

# National Testing Agency

<b>Question Paper Name :</b>	Soil Science and Agricultural Chemistry 23rd Sep 2020 Shift 2
<b>Subject Name :</b>	Soil Science and Agricultural Chemistry
<b>Creation Date :</b>	2020-09-23 19:33:46
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<b>Display Marks:</b>	Yes
<b>Share Answer Key With Delivery Engine :</b>	Yes
<b>Actual Answer Key :</b>	Yes

## Soil Science and Agricultural Chemistry

<b>Group Number :</b>	1
<b>Group Id :</b>	71087067
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	120
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	480
<b>Is this Group for Examiner? :</b>	No

## Part A General Knowledge

<b>Section Id :</b>	710870199
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	20

**Number of Questions to be attempted :** 20  
**Section Marks :** 80  
**Display Number Panel :** Yes  
**Group All Questions :** Yes  
**Mark As Answered Required? :** Yes  
**Sub-Section Number :** 1  
**Sub-Section Id :** 710870199  
**Question Shuffling Allowed :** Yes

**Question Number : 1 Question Id : 7108707981 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which one of the following crops is a commercial crop in Punjab and Haryana but is a subsistence crop in Orissa?

1. Tea
2. Cotton
3. Rubber
4. Rice

**Options :**

71087031921. 1  
71087031922. 2  
71087031923. 3  
71087031924. 4

**Question Number : 2 Question Id : 7108707982 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following are the two most important wheat-growing zones of the country?

- A. Ganga-Satluj plains in the north-west
- B. Deltaic regions
- C. Black soil region of the Deccan
- D. Plains of north-east

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

- 1. Only A and B
- 2. Only B and C
- 3. Only C and D
- 4. Only A and C

**Options :**

- 71087031925. 1
- 71087031926. 2
- 71087031927. 3
- 71087031928. 4

**Question Number : 3 Question Id : 7108707983 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Indian agriculture is typically characterized as

- 1. Land surplus, labour scarce economy
- 2. Land surplus, labour surplus economy
- 3. Land scarce, labour surplus economy
- 4. Land scarce, labour scarce economy

**Options :**

- 71087031929. 1

71087031930. 2

71087031931. 3

71087031932. 4

**Question Number : 4 Question Id : 7108707984 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which one of the following countries is the main rival of India in tea export?

1. China
2. Japan
3. Germany
4. Sri Lanka

**Options :**

71087031933. 1

71087031934. 2

71087031935. 3

71087031936. 4

**Question Number : 5 Question Id : 7108707985 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement A:** MSP is declared by the government every year to provide incentives to the farmers for raising the production of crops.

**Statement B:** Buffer stock is created to distribute food grains in the deficit areas and among the poorer strata of the society at the lower price than the market price.

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

1. Both Statement A and Statement B are correct
2. Both Statement A and Statement B are incorrect
3. Statement A is correct but Statement B is incorrect
4. Statement A is incorrect but Statement B is correct

**Options :**

71087031937. 1

71087031938. 2

71087031939. 3

71087031940. 4

**Question Number : 6 Question Id : 7108707986 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is a global association of nations of the world to help cooperation in international law, security, economic development and social equity?

1. United Nations Organization
2. International Monetary Fund
3. World Bank
4. World Health Organization

**Options :**

- 71087031941. 1
- 71087031942. 2
- 71087031943. 3
- 71087031944. 4

**Question Number : 7 Question Id : 7108707987 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Under the Ganga Action Plan Phase II, pollution abatement works are being taken up in how many towns?

- 1. 57
- 2. 65
- 3. 52
- 4. 69

**Options :**

- 71087031945. 1
- 71087031946. 2
- 71087031947. 3
- 71087031948. 4

**Question Number : 8 Question Id : 7108707988 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following statements is **incorrect**?

- 1. The highest number of pigs in the world are found in India
- 2. Utter Pradesh provides largest amount of pork
- 3. Assam has the largest number of pork producing pigs
- 4. Pork constitutes about 7.6% of the total meat produced in India

**Options :**

71087031949. 1  
71087031950. 2  
71087031951. 3  
71087031952. 4

**Question Number : 9 Question Id : 7108707989 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which type of N-fertilizer is suitable for water-logged soils?

1. Zinc Phosphate
2. Ammonium Sulphate
3. Calcium
4. Potassium Nitrate

**Options :**

71087031953. 1  
71087031954. 2  
71087031955. 3  
71087031956. 4

**Question Number : 10 Question Id : 7108707990 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The famous Bailadila range of hills in the Bastar district of Chhattisgarh is famous for its

1. Bauxite deposits
2. Manganese deposits
3. Copper deposits
4. High-grade haematite deposits

**Options :**

71087031957. 1

71087031958. 2

71087031959. 3

71087031960. 4

**Question Number : 11 Question Id : 7108707991 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

A farmer wishes to start a 100 sq. m rectangular vegetable garden. Since he has only 30m barbed wire, he fences three sides of the garden letting his house compound wall act as the fourth side fencing. What is the dimension of the garden?

1. 15 m x 6.67m
2. 20 m x 5 m
3. 30 m x 3.33 m
4. 40 m x 2.5 m

**Options :**

71087031961. 1

71087031962. 2

71087031963. 3

71087031964. 4

**Question Number : 12 Question Id : 7108707992 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

In which one of the following industries, the consumption of natural rubber is the largest?

1. Auto tyres and tubes
2. Footwear
3. Dipped goods
4. Latex foam

**Options :**



71087031965. 1  
71087031966. 2  
71087031967. 3  
71087031968. 4

**Question Number : 13 Question Id : 7108707993 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which one of the following countries was the partner country of 34<sup>th</sup> Surajkund International Crafts Fair held in Haryana?

1. China
2. Nepal
3. Bhutan
4. Uzbekistan

**Options :**

71087031969. 1  
71087031970. 2  
71087031971. 3  
71087031972. 4

**Question Number : 14 Question Id : 7108707994 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Nobel laureate Abhijit Vinayak Banerjee was conferred the honorary Doctor of Letters (D. Litt.) by which University?

1. University of Delhi
2. University of Kolkata
3. University of Mumbai
4. University of Hyderabad

**Options :**

- 71087031973. 1
- 71087031974. 2
- 71087031975. 3
- 71087031976. 4

**Question Number : 15 Question Id : 7108707995 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Where is the headquarters of European Union?

- 1. Geneva, Switzerland
- 2. Washington D.C., USA
- 3. New York, US
- 4. Brussels, Belgium

**Options :**

- 71087031977. 1
- 71087031978. 2
- 71087031979. 3
- 71087031980. 4

**Question Number : 16 Question Id : 7108707996 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following would be deficient if one finds high somatic cell count in the cow's milk?

- 1. Butterfat
- 2. Whey protein
- 3. Casein
- 4. Trace minerals

**Options :**

- 71087031981. 1
- 71087031982. 2
- 71087031983. 3
- 71087031984. 4

**Question Number : 17 Question Id : 7108707997 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Who was the first administrator-statesman to attempt planning as a means for economic development?

- 1. C. Rajagopalachari
- 2. V. T. Krishnamachari
- 3. M. Viswesvarayya
- 4. Sir C. P. Ramaswami Aiyar

**Options :**

- 71087031985. 1
- 71087031986. 2
- 71087031987. 3
- 71087031988. 4

**Question Number : 18 Question Id : 7108707998 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Amazon rainforest span over nine countries. In August 2019, in which country did a deadly fire broke out in the Amazon forest?

- 1. Brazil
- 2. Venezuela
- 3. Colombia
- 4. Argentina

**Options :**

- 71087031989. 1
- 71087031990. 2
- 71087031991. 3
- 71087031992. 4

**Question Number : 19 Question Id : 7108707999 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Economic liberalization in India started with

- 1. Sustainable changes in industrial licensing policy
- 2. The convertibility of the Indian Rupee
- 3. Significant reduction of tax rates
- 4. Changes in procedural formalities for FDI

**Options :**

- 71087031993. 1
- 71087031994. 2
- 71087031995. 3
- 71087031996. 4

**Question Number : 20 Question Id : 7108708000 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The term 'Delimitation' which was in news recently is associated with which process?

- 1. Fixing the limit of Income tax
- 2. Fixing limits of Affordable housing
- 3. Fixing limits of Territorial constituencies
- 4. Fixing limits of Chairpersons salary

**Options :**

- 71087031997. 1

71087031998. 2  
71087031999. 3  
71087032000. 4

## Part B Core Natural Resource Management-II

<b>Section Id :</b>	710870200
<b>Section Number :</b>	2
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Display Number Panel :</b>	Yes
<b>Group All Questions :</b>	Yes
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	710870200
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 7108708001 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is  
Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical  
Correct Marks : 4 Wrong Marks : 1**

The most commonly used carrier gas in GC-MS/MS is

1. Hydrogen
2. Nitrogen
3. Helium
4. Oxygen

**Options :**

71087032001. 1  
71087032002. 2

71087032003. 3

71087032004. 4

**Question Number : 22 Question Id : 7108708002 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Organic compounds used by insects to convey specific chemical messages that modify behaviour or physiology are

1. Semiochemicals
2. Chemosterilant
3. Juvenile Hormone
4. Antibiotics

**Options :**

71087032005. 1

71087032006. 2

71087032007. 3

71087032008. 4

**Question Number : 23 Question Id : 7108708003 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Carbamate pesticides are developed from which natural lead containing molecule?

1. Rotenone
2. Nicotine
3. Physostigmine
4. Anabasine

**Options :**

71087032009. 1

71087032010. 2

71087032011. 3

71087032012. 4

**Question Number : 24 Question Id : 7108708004 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Addition of PBO with the pyrethrum extract is a / an

1. Additive effect
2. Synergistic effect
3. Antagonistic effect
4. Symbiotic effect

**Options :**

71087032013. 1

71087032014. 2

71087032015. 3

71087032016. 4

**Question Number : 25 Question Id : 7108708005 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Insect growth regulator	I. Azadirachtin
B. Insect pheromone	II. Methyl eugenol
C. Insect repellent	III. DEET
D. Insect chitin synthesis inhibitor	IV. Diflubenzuron

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

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

**Options :**

71087032017. 1

71087032018. 2

71087032019. 3

71087032020. 4

**Question Number : 26 Question Id : 7108708006 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

MRL is the amount of residue that will NOT be a concern to human health. MRL stands for

1. Multiple Residue Limit
2. Minimum Residue Limit
3. Minimum Residual Limit
4. Maximum Residue Limit

**Options :**

71087032021. 1

71087032022. 2

71087032023. 3



71087032024. 4

**Question Number : 27 Question Id : 7108708007 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following are NOT true about haemoglobin and leghaemoglobin?

- A. Both are oxygen carriers
- B. Haemoglobin is red in colour but leghaemoglobin is blue in colour
- C. Both are hemoproteins
- D. Haemoglobin has significantly higher oxygen affinity than leghaemoglobin

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

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

**Options :**

- 71087032025. 1
- 71087032026. 2
- 71087032027. 3
- 71087032028. 4

**Question Number : 28 Question Id : 7108708008 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

In which year, did the Supreme Court of India ban production, use and sale of Endosulfan, an organochlorine contact pesticide?

1. 2014
2. 2011
3. 1999
4. 2006

**Options :**

71087032029. 1  
71087032030. 2  
71087032031. 3  
71087032032. 4

**Question Number : 29 Question Id : 7108708009 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A:** Insects develop resistance to natural pesticides more than synthetic pesticides

**Reason R:** Active ingredient of natural pesticides comprises a number of homologous compounds

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

**Options :**

71087032033. 1  
71087032034. 2  
71087032035. 3  
71087032036. 4

**Question Number : 30 Question Id : 7108708010 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

2 - PAM is known to be effective as a

1. Synergist
2. Antidote
3. Insect growth regulator
4. Plant growth regulator

**Options :**

71087032037. 1  
71087032038. 2  
71087032039. 3  
71087032040. 4

**Question Number : 31 Question Id : 7108708011 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

FSSAI stands for

1. Food Standards and Safety Authority of India
2. Food Safety and Standards Authority of India
3. Food Safety and Sanitary Authority of India
4. Food Sanitary and Safety Authority of India

**Options :**

71087032041. 1  
71087032042. 2

71087032043. 3

71087032044. 4

**Question Number : 32 Question Id : 7108708012 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Phosphorus-containing pesticides may be analysed with GLC coupled with which detector?

1. ECD
2. RI
3. NPD
4. UV-Vis

**Options :**

71087032045. 1

71087032046. 2

71087032047. 3

71087032048. 4

**Question Number : 33 Question Id : 7108708013 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

In general, which one of the following is NOT the purpose of pesticide formulation?

1. To facilitate the application in the field
2. To reduce drift hazard
3. To improve bioefficacy
4. To provide stability to the active ingredient

**Options :**

71087032049. 1

71087032050. 2

71087032051. 3

71087032052. 4

**Question Number : 34 Question Id : 7108708014 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

World Water Day is celebrated on which day every year?

1. 22 April
2. 22 March
3. 16 October
4. 4 December

**Options :**

71087032053. 1  
71087032054. 2  
71087032055. 3  
71087032056. 4

**Question Number : 35 Question Id : 7108708015 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Downward movement of water through saturated or nearly saturated soil in response to gravity is known as

1. Infiltration
2. Seepage
3. Permeability
4. Percolation

**Options :**

71087032057. 1  
71087032058. 2  
71087032059. 3  
71087032060. 4

**Question Number : 36 Question Id : 7108708016 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** Consumptive use of water in a crop is the amount of water lost through evaporation, percolation, run-off and seepage

**Statement II:** Irrigation water requirement of crop includes water used in evapotranspiration, special operations and water lost through percolation, run-off and seepage etc

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

**Options :**

71087032061. 1

71087032062. 2

71087032063. 3

71087032064. 4

**Question Number : 37 Question Id : 7108708017 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

In a sprinkler irrigation system, the required total capacity of the system is  $0.005 \text{ m}^3/\text{s}$ . The total head required is 37 m of water column. Determine the size of a monobloc pumpset. Assume pump and motor efficiency as 70% each.

1. 3.0 h.p
2. 1.0 h.p
3. 7.5 h.p
4. 5.0 h.p

**Options :**

71087032065. 1  
71087032066. 2  
71087032067. 3  
71087032068. 4

**Question Number : 38 Question Id : 7108708018 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Central Research Institute for Dryland Agriculture is located at

1. Jodhpur
2. Hyderabad
3. Jaipur
4. Nagpur

**Options :**

71087032069. 1  
71087032070. 2  
71087032071. 3  
71087032072. 4

**Question Number : 39 Question Id : 7108708019 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

A rectangular wire mesh box filled with stones is a

1. Chute spillway
2. Gabion
3. Drop spillway
4. Drop inlet spillway

**Options :**

71087032073. 1

71087032074. 2

71087032075. 3

71087032076. 4

**Question Number : 40 Question Id : 7108708020 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

A hydrograph is a graphical representation of

1. Rainfall and time
2. Total runoff and time
3. Surface runoff and time
4. Base flow and time

**Options :**

71087032077. 1

71087032078. 2

71087032079. 3

71087032080. 4

**Question Number : 41 Question Id : 7108708021 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



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

**Assertion A:** Gypsum is not considered a liming material for reclamation of acid soils although it contains calcium

**Reason R:** Calcium sulphate dissociates into calcium and sulphate. While the former replaces aluminium in the exchange complex, the latter forms sulphuric acid reacting with soil moisture. Both processes reduce pH.

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

**Options :**

- 71087032081. 1
- 71087032082. 2
- 71087032083. 3
- 71087032084. 4

**Question Number : 42 Question Id : 7108708022 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

For the sprinkler head to move freely, it is lubricated with

1. Oil
2. Grease
3. Mineral Oil
4. No lubricant is used

**Options :**

- 71087032085. 1

71087032086. 2

71087032087. 3

71087032088. 4

**Question Number : 43 Question Id : 7108708023 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Water Horse Power (WHP) developed by a pump is given as  $WHP = (\text{Discharge} \times \text{Total Head against which pump is working})/75$ . If the head is in meters then discharge in the formula is in

1.  $\text{m}^3/\text{s}$
2. Litres/s
3.  $\text{cm}^3/\text{s}$
4.  $\text{m}^3/\text{hr}$

**Options :**

71087032089. 1

71087032090. 2

71087032091. 3

71087032092. 4

**Question Number : 44 Question Id : 7108708024 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Spreading type of varieties in groundnut belong to the sub-species

1. Procumbens
2. Indica
3. Fastigata
4. Javanica

**Options :**

71087032093. 1

71087032094. 2

71087032095. 3

71087032096. 4

**Question Number : 45 Question Id : 7108708025 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Which one of the following is a condition influencing weed - crop competition?

1. pH
2. Nitrogen
3. CO<sub>2</sub>
4. Space

**Options :**

71087032097. 1

71087032098. 2

71087032099. 3

71087032100. 4

**Question Number : 46 Question Id : 7108708026 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

What is the Rate of atrazine (Kg/ha) if 3 Kg is applied in 2 ha area at 50% WP?

1. 0.75
2. 1.50
3. 3.00
4. 2.25

**Options :**

71087032101. 1

71087032102. 2

71087032103. 3

71087032104. 4

**Question Number : 47 Question Id : 7108708027 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

A fresh soil sample weighing 100 gm contains 18% soil moisture. Find out the dry weight of the soil.

1. 84.74
2. 90.74
3. 75.74
4. 82.0

**Options :**

- 71087032105. 1
- 71087032106. 2
- 71087032107. 3
- 71087032108. 4

**Question Number : 48 Question Id : 7108708028 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is relatively resistant to low water stress?

1. Sorghum
2. Wheat
3. Rice
4. Potato

**Options :**

- 71087032109. 1
- 71087032110. 2
- 71087032111. 3
- 71087032112. 4

**Question Number : 49 Question Id : 7108708029 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements, as per the Mitscherlich equation

**Statement I:** 1 Baule of N = 1 Baule of  $P_2O_5$  = 1 Baule of  $K_2O$

**Statement II:** Amount of nutrient required to produce 50% of maximum possible yield.

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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

- 71087032113. 1
- 71087032114. 2
- 71087032115. 3
- 71087032116. 4

**Question Number : 50 Question Id : 7108708030 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** In the Mitscherlich equation, the value of C indicates the efficiency factor of input x

**Statement II:** There is an inverse relationship between input and efficiency

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 correct but Statement II is false
4. Statement I is incorrect but Statement II is true

**Options :**

- 71087032117. 1
- 71087032118. 2
- 71087032119. 3
- 71087032120. 4

**Question Number : 51 Question Id : 7108708031 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Cultivation of chickpeas and sarson is believed to have started around

1. 2000 BC
2. 2200 BC
3. 2300 BC
4. 1800 BC

**Options :**

- 71087032121. 1
- 71087032122. 2

71087032123. 3

71087032124. 4

**Question Number : 52 Question Id : 7108708032 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Match the following problem soil with it's characteristics

List I	List II
Problem soil	Characteristics
A. Saline alkali soil	I. pH > 8.5, ESP > 15%, EC > 4 dsm <sup>-1</sup>
B. Alkali soil	II. pH < 8.5, ESP < 15%, EC > 4 dsm <sup>-1</sup>
C. Saline soil	III. pH > 8.5, ESP > 15%, EC < 4 dsm <sup>-1</sup>
D. Non-saline alkali soil	IV. pH > 8.5, compact and dark coloured soils
E. Degraded alkali soil	V. ESP > 15%

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

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

**Options :**

71087032125. 1

71087032126. 2

71087032127. 3

71087032128. 4

**Question Number : 53 Question Id : 7108708033 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Sea water has salt content within the range

1. 20,000 - 30,000 ppm
2. 30,000 - 40,000 ppm
3. 40,000 - 50,000 ppm
4. 50,000 - 60,000 ppm

**Options :**

71087032129. 1

71087032130. 2

71087032131. 3

71087032132. 4

**Question Number : 54 Question Id : 7108708034 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

What is the acceptable limit of biuret for most crops?

1. 1.0%
2. 1.5%
3. 2.0%
4. 2.5%

**Options :**

71087032133. 1

71087032134. 2

71087032135. 3

71087032136. 4

**Question Number : 55 Question Id : 7108708035 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



The principle of allelopathy was first reported by

1. Zimmerman
2. Molisch
3. Jethro Tull
4. Wilcox

**Options :**

71087032137. 1  
71087032138. 2  
71087032139. 3  
71087032140. 4

**Question Number : 56 Question Id : 7108708036 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The yield obtained from a treated plot is 20 q/ha. The yield obtained from a similar but untreated plot is 10 q/ha. Calculate the weed index (WI)

1. 40%
2. 50%
3. 75%
4. 100%

**Options :**

71087032141. 1  
71087032142. 2  
71087032143. 3  
71087032144. 4

**Question Number : 57 Question Id : 7108708037 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Weeds which mature in few weeks are called as

1. Biennial weeds
2. Annual weeds
3. Ephemerals
4. Peripherals

**Options :**

71087032145. 1

71087032146. 2

71087032147. 3

71087032148. 4

**Question Number : 58 Question Id : 7108708038 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Match the name of the weed and the crop in which it occurs

List I	List II
Crop	Weed
A. Rice	I. Dodder
B. Sorghum	II. Phalaris
C. Mango	III. Striga
D. Oats	IV. Echinochloa
E. Citrus	V. Loranthus

Choose the correct answer from the options given below

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

**Options :**

71087032149. 1  
71087032150. 2  
71087032151. 3  
71087032152. 4

**Question Number : 59 Question Id : 7108708039 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following States has the highest area under drip irrigation?

1. Maharashtra
2. Rajasthan
3. Karnataka
4. Telangana

**Options :**

71087032153. 1  
71087032154. 2  
71087032155. 3  
71087032156. 4

**Question Number : 60 Question Id : 7108708040 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

World Wetlands Day is celebrated on

1. 2<sup>nd</sup> October
2. 12<sup>th</sup> October
3. 2<sup>nd</sup> February
4. 12<sup>th</sup> February

**Options :**

71087032157. 1  
71087032158. 2

71087032159. 3

71087032160. 4

**Question Number : 61 Question Id : 7108708041 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Highest proportion of plant tissue is made up of

1. N, P, K
2. C, H, O
3. Ca, Mg, S
4. Zn, Mn, Fe

**Options :**

71087032161. 1

71087032162. 2

71087032163. 3

71087032164. 4

**Question Number : 62 Question Id : 7108708042 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Mineralisation is the process of

- A. Conversion from organic form to an inorganic form
- B. Conversion from inorganic to an organic form
- C. Conversion from oxidised form to a reduced form
- D. Conversion from reduced form to an oxidised form.

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

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

**Options :**

- 71087032165. 1
- 71087032166. 2
- 71087032167. 3
- 71087032168. 4

**Question Number : 63 Question Id : 7108708043 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Level terrace or inward sloping is suggested for

A. 6 - 50% slope

B. More than 1000 mm annual rainfall

Choose the correct answer from the options given below

1. A only
2. B only
3. Both A and B
4. Neither A nor B

**Options :**

71087032169. 1

71087032170. 2

71087032171. 3

71087032172. 4

**Question Number : 64 Question Id : 7108708044 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

If the natural flow of wind is in the E - W direction, ploughing to prevent soil erosion by wind is suggested to be made in the

1. E - W direction
2. N - S direction
3. Direction of ploughing has no effect
4. Ploughing cannot prevent soil erosion by wind

**Options :**

71087032173. 1

71087032174. 2

71087032175. 3

71087032176. 4

**Question Number : 65 Question Id : 7108708045 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

For the design of a gravel pack for the aquifer material, the sieve analysis curve is plotted on a

1. Simple graph paper
2. Semilog paper
3. Log-log paper
4. Combination of semi-log and log log paper

**Options :**

71087032177. 1

71087032178. 2

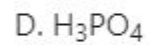
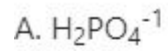
71087032179. 3

71087032180. 4

**Question Number : 66 Question Id : 7108708046 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Plant absorbable form of phosphorus in soil are



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

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

**Options :**

71087032181. 1

71087032182. 2

71087032183. 3

71087032184. 4

**Question Number : 67 Question Id : 7108708047 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



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

<b>List I</b>	<b>List II</b>
A. Nitrogen	I. Secondary nutrient
B. Calcium	II. Micronutrient
C. Aluminium	III. Macronutrient
D. Zinc	IV. Beneficial nutrient

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

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

**Options :**

71087032185. 1

71087032186. 2

71087032187. 3

71087032188. 4

**Question Number : 68 Question Id : 7108708048 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Ratoon stunting disease of sugar cane is caused by

1. Nematode
2. Fungi
3. Virus
4. Bacteria

**Options :**

71087032189. 1

71087032190. 2

71087032191. 3

71087032192. 4

**Question Number : 69 Question Id : 7108708049 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Match the scientists with their contribution to plant nutrition

List I	List II
Scientist	Contribution
A. Francis Bacon	I. Water is the sole nutrient of plants
B. Van Helmont	II. Plants contain salt, spirit and earth
C. Robert Boyle	III. Saltpeter ( $KNO_3$ ) is the principle of vegeta
D. J. R. Glauber	IV. Principle nourishment to plants is water
E. John Woodward	V. Earth is the principle of vegetation

Which of the following match is **correct** ?

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

**Options :**

71087032193. 1

71087032194. 2

71087032195. 3

71087032196. 4

**Question Number : 70 Question Id : 7108708050 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

A soil considered to be very fertile, when percent base saturation is

1. 50 - 80%
2. 30 - 50%
3. < 30%
4. > 80%

**Options :**

- 71087032197. 1
- 71087032198. 2
- 71087032199. 3
- 71087032200. 4

## **Part C Soil Science and Agricultural Chemistry**

<b>Section Id :</b>	710870201
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Display Number Panel :</b>	Yes
<b>Group All Questions :</b>	Yes
<b>Mark As Answered Required? :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	710870201
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 71 Question Id : 7108708051 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The constituents of DTPA extractant are

1. 0.05 M DTPA + 0.1 M TEA + 0.01 M CaCl<sub>2</sub>
2. 0.005 M DTPA + 0.1 M TEA + 0.01 M CaCl<sub>2</sub>
3. 0.005 M DTPA + 0.01 M TEA + 0.01 M CaCl<sub>2</sub>
4. 0.05 M DTPA + 0.1 M TEA + 0.1 M CaCl<sub>2</sub>

**Options :**

- 71087032201. 1
- 71087032202. 2
- 71087032203. 3
- 71087032204. 4

**Question Number : 72 Question Id : 7108708052 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Who gave the concept that Cation Exchange Capacity (CEC) is next to Photosynthesis?

1. R.K. Schofield
2. K. Mengel and E.A. Kirkby
3. C.E. Marshall
4. S.A. Barbar

**Options :**

- 71087032205. 1
- 71087032206. 2
- 71087032207. 3
- 71087032208. 4

**Question Number : 73 Question Id : 7108708053 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Maximum potassium fixation occurs in soils having a high content of

1. Illite
2. Amorphous clays
3. Vermiculite
4. Montmorillonite

**Options :**

71087032209. 1

71087032210. 2

71087032211. 3

71087032212. 4

**Question Number : 74 Question Id : 7108708054 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Assimilatory nitrate reduction results in the formation of

1.  $\text{NH}_3$
2.  $\text{NO}_2$
3.  $\text{N}_2$
4.  $\text{N}_2\text{O}$

**Options :**

71087032213. 1

71087032214. 2

71087032215. 3

71087032216. 4

**Question Number : 75 Question Id : 7108708055 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The characteristics of saline sodic soils are

1. EC > 4, pH < 8.5 and ESP < 15
2. EC > 4, pH < 8.5 and ESP > 15
3. EC > 4, pH > 8.5 and ESP < 15
4. EC > 4, pH > 8.5 and ESP > 15

**Options :**

71087032217. 1

71087032218. 2

71087032219. 3

71087032220. 4

**Question Number : 76 Question Id : 7108708056 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The Headquarters of International Union of Soil Science (IUSS) is at

1. Paris (France)
2. New York (USA)
3. Vienna (Austria)
4. Rome (Italy)

**Options :**

71087032221. 1

71087032222. 2

71087032223. 3

71087032224. 4

**Question Number : 77 Question Id : 7108708057 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

If concentration of  $\text{H}_2\text{PO}_4^-$  and  $\text{Ca}^{2+}$  ions increases in soil solution, then the dissolution of rock phosphate  $[\text{Ca}_{10}(\text{PO}_4)_6\text{F}_2]$

1. Increases
2. Continues at the same rate
3. Stops
4. Decreases

**Options :**

71087032225. 1  
71087032226. 2  
71087032227. 3  
71087032228. 4

**Question Number : 78 Question Id : 7108708058 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

In Nostoc, nitrogen fixation takes place in

1. *Heterocysts*
2. *Akinetes*
3. *Hormogones*
4. *Soil fungi*

**Options :**

71087032229. 1  
71087032230. 2  
71087032231. 3  
71087032232. 4

**Question Number : 79 Question Id : 7108708059 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which one of the following is  $N_2$  fixing bacteria associated with roots of  $C_4$  plants?

1. *Azospirillum*
2. *Clostridium*
3. *Azotobactor*
4. *Bacillus polymyxa*

**Options :**

71087032233. 1  
71087032234. 2  
71087032235. 3  
71087032236. 4

**Question Number : 80 Question Id : 7108708060 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Hexagonal close packing may be expressed as

1. ABABAB.....
2. ABC ABC ABC.....
3. ABABC ABABC.....
4. AA BB AA BB.....

**Options :**

71087032237. 1  
71087032238. 2  
71087032239. 3  
71087032240. 4

**Question Number : 81 Question Id : 7108708061 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



Clay in soil will fix large quantities of phosphorus when

1.  $\text{SiO}_2 : \text{R}_2\text{O}_3$  ratio is low
2.  $\text{SiO}_2 : \text{R}_2\text{O}_3$  ratio is high
3.  $\text{SiO}_2 : \text{R}_2\text{O}_3$  ratio is 1
4.  $\text{SiO}_2 : \text{R}_2\text{O}_3$  has no role in P-fixation

**Options :**

71087032241. 1

71087032242. 2

71087032243. 3

71087032244. 4

**Question Number : 82 Question Id : 7108708062 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

If the porosity of a soil mass is 32.10%, then its void ratio can be expressed in per cent as

1. 47.28
2. 52.38
3. 67.90
4. 72.80

**Options :**

71087032245. 1

71087032246. 2

71087032247. 3

71087032248. 4

**Question Number : 83 Question Id : 7108708063 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Which ion exchange reaction is widely used for heterovalent exchange?

1. Kerr equation
2. Vanselow and Gapon equation
3. Freundlich equation
4. Krishnamoorthy, Davis and Overstreet

**Options :**

71087032249. 1  
71087032250. 2  
71087032251. 3  
71087032252. 4

**Question Number : 84 Question Id : 7108708064 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The book *Chemical Equilibria in Soils* is authored by

1. K. H. Tan
2. S.A. Barber
3. W.L. Lindsay
4. J.J. Mortvedt

**Options :**

71087032253. 1  
71087032254. 2  
71087032255. 3  
71087032256. 4

**Question Number : 85 Question Id : 7108708065 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

What is the ratio of Zn, Cu and Ni toxicity in Zn-equivalent concept?

1. 1:1:1
2. 1:2:2
3. 1:8:2
4. 1:2:8

**Options :**

71087032257. 1  
71087032258. 2  
71087032259. 3  
71087032260. 4

**Question Number : 86 Question Id : 7108708066 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The bacterium which protects the rice plants from H<sub>2</sub>S injury is

1. *Thiobacillus*
2. *Dusulfovibrio*
3. *Beggiatoa*
4. *Chlorobium*

**Options :**

71087032261. 1  
71087032262. 2  
71087032263. 3  
71087032264. 4

**Question Number : 87 Question Id : 7108708067 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Short wave reflectivity from the earth's surface is termed as

1. Short-wave ray
2. Albedo
3. Ultraviolet ray
4. Infrared ray

**Options :**

71087032265. 1

71087032266. 2

71087032267. 3

71087032268. 4

**Question Number : 88 Question Id : 7108708068 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Negative adsorption is maximum in

1. Montmorillonite
2. Illite
3. Kaolinite
4. Vermiculite

**Options :**

71087032269. 1

71087032270. 2

71087032271. 3

71087032272. 4

**Question Number : 89 Question Id : 7108708069 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

The DRIS approach was given by

1. Bray
2. Beaufigs
3. Jackson
4. Nemeth

**Options :**

71087032273. 1  
71087032274. 2  
71087032275. 3  
71087032276. 4

**Question Number : 90 Question Id : 7108708070 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Soils where the composition of parent material subdues the effect of climate and vegetation, are called

1. Endo-dynamo-morphic soils
2. Ecto-dynamo-morphic soils
3. Zonal soils
4. Azonal soils

**Options :**

71087032277. 1  
71087032278. 2  
71087032279. 3  
71087032280. 4

**Question Number : 91 Question Id : 7108708071 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Well-drained soils with mean annual soil temperature 22 °C - 28 °C are termed as

1. Mesic
2. Thermic
3. Hyperthermic
4. Megathermic

**Options :**

71087032281. 1  
71087032282. 2  
71087032283. 3  
71087032284. 4

**Question Number : 92 Question Id : 7108708072 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

A group of soils similar in their differentiating characteristics and arrangements of horizons is classified as

1. Soil phases
2. Soil series
3. Soil family
4. Soil units

**Options :**

71087032285. 1  
71087032286. 2  
71087032287. 3  
71087032288. 4

**Question Number : 93 Question Id : 7108708073 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Soil represents the largest terrestrial stock of carbon holding at approximately

1. 3000 Pg
2. 1550 Pg
3. 500 Pg
4. 2000 Pg

**Options :**

71087032289. 1  
71087032290. 2  
71087032291. 3  
71087032292. 4

**Question Number : 94 Question Id : 7108708074 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following equations represent the flow of water in saturated soil?

1. Poiseuille's equation
2. Bernoulli's equation
3. Darcy's equation
4. Navier-Stokes equation

**Options :**

71087032293. 1  
71087032294. 2  
71087032295. 3  
71087032296. 4

**Question Number : 95 Question Id : 7108708075 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Time-domain reflectometry of soil moisture estimation is based on the estimation of

1. Roughness of soil surface
2. Dielectric constant
3. Thermal conductivity
4. Electrical capacity

**Options :**

71087032297. 1

71087032298. 2

71087032299. 3

71087032300. 4

**Question Number : 96 Question Id : 7108708076 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements, one is labelled as **Assertion A** and the other is labelled as

**Reason R**

**Assertion A:** Removal of  $\text{Ca}(\text{NO}_3)_2$  is a must for commercial manufacturing of Nitrophosphate fertilizer

**Reason R:** ODDA process is followed to remove  $\text{Ca}(\text{NO}_3)_2$  by cooling of mother liquor and crystallization

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

**Options :**



71087032301. 1  
71087032302. 2  
71087032303. 3  
71087032304. 4

**Question Number : 97 Question Id : 7108708077 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A:** Podzolization leads to an ash colour horizon appearing beneath the surface horizon

**Reason R:** Formation of organo-sesquioxide and organo-clay complexes in sandy and siliceous parent materials leads to podsolization

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

**Options :**

71087032305. 1  
71087032306. 2  
71087032307. 3  
71087032308. 4

**Question Number : 98 Question Id : 7108708078 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A:** Zero Point of Charge (ZPC) is the pH value at which the total positive charge is equal to the total negative charge

**Reason R:** ZPC of an oxide of a metal increases with an increase in electronegativity

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

**Options :**

71087032309. 1

71087032310. 2

71087032311. 3

71087032312. 4

**Question Number : 99 Question Id : 7108708079 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A:** Fried and Dean (1952) gave the concept of A-Value

**Reason R:** When the plant is confronted with two sources of a given nutrient, the plant will absorb from each of these in proportion to the respective amounts available

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

**Options :**

71087032313. 1

71087032314. 2

71087032315. 3

71087032316. 4

**Question Number : 100 Question Id : 7108708080 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

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

**Assertion A:** For the synthesis of  $\text{NH}_3$  by the Haber-Bosch process, hydrogen ( $\text{H}_2$ ) gas is required which comes from a hydrocarbon by the process of steam reforming and non-catalytic partial oxidation

**Reason R:** Steam reforming is an endothermic process while non-catalytic partial oxidation is an exothermic process

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

**Options :**

71087032317. 1

71087032318. 2

71087032319. 3

71087032320. 4

**Question Number : 101 Question Id : 7108708081 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** Ammonium chloride fertilizer changes its shape and chemical structure on heating

**Statement II:** Ammonium chloride fertilizer is widely used in tea gardens

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

**Options :**

71087032321. 1

71087032322. 2

71087032323. 3

71087032324. 4

**Question Number : 102 Question Id : 7108708082 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** Gelisols have permafrost within 100 cm of the soil surface

**Statement II:** Gelisols have gelic materials within 50 cm of the soil surface and permafrost within 100 cm of the soil surface

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

**Options :**

71087032325. 1

71087032326. 2

71087032327. 3

71087032328. 4

**Question Number : 103 Question Id : 7108708083 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** Cation exchange capacities of alkaline soils are commonly lower than those of acid soils with comparable soil textures

**Statement II:** High pH levels of alkaline soils stimulate high levels of pH-dependent charges on the soil colloids, especially humus

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

**Options :**

71087032329. 1

71087032330. 2

71087032331. 3

71087032332. 4

**Question Number : 104 Question Id : 7108708084 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** Organisms that use radiant energy are phototrophs while organisms utilizing chemical energy are chemotrophs

**Statement II:** Organisms that oxidise an organic form of carbon are called heterotrophs whereas organisms that oxidise inorganic compounds are lithotrophs

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

**Options :**

71087032333. 1

71087032334. 2

71087032335. 3

71087032336. 4

**Question Number : 105 Question Id : 7108708085 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**



Given below are two statements

**Statement I:** Potassium plays a major role in catalytic activities of more than 60 enzymes

**Statement II:** Potassium is a part of the chemical structure of plants

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

**Options :**

71087032337. 1

71087032338. 2

71087032339. 3

71087032340. 4

**Question Number : 106 Question Id : 7108708086 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Given below are two statements

**Statement I:** The activity of dehydrogenase reflects the total range of oxidative activity of soil microorganisms and may be considered a good indicator of the oxidative metabolisms in soils

**Statement II:** Phosphatase enzyme catalyzes the hydrolysis of organic phosphorus compounds and transforms them into inorganic phosphorous which is then assimilated by plants and microorganisms

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

**Options :**

- 71087032341. 1
- 71087032342. 2
- 71087032343. 3
- 71087032344. 4

**Question Number : 107 Question Id : 7108708087 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

The advantage of using diffusivity rather than hydraulic conductivity under unsaturated conditions is because

- A. Its range of variation is more in a given wetness range
- B. Its range of variation is less in a given wetness range
- C. The variation is uniform throughout the wetness range
- D. It varies in the same proportion as the hydraulic conductivity

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

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

**Options :**

- 71087032345. 1
- 71087032346. 2
- 71087032347. 3
- 71087032348. 4

**Question Number : 108 Question Id : 7108708088 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following are nitrifications inhibitors?

- A. 2-Chloro-6-trichloromethyl pyridine
- B. 2 Amino-4-chloro-6-methyl pyrimidine
- C. Phenyl phosphorodiamidate
- D. Dicyandiamide

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

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

**Options :**

- 71087032349. 1
- 71087032350. 2
- 71087032351. 3
- 71087032352. 4

**Question Number : 109 Question Id : 7108708089 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Commercially, urea is produced by a chemical reaction with anhydrous liquid ammonia ( $\text{NH}_3$ ) and gaseous  $\text{CO}_2$  in a reactor maintained at a

- A. Temperature of 180-200  $^\circ\text{C}$
- B. Pressure of 200-350  $\text{kg cm}^{-2}$
- C. 1:2 ratio of  $\text{CO}_2$ :  $\text{NH}_3$
- D. Temperature of 400-450  $^\circ\text{C}$

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

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

**Options :**

- 71087032353. 1
- 71087032354. 2
- 71087032355. 3
- 71087032356. 4

**Question Number : 110 Question Id : 7108708090 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Which of the following are characteristics of Kaolinite?

- A. Kaolinite exhibit a characteristic first order diffraction peak at d-spacing of 7.13 Å
- B. Heating of kaolinite at 500 °C make diffraction peak at d-spacing of 7.13 Å to disappear
- C. Kaolinite exhibit a charactersitic second-order diffraction peak at d-spacing of 3.56 Å
- D. Potassium saturation does not have any effect on d-spacing of kaolinite

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

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

**Options :**

- 71087032357. 1
- 71087032358. 2
- 71087032359. 3
- 71087032360. 4

**Question Number : 111 Question Id : 7108708091 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

Identify the correct statements

A. In a gravimetric analysis of phosphorus, the precipitated and weighed forms are  $\text{Mg}(\text{NH}_4)\text{PO}_4$  and  $\text{MgP}_2\text{O}_7$ , respectively.

B. In a simple flame photometer, an interference filter is used, while a more sophisticated flame photometer which requires better isolation of radiation, a grating monochromator is used

C. Disodium salt of ethylene diamine tetraacetic acid is widely used for complexometric titration

D. For the determination of Al or Ti by FES/AAS, a higher flame temperature of 3200 K is essential which is produced by the propane-air mixture

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

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

**Options :**

71087032361. 1

71087032362. 2

71087032363. 3

71087032364. 4

**Question Number : 112 Question Id : 7108708092 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

Amount of soil erosion (A) is expressed by Universal Soil Loss Equation (USLE) as  $A = R \times K \times LS \times C \times P$  where

A. R factor represents the rainfall erodibility

B. K factor represents the soil erosivity

C. LS factor reflects the influence of length and steepness of slope on soil erosion

D. C is cropping factor

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

1. A only

2. B only

3. C and D only

4. A and B only

**Options :**

71087032365. 1

71087032366. 2

71087032367. 3

71087032368. 4

**Question Number : 113 Question Id : 7108708093 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**



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

<b>List I</b>	<b>List II</b>
<b>(Nutrients)</b>	<b>(Essentiality of nutrients given by)</b>
A. Boron	I. C. Sprengel
B. Zinc	II. Sachs and Knop
C. Phosphorus	III. K. Warrington
D. Sulfur	IV. A. L. Sommer and C. P. Lipman

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

**Options :**

71087032369. 1  
71087032370. 2  
71087032371. 3  
71087032372. 4

**Question Number : 114 Question Id : 7108708094 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Darcy's law	I. Flux of liquid (soil water) is proportional to the hydraulic gradient
B. Fick's law	II. Flux of electric current is proportional to the potential gradient
C. Fourier's law	III. Flux of gas is proportional to the partial pressure gradient
D. Ohm's law	IV. Flux of heat is proportional to the temperature gradient

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

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

**Options :**

71087032373. 1

71087032374. 2

71087032375. 3

71087032376. 4

**Question Number : 115 Question Id : 7108708095 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Sodium	I. 285.2 nm
B. Calcium	II. 589.0 nm
C. Zinc	III. 422.7 nm
D. Magnesium	IV. 213.9 nm

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

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

**Options :**

71087032377. 1

71087032378. 2

71087032379. 3

71087032380. 4

**Question Number : 116 Question Id : 7108708096 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Redox indicator	I. Ferric alum
B. Precipitation indicator	II. $\text{KMnO}_4$
C. Self-indicator	III. Ortho-phenanthroline
D. Metal ion indicator	IV. Murexide

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

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

**Options :**

71087032381. 1

71087032382. 2

71087032383. 3

71087032384. 4

**Question Number : 117 Question Id : 7108708097 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is**

**Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Mull	I. Developed under acid litter and humus from coniferous and heath vegetation
B. Sward	II. Forest soil horizon ( $A_h$ ) intimately mixed mineral matter and amorphous humus
C. Orterde	III. Rhizogenous $A_h$ horizon in grassland
D. Mor	IV. Humus rich B horizon in Podsoles

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

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

**Options :**

71087032385. 1

71087032386. 2

71087032387. 3

71087032388. 4

**Question Number : 118 Question Id : 7108708098 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Lessivage	I. Oxisols
B. Melanization	II. Histosols
C. Paludization	III. Alfisols
D. Laterization	IV. Mollisols

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

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

**Options :**

71087032389. 1

71087032390. 2

71087032391. 3

71087032392. 4

**Question Number : 119 Question Id : 7108708099 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Bacteria	I. Jenson's free media
B. Rhizobium	II. Nutrient Agar media
C. Azotobacter	III. Potato Dextrose agar media
D. Fungi	IV. Yeast Extract Mannitol Agar (YEMA) media

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

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

**Options :**

71087032393. 1

71087032394. 2

71087032395. 3

71087032396. 4

**Question Number : 120 Question Id : 7108708100 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**Correct Marks : 4 Wrong Marks : 1**

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

<b>List I</b>	<b>List II</b>
A. Law of minimum	I. Fried & Dean
B. Critical limit	II. Cate & Nelson
C. Fertility gradient approach	III. Ramamoorthy
D. A- value	IV. Liebig

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

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

**Options :**

71087032397. 1

71087032398. 2

71087032399. 3

71087032400. 4