Roll No	
Application No	
Candidate Name	
Module Name	**AGRONOMY**
Exam Date	**03-Jul-2025**
Exam Batch	**10:00-12:00**

1) AGRONOMY

Question No. 1 / Question ID 22038 Marks: 4.00

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

Assertion (A) : Tillage is the chemical manipulation of soil with tools and implements.

Reason (R) : Tilth is a physical condition of the soil resulting from tillage.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 2 / Question ID 22092 Marks: 4.00

In India, the first fertilizer produced happened to be single superphosphate (SSP) in 1906 by EID Parry (India) Ltd. where they started production of SSP initially with the following:

1. Rock phosphate and H_2SO_4 to produce SSP.
2. Bones and H_2SO_4 to produce SSP.
3. Rock phosphate and HNO_3 to produce SSP.
4. Rock phosphate and H_3PO_4 to produce SSP.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 3 / Question ID 22012 Marks: 4.00

In plant systems, which of the following roles of carbohydrates is not directly associated with their function as an energy source?

1. Sucrose transport from source to sink.
2. Starch storage in plastids.
3. Cellulose synthesis in cell walls.
4. ATP generation through mitochondrial respiration.

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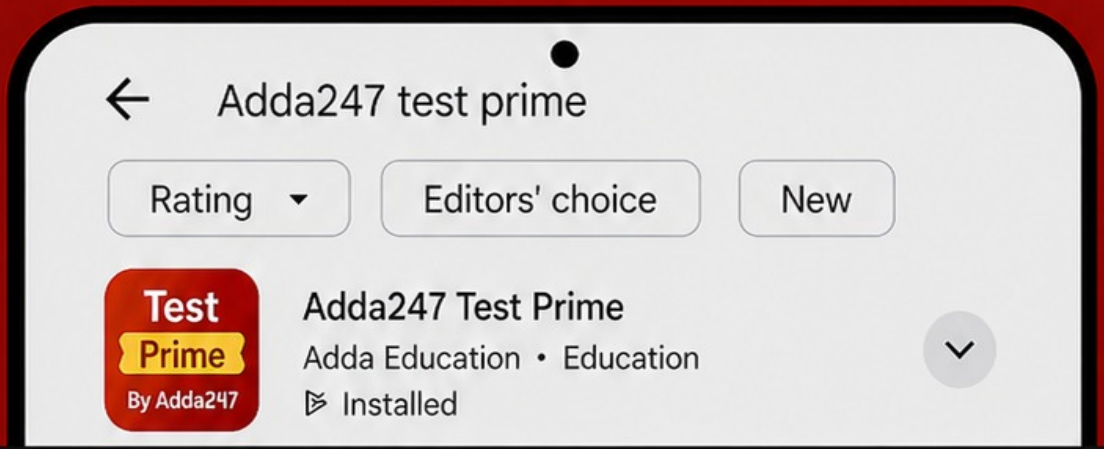

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- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 4 / Question ID 22074 Marks: 4.00

Evaporation pan has higher rates of evaporation than a large free water surface; thus to convert the observed evaporation rate to those of large water surface areas, a recommended factor is:

1. 0.6
2. 0.7
3. 0.8
4. 0.9

- 1
- 2
- 3
- 4

Question No. 5 / Question ID 22017 Marks: 4.00

In thermal reactions, the reactants gain energy in the form of heat, which can be used to accelerate the reaction. The reactions which are caused by heat and in the absence of light are called as:

1. Photochemical reactions
2. Dark reactions
3. Reversible reactions
4. Reversible photochemical reactions

- 1
- 2 (Chosen Option)
- 3
- 4

Question No. 6 / Question ID 22058 Marks: 4.00

Choose the highly corelated statements among the following:

(A). *Agropyron repens* is used for soil conservation.

(B). *Asphodelus tenuifolius* determines air pollution due to NO_2 and SO_2.

(C). *Eichhornia crassipes* is indicator plant used to identify metals (zinc and copper).

(D). *Tephrosia purpurea* is used as a green manure.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 7 / Question ID 22086 Marks: 4.00

Potassium concentration in healthy plant tissues varies from:

1. 0.1% to 0.5%
2. 1% to 5%
3. 0.01% to 0.05%.
4. 5% to 10%

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 8 / Question ID 22097 Marks: 4.00

Lime requirement tests for soils give recommendations to bring about long-term changes in soil pH. Lime requirement of acid soils depends mainly on the following factors:

(A). Required change to be brought in soil pH.

(B). Buffering capacity of soil.

(C). Chemical composition of liming material.

(D). Fineness of liming material.

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.

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 9 / Question ID 22069 Marks: 4.00

Given below are properties of organic natural herbicides, choose the option which is not correct.

1. They are made from chemicals that naturally occur in nature.
2. Although they are expensive but work in every situation.
3. They are contact herbicides and applied as post-emergence.
4. Organic herbicides burn back the top of perennial weeds.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 10 / Question ID 22010 Marks: 4.00

Wheat crop grows in two controlled chambers: Chamber A: 25°C, 380 ppm CO_2, 21% O_2 Chamber B: 38°C, 200 ppm CO_2, 21% O_2. After 3 days, there was a significant decrease in net photosynthetic efficiency in Chamber B, despite adequate light and water. Which of the following best explains the physiological basis of this observation?

1. Rubisco undergoes thermal denaturation at high temperatures.
2. High temperature and low CO_2 increase photorespiration.
3. Wheat switches to C_4 photosynthesis under heat stress.
4. The light reaction halts due to high O_2 competition at PS-I.

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 11 / Question ID 22080 Marks: 4.00

In sprinkler irrigation, a satisfactory uniformity coefficient value is:

1. 65-70%
2. 70-75%
3. 75-80%
4. ≥ 85%

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 12 / Question ID 22093 Marks: 4.00

The transformation or fate of urea in soil upon application and its subsequent utilization by crop and losses of N occurs in the sequence as:

(A). Nitrification

(B). Leaching

(C). Hydrolysis

(D). Denitrification

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 13 / Question ID 22005 Marks: 4.00

A C_3 plant is placed in a sealed, transparent chamber with a controlled CO_2 concentration and a constant light source. The plant is initially exposed to normal atmospheric oxygen levels. After some time, the oxygen concentration is drastically reduced while keeping light and CO_2 constant. The researcher observes a significant increase in net photosynthetic rate. Which of the following best explains the observed increase in photosynthetic rate?

1. Lower oxygen levels reduce photorespiration, allowing Rubisco to fix more CO_2 efficiently.
2. Reduced oxygen directly increases ATP synthesis in the light reactions.
3. Oxygen is a competitive inhibitor of the light-dependent reactions, so its removal enhances electron transport.
4. The Calvin cycle requires low oxygen levels to regenerate RuBP efficiently.

- ○ 1 (Chosen Option)
- ○ 2

- 3
- 4

Question No. 14 / Question ID 22053 Marks: 4.00

Which one is a post-emergence herbicide in soybean that kills dicot weeds ?

1. Metribuzin
2. Quizalofop-ethyl
3. Chlorimuron-ethyl
4. Fluchloralin

- 1 (Chosen Option)
- 2
- 3
- 4

Question No. 15 / Question ID 22009 Marks: 4.00

In a scenario where a cell undergoes anaerobic respiration due to an absence of oxygen, it switches from oxidative phosphorylation to fermentation. If the cell is using lactic acid fermentation, which of the following statements correctly describes the role of NAD+ in this process?

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

1. NAD+ is synthesized directly from ATP during the reduction of pyruvate, enabling lactate accumulation.
2. NAD+ is reduced to NADH during the conversion of glucose to lactate, ensuring that glycolysis halts.
3. NAD+ is regenerated by the oxidation of NADH in the electron transport chain, which continues in the absence of oxygen.
4. NAD+ is regenerated during the reduction of pyruvate to lactate, allowing glycolysis to continue.

- 1
- 2
- 3
- 4 (Chosen Option)

Question No. 16 / Question ID 22116 Marks: 4.00

Read the following statements carefully and choose the correct option.

(A). Fresh water is the most critical natural resource for sustainable agriculture.

(B). Globally, agriculture uses 60-80% of freshwater.

(C). The share of water supply to agriculture should be curtailed and used for future food security, economic and social harmony.

(D). In India agriculture consumes about 90% of available fresh water.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 17 / Question ID 22016 Marks: 4.00

Which of the following nutrient - effect combinations are incorrectly matched?

(A). Nitrogen-Decline in protein formation

(B). Nitrogen-Decline in stomata opening and closing

(C). Potassium-Increase plant immunity

(D). Nitrogen-Poor development of root system

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

1. (A), (B) and (D) are correct but (C) is incorrect.
2. (A), (B) and (C) are correct but (D) is incorrect.
3. (A), (B) and (D) are incorrect but (C) is correct.
4. (B), (C) and (D) are correct but (A) is incorrect.

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 18 / Question ID 22084 Marks: 4.00

Read the statements about Typhoon system of drip irrigation.

(A). Developed in UAE.

(B). Efficient drip irrigation system for sugarcane.

(C). Pipes are buried 25-35 cm deep in the soil.

(D). Typhoon system can save about 50% of irrigation water.

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 19 / Question ID 22063 Marks: 4.00

Calculate the active ingredient and cost of herbicide required for one acre (4000 m^2), if 5000 m^2 area was sprayed with 350 g herbicide. The rate of application and cost of herbicide were 0.6 kg a.i./ha and Rs. 3500 per kg, respectively.

1. 85.7% and Rs. 980
2. 58.3% and Rs. 1225
3. 11.6% and Rs. 2450
4. 16.6% and Rs. 1000

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 20 / Question ID 22078 Marks: 4.00

Given below are two statements:

Statement (I): Osmotic pressure is determined by using vapour pressure psychrometers.

Statement (II): There is a close agreement between electrical conductivity and osmotic potential.

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.

- ○ 1 (Chosen Option)

- 2
- 3
- 4

Question No. 21 / Question ID 22110 Marks: 4.00

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

List-I	**List-II**
(Revolutions)	**(Associated event)**
(A) Green Revolution	(I) Fertilizer production
(B) Grey Revolution	(II) Oilseed production
(C) Round Revolution	(III) Food grain production
(D) Yellow Revolution	(IV) Potato production

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

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

- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 22 / Question ID 22094 Marks: 4.00

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

Assertion (A) : Nitrogen (N) mineralization is the conversion of organic N to NH_4^+ through two reactions namely, aminization and ammonification.

Reason (R) : A diverse population of aerobic and anaerobic bacteria, fungi, and actinomycetes is capable of converting the products of aminization to NH_4^+.

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.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 23 / Question ID 22085 Marks: 4.00

Find the correct match of crop and critical stages for irrigation if water is available for 2 irrigations only.

1. Maize: Knee-high and silking
2. Finger millet: Panicle initiation and flowering
3. Wheat: CRI and maximum tillering
4. Sorghum: Knee-high and flowering

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 24 / Question ID 22003 Marks: 4.00

Mitotic spindle is mainly composed of which protein?

1. Actin
2. Myosin
3. Tubulin
4. Myoglobin

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 25 / Question ID 22026 Marks: 4.00

Given below are two statements:

Statement (I): The monsoon trough is fully established over Indian sub-continent by July month.

Statement (II): In the northern hemispheric summer, the Asian land mass gets heated while the surrounding oceans remains relatively cool.

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.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 26 / Question ID 22099 Marks: 4.00

Maximum amount of clay content is found in soils of

1. Alluvial Soils
2. Black Soils
3. Red Soils
4. Laterite and Lateritic Soils

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 27 / Question ID 22046 Marks: 4.00

Match the following

List-I	List-II
(A). "B" gene of wheat in comes	(I). *T. monoccum*
(B). Tetraploid wheat	(II). *T. tauschi*
(C). "D" gene in hexaploids in comes	(III). *T. speltoides*
(D). "A" gene of polyploidy in comes	(IV). *T. durum*

Choose the correct answer from the options given below:

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 28 / Question ID 22047 Marks: 4.00

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

List-I	**List-II**
Theory proposed	**Associated Crop**
(A). Aberg and wiebe	(I). *Pennisetum typhoides* classification
(B). Staph	(II). *Gossypium spp.* classification
(C). Waldron	(III). *Hordeum* classification
(D). Hutchinson	(IV). *Arachis hypogaea* classification

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 29 / Question ID 22081 Marks: 4.00

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

Assertion (A) : In alternate furrow irrigation, crop yields are reduced to the extent of 2 to 16% compared to every furrow irrigation.

Reason (R) : The amount of water applied in alternate furrow irrigation is reduced by 25-35% compared to every furrow irrigation.

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.

- ○ 1 (Chosen Option)
- ○ 2

- 3
- 4

Question No. 30 / Question ID 22007 Marks: 4.00

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

Assertion (A) : In the light reactions of photosynthesis, ATP is generated through a process called photophosphorylation, which involves the use of a proton gradient.

Reason (R) : The proton gradient is established by the flow of electrons through the electron transport chain in the thylakoid membrane, leading to the movement of protons from the stroma into the thylakoid lumen.

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.

- 1 (Chosen Option)
- 2
- 3
- 4

Question No. 31 / Question ID 22102 Marks: 4.00

Agronomically, the season is of _____ types.

1. 4 types
2. 6 types
3. 3 types
4. 2 types

- 1
- 2
- 3
- 4

Question No. 32 / Question ID 22035 Marks: 4.00

Given below are two statements:

Statement (I): The reduction of carbon di-oxide is also called dark reaction as light is not necessary.

Statement (II): The energy supplied by ATP, carbon di-oxide combines with oxygen and form carbohydrates.

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.

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 33 / Question ID 22066 Marks: 4.00

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

List-I	**List-II**
(Bioherbicide)	**(Target weed)**
(A). *Bactera verutana*	(I). *Salvinia molesta*
(B). *Paulinia acuminata*	(II). *Imperata cylindrica*
(C). Parthenium hysterophorus	(III). *Cyperus rotundus*
(D). *Orseoliells javanica*	(IV). *Epiblema strenuana*

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 34 / Question ID 22088 Marks: 4.00

According to Arnon and Stout (1939) an element is essential for plant growth if,

(A). The plant is unable to grow normally or complete its life cycle without it.

(B). The deficiency of the element can be prevented or corrected by supplying any element.

(C). The need of such a nutrient is specific and its deficiency cannot be prevented or corrected by adding some other nutrients.

(D). The nutrient plays a direct role in the plants active (metabolic) processes and meets its nutritional needs.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 35 / Question ID 22039 Marks: 4.00

How much is the photoperiod (hours) requirement of intermediate day plants ?

1. 5-6 hours
2. 7-10 hours
3. 12-14 hours
4. 15-17 hours

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 36 / Question ID 22113 Marks: 4.00

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

Assertion (A) : The activity of the dehdrogenases (DHA) reflects the total range of the oxidative activity of soil microorganisms and may be considered a good indicator of the oxidative metabolism in soils, and thus, of microbiological activity.

Reason (R) : Dehydrogenases oxidize soil organic matter by transferring protons and electrons from organic substrates to inorganic acceptors.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 37 / Question ID 22001 Marks: 4.00

In any plant system, the dictyosomes are mainly involved in the formation of which of the following organelles ?

1. Cellulose wall
2. Plasmalemma
3. Vacuole
4. Mitochondria

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 38 / Question ID 22011 Marks: 4.00

In which of the following conditions does the rate of transpiration in plants typically reach its maximum limit ?

1. High moisture and low light interception.
2. Hot, dry, and windy weather conditions.
3. Low light and low light interceptions.
4. Humid and cool temperature conditions.

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 39 / Question ID 22004 Marks: 4.00

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

List-I	List-II
Characters	**Responses**
(A). Color blindness	(I). Autosomal recessive; leads to accumulation of phenylpyruvic acid.
(B). Hemophilia A	(II). Missense mutation on chromosome 11 affecting oxygen transport.
(C). Sickle cell Anemia	(III). X-linked disorder often results from factor-VIII deficiency.
(D). Phenylketonuria	(IV). X-linked recessive; defect in opsin gene.

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 40 / Question ID 22042 Marks: 4.00

---------- present in plasma membrane plays crucial role in hydraulic conductance.

1. Aquaporins
2. Aquapressure
3. Sodim permanganate
4. Potassium chloride

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 41 / Question ID 22055 Marks: 4.00

List-I	List-II
Amino Acids	**Percentage (%)**
(A) Arginine	(I) 0.5
(B) Cystine	(II) 1.7
(C) Leucine	(III) 3.8
(D) Isoleucine	(IV) 2.7

Choose the correct answer from the options given below:

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 42 / Question ID 22068 Marks: 4.00

If phytotoxicity of herbicides is observed in the crop, which of the following remedial measures should be adopted?

(A). Irrigate the crop immediately.

(B). Spray of urea fertilizer may be done to dilute herbicide in plants.

(C). Spray of gibberellic acid and salt solution should be done.

(D). Interculture should be done under dry farming conditions.

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

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

- ○ 1
- ○ 2

- 3
- 4

Question No. 43 / Question ID 22101 Marks: 4.00

India's winter is

1. Cold and dry
2. Cold and humid
3. Hot and humid
4. Hot and dry

- 1 (Chosen Option)
- 2
- 3
- 4

Question No. 44 / Question ID 22103 Marks: 4.00

Agro-climatic zones of India formed were during the _____ plan.

1. 5^{th} Five year
2. 6^{th} Five year
3. 7^{th} Five year
4. 8^{th} Five year

- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 45 / Question ID 22051 Marks: 4.00

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

List-I	**List-II**
Crops	**Scientific Name**
(A) Oats	(I) Pennisetum purpureum schum
(B) Berseem	(II) cyamopsis tertagonoloba
(C) Cluster bean	(III) Avena sativa
(D) Napier grass	(IV) Trifolium alexandrinum

Choose the correct answer from the options given below:

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 46 / Question ID 22076 Marks: 4.00

One millibar is equal to

1. 0.1 kPa
2. 0.01 kPa
3. 0.001 kPa
4. 0.0001 kPa

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 47 / Question ID 22070 Marks: 4.00

Which of the following herbicides has the longest average half-life under field conditions ?

1. Paraquat
2. Fluazifop-P-butyl
3. Halosulfuron methyl
4. Fomesafen

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 48 / Question ID 22019 Marks: 4.00

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

List-I	**List-II**
Compounds	**Characteristics**
(A). Glyceroglycolipids	(I). Sugar form the polar head group
(B). Glycerolipids	(II). Polar lipids
(C). Glycerophosholipids	(III). The phosphate contain polar head group attached to position-3 of the glycerol
(D). Glycine oxidation	(IV). Glycine is converted into serine

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 49 / Question ID 22056 Marks: 4.00

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

List-I	List-II
Allelochemical	**Effect**
(A). Juglone	(I). Inhibits seed germination and seedling growth.
(B). Cinnamic acid	(II). It has herbicidal, anti-microbial and anti-viral activity.
(C). Lignans	(III). They are generally responsible for changes in membrane permeability and leakage.
(D). Saponins	(IV). Inhibits growth, chlorophyll content and net photosysnthesis.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 50 / Question ID 22111 Marks: 4.00

The US Salinity Laboratory Staff (1954) characterized saline soils for management purposes as:

(A). Soil pH >8.5.

(B). Electrical conductivity (EC) > 4 dS m^{-1}.

(C). Sodium adsorption ratio (SAR) < 13.

(D). Exchangeable sodium percentage (ESP) < 15

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.

- ○ 1

- 2
- 3
- 4 (Chosen Option)

Question No. 51 / Question ID 22105 Marks: 4.00

The growing season ends by the end of _____ month in the arid zone of north western India.

1. June
2. September
3. November
4. March

- 1
- 2
- 3
- 4 (Chosen Option)

Question No. 52 / Question ID 22120 Marks: 4.00

The soils in cold deserts of India are

1. Highly acidic to slightly acidic
2. Slightly acidic to neutral
3. Neutral to slightly alkaline
4. Slightly alkanline to highly alkaline

- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 53 / Question ID 22064 Marks: 4.00

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

List-I	**List-II**
(Weed host)	**(Disease)**
(A). *Cyperus rotundus*	(I). Black rust (wheat)
(B). *Saccharum spontaneum*	(II). Ergot (pearl millet)
(C). *Agropyron repens*	(III). Blast (rice)
(D). *Cenchrus ciliaris*	(IV). Downey mildew (maize)

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

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

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 54 / Question ID 22061 Marks: 4.00

Which of the following is not a technique for weed seed bank management ?

1. Fall-applied fertilizer
2. Autmn tickle
3. Spray gazing
4. Chaff collection

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 55 / Question ID 22018 Marks: 4.00

Given below are two statements:

Statement (I): Photosystem II inhibitors are effective herbicides that disrupt the photosynthetic process in plants.

Statement (II): Photosystem II inhibitors bind to the D1 protein, blocking electron transport and leading to the production of harmful reactive oxygen species.

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

1. Both statement (I) and (II) are true, and statement (II) is the correct explanation of statement (I).
2. Both statements (I) and (II) are true, but statement (II) is not the correct explanation of (I).
3. Statement (I) is true but Statement (II) is false.
4. Statement (I) is false but Statement (II) is true.

- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 56 / Question ID 22050 Marks: 4.00

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

List-I	**List-II**
Varieties	**Crops**
(A) PRK-1	(I) Kodo millets
(B) RBK-155	(II) Barnyard millets
(C) GPUP-8	(III) Foxtail millets
(D) VL Madira 172	(IV) Proso millets

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

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

- 1
- 2
- 3
- 4

Question No. 57 / Question ID 22065 Marks: 4.00

Highly correlated statements in respect of spray volume

(A). High volume spray----------560 litre/ha and above

(B). Low volume spray----------56 to <560 litre/ha

(C). Semi-low volume spray---------- 5.6 to <56 litre/ha

(D). Ultra low volume spray----------0.56 to <5.6 litre/ha

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

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

- 1
- 2
- 3 (Chosen Option)
- 4

Question No. 58 / Question ID 22041 Marks: 4.00

An All India Co-ordinated Research Project for Dryland Agriculture was launched by the ICAR in

1. 1970
2. 1975
3. 1977
4. 1980

- 1 (Chosen Option)
- 2
- 3
- 4

Question No. 59 / Question ID 22072 Marks: 4.00

Given below are two statements:

Statement (I): The major irrigation projects have a culturable command area of 8000 to 10,000 ha.

Statement (II): These are essentially surface water projects and also include lift irrigation schemes.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 60 / Question ID 22027 Marks: 4.00

In which year first Indian Remote Sensing Satellite (IRS-1A) was launched?

1. 1978
2. 1988
3. 1995
4. 1998

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 61 / Question ID 22059 Marks: 4.00

Most suitable statements in respect of perennial weeds

(A). The seedling of a perennial weed is not perennial when it first emerges from soil

(B). *Cyperus esculentus* becomes perennial only 4-6 days after its emergence.

(C). *Sorghum halepense* becomes perennial only after 3-6 weeks after its emergence.

(D). *Convolvulus arvensis* becomes perennial only 2-3 weeks after its emergence.

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

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

- ○ 1
- ○ 2

○ 3
○ 4

Question No. 62 / Question ID 22118 Marks: 4.00

Read the following statements carefully and choose the option which is not correct.

(A). Shifting cultivation is practiced generally in hills covered with forests.

(B). Land for cultivation is selected based on the standing forest cover and soil fertility.

(C). The vegetation in selected area is cut during November-December and burnt.

(D). The land is allotted by lottery system.

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

○ 1
○ 2
○ 3
○ 4 (Chosen Option)

Question No. 63 / Question ID 22045 Marks: 4.00

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

Assertion (A): In rice crop, a gradual depletion of oxygen in the soil causes increase in the number of sulphate ions.

Reason (R): Reduction of sulphate to sulphide results in the sulphide toxicity.

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

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

○ 1
○ 2 (Chosen Option)
○ 3
○ 4

Question No. 64 / Question ID 22060 Marks: 4.00

Which of the following weeds has biochemical mimicry with berseem ?

1. *Phalaris minor*
2. *Avena fatua*
3. *Anagallis arvensis*
4. *Cichorium intybus*

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 65 / Question ID 22048 Marks: 4.00

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

Assertion (A) : Retting in slow running water is better than stagnant water

Reason (R) : Extraction of the fiber of sun-hemp is more difficult than jute.

In light of the above statements, choose the *correct* 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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 66 / Question ID 22033 Marks: 4.00

Given below are two statements:

Statement (I): On immobilization, organic matter releases ammonium and nitrate and these are avilable to plants.

Statement (II): Most of the arable soils have enough urease to cause rapid hydrolysis.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 67 / Question ID 22096 Marks: 4.00

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

List-I	**List-II**
Name of organism	**Purpose/Function**
(A). *Pseudomonas striata*	(I). Cellulolytic microorganism
(B). *Rhizobium* sp.	(II). Nitrifying bacteria
(C). *Nitrobacter* sp.	(III). Nitrogen fixing bacteria
(D). *Trichoderma viride*	(IV). Phosphate solubilizing bacteria

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

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

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 68 / Question ID 22117 Marks: 4.00

Read the following statements carefully and choose the *correct* answer from the options given below:

(A). Usually, diversified farms are economically and ecologically more resilient.

(B). Monoculture farms are more efficient and easy to manage.

(C). Diversified farms help in maximizing yield with reduced input use, but the farmer can't attend all crops at the optimal time.

(D). Diversification will reduce risk only when there is no positive co-relation between the yield of alternate crops.

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 69 / Question ID 22073 Marks: 4.00

Given below are two statements:

Statement (I): Bharat Ratna, M. Visveshwaraih was largely responsible for construction of Krishnarajasagar dam.

Statement (II): This dam is constructed on river Godavari near city of Mysore.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 70 / Question ID 22029 Marks: 4.00

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

Assertion (A): We can take cloud picture from Geostationary satellite (INSAT-3D) data in India.

Reason (R): Because Geostationary satellite (INSAT-3D) is always looking towards India.

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 71 / Question ID 22054 Marks: 4.00

Groundnut crop has a low risk of pre-harvest contamination of aflatoxigenic fungi in soils of:

1. Aridisols
2. Alfisols
3. Inseptisols
4. Vertisols

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 72 / Question ID 22067 Marks: 4.00

Read the following statements:

(A). Shoot mobile herbicides are foliar applied herbicides that are capable of phloem-xylem interchange.

(B). Shoot immobile herbicides are foliar applied herbicides which translocate only in acropetal direction through xylem.

(C). Reverse xylem mobile herbicides are foliar applied herbicides which translocate to roots through xylem in acute water deficiency conditions.

(D). Circulatory herbicides are foliar applied herbicides that translocate in both acropetal and basipetal directions through phloem, sometimes in both directions simultaneously.

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 73 / Question ID 22013 Marks: 4.00

In a plant cell, a defect in the transcription of a specific gene leads to the absence of a functional enzyme. Which of the following sequences of events best explains the failure of enzyme activity?

1. Mutation in DNA → Failure of tRNA synthesis → Inactive enzyme
2. Mutation in DNA → No mRNA formed → No protein synthesis
3. Mutation in tRNA → mRNA not transcribed → Enzyme denatured
4. Mutation in rRNA → DNA replication blocked → No enzyme formed

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 74 / Question ID 22002 Marks: 4.00

Match the following plant cell structures with their correct functions

List-I	List-II
Organelle	**Functions**
(A). Plasma membrane	(I). Synthesis of lipids and detoxification of metabolic by-products.
(B). Power house of cell	(II). Selectively permeable barrier controlling the movement of ions and solutes.
(C). Green plastids	(III). Site of cellular respiration and ATP production.
(D). Smooth endoplasmic reticulum	(IV). Site of photosynthesis and conversion of light energy into chemical energy.

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 75 / Question ID 22037 Marks: 4.00

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

Assertion (A) : Theoretically, an erectophile canopy would be more efficient if radiations were distributed more evenly over leaf surfaces.

Reason (R) : Such an equitable distribution could be accomplished by having leaves, at least the upper leaves, at a vertical leaf inclination when the sun is at high elevations.

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.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 76 / Question ID 22028 Marks: 4.00

Which is the favorable condition for formation of 'Radiation fog' ?

1. Gentle wind, long winter, cloudless sky.
2. Calm wind, long winter night, cloudy sky.
3. Strong wind, short winter night, cloudless sky.
4. Gentle wind, short winter night, cloudy sky.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 77 / Question ID 22119 Marks: 4.00

In an agroforestry system harvesting of trees generate employment to the tune of

1. 5-10 man-days/m^3
2. 10-15 man-days/m^3
3. 15-20 man-days/m^3
4. 20-25 man-days/m^3

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 78 / Question ID 22089 Marks: 4.00

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

List-I	**List-II**
Nutrients	**Essentiality discoverer**
(A). Nitrogen	(I). K. Warington (1923)
(B). Potassium	(II). Theodore de Saussure (1804)
(C). Sulphur	(III). C. Sprengel (1839)
(D). Boron	(IV). Sachs and Knop (1860)

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

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

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 79 / Question ID 22020 Marks: 4.00

Which of the following vitamins is synthesized in chloroplasts and is essential for electron transport in photosynthesis?

1. Vitamin K
2. Vitamin E
3. Vitamin A
4. Vitamin D

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 80 / Question ID 22032 Marks: 4.00

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

List-I	**List-II**
(ICAR Research Institutes)	**(Headquarters)**
(A). ICAR-Central Institute of Brackishwater Aquaculture	(I). Hissar
(B). ICAR-Central Arid Zone Research Institute	(II). Chennai
(C). ICAR-Central Institute for Research on Buffaloes	(III). Makhdoom
(D). ICAR-Central Institute for Research on Goats	(IV). Jodhpur

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 81 / Question ID 22006 Marks: 4.00

How many carboxylation reactions occur in Hatch - Slack pathway and also known as which pathway?

1. One and C_3 pathway
2. Two and C_4 pathway
3. Three and C_3 pathway
4. Four and C_4 pathway

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 82 / Question ID 22114 Marks: 4.00

As per the Fertiliser (Control) Order (FCO, 1985), the maximum permissible limit of biuret content in urea for soil application and for foliar spray beyond which it is toxic to plants is:

1. 2.5% for soil application and 1.0% for foliar spray.
2. 1.5% for soil application and 1.0% for foliar spray.
3. 1.5% for soil application and 0.5% for foliar spray.
4. 2.5% for soil application and 0.5% for foliar spray.

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 83 / Question ID 22030 Marks: 4.00

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

Assertion (A) : The ability to visualize the data is one of the characteristics which makes geographic data processing so powerful.

Reason (R) : This is done by linking the geographic data to the visual data elements (point, lines, areas) which compose the picture.

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.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 84 / Question ID 22115 Marks: 4.00

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

List-I	**List-II**
Name of Laws Theory	**Thinker**
(A). Law of Minimum	(I). Baule
(B). Law of Diminishing Yield Curves	(II). Wallace and Wallace
(C). Law of Percentage Yield Concept	(III). Mitscherlich
(D). Law of Maximum	(IV). Liebig

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 85 / Question ID 22022 Marks: 4.00

Which one of the following is most variable component in atmosphere?

1. Nitrogen
2. Oxygen
3. Carbon dioxide
4. Water vapour

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 86 / Question ID 22015 Marks: 4.00

Which of the following combinations correctly match the nutrient deficiencies in order and their primary physiological roles?

(A). Nitrogen → Potassium → Phosphorus (chlorophyll synthesis, stomatal closure, energy transfer)

(B). Nitrogen→ Phosphorus → Potassium (protein synthesis, ATP formation, enzyme activation)

(C). Potassium→ Nitrogen → Phosphorus (Osmoregulation, nucleic acid synthesis, disease resistance)

(D). Phosphorus → Potassium→ Nitrogen (cell elongation, water uptake, amino acid production)

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

1. (A), (C), and (D) are correct but (B) is not correct.
2. (A), (C), and (D) are incorrect but (B) is correct.
3. (A), (B), and (C) are correct but (D) is not correct.
4. (B), (C), and (D) are incorrect but (A) is correct.

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 87 / Question ID 22100 Marks: 4.00

Read the following statements:

(A). Plant roots mostly absorb phosphorus as the dihydrogen orthophosphate ion ($H_2PO_4^-$), but under neutral to alkaline environments, it is also taken up as monohydrogen orthophosphate (HPO_4^{2-}) ion.

(B). In normal P-sufficient plants, P-content varies from 0.1% to 0.4% by weight, which is $1/5^{th}$ to $1/10^{th}$ of N or K content.

(C). It is needed for energy storage and transfer, which is the single most important essential function of P.

(D). Because of its faster mobility in plants, P gets easily translocated from older tissues to the meristematic tissues. Therefore, deficiency symptoms of P appear first on the older leaves.

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.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 88 / Question ID 22052 Marks: 4.00

The correct sequence with respect to increasing fatty acid composition in *Brassica spp* is:

1. Brown sarson > *Toria* > *Karan rai*
2. *Karan rai* > Brown sarson > Toria
3. *Karan rai* > Toria > Brown sarson
4. Brown sarson > *Karan rai* > *Toria*

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 89 / Question ID 22057 Marks: 4.00

Which of the following statements are most suitable for soil solarization in weed management.

(A). During soil solarization, soil temperature exceeds thermal death point of weeds.

(B). During soil solarization, soil temperature increases by 8-12 °C.

(C). Black polythene sheets are better than UV absorbing transparent polythene sheets for soil solarization.

(D). Annual weeds can be managed by solarization of 5 weeks.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 90 / Question ID 22044 Marks: 4.00

The second growth of meadow plant after the first cut of crop is known as:

1. Aftermath
2. After cultivation
3. Aggressivity
4. After ripening

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 91 / Question ID 22108 Marks: 4.00

Most important / significant factor affecting absorption and hence the behaviour of herbicide in the _____of soils.

1. Organic matter
2. pH
3. Microbes
4. Nitrogen content

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 92 / Question ID 22098 Marks: 4.00

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

List-I	**List-II**
Micronutrient	**Deficiency symptoms**
(A). Zinc deficiency	(I). Die-back symptoms
(B). Iron deficiency	(II). Whip-tail disease in cauliflower
(C). Copper deficiency	(III). Little leaf in citrus
(D). Molybdenum deficiency	(IV). Lime induced chlorosis

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 93 / Question ID 22040 Marks: 4.00

What is the optimum cardinal temperature of maize?

1. 20 °C
2. 25 °C
3. 30 °C
4. 35 °C

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 94 / Question ID 22049 Marks: 4.00

Which classification of soyabean is based on shape of the pods ?

1. Martain classification
2. American classification
3. Hertz classification
4. Manchurian classification

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 95 / Question ID 22008 Marks: 4.00

How many protons are pumped across the inner mitochondrial membrane by the complexes of oxidative phosphorylation during the transfer of a pair of electrons from NADH to O_2?

1. 6 protons
2. 8 protons
3. 10 protons
4. 12 protons

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 96 / Question ID 22071 Marks: 4.00

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

List-I	**List-II**
Dam	**River**
(A) Aswan dam	(I) Nile river
(B) Roosevelt dam	(II) Salt river project
(C) Hoover dam	(III) Indus river
(D) Terhela dam	(IV) Colorado river

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4

Question No. 97 / Question ID 22104 Marks: 4.00

Dry land Operational Research Project was established in:

1. 1976
2. 1972
3. 1975
4. 1978

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 98 / Question ID 22109 Marks: 4.00

Pusa Phalguni is a variety of

1. Cowpea
2. Chickpea
3. Moongbean
4. Horsegram

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 99 / Question ID 22043 Marks: 4.00

Numbers of microbes per unit area in arid or semiarid conditions found in the sequence of:

1. Bacteria > Actinomycetes > Fungi > Algae
2. Actinomycetes > Bacteria > Fungi > Algae
3. Algae > Bacteria > Actinomycetes > Fungi
4. Fungi > Bacteria > Actinomycetes > Algae

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 100 / Question ID 22091 Marks: 4.00

Ammonium sulphate contains:

1. 25.5% N and 23.7% S
2. 20.5% N and 23.7% S
3. 20.5% N and 13.7% S
4. 15.5% N and 13.7% S

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 101 / Question ID 22023 Marks: 4.00

Among these, which is not a wind belt?

1. Doldrums
2. Prevailing westerlies
3. Prevailing northerly
4. Prevailing easterlies

- ○ 1 (Chosen Option)
- ○ 2

- 3
- 4

Question No. 102 / Question ID 22021 Marks: 4.00

Diameter of the outer ring of an ordinary rain gauge is:

1. 100 mm
2. 200 mm
3. 250 mm
4. 300 mm

- 1
- 2
- 3
- 4

Question No. 103 / Question ID 22036 Marks: 4.00

Who among the following soil scientists was the Director General of International Rice Research Institute?

1. Dr. Samuel L.Tisdale
2. Dr. Nyle C. Brady
3. Dr. Horst Marschner
4. Sir E. John Russell

- 1
- 2
- 3
- 4

Question No. 104 / Question ID 22079 Marks: 4.00

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

List-I	List-II
(A). Pressure plate apparatus	(I). Drip irrigation
(B). TDR	(II). Soil moisture tension in sandy soils
(C). Simcha Blass	(III). Soil moisture characteristic curves
(D). Tensiometer	(IV). Soil moisture

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 105 / Question ID 22075 Marks: 4.00

Read the following statements.

(A). Irrigation interval can be longer in clay soils than sandy soils.

(B). Soil water in clay soil is loosely held than in sandy soil so irrigations can be delayed.

(C). Clay soils have higher total porosity so hold more volume of water than sandy soils.

(D.) Amount of available water is more in clay soil than in sandy soil.

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3

○ 4

Question No. 106 / Question ID 22014 Marks: 4.00

Which of the following correctly pairs a vitamin with its role in assisting enzyme activity in plant metabolism?

1. Thiamine – Coenzyme for pyruvate dehydrogenase complex in the citric acid cycle.
2. Pyridoxine – Coenzyme for enzymes involved in amino acid metabolism.
3. Tocopherol– Coenzyme for nitrate reductase in nitrogen metabolism.
4. Cobalamin – Activates RuBisCO in the Calvin cycle.

○ 1
○ 2
○ 3
○ 4

Question No. 107 / Question ID 22077 Marks: 4.00

Given below are two statements:

Statement (I): Infiltration stands for the movement of water from the surface into the soil.

Statement (II): Infiltration rate is the actual rate at which water is entering the soil at any given time.

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

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

○ 1
○ 2
○ 3 (Chosen Option)
○ 4

Question No. 108 / Question ID 22090 Marks: 4.00

The farmyard manure (FYM) becomes ready for use in 4-6 months and, on an average, contains major nutrients with:

1. 0.5% N, 0.2% P_2O_5 and 0.5% K_2O.
2. 0.1% N, 0.2% P_2O_5 and 0.5% K_2O.
3. 1.5% N, 0.5% P_2O_5 and 0.5% K_2O.
4. 0.5% N, 0.2% P_2O_5 and 1.5% K_2O.

○ 1 (Chosen Option)
○ 2
○ 3
○ 4

Question No. 109 / Question ID 22025 Marks: 4.00

What are the two branches of South west monsoon of India?

1. Bay of Bengal and Arabian sea
2. Bay of Bengal and India ocean
3. Indian ocean and Arabian sea
4. Pacific ocean and Indian ocean

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 110 / Question ID 22083 Marks: 4.00

What will be net irrigation requirement if the field capacity of the soil is 22%, soil moisture before irrigation is 10%, bulk density of soil is 1.5 Mg/m^3 and effective root zone depth is 50 cm ?

1. 45 mm
2. 90 mm
3. 120 mm
4. 150 mm

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 111 / Question ID 22062 Marks: 4.00

Calculate the amount of atrazine (50% WP) and volume of spray water for spraying on an area of 8000 m^2 if rate of atrazine application is 0.4 kg a.i./ha. The spray volume of water is 800 litre/ha.

1. 600 g and 600 litre
2. 640 g and 640 litre
3. 1250 g and 640 litre
4. 640 g and 1000 litre

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

Question No. 112 / Question ID 22031 Marks: 4.00

Which two countries are involving in NISAR satellite launch?

1. India and Japan
2. USA and Canada
3. India and USA
4. China and Russia

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 113 / Question ID 22095 Marks: 4.00

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

Assertion (A) : Single superphosphate (SSP) contains 16% P_2O_5, and it is an important P-fertilizer and is likely to remain so, particularly for pulses and oilseeds.

Reason (R) : The production process of SSP is very simple, requiring little technological skill, and it is a high analysis fertilizer as it contains P along with two secondary nutrients, namely, calcium (Ca) and sulphur (S).

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.

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 114 / Question ID 22087 Marks: 4.00

The following terms are commonly used to describe nutrient levels in plants:

(A). **Deficient**: When the concentration of an essential element is low enough to severely limit yield and distinct deficiency symptoms are visible.

(B). **Critical range**: The nutrient concentration in the plant below which a yield response to added nutrient occurs. Critical levels or ranges are fixed among plants and nutrients.

(C). **Sufficient**: The nutrient concentration range in which added nutrient will not increase yield but can increase nutrient concentration.

(D). **Excessive or toxic**: When the concentration of essential or other elements is high enough to reduce plant growth and yield and can cause an imbalance in other essential nutrients, which can also reduce yield.

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

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

- ○ 1
- ○ 2
- ○ 3
- ○ 4 (Chosen Option)

Question No. 115 / Question ID 22082 Marks: 4.00

A sorghum crop of 2 ha area was irrigated 3 times with 6 cm water per irrigation, find out the total quantity of water applied in cubic meter.

1. 1200
2. 1800
3. 3600
4. 7200

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 116 / Question ID 22112 Marks: 4.00

Arrange the following soil separates according to their size (diameter):

(A). Coarse sand

(B). Clay

(C). Silt

(D). Fine sand

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

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

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 117 / Question ID 22107 Marks: 4.00

Abnormal failure of rainfall, that occurs almost anywhere especially in most parts of the humid and sub-humid climates is a typical _____drought.

1. Permanent
2. Seasonal
3. Contingent
4. Invisible

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 118 / Question ID 22024 Marks: 4.00

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

List-I	**List-II**
(Instruments)	**(Parameter measured)**
(A). Anemometer	(I). Wind direction
(B). Wind vane	(II). Wind speed
(C). Dry bulb and wet bulb thermometer	(III). Canopy temperature
(D). IR thermometer	(IV). Relative humidity

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

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

- ○ 1
- ○ 2
- ○ 3 (Chosen Option)
- ○ 4

Question No. 119 / Question ID 22106 Marks: 4.00

According to Ramdas (1960), drought is a situation when the actual seasonal rainfall is deficient by more than

1. Twice the mean deviation
2. Thrice the mean deviation
3. Zero the mean deviation
4. Five times the mean deviation

- ○ 1 (Chosen Option)
- ○ 2
- ○ 3
- ○ 4

Question No. 120 / Question ID 22034 Marks: 4.00

Arrange in correct sequence of the steps of precision agriculture:

(A). Evaluation of precision agriculture

(B). Preparation of variability maps

(C). Managing variability

(D). Assessing variability

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

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

- ○ 1
- ○ 2 (Chosen Option)
- ○ 3
- ○ 4

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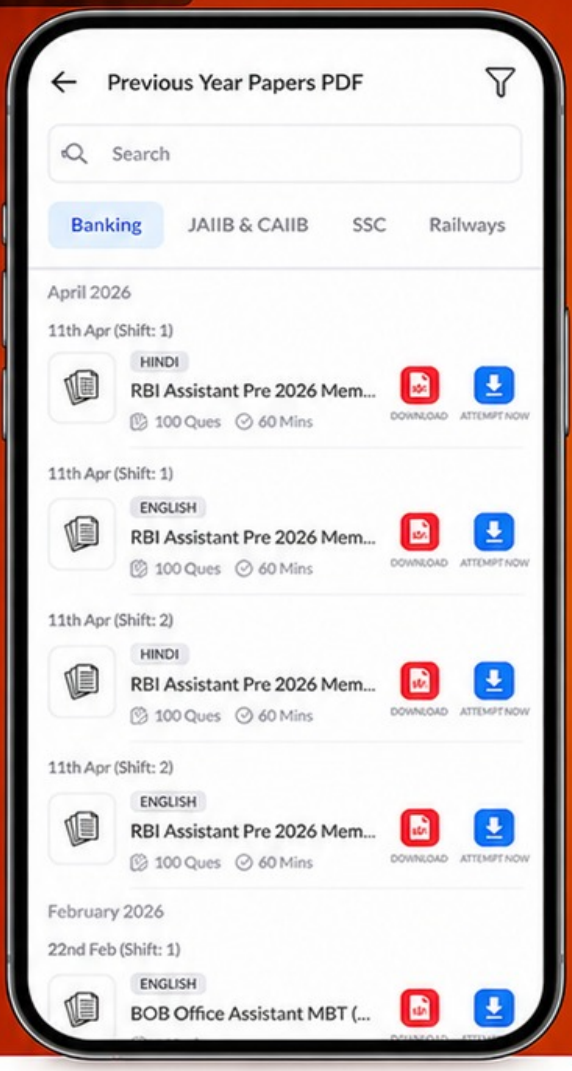

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Final Answer Key

Subject: Agronomy

Exam Shift: 10:00 to 12:00 Exam Date: 03-07-2025

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22002	1	22037	4	22072	2	22107	3
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22014	2	22049	3	22084	1	22119	2
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22020	1	22055	DROP	22090	1		
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22024	3	22059	2	22094	1		
22025	1	22060	4	22095	3		
22026	1	22061	1	22096	3		
22027	2	22062	2	22097	3		
22028	1	22063	1	22098	4		
22029	1	22064	3	22099	2		
22030	1	22065	2	22100	3		
22031	3	22066	4	22101	1		
22032	1	22067	3	22102	3		
22033	4	22068	4	22103	3		
22034	2	22069	2	22104	1		
22035	3	22070	1	22105	2		