

ICAR AIEEA PG 2024

AGRONOMY

Solved Paper

Key Answers are available at the bottom of this document

Question No. 1 / Question ID 50050

Marks: 4.00

Which of the following is a *desi* cotton cultivated species in india as per Hutchinson (1947):

1. *Gossypium arboreum* , *Gossypium herbaceum*
2. *Gossypium hirsutum* , *Gossypium barbadense*
3. *Gossypium arboreum*, *Gossypium hirsutum*
4. *Gossypium herbaceum*, *Gossypium barbadense*

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 2 / Question ID 50080

Marks: 4.00

One acre-foot water is equal to how many cubic meter water?

1. 1233.5
2. 1525.5
3. 3000.5
4. 3630.5

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 3 / Question ID 50018

Marks: 4.00

Lundegardh's Cytochrome pump theory believed that there was a definite correlation between

1. Photosynthesis and anion absorption
2. Respiration and anion absorption
3. Photosynthesis and cation absorption
4. Respiration and cation absorption

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 4 / Question ID 50101

Marks: 4.00

Statement A: Variation in environment and landscape leads to soil evaluation rather than soil development.

Statement B : Intermediate topography affords the best condition for the formation of an agriculture-productive soil.

1. Both statements A and B are true
2. Statement A is true but B is false
3. Both statements A and B are false
4. Statement A is false but B is true

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 5 / Question ID 50033

Marks: 4.00

Given below are two statements:

Statement (I): The optimum range of soil moisture for effective ploughing is 25 to 50 per cent depletion of available soil moisture.

Statement (II): Light soil can be ploughed in a narrow range of soil moisture conditions while the range is wider for heavy soils.

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. 6 / Question ID 50117

Marks: 4.00

Given below are some important features for a tree to be suitable for agroforestry.

- (A). It should be suitable for prevailing agro-climatic conditions.
- (B). It should be fast growing and preferably nitrogen fixing species.
- (C). It should meet needs of farmers for timber, fodder, fuel, fruit and fibre.
- (D). It should have ability to generate employment and high returns.

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

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

- ☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 7 / Question ID 50026

Marks: 4.00

Given below are two statements:

Statement (I): Global Warming Potential (GWP) is a measure of how much energy the emissions of 1 tonne of a gas will absorb over a given period of time, relative to the emissions of 1 tonne of carbon dioxide (CO₂).

Statement (II): A gas with a smaller GWP warms the Earth more compared to CO₂ over that time period.

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.

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 8 / Question ID 50073

Marks: 4.00

Correct order, in decreasing trend, of reservoirs based on their capacity at full reservoir level (Mm³)

1. Ukai > Nagarjunasagar > Sriramsagar > Koyna > Idukki
2. Nagarjunasagar > Ukai > Sriramsagar > Idukki > Koyna
3. Nagarjunasagar > Sriramsagar > Ukai > Koyna > Idukki
4. Nagarjunasagar > Ukai > Sriramsagar > Koyna > Idukki

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 9 / Question ID 50078

Marks: 4.00

In neutron method used to measure soil moisture, the source of fast neutrons is a mixture

1. Radium –beryllium
2. Silicon-beryllium
3. Silicon-sodium
4. Sodium and americium

- ☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 10 / Question ID 50076

Marks: 4.00

Total depth of irrigation applied for a wheat crop of 90 days base period is 70 cm, what will be the duty of water.

1. 1111 ha/ cumec
2. 672 ha/cumec
3. 630 ha/cumec
4. 1344 ha/cumec

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 11 / Question ID 50020

Marks: 4.00

Passage of mineral from top soil to subsoil through seepage of water is known as

1. Percolation
2. Leaching
3. Conduction
4. Transpiration

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 12 / Question ID 50084

Marks: 4.00

A method of irrigation in which water is applied on per plant basis

1. Bubbler irrigation
2. Pulse irrigation
3. Micro-jet
4. Fogging system

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 13 / Question ID 50068

Marks: 4.00

The major site of uptake for soil applied herbicides are

- A) Root
- B) Shoot
- C) Seed
- D) Leaves

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

☐ 1 ☐ 2 ☐ 3 ☐ 4

☒ (Chosen

☐ Option)



Question No. 14 / Question ID 50098

Marks: 4.00

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

Assertion (A) : Saline soils are dominated by neutral soluble salts consisting of chlorides and sulphates of sodium, calcium and magnesium.

Reason (R) : Sodic soils contain sodium salts capable of causing alkaline hydrolysis, mainly Na_2CO_3

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

☒ (Chosen

☐ Option) 3

☐ 4

Question No. 15 / Question ID 50093

Marks: 4.00

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

Assertion (A) : For determination of total nitrogen in soil, the sample is usually digested with concentrated H_2SO_4 in the presence of catalyst mixture consisting of K_2SO_4 and CuSO_4 in the ratio of 10:1.

Reason (R) : The K_2SO_4 is used to raise the boiling point of H_2SO_4 that promote the oxidation of organic matter and conversion of organic N to $\text{NH}_4^+\text{-N}$, while, the CuSO_4 acts as a catalyst and hastens the breaking down of organic matter and conversion of N to $(\text{NH}_4)_2\text{SO}_4$.

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. 16 / Question ID 50022

Marks: 4.00

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

Assertion (A) : The temperature decreases with height in the troposphere.

Reason (R) : Ozone absorbs ultra violet radiation in the troposphere and makes it cool.

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 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 17 / Question ID 50032

Marks: 4.00

Match List-I with List-II

List-I	List-II
(Name of ICAR research institutes)	(Headquarter)
(A). ICAR- Central Institute of Temperate Horticulture	(I). Motihari
(B). ICAR-Directorate of Onion and Garlic Research	(II). Srinagar
(C). ICAR- National Research Centre on Integrated Farming (ICAR-NRCIF)	(III). Solapur
(D). ICAR- National Research Centre on Pomegranate	(IV).Pune

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

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

- ☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 18 / Question ID 50013

Marks: 4.00

Which of the following is not a seed germination inhibitor

1. Coumarin
2. Phthalides
3. Ferulic acid
4. Gibberellic acid

- ☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 19 / Question ID 50056

Marks: 4.00

Match List-I with List-II

List-I	List-II
Nutrient	Indicator weed species
(A). Phosphorus (P)	(I). <i>Solanum nigrum</i>
(B).Potassium (K)	(II). <i>Chenopodium serotimum</i>
(C). Magnesium (Mg)	(III). <i>Chrysanthemum leucanthamomum</i>
(D). Manganese (Mn)	(IV). <i>Chenopodium album</i>

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

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

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 20 / Question ID 50040

Marks: 4.00

The idealized patterns range for planophile with most leaves nearly horizontal and erectophile with most leaves nearly vertical are :

1. $>35^\circ$ from horizontal and $< 60^\circ$ from horizontal
2. $> 35^\circ$ from horizontal and $> 60^\circ$ from horizontal
3. $< 35^\circ$ from horizontal and $< 60^\circ$ from horizontal
4. $< 35^\circ$ from horizontal and $> 60^\circ$ from horizontal

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 21 / Question ID 50070

Marks: 4.00

Match List-I with List-II

List-I	List-II
(Crop)	(Herbicide)
(A). Wheat	(I). Quizalfop-p-ethyl
(B). Sorghum	(II). Halosufuron-methyl
(C). Soybean	(III). Sulfosulfuron
(D). Sugarcane	(IV). Atrazine

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

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

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 22 / Question ID 50113

Marks: 4.00

In India, EID (Parry) Ltd. for the first time produced single superphosphate (SSP) by treating fresh bone meal with H_2SO_4 in the year -

1. 1904
2. 1905
3. 1906
4. 1907

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 23 / Question ID 50114

Marks: 4.00

Immediately after application (injection) of anhydrous NH_3 into soil, it moves laterally as well as vertically (limited to < 5 cm), and a localized zone known as NH_3 retention zone is formed. A number of temporary yet dramatic changes occur in the NH_3 retention zone. These are:

- (A). A retention zone of both ammonia (NH_3) and ammonium (NH_4^+) having circular to oval shape (3-13 cm diameter) is formed.
- (B). The concentration of both NH_3 and NH_4^+ increased in the range of 1000-3000 ppm.
- (C). The pH increased up to 9.0-9.5 in the vicinity of the point of application.
- (D). Concentration of NO_2^- (nitrite) increased to toxic levels (100-300 ppm).

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
- ☐ 4

Question No. 24 / Question ID 50095

Marks: 4.00

The sequence of events occurring upon application of urea in soil are:

- (A). Hydrolysis
- (B). Nitrification
- (C). Denitrification
- (D). Leaching

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), (B), (D), (A).

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

Question No. 25 / Question ID 50023

Marks: 4.00

The date of summer solstice in the southern hemisphere is

1. 21st December
2. 21st March
3. 21st June
4. 23rd September

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 26 / Question ID 50005

Marks: 4.00

Rieske centre is

1. Core complex I
2. Cytochrome b₆-f complex
3. D₁ protein
4. D₂ protein

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 27 / Question ID 50048

Marks: 4.00

Weed seed dispersal by ants is known as

1. Myrmecochory
2. Autuchory
3. Blastochor
4. HerpoSchory

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 28 / Question ID 50031

Marks: 4.00

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

Assertion (A) : Operational microwave remote sensing has both active and passive sensors.

Reason (R) : Active microwave remote sensing depends on the emission characteristics of various target surfaces or the media of interest.

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) 3



Question No. 29 / Question ID 50016

Marks: 4.00

In symplastic loading the transport sugars are mainly

1. Sucrose
2. Glucose
3. Maltose
4. Vitamin C

☐ 1 2

☒ (Chosen

☐ Option) 3

☐ 4

Question No. 30 / Question ID 50064

Marks: 4.00

The first commercially available robotic weeding machine is known as

1. Robocrop
2. Robotic weeder
3. Robo power weeder
4. Robo weeder

☐ 1 2

☒ (Chosen

☐ Option) 3

☐ 4

Question No. 31 / Question ID 50090

Marks: 4.00

Match List-I with List-II

List-I	List-II
Nutrients	Deficiency symptoms
(A). Nitrogen	(I). Necrosis on leaf margins
(B). Phosphorus	(II). Symptoms appearing first on older leaves; chlorosis starting from leaf tips.
(C). Potassium	(III). Symptoms appearing first on younger leaves; mottled yellow-green leaves with yellowish veins.
(D). Sulphur	(IV). Reddish colour on green leaves or stem.

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. 32 / Question ID 50044

Marks: 4.00

International year of millets was celebrated during the year

1. 2011
2. 2020
3. 2023
4. 2024

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 33 / Question ID 50003

Marks: 4.00

Which of the following dyes is used for testing the viability of seeds?

1. Safranin
2. 2,6 dichlorophenol indophenols
3. 2,3,5, triphenyl tetrazolium chloride
4. Acridine

☐ 1

- ☐ 2
☒ 3 (Chosen Option)
☐ 4

Question No. 34 / Question ID 50042

Marks: 4.00

Statement A : Retting in slow running water is better than stagnant water.

Statement B : The extraction of the fiber of sunhemp is more difficult than jute.

1. Both A and B are right
2. Both A and B are wrong
3. A is right but B is wrong.
4. B is right but A is wrong.

- ☒ 1 (Chosen Option)
☐ 2
☐ 3
☐ 4

Question No. 35 / Question ID 50024

Marks: 4.00

Match List-I with List-II

List-I	List-II
(Instruments)	(Parameter measured)
(A). Wind vane	(I). PAR
(B). Line Quantum sensor	(II). Wind direction
(C). Pyranometer	(III). Relative humidity
(D). Hygrometer	(IV). Shortwave radiation

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

1. (A) - (I), (B) - (III), (C) - (III), (D) - (IV)
2. (A) - (I), (B) - (III), (C) - (II), (D) - (IV)
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. 36 / Question ID 50075

Marks: 4.00

Read the following statements:

- (A). Water holding capacity of sandy soil is high as larger pores can hold more water.
- (B). Silty soils have medium to high water retentive capacity.
- (C). Clay soils have small size pores, thus have low water holding capacity.
- (D.) Clay soil have poor aeration and poor drainage.
- (E). Water holding capacity of soil depends largely on its texture and organic matter present in it.

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

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

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 37 / Question ID 50099

Marks: 4.00

Nutrient index value (Parker, 1952) is calculated from the number of soil samples falling in the category of low (NI), medium (Nm) and high (Nh) nutrient status and represented by expression as given below:

- 1. Nutrient index value (NIV) = $(NI+3Nm+2Nh) / (NI+Nm+Nh)$
- 2. Nutrient index value (NIV) = $(NI+2Nm+3Nh) / (NI+Nm+Nh)$
- 3. Nutrient index value (NIV) = $(3NI+2Nm+Nh) / (NI+Nm+Nh)$
- 4. Nutrient index value (NIV) = $(NI+Nm+Nh) / (NI+2Nm+Nh)$

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 38 / Question ID 50043

Marks: 4.00

List I	List II
A. <i>Cicer arietinum</i> L.	I. C-158
B. <i>Lens esculenta</i> moench	II. Virsha Arhar -1
C. <i>Cajanus cajan</i> L.	III DPL-15
D. <i>Vigna sinensis</i>	IV Pant G-114

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

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 39 / Question ID 50104

Marks: 4.00

VL-149 and Gautami are the varieties of _____

1. Barley
2. Finger millet
3. Chick pea
4. Lentil

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 40 / Question ID 50029

Marks: 4.00

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

Assertion (A) : In Global Positioning System three satellites are accommodated in each orbit at an altitude of 20,185 km from surface of the Earth

Reason (R) : All the GPS satellites are placed in six orbits.

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. 41 / Question ID 50102

Marks: 4.00

Which one of the following is not a genus of *Pennisetum* as per the classification of Staph (1934)

1. *Gymnothria*
2. *Pennicillaria*
3. *Eupennisetum*
4. *Bicolor*

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 42 / Question ID 50007

Marks: 4.00

Active transport of ions across the membrane of a root hair can be assumed to be taking place if

- A. The cell produces more glutathione
- B. The cell has mitochondria
- C. The uptake of ions stops when cyanide is added
- D. The uptake of ions is against the concentration gradient.

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

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 43 / Question ID 50060

Marks: 4.00

Which of the following weeds is an annual weed?

1. *Cyperus rotundus*
2. *Sonchus arvensis*
3. *Panicum maximum*
4. *Sonchus oleraceus*

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 44 / Question ID 50108

Marks: 4.00

'Priya' is a variety of which maize group ?

1. Baby corn
2. Pop corn
3. Sweet corn
4. Fodder maize

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 45 / Question ID 50092

Marks: 4.00

Followings are the major sources of feedstock for production of nitrogenous fertilizer. Arrange them in sequence according to their higher share of consumption in India.

- (A). Naptha
- (B). Natural Gas
- (C). Coal or Coke
- (D). Electrolysis of water

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

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

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 46 / Question ID 50037

Marks: 4.00

Enzyme responsible for carboxylation in C_4 plants

1. Phosphoenol pyruvic acid (PEP) carboxylase
2. Phosphophenol pyruvic acid (PEP) carboxylase
3. Phospho pyruvic acid (PEP) carboxylase
4. Phospheticenol pyruvic acid (PEP) carboxylase

☒ 1 (Chosen)
☐ Option) 2
☐ 3 4
☐

Question No. 47 / Question ID 50063

Marks: 4.00

Match the following

List - I	List - II
Target weed species	Bioagent
(A) <i>Parthenium hysterophorus</i>	(I) <i>Dactylopius tomentosus</i>
(B) <i>Opuntia</i> sp	(II) <i>Bactra verutana</i>
(C) <i>Lantana camara</i>	(III) <i>Zygogramma bicolorata</i>
(D) <i>Cyperus rotundus</i>	(IV) <i>Octotoma scabripennis</i>

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

☒ 1 (Chosen)
☐ Option) 2
☐ 3 4
☐

Question No. 48 / Question ID 50004

Marks: 4.00

Oat has a protein composition of 80 percent

1. Hordenin
2. Glutelins
3. Zein
4. Gliadin

☐ 1 2
☒ (Chosen)
☐ Option) 3
☐ 4

Question No. 49 / Question ID 50081

Marks: 4.00

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

Assertion (A) : High Na-concentration in irrigation water may reduce oxygen supply to the root system.

Reason (R): High sodium content in irrigation water causes flocculation of soil particles.

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
☐ (Chosen
☒ Option) 4
☐

Question No. 50 / Question ID 50085

Marks: 4.00

If water is available for three irrigations only, at which stages the wheat crop should be irrigated

1. CRI, Late jointing and Flowering
2. CRI, Late tillering and Flowering
3. CRI, Boot and Flowering
4. CRI, Boot and Milk

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 51 / Question ID 50074

Marks: 4.00

One cumec day is equal to

1. 8.64 ha-cm
2. 8.64 ha-m
3. 12.64 ha-m
4. 12.64 ha-cm

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 52 / Question ID 50009

Marks: 4.00

ATP is produced in which of the following steps of ETS?

1. FAD-UQ
2. Cyt_b-Cyt_c
3. Cyt_c-Cyt_{c1}
4. Cyt_a-Cyt_c

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 53 / Question ID 50021

Marks: 4.00

Among the following, which thermometer is not installed in an agro-meteorology observatory?

1. Maximum temperature thermometer
2. Minimum temperature thermometer
3. Wet bulb thermometer
4. IR thermometer

- ☐ 1 ☐ 2 ☐ 3 ☐ 4
☐ (Chosen
☐ Option)



Question No. 54 / Question ID 50109

Marks: 4.00

The flour corn is also known as

1. *Zea mays everta*
2. *Zea mays indurta*
3. *Zea mays amylacea*
4. *Zea mays tunicate*

- ☐ 1 ☐ 2 ☐ 3
☐ (Chosen
☒ Option) 4



Question No. 55 / Question ID 50107

Marks: 4.00

'Pusa Kiran' is a variety of

1. Wheat
2. Jowar
3. Maize
4. Bajra

- ☒ 1 (Chosen
☐ Option) 2
☐ 3

Question No. 56 / Question ID 50119

Marks: 4.00

Assertion (A): Gypsum can be used to manage sub-soil acidity.

Reason (R): The SO_4^{2-} released by dissolution of gypsum increases level of Ca and reduces level of Al in both soil solution and exchange complex.

1. (A) is true but (R) is false.
2. (A) is False but (R) is True.
3. Both (A) and (R) are correct; and (R) is correct explanation of (A).
4. Both A and (R) are correct but (R) is not correct explanation of (A).

- ☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 57 / Question ID 50015

Marks: 4.00

Electro-osmotic theory for translocation of organic solutes was given by

1. Mason & Phillis
2. Fenson & Spanner
3. Van den Honert
4. De Varies & Curtis

- ☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 58 / Question ID 50083

Marks: 4.00

Read the following statements

- (A). In furrow irrigation method, short, near horizontal furrows can be used on flat land with a maximum slope of 2%.
- (B). On steep sloping land, contour furrows can be used upto a maximum slope of 6%.
- (C). A minimum of 0.05% slope is recommended to assist drainage in a furrow system.
- (D). Border irrigation can be used on sloping land upto 2% slope on a sandy soil.
- (E). Border irrigation can be used on sloping land upto 3% slope on a clay soil.

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

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

- ☐ 1
☒ 2 (Chosen Option)
☐ 3

Question No. 59 / Question ID 50088

Marks: 4.00

For commercial production of DAP (Diammonium phosphate), liquid ammonia is reacted with mineral acid

1. Nitric acid (HNO_3)
2. Sulphuric acid (H_2SO_4)
3. Hydrochloric acid (HCl)
4. Phosphoric acid (H_3PO_4)

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 60 / Question ID 50097

Marks: 4.00

Followings are the slow release fertilizers having low water solubility that undergo chemical and/or microbial decomposition when applied to soil.

- (A). Urea-formaldehyde
- (B). Phenyl phosphorodiamidate (PPDA)
- (C). Urea-Z
- (D). Crotonylidene diurea

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

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

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 61 / Question ID 50118

Marks: 4.00

_____ is considered as father of conservation tillage. He wrote the book entitled _____.

1. "Jethro Tull" and "Horse Hoeing Husbandry"
2. "Edward H. Faulkner" and "Plowman's Folly: A Second Look"
3. "Pietro de'Crescenzi" and "Book of Rural Benefits"
4. "Glubler B. Triplets" and "Plowman's Folly: A Second Look"

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 62 / Question ID 50006

Marks: 4.00

The sap of a plant cell has an osmotic potential of -10 bars and there is a wall pressure of 2 bars, when this cell is placed with an osmotic potential of -3 bars, the force causing water to enter the cell is:

1. -8 bar
2. -7 bar
3. -5 bar
4. -3 bar

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 63 / Question ID 50001

Marks: 4.00

The halophytes which can resist a wider range of salt concentrations are known as:

1. Euryhaline
2. Stenohaline
3. Thermal denaturation
4. Photoacclimation

☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 64 / Question ID 50120

Marks: 4.00

Journal of Soil and Water Conservation is published by

1. Soil Conservation Society of India, New Delhi.
2. Association of Soils and Crops Research Scientists, Nagpur.
3. Agricultural Research Communication Centre, Karnal.
4. Indian Association of Soil and Water Conservationists, Dehradun.

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 65 / Question ID 50047

Marks: 4.00

World's most water saving high yielding aromatic rice variety is

1. Pusa 1121
2. Pusa 1002
3. Pusa 2679
4. Pusa 2677

☐ 1
☒ 2 (Chosen Option)
☐ 3

Which of the following statements are correct for "Gibberelins"?

- (A). There are 50 forms of Gibberelins.
- (B). Gibberelins broke the dormancy.
- (C). Gibberelins hastens senescence.
- (D). Gibberelins hastens water uptake of plants.

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

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

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Match List-I with List-II

List-I	List-II
(Group)	(Herbicide)
(A). Isoxazolines	(I). Alachlor
(B). Diphenylethers	(II). Asulam
(C). Chloracetamides	(III). Aclonifen
(D). Carbamates	(IV). Pyroxasulfone

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

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

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Sulphur deficiency first occurs in

1. Young leaves
2. Leaf sheath of older leaves
3. Young stems
4. Leaf blade of older leaf

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 69 / Question ID 50086

Marks: 4.00

For qualifying as an essential nutrient, element must satisfy the essentiality criteria propounded by D.I. Arnon and P.R. Stout in the year -

1. 1937
2. 1938
3. 1939
4. 1940

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 70 / Question ID 50112

Marks: 4.00

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

Assertion (A) : Fixation and release of K^+ in soil is influenced by absence or presence of ammonium ion (NH_4^+).

Reason (R) : The physics of NH_4^+ is closely related to that of K^+ because both ions have similar ionic radii and low hydration energy.

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. 71 / Question ID 50062

Marks: 4.00

From the following statements, find out the incorrect one

1. Higher is the temperature, lesser will be the activity of herbicides.
2. Chemical selectivity is true selectivity.
3. Selectivity is relative property of herbicides.
4. Due to more leaching, lower doses of herbicides are sufficient in light soils.

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 72 / Question ID 50054

Marks: 4.00

Statement A : In case of triticale, wheat is the male parent and rye is the female parent.

Statement B: It is mainly a *kharif* crop in India .

Statement C: It is mainly used for animal feeding as roughage

1. Only A is true
2. Only B is true
3. Only C is true
4. All is true

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 73 / Question ID 50002

Marks: 4.00

Jasmonate is synthesized in plant from

1. Linolenic acid
2. Diphosphatidylglycerol
3. Leucine
4. Salicyclic acid

☐ 1 ☐ 2

☒ (Chosen

☐ Option) 3

☐ 4

Question No. 74 / Question ID 50089

Marks: 4.00

The law which states that whatever is being taken by plants from soil needs to be restored to maintain the nutrient supplying capacity of the soil is known as:

1. Law of Restoration
2. Law of Restitution
3. Law of Maximum
4. Law of Conservation

☐ 1 ☐ 2 ☐ 3
☐ (Chosen
☒ Option) 4
☐

Question No. 75 / Question ID 50067

Marks: 4.00

Which among the followings is used as modifier for herbicides?

1. Butylate
2. Dazomet
3. Dietholate
4. Molinate

☐ 1 ☐ 2 ☐ 3
☐ (Chosen
☒ Option) 4
☐

Question No. 76 / Question ID 50049

Marks: 4.00

Statement A: 2,4-D should be applied in grain *Sorghum* when it attains a height of 10-30 cm.

Statement B: 2,4-D should be applied in wheat 18-25 days after sowing

1. Both A and B are true .
2. Both A and B are false
3. A is true but B is false
4. B is true but A is false

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 77 / Question ID 50072

Marks: 4.00

Given below are two statements:

Statement (I): The Qanats, the oldest known irrigation methods, were developed in Ancient Persia

Statement (II): The system comprises a network of canals and steeply sloping tunnels driven into sides of cliffs and steep hills for harvesting of rain water.

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.

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 78 / Question ID 50111

Marks: 4.00

- (A). In normal P-sufficient plants, P-content varies from 0.1% to 0.4% by weight, which is $1/5^{\text{th}}$ to $1/10^{\text{th}}$ of N or K content.
- (B). Phosphorus containing ATP is called the "Energy currency of the plants".
- (C). Plant roots absorb P in the H_2PO_4^- form, but under neutral to alkaline environments, HPO_4^{2-} and or PO_4^{3-} ions could also be taken up.
- (D). Phosphorus is a structural component of the nucleic acids (DNA and RNA), and also a constituent of fatty phospholipids.

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
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 79 / Question ID 50011

Marks: 4.00

hy4 gene related to photomorphogenesis was later named as

1. cry1 gen
2. cry3 gene
3. cry9 gene
4. cry7 gene

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

A rice crop of 5 ha area was irrigated 10 times with 5 cm water per irrigation, find out the total quantity of water applied in cubic meter.

1. 5000
2. 10,000
3. 20,000
4. 25,000

☐ 1 ☐ 2 ☐ 3 ☐ 4

☒ (Chosen

☐ Option)



Weight of a soil sample with can is 210 g and dry weight with can is 180 g. Weight of empty moisture can is 40 g. Calculate moisture content of soil sample.

1. 18.0 %
2. 21.4 %
3. 25.0%
4. 27.3 %

☐ 1 ☐ 2

☒ (Chosen

☐ Option) 3

☐ 4

Match List-I with List-II

List-I	List-II
(Category of water)	(Major use)
(A). Green water	(I). Crop production; ideal for kitchen gardens and lawns
(B). Fossil water	(II). Plants/crops, particularly forests, grass lands, and dryland agriculture
(C). Grey water	(III). Agriculture and domestic use
(D). Black water	(IV). Export-import of agricultural products leads to export-import of water.
(E). Virtual water	(V). Crop production, need to be treated for preventing heavy metals/ pathogens entering human chain

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

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

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 83 / Question ID 50079

Marks: 4.00

Match List-I with List-II

List-I	List-II
(Instruments/Forces)	(Purpose/ Effect)
(A). Piezometer	(I) Pattern of molecular structure
(B). Penetrometer	(II). Soil moisture suction
(C). London-van der Waals	(III). Soil moisture
(D). Tensiometer	(IV). Soil strength
(E). FDR	(V.) Hydraulic head

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

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

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 84 / Question ID 50025

Marks: 4.00

Optimum soil temperature for potato crop in tropics is

1. 17 °C
2. 20 °C
3. 25 °C
4. 28 °C

☐ 1 ☐ 2

☒ (Chosen

☐ Option) ☐ 3

☐ 4

Question No. 85 / Question ID 50061

Marks: 4.00

Which of the following herbicides is a contact herbicide?

1. Atrazine
2. Pyrazon
3. Nitrofen
4. Oxyfluorfen

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 86 / Question ID 50045

Marks: 4.00

Arka Garima is a variety of

1. Cowpea
2. Lentil
3. Fieldpea
4. Horsegram

☐ 1
☐ 2
☐ 3
☐ 4

Question No. 87 / Question ID 50096

Marks: 4.00

The characteristics of ammonium sulphate are:

- (A). Ammonium sulphate $[(\text{NH}_4)_2\text{SO}_4]$ is a white crystalline and free-flowing fertilizer.
- (B). It contains only 20.5% N and classified as low analysis fertilizer and also contains 23.7% S.
- (C). It is the best N-fertilizer having least hygroscopicity, indicating that it has excellent physical property.
- (D). It is an excellent nitrogenous fertilizer for acid soil.

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 50010

Marks: 4.00

Find out the correct equation from the following

1. $\text{DPD} = \text{O.P} \times \text{T.P}$
2. $\text{DPD} = \text{O.P} + \text{T.P}$
3. $\text{DPD} = \text{O.P} - \text{T.P}$
4. $\text{DPD} = \text{M.P} \times \text{O.P}$

- ☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 89 / Question ID 50012

Marks: 4.00

The process whereby adjustments are made to structure and function of the photosynthetic apparatus in response to change in growth irradiance is called

1. Denaturation
2. Transition temperature
3. Photo-acclimation
4. Photorespiration

- ☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 90 / Question ID 50094

Marks: 4.00

The characteristics of saline-sodic soil are:

1. pH < 8.5, EC > 4 dS/m, SAR < 13, ESP < 15
2. pH > 8.5, EC > 4 dS/m, SAR > 13, ESP > 15
3. pH < 8.5, EC > 4 dS/m, SAR < 13, ESP > 15
4. pH < 8.5, EC > 4 dS/m, SAR > 13, ESP > 15

- ☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 91 / Question ID 50103

Marks: 4.00

BSH-169 and HBL-113 are the varieties of

1. Barley
2. Pearl millet
3. Sorghum
4. Maize

- ☐ 1 2
☒ (Chosen
☐ Option) 3
☐ 4

Question No. 92 / Question ID 50041

Marks: 4.00

Yellow mite mainly attacks

1. *Capsularis jute*
2. *Olitorius jute*
3. *Crotalaria juncia*
4. *Avena sativa*

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 93 / Question ID 50055

Marks: 4.00

Find out the correct one from the following statements

1. In castor, varieties with high waxy bloom are more resistant to mites.
2. Castor is a long-day plant (LDP).
3. Warmer temperature during flowering promotes more female flower and cooler temperature promotes more male flower.
4. The germination of castor is epigeal type, so more problem of germination in crusted soil.

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 94 / Question ID 50052

Marks: 4.00

Early sowing of pulses is not recommended mainly due to

1. More vegetative growth
2. Higher weed pest problem
3. Photoperiod sensitivity
4. Less availability of water

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 95 / Question ID 50019

Marks: 4.00

Match List-I with List-II

List-I	List-II
(A). Glyoxysome	(I). Oil reach storage tissues of the seed
(B). GNOM gene	(II). Glutamate synthases
(C). GOGAT gene	(III). For development of roots and cotyledons
(D). Goldman diffusion potential	(IV). Calculated diffusion potential
(E). Goldman equation	(V). Predicts the diffusion potential across a membrane

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

1. A-1; B-3; C-4; D-5; E-2
2. A-1; B-2; C-3; D-4; E-5
3. A-1; B-3; C-2; D-4; E-5
4. A-4; B-2; C-3; D-5; E-1

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 96 / Question ID 50116

Marks : 4.00

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

Assertion (A): Among components of sustainability, productivity and ecological viability are more important than economic and social viability.

Reason (R): Because food security depends upon per capita productivity and permanence of productivity depends on ecological base for production.

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 correct explanation of (A)
2. Both (A) and (R) are correct but (R) is not correct explanation of (A)
3. (A) is correct but (R) is not correct.
4. (A) is not correct but (R) is correct.

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 97 / Question ID 50077

Marks : 4.00

Given below are two statements:

Statement (I): Capillary rise is responsible for loss of water from soil by evaporation.

Statement II: Retention of water by soil against gravitation pull depends on two surface forces, namely, cohesion and adhesion.

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

1. Both Statement (I) and Statement (II) are 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.

☒ 1 (Chosen
☐ Option) 2
☐ 3 4
☐

Question No. 98 / Question ID 50030

M a r k s : 4 . 0 0

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

Assertion (A) : The database concept is central to a Geographical Information System (GIS)

Reason (R) : GIS does not hold any maps and pictures, it holds only a database.

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. 99 / Question ID 50057

M a r k s : 4 . 0 0

Read the following statements.

- A) *Orobancha* is total stem parasite of tomato
- B) *Cuscuta campestris* is total stem parasite of linseed
- C) *Loranthus longiflorus* is partial stem parasite of mango
- D) Broom rape is obligate root parasite of mustard

Choose the correct answer out of the options given below:

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

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 100 / Question ID 50100

Marks: 4.00

Match List-I with List-II

List-I	List-II
(Nutrients)	(Essentiality given by the Scientist)
(A). Phosphorus	(I). Theodore de Saussure
(B). Nitrogen	(II). C. Sprengel
(C). Boron	(III). J.S. McHargue
(D). Manganese	(IV). K. Warington

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

- 1. (A) - (II), (B) - (I), (C) - (IV), (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. 101 / Question ID 50014

Marks: 4.00

The vernalization is the induction of the flowering process of the plant by exposure to a prolonged cold, these processes are

1. Aerobic
2. Anaerobic
3. Aerobic and anaerobic
4. Light sensitive

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 102 / Question ID 50065

Marks: 4.00

Which of the following combinations is not correct?

Chemical	Source
1. Camphor	Salvia shrubs
2. Phlorizin	Phyllanthus emblica
3. Bialophos	Microorganism
4. Dhurrin	Sorghum

☒ 1 (Chosen

☐ Option) 2

☐ 3 4



Question No. 103 / Question ID 50115

Marks: 4.00

Potassium (K) is present in soil in different forms. Plants prefer to take up K from the soil as:

- (A). Exchangeable K
- (B). Solution K
- (C). Total or Mineral K
- (D). Non-exchangeable K

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), (B), (D), (A).

☐ 1 ☐ 2

☒ (Chosen

☐ Option) 3

☐ 4

Question No. 104 / Question ID 50091

Marks: 4.00

- (A). Nitrification is a two-step process which refers to the conversion of ammonium (NH_4^+) to nitrate (NO_3^-).
- (B). In the first step, *Nitrosomonas* (obligate autotrophic bacteria) convert ammonium (NH_4^+) to nitrite (NO_2^-).
- (C). The second step of nitrification occurs through *Nitrobacter* and *Nitrosolobus* species, which convert nitrite (NO_2^-) to nitrate (NO_3^-).
- (D). The second step of nitrification occurs through *Nitrobacter* species only, which convert nitrite (NO_2^-) to nitrate (NO_3^-).

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. 105 / Question ID 50028

Marks: 4.00

How many days in advance, weather forecasts are currently issued by IMD for a medium range weather forecasting?

1. 3 days
2. 5 days
3. 10 days
4. 21 days

☐ 1 2 3
☐ (Chosen
☒ Option) 4
☐

Question No. 106 / Question ID 50017

Marks: 4.00

Legumes are generally rich in

1. Albuminus
2. Globulins
3. Glutelins
4. Prolamins

☐ 1 2 3 4
☐ (Chosen
☐ Option)
☒

Question No. 107 / Question ID 50034

Marks: 4.00

Arrange in the correct sequence 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

Question No. 108 / Question ID 50035

Marks: 4.00

Which of the following primary products of carbon fixation are the 4 carbon compounds in C₄ plants?

- 1. Malic acid and aspartic acid
- 2. Aspartic acid and tartaric acid
- 3. Malic acid and tartaric acid
- 4. Malic acid, aspartic acid and tartaric acid

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

Question No. 109 / Question ID 50053

Marks: 4.00

Direct solar radiation contains how much PAR?

- 1. 30%
- 2. 50%
- 3. 42%
- 4. 65%

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

Question No. 110 / Question ID 50027

Marks: 4.00

Remote sensing satellites are placed above the earth surface at a height of

1. 800 km
2. 1000 km
3. 18000 km
4. 36000 km

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

Question No. 111 / Question ID 50087

M a r k s : 4 . 0 0

Deficiency of boron (B) can be corrected by application of which of the following fertilizers ?

- (A). Borax
- (B). Boric acid
- (C). Solubor
- (D). Lime

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
- ☒ (C h o s e n
- ☐ O p t i o n) 2
- ☐ 3
- ☐ 4

Question No. 112 / Question ID 50051

M a r k s : 4 . 0 0

Statement A: Drum seedling is a technique of DSR which is basically a type of dry seedling.

Statement B: It is invented by CRRI.

1. Both are true
2. Both are false
3. A is true and B is false
4. B is true and A is false

- ☒ 1 (C h o s e n
- ☐ O p t i o n) 2
- ☐ 3
- ☐ 4

Question No. 113 / Question ID 50008

M a r k s : 4 . 0 0

Dinitrogenase is a

1. 240 KDa heterotetramer enzyme
2. 200 KDa heterotetramer enzyme
3. 150 KDa heterotetramer enzyme
4. 400 KDa heterotetramer enzyme

- ☐ 1
☐ 2
☐ 3
☐ 4

Question No. 114 / Question ID 50069

M a r k s : 4 . 0 0

Optimum temperature and relative humidity for microbial degradation of herbicides in soil is

1. 25-35 °C and 50-100%
2. 20-25 °C and 50-75%
3. 25-30 °C and 75-100%
4. 25-35 °C and 75-90%

- ☐ 1 ☐ 2 ☐ 3 ☐ 4
☒ (C h o s e n
☐ O p t i o n)



Question No. 115 / Question ID 50038

M a r k s : 4 . 0 0

Given below are two statements:

Statement (I): The term preparatory cultivation and seed bed preparation are used synonymously

Statement (II): Preparatory cultivation consists of three distinct operations viz. primary tillage, secondary tillage and layout of seed bed

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 (C h o s e n
☐ O p t i o n) 2
☐ 3 4
☐

Question No. 116 / Question ID 50105

M a r k s : 4 . 0 0

Which of the followings is not a method of computing water balance in Thornthwaite's 1948 systems?

1. Moisture index
2. Humidity index
3. Seasonal rainfall variation
4. Thermal efficiency index

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 117 / Question ID 50059

Marks: 4.00

Read the following statements regarding biological weed control.

- A. It is ecofriendly because of no pollution.
- B. It is long lasting because of its slow action.
- C. A particular weed can be controlled in inaccessible areas.
- D. It can lead to 100% control of a particular weed.
- E. It is economical in the long-run.

Choose the correct answer out of the options given below.

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

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 118 / Question ID 50046

Marks: 4.00

"GYEI" Stands for

1. Grain yield efficiency intensity
2. Gross yield efficiency intensity
3. Gross yield efficiency index
4. Grain yield efficiency index

☐ 1 ☐ 2 ☐ 3 ☐ 4

☐ (Chosen

☐ Option)



Question No. 119 / Question ID 50106

Marks: 4.00

Which one of the followings is not a drought tolerant variety ?

1. Sahbhagi Dhan
2. Swarna - sub 1
3. Pant Sankar Dhan 3
4. CSR35

- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4

Question No. 120 / Question ID 50058

M a r k s : 4 . 0 0

For weeds evolution, CSR refers to

1. C- Competitiveness, S- Sensitiveness to stress, R- Ruderal habit
2. C- Competitiveness, S- Stress tolerance, R- Ruderal habit
3. C- Crop, S- Stress, R- Resistance
4. C- Crop, S- Specific, R-Ruderal habit

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

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NATIONAL TESTING AGENCY
Indian Council of Agricultural Research (ICAR) - PG
Final Answer Key

Exam Date: 29-06-2024

Exam Timing: 10:00 to 12:00

Subject: AGRONOMY

Question ID	Correct Option ID	Question ID	Correct Option ID	Question ID	Correct Option ID
50001	1	50041	2	50081	3
50002	1	50042	1	50082	4
50003	3	50043	1	50083	2
50004	Dropped	50044	3	50084	1
50005	2	50045	1	50085	4
50006	3	50046	4	50086	3
50007	2	50047	1	50087	2
50008	1	50048	1	50088	4
50009	2	50049	3	50089	2
50010	3	50050	1	50090	1
50011	1	50051	2	50091	2
50012	3	50052	1	50092	2
50013	4	50053	3	50093	1
50014	1	50054	3	50094	4
50015	2	50055	2	50095	2
50016	1	50056	1	50096	2
50017	2	50057	3	50097	1
50018	2	50058	2	50098	2
50019	3	50059	3	50099	2
50020	2	50060	4	50100	1
50021	4	50061	4	50101	1
50022	3	50062	2	50102	4
50023	1	50063	3	50103	1
50024	3	50064	1	50104	2
50025	1	50065	2	50105	4
50026	3	50066	4	50106	2
50027	1	50067	3	50107	1
50028	2	50068	4	50108	3
50029	4	50069	1	50109	3
50030	2	50070	2	50110	1
50031	3	50071	4	50111	3
50032	1	50072	3	50112	1
50033	3	50073	4	50113	3
50034	2	50074	2	50114	3
50035	1	50075	3	50115	3
50036	2	50076	1	50116	1
50037	1	50077	1	50117	4
50038	1	50078	1	50118	2
50039	2	50079	4	50119	3
50040	4	50080	1	50120	1