheat milling</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <p>1. (A) only.</p> <p>2. (A) and (C) only.</p> <p>3. (A) and (B) only.</p> <p>4. (B) and (D) only.</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                         |     |      |
|----|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 71 | 1002201 | <p>What is total irrigated area in India in Million hectares from all sources of irrigation in quinquennial average from year 1945-46 to 1949-50 (At the time of independence):</p> <p>1. 17.1</p> <p>2. 18.0</p> <p>3. 19.0</p> <p>4. 19.4</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                          |     |      |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 72 | 1002202 | <p>What is culturable command area of irrigation project in India to be classified as major irrigation project ?</p> <ol style="list-style-type: none"> <li>1. 2000 ha</li> <li>2. 3000 ha</li> <li>3. 5000 ha</li> <li>4. <math>\geq 10000</math> ha</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

731002203

4.01.00

Match List I with List II

| List I              | List II       |
|---------------------|---------------|
| Name of Dam         | Name of river |
| (A) Bhakra Dam      | (I) Satluj    |
| (B) Nagarjuna Sagar | (II) Krishna  |
| (C) Krishna Sagar   | (III) Kaveri  |
| (D) Gandhi Sagar    | (IV) Chambal  |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

741002204

4.01.00

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

| <b>List-I</b>                          | <b>List-II</b>              |
|----------------------------------------|-----------------------------|
| <b>(Watering system)</b>               | <b>(Type of irrigation)</b> |
| (A) Watering in small level enclosures | (I) Check Basin             |
| (B) Watering in long strips            | (II) Border Irrigation      |
| (C) Watering in the form of rain drops | (III) Sprinkler irrigation  |
| (D) Watering drop by drop              | (IV) Drip irrigation        |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

|    |         |  |     |      |
|----|---------|--|-----|------|
| 75 | 1002205 |  | 4.0 | 1.00 |
|----|---------|--|-----|------|

## Match List I with List II

| List I              | List II                                                            |
|---------------------|--------------------------------------------------------------------|
| Terminology         | Definition                                                         |
| (A) Delta           | (I) Ratio of rate of flow of irrigation water per unit area of CCA |
| (B) Base Period     | (II) Depth of irrigation to a crop in cm                           |
| (C) Duty of water   | (III) Period in days for which water is supplied to a crop         |
| (D) Water allowance | (IV) Ratio of irrigated area and rate of flow of irrigation water. |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

76 1002206

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

**Assertion (A) :** Long axis of greenhouse should be in East-West direction.

**Reason (R) :** Plant in every corner receives maximum light.

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

- Both (A) and (R) are correct and (R) is the correct explanation of (A).
- Both (A) and (R) are correct but (R) is NOT the correct explanation of (A).
- (A) is correct but (R) is not correct.
- (A) is not correct but (R) is correct.

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |     |      |
|----|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 77 | 1002207 | <p>Given below are two statements, one is labelled as <b>Assertion (A)</b> and other one labelled as <b>Reason (R)</b>.</p> <p><b>Assertion (A) :</b> Crop production can be taken year round in Green house.</p> <p><b>Reason (R) :</b> It is possible due to selection of appropriate type of crop and environment control.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> <li>Both (A) and (R) are correct and (R) is the correct explanation of (A).</li> <li>Both (A) and (R) are correct but (R) is NOT the correct explanation of (A).</li> <li>(A) is correct but (R) is not correct.</li> <li>(A) is not correct but (R) is correct.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                  |     |      |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 78 | 1002208 | <p>Determine the light intensity in lux if greenhouse receives <math>500 \text{ W/m}^2</math> solar radiation.</p> <ol style="list-style-type: none"> <li>500 lux</li> <li>5000 lux</li> <li>50,000 lux</li> <li>1,00,000 lux</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |  |     |      |
|----|---------|--|-----|------|
| 79 | 1002209 |  | 4.0 | 1.00 |
|----|---------|--|-----|------|

Diurnal variation of CO<sub>2</sub> concentration in green house indicates that minimum CO<sub>2</sub> concentration is available at which time?

1. 6 AM
2. 12 Noon
3. 6 PM
4. 12 Night

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

80 1002210

What is expression for determination of volume of arch type house. Where b is width, H is the height of rectangular portion, h is height above rectangular part, r is radius of semi-circular part and L is length of greenhouse.

1.  $\left[ bxH + \frac{\pi r^2}{2} \right] xL$
2.  $\left[ bxH + \frac{\pi h}{2} \right] xL$
3.  $\left[ \frac{\pi r^2}{2} \right] xL$
4.  $\pi r^2 xL$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

81 1002211

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

**Assertion (A) :** Solar light is essential for normal growth of the plants in poly house.

**Reason (R) :** Optimum light intensity is 32,000 lux for normal plant growth in polyhouse.

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 correct explanation of (A)
2. Both (A) and (R) are true but (R) is NOT 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

82 1002212

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

**Assertion (A) :** Climate control in the greenhouse also include CO<sub>2</sub> level in greenhouse.

**Reason (R) :** Minimum CO<sub>2</sub> concentration of 300 ppm is essential for normal growth of crops in greenhouse.

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

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |     |      |
|----|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 83 | 1002213 | <p>Arrange the rainfall in the increasing order of intensity of rainfall.</p> <p>(A) Trace</p> <p>(B) Light rainfall</p> <p>(C) Moderate rainfall</p> <p>(D) Heavy rainfall</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <ol style="list-style-type: none"> <li>(A), (B), (C), (D).</li> <li>(B), (C), (D), (A).</li> <li>(C), (D), (A), (B).</li> <li>(D), (A), (B), (C).</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                                      |     |      |
|----|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 84 | 1002214 | <p>Select the forms of precipitation</p> <p>(A) Drizzle</p> <p>(B) Glage</p> <p>(C) Sleet</p> <p>(D) Hail</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <ol style="list-style-type: none"> <li>(A), (B) and (D) only.</li> <li>(B), (C) and (D) only.</li> <li>(A), (B), (C) and (D).</li> <li>(A), (C) and (D) only.</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |  |     |      |
|----|---------|--|-----|------|
| 85 | 1002215 |  | 4.0 | 1.00 |
|----|---------|--|-----|------|

Major seasons and two transitional periods in Indian subcontinent are as follows:

- (A) South West monsoon
- (B) Transition - I Post monsoon
- (C) Winter season
- (D) Transition - II

Arrange these seasons in chronological order (June - May):

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

86 1002216

4.0 1.00

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

| List-I                     | List-II                                   |
|----------------------------|-------------------------------------------|
| (Name of graph)            | (Parameters plotted )                     |
| (A) Hyetograph             | (I) Discharge vs time                     |
| (B) Rainfall frequency     | (II) Rainfall intensity vs time           |
| (C) Mass curve of rainfall | (III) Rainfall magnitude vs return period |
| (D) Hydrograph             | (IV) Accumulated precipitation vs time    |

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                                    |     |      |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 87 | 1002217 | <p>Analysis of data on maximum one day rainfall depth at a particular place indicates that a depth of 250 mm had a return period of 50 years. What is probability of occurrence of a one-day rainfall depth equal to or greater than 250 mm:</p> <ol style="list-style-type: none"> <li>1. 1 %</li> <li>2. 2 %</li> <li>3. 5 %</li> <li>4. 10 %</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                   |     |      |
|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 88 | 1002218 | <p>Lysimeter is a instrument used to measure which parameter:</p> <ol style="list-style-type: none"> <li>1. Rainfall</li> <li>2. Runoff</li> <li>3. Evaporation</li> <li>4. Evapotranspiration</li> </ol> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |  |     |      |
|----|---------|--|-----|------|
| 89 | 1002219 |  | 4.0 | 1.00 |
|----|---------|--|-----|------|

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

**Assertion (A) :**  $\phi$  index is average rainfall above which the rainfall volume is equal to the runoff volume.

**Reason (R) :** Infiltration losses are taken as constant for the duration of rainfall.

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

#### Objective Question

90 1002220

The virgin flow is defined as :

1. The flow of river downstream of the a gauging station
2. The flow of river upstream of a gauging station
3. The flow that would unaffected by works of man
4. The flow that would exist in the stream if there were no abstraction to the precipitation

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

91 1002221

4.0 1.00

**Match List I with List II**

| <b>List I</b>                     | <b>List II</b>   |
|-----------------------------------|------------------|
| <b>(Name of satellite system)</b> | <b>(Country)</b> |
| (A) LANDSAT - I                   | (I) France       |
| (B) SPOT                          | (II) INDIA       |
| (C) INSAT                         | (III) Europe     |
| (D) ERS                           | (IV) USA         |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (V)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

92 1002222

4.0 1.00

**Match List I with List II**

| <b>List I</b>                        | <b>List II</b>                     |
|--------------------------------------|------------------------------------|
| <b>Electromagnetic spectrum name</b> | <b>Wave length</b>                 |
| (A) Cosmic rays                      | (I) $10^{-7} \mu\text{m}$          |
| (B) Radio waves                      | (II) $10^8 \mu\text{m}$            |
| (C) Visible blue                     | (III) $0.4\text{-}0.5 \mu\text{m}$ |
| (D) Visible red                      | (IV) $0.6\text{-}0.7 \mu\text{m}$  |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 1002223

4.0 1.00

**Match List I with List II**

| <b>List I</b>                  | <b>List II</b>             |
|--------------------------------|----------------------------|
| <b>(Resolution of RS data)</b> | <b>(Parameter)</b>         |
| (A) Spectral resolution        | (I) Wavelength in spectrum |
| (B) Radiometric resolution     | (II) Reflected radiation   |
| (C) Temporal resolution        | (III) Time in days         |
| (D) Spatial resolution         | (IV) Pixel size            |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

**Objective Question**

94 1002224

Atmospheric windows in remote sensing refers to phenomena:

- Objects having own source of radiation
- Objects using no source of radiation
- Electromagnetic spectrum in which very little absorption
- Electromagnetic spectrum in which restricts the availability of light

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

**Objective Question**

95 1002225

4.0 1.00

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

| <b>List-I</b>                     | <b>List-II</b>                      |
|-----------------------------------|-------------------------------------|
| <b>(Elements of visual image)</b> | <b>(Property)</b>                   |
| (A) Size                          | (I) Dimensions of objects           |
| (B) Tone                          | (II) Intensity of radiant energy    |
| (C) Pattern                       | (III) Natural and cultural features |
| (D) Texture                       | (IV) Microtonal features            |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

96 1002226

4.0 1.00

A channel is called as prismatic if

**Statement (I) :** It has unvarying cross section.

**Statement (II) :** It has constant bottom slope.

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

- Both **Statement (I)** and **Statement (II)** are incorrect.
- Both **Statement (I)** and **Statement (II)** are correct.
- Statement (I)** is correct but **Statement (II)** is incorrect.
- Statement (I)** is incorrect but **Statement (II)** is correct.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                              |     |      |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 97 | 1002227 | <p>Arrange the following materials in the increasing order of their density</p> <p>(A) Mercury</p> <p>(B) Water</p> <p>(C) Ice</p> <p>(D) Seawater</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <p>1. (A), (B), (C), (D).</p> <p>2. (D), (C), (A), (B).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (C), (B), (D), (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p> | 4.0 | 1.00 |
|----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

## Objective Question

|    |         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |     |      |
|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|
| 98 | 1002228 | <p>Read the following statements about reference evapotranspiration</p> <p>(A) The evapotranspiration rate from a reference surface, not short of water, is called the reference evapotranspiration</p> <p>(B) The only factors affecting reference evapotranspiration are climatic parameters.</p> <p>(C) It is denoted by <math>ET_R</math></p> <p>(D) Reference evapotranspiration is calculated using Penman-Monteith method</p> <p>Choose the <b>correct</b> answer from the options given below:</p> <p>1. (A) and (D) only.</p> <p>2. (A), (B) and (D) only.</p> <p>3. (A), (B), (C) and (D).</p> <p>4. (B), (C) and (D) only.</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> | 4.0 | 1.00 |
|----|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------|

A4 : 4

## Objective Question

99 1002229

4.0 1.00

## Match List I with List II

| List I                                | List II                    |
|---------------------------------------|----------------------------|
| (Mouthpiece Type)                     | (Coefficient of Discharge) |
| (A) External Mouthpiece               | (I) 0.50                   |
| (B) Internal Mouthpiece, running full | (II) 1                     |
| (C) Internal Mouthpiece, running free | (III) 0.855                |
| (D) Convergent Mouthpiece             | (IV) 0.707                 |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

100 1002230

4.0 1.00

Which of the following statements regarding depth to water table map are correct

- (A) It is called as isobar map
- (B) It shows spatial distribution of depth of the watertable below land surface
- (C) It can be prepared by converting water level data of observation wells to water levels below land surface
- (D) It can be also prepared by superimposing a watertable-contour map on topographic base map showing contours lines of the land surface

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

#### Objective Question

101 1002231

The Electrical Conductivity value used for classification of salt affected soils denotes

- 1. Electrical conductivity of saturated extract
- 2. Electrical conductivity of air-dried soil
- 3. Electrical conductivity of 1:1 (Soil: Water) soil solution
- 4. Electrical conductivity of 1:2 (Soil: Water) soil solution

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

102 1002232

4.0 1.00

An oil of specific gravity 0.95 is contained in a vessel. At a point the height of oil is 20 m. Find the corresponding height of water at that point

1. 19 m
2. 21 m
3. 20 m
4. 20.95 m

A1 : 1

A2 : 2

A3 : 3

A4 : 4

#### Objective Question

103 1002233

The principal factors influencing the amount of capillary water in soil are

- (A) Soil structure
- (B) Soil texture
- (C) Soil organic matter

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

104 1002234

4.0 1.00

Depth of water penetrated in field after application of irrigation was varied linearly from 1.2 m at the head end of the field to 0.8 m at the tail end. Determine the water distribution efficiency.

1. 80%
2. 60%
3. 66.67%
4. 40%

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

105 1002235

4.0 1.00

Given below are two statements:

**Statement (I) :** pF is defined as the logarithm of negative pressure head in centimeters of water

**Statement (II) :** A tension head of 1000 cm is expressed as 2 pF

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

106 1002236

4.0 1.00

Given below are two statements regarding vertical distribution of groundwater:

**Statement (I) :** Vadose water occurs in zone of aeration

**Statement (II) :** The zone of aeration extends from the upper surface of saturation down to underlaying impermeable rock

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

107 1002237

Given below are two statements regarding pumping wells and recharge wells:

**Statement (I) :** The direction of flow of water in recharge well is opposite to that of pumping wells

**Statement (II) :** If water is admitted into a well, a cone of recharge will be formed that is similar in shape but in reverse of a cone of depression surrounding a pumping well.

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

108 1002238

4.0 1.00

Which of the following statement/s about cavity well is/are false

- (A) The cavity type of tubewells do not have a strainer
- (B) They draw water from multiple stratum
- (C) The cavity well requires a strong and dependable stratum immediate on top of the water bearing stratum

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

#### Objective Question

109 1002239

From a drainage design standpoint, the subsoil is considered impermeable if the saturated hydraulic conductivity of the subsoil is

- 1. About one tenth that of the surface soil
- 2. About half that of the surface soil
- 3. About 10% less than that of the surface soil
- 4. About 1% that of the surface soil

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

#### Objective Question

110 1002240

4.0 1.00

## Match List-I with List-II

| List-I               | List-II                |
|----------------------|------------------------|
| (Ion)                | (Equivalent weight, g) |
| (A) $\text{Ca}^{++}$ | (I) 35.46              |
| (B) $\text{Mg}^{++}$ | (II) 12.16             |
| (C) $\text{Na}^+$    | (III) 20.04            |
| (D) $\text{Cl}^-$    | (IV) 23.00             |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

111 1002241

Given below are two statements regarding input requirements of drainage equations:

**Statement (I) :** Both steady state and unsteady state drainage equations requires hydraulic conductivity as input parameter.

**Statement (II) :** Drainable pore space is required as input parameter for unsteady state drainage equations only.

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

- Both **Statement (I)** and **Statement (II)** are true.
- Both **Statement (I)** and **Statement (II)** are false.
- Statement (I)** is true but **Statement (II)** is false.
- Statement (I)** is false but **Statement (II)** is true.

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

112 1002242

4.0 1.00

What are the major management procedures adopted to reduce incrustation in tube wells

- (A) The drawdown while pumping is kept high
- (B) Entrance velocity of water into tube wells is kept low
- (C) Well screen are cleaned periodically by subjecting tube well to development, once in two or three years

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

113 1002243

4.0 1.00

A 30 cm well fully penetrates a confined aquifer 100 m deep. After long period of pumping at a rate of 1200 lpm, the drawdowns in the wells at 10 and 100 m from the pumping well are found to be 2.2 and 1.2 m, respectively. Determine the transmissibility of the aquifer.

- 1.  $0.44 \text{ m}^3/\text{min}/\text{m}$
- 2.  $2.27 \text{ m}^3/\text{min}/\text{m}$
- 3.  $0.34 \text{ m}^3/\text{min}/\text{m}$
- 4.  $1.02 \text{ m}^3/\text{min}/\text{m}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

114 1002244

4.0 1.00

Height of fresh water at a location in coastal area is 2.5 m above sea level. According to Ghyben-Herzberg equation, at what depth will salt water occur at this location?

1. 40 m
2. 16 m
3. 100 m
4. 25 m

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

115 1002245

Arrange the following crops in increasing order of the crop water requirement

- (A) Beans
- (B) Sugarcane
- (C) Maize
- (D) Rice

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

116 1002246

4.0 1.00

## Match List-I with List-II

| List-I               | List-II                                                                    |
|----------------------|----------------------------------------------------------------------------|
| (Pump)               | (Characteristic)                                                           |
| (A) Rotary pump      | (I) Eductor pipe                                                           |
| (B) Centrifugal pump | (II) Sometimes used as booster in irrigation pumping                       |
| (C) Submersible pump | (III) For satisfactory operation suction lift should not exceed 4.5 to 6 m |
| (D) Air lift pump    | (IV) For deep tube wells                                                   |

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

- (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
- (A) - (II), (B) - (III), (C) - (I), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

## Objective Question

117 1002247

Arrange the following soils in increasing order of the depth of available water per unit depth of soil

- Fine sand
- Sandy loam
- Clay loam
- Clay

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

- (A), (B), (C), (D).
- (A), (C), (D), (B).
- (A), (D), (C), (B).
- (A), (B), (D), (C).

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

## Objective Question

118 1002248

4.0 1.00

Given below are two statements:

**Statement (I) :** Rate of water use by crops doesnot depend upon stage of crop growth

**Statement (II) :** Water requirement includes only the quantity of water lost in evapotranspiration.

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

119 1002249

4.0 1.00

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

**Assertion (A) :** Crop yield gets adversely affected due to presence of high concentrations of certain salts in the soil

**Reason (R) :** High concentration of soluble salts increases the solute suction and thus reduce the availability of soil water to plants

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

## Objective Question

120 1002250

4.0 1.00

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

| List-I                   | List-II                                                                    |
|--------------------------|----------------------------------------------------------------------------|
| (Drainage System)        | (Characteristic)                                                           |
| (A) Bedding system       | (I) Most effective method of surface drainage                              |
| (B) Parallel field drain | (II) Applicable in soils that require both surface and subsurface drainage |
| (C) Random drain         | (III) Is essentially a land forming process                                |
| (D) Parallel open ditch  | (IV) Drains small scattered depressions.                                   |

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

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (III), (B) - (II), (C) - (IV), (D) - (I)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (I), (C) - (IV), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4