

PREVIEW QUESTION BANK

Module Name : PHYSICAL SCIENCE-ENG
Exam Date : 09-Jul-2023 Batch : 10:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	501	<p>Water use efficiency in increasing order</p> <p>(A) Surface Irrigation</p> <p>(B) Sprinkler Irrigation</p> <p>(C) Drip Irrigation</p> <p>(D) Pitcher pot Irrigation</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <p>1. (A), (B), (C), (D).</p> <p>2. (D), (C), (A), (B).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (C), (B), (D), (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
Objective Question				



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

List-I (Nature of reaction)	List-II (Nature of the process)
(A) Reduction of iron in waterlogged soil	(I) Argillation
(B) Leaching of dispersed particles	(II) Podsolisation
(C) Intermixing of soil horizon	(III) Gleisation
(D) Eluviation of oxides of Fe, Al & Humus	(IV) Pedoturbation

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

3	503	<p>Given below are two statements :</p> <p>Statement (I) : Saline soil has the characteristics of $EC > 4$ ds/m, $ESP > 15$, and $pH < 8.5$</p> <p>Statement (II) : Alkaline soils have the characteristics of $EC > 4$ ds/m, $ESP < 15$, and $pH > 8.5$</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none">Both Statement (I) and Statement (II) are true.Both Statement (I) and Statement (II) are false.Statement (I) is true but Statement (II) is false.Statement (I) is false but Statement (II) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

4	504	<p>What will be the soil texture if it contains 60% clay, 20% silt, and 20% sand particles ?</p> <ol style="list-style-type: none">Sandy clayClayeySilty loamLoamy sand <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

5	505	<p>The ionic product of water at ordinary temperature (25°C) is a constant value of :</p> <ol style="list-style-type: none">1. 10^{-4}2. 10^{-7}3. 10^{-8}4. 10^{-14} <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

6	506		4.0	1.00
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Match **List-I** with **List-II**

List-I (Method)	List-II (Estimation)
(A) Kjeldahl method	(I) Estimation of Soil moisture
(B) Walkley & Black method	(II) Estimation of Sedimentation of soil particals
(C) Hydrometer method	(III) Estimation of Organic Carbon
(D) Gravimetric method	(IV) Estimation of Nitrogen

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

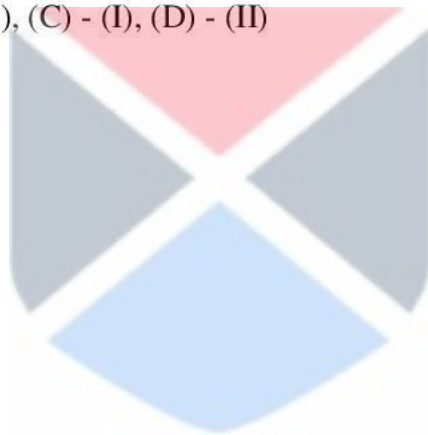
1. (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
2. (A) - (IV), (B) - (I), (C) - (III), (D) - (II)
3. (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
4. (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4



7	507	<p>Identify the copper-containing minerals.</p> <p>(A) Covellite</p> <p>(B) Azurite</p> <p>(C) Powellite</p> <p>(D) Limonite</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <ol style="list-style-type: none">1. Only (A) and (B)2. Only (B) and (C)3. Only (A) and (C)4. Only (B) and (D)	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			
Objective Question				



8	508	<p>Given below are two statements, one is labeled as Assertion (A) and the other one is labeled as Reason (R).</p> <p>Assertion (A) : The organochlorine pesticides accumulate in the fatty tissues in the human body.</p> <p>Reason (R) : Organochlorine pesticides are chemically unstable and hydrophobic.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are correct and (R) is the correct explanation of (A). Both (A) and (R) are correct and (R) is not correct explanation of (A). (A) is correct but (R) is not correct. (A) is not correct but (R) is correct. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

9	509	<p>Which of the following method likely to be used where the water supply is limited and the market value of the crop is high ?</p> <ol style="list-style-type: none"> Sprinkler irrigation Drip irrigation Furrow irrigation Surface irrigation <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

10	510	<p>Plantation of high water - consuming for withdrawal of ground water is term as :</p> <ol style="list-style-type: none">1. Surface drainage2. Bio drainage3. Sub surface drainage4. Mole drainage <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

11	511	<p>The word soil has been derived from.</p> <ol style="list-style-type: none">1. French2. Latin3. Greek4. Arabic <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

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

List-I (Name of Scientist)	List-II (Discovered)
(A) James Wilson	(I) Nitrogen-fixing bacteria
(B) Winogradsky	(II) Host plant resistance
(C) R.H. Painter	(III) Hybrid wheat
(D) S.S. Bains	(IV) Relay cropping

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I (Name of Author)	List-II (Name of Book)
(A) Rachel Carson	(I) Elements of Agricultural Chemistry
(B) Humphrey Davy	(II) Natures of plant
(C) Theophrastus	(III) Soil Genesis and classification
(D) S. Buol	(IV) Silent Spring

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

14	514	<p>The science that deals with soil genesis and classification is called as :</p> <ol style="list-style-type: none"> 1. Petrology 2. Pedology 3. Pedagology 4. Petrography <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

15	515	<p>Diseases occurring due to Ca deficiency are</p> <ol style="list-style-type: none"> (A) Hollow heart in Groundnut (B) Frenching of Citrus (C) Pod popping in Groundnut (D) Pillowing of Cucumber <p>Choose the correct answer from the options given below :</p> <ol style="list-style-type: none"> 1. Only (A) and (B) 2. Only (B) and (C) 3. Only (A) and (D) 4. Only (C) and (D) <p>A1 : 1</p> <p>A2 : 2</p>	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

16 516

4.0 1.00

Which are the fundamental soil-forming process ?

- (A) Eluviation
- (B) Illuviation
- (C) Laterization
- (D) Humification

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

17	517	<p>Suppose roots, straw, and grains of a wheat crop produce dry matter of 2.5 t/ha, 6 t/ha, and 4 t/ha containing 0.2%, 0.5%, and 1.5% N, respectively. How much total N uptake by the above-ground portion ?</p> <ol style="list-style-type: none">1. 30 kg/ha2. 60 kg/ha3. 90 kg/ha4. 120 kg/ha <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
Objective Question				



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

List-I	List-II
Instrument	Used for Measurement of
(A) Liquid Limit Device	(I) Wind speed
(B) Pycnometer	(II) Soil Plasticity
(C) Beufort scale	(III) Depth of water table
(D) Piezometer	(IV) Specific Gravity of soil

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

Assertion (A) : *Bacillus megaterium* is an efficient P-solubilizing bacteria.

Reason (R) : *Bacillus megaterium* produces different organic acids for dissolution.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

20	520	<p>Given below are two statements, one is labeled as Assertion (A), and the other one is labeled as Reason (R).</p> <p>Assertion (A) : Humic acids are more resistant than fulvic acid.</p> <p>Reason (R) : Humic acids have low molecular weight and simple structure than fulvic acids.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

21	521		4.0	1.00
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Which of the following theories are associated with humus formation ?

- (A) Polyphenol theory
- (B) Linin-protein theory
- (C) Chemiosmosis theory
- (D) Sugar-amine condensation theory

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

22 522

The Strategic Research Extension Plan (SREP) is related with

1. National Institute of Agriculture Extension Management (MANAGE).
2. Agriculture Technology Information Centre (ATIC).
3. Agriculture Technology Management Agency (ATMA).
4. National Bank for Agricultural & Rural Development (MABARD).

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

The characteristics of the Plinthite horizon are

- (A) It is rich in humus
- (B) It is rich in sesquioxide
- (C) Presence of yellowish or greyish mottles
- (D) Hardens reversibly due to repeated wetting and drying

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

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



A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(Land Capability Classes)	(Colour)
(A) Class II	(I) Green
(B) Class IV	(II) Yellow
(C) Class III	(III) Brown
(D) Class I	(IV) Pink

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(Soil Moisture Regime)	(Mean Annual Soil Temperature)
(A) MESIC	(I) 15° C to < 22° C
(B) THERMIC	(II) 8° C to < 15° C
(C) HYPERTHERMIC	(III) 28° C or more
(D) MEGHATHERMIC	(IV) 22° C to < 28° C

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

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

Assertion (A) : Universal Soil Loss Equation $A = RKLSCP$

Reason (R) : Universal soil loss equation determination for the reduction of soil erosion to tolerable limits necessitates the adoption of properly planned cropping practices and soil conservation measures.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(A) Land use	(I) Cover crop
(B) C : N ratio	(II) Hilly areas
(C) Landslide	(III) Mineralization and immobilization
(D) Soil and water conservation	(IV) Soil capability classification

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(Parameter)	(Unit)
(A) Relative Humidity	(I) Okta
(B) Temperature	(II) km/hr
(C) Wind Speed	(III) °C
(D) Cloud Cover	(IV) %

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

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

Assertion (A) : Water requirement for wheat crops varies from 300 to 600 mm.

Reason (R) : Water requirement varies depending on the soil type and rainfall and variety.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

30	530	<p>(i) Very dark, cracking clay-dominated soils; (ii) locally called regur, karail, and bhal; (iii) high clay varying from 30-60%, base-rich; (iv) occur in Maharashtra, Madhya Pradesh, Gujarat, Rajasthan, Chhattisgarh and some parts of Karnataka and T.N. is called</p> <p>(A) Black Soils</p> <p>(B) Alluvial Soils</p> <p>(C) Red Soils</p> <p>(D) Laterite and Lateritic Soils</p> <p>Choose the correct answer from the options given below :</p> <p>1. (A) only.</p> <p>2. (B) and (C) only.</p> <p>3. (D) only</p> <p>4. (B), (C) and (D) only.</p>	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			

Objective Question

31	531	<p>Objective of GIS</p> <p>(A) Maximizing the efficiency of planning and decision-making.</p> <p>(B) Providing efficient means for data distribution and handling.</p> <p>(C) Elimination of redundant database - minimize duplication.</p> <p>(D) Capacity to integrate information from many sources.</p> <p>Choose the most correct answer from the options given below :</p> <ol style="list-style-type: none"> (A), (B) and (D) only. (A), (B) and (C) only. (A), (B), (C) and (D). (B), (C) and (D) only. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

32	532	<p>Given below are two statements, one is labelled as Assertion (A) and the other one is labelled as Reason (R).</p> <p>Assertion (A) : The notation of Munsell colour chart is 2.5YR5/6.</p> <p>Reason (R) : Because hue is 2.5 YR, value is 5 and chroma is 6</p> <p>In light of the above statements, choose the correct answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. 	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

33 533

Soil Water Content increasing order

4.0 1.00

- (A) field capacity
- (B) Oven dry
- (C) Hygroscopic
- (D) Permanent wilting

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

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



A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

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

List-I	List-II
(Institutes)	(Headquarts)
(A) I I S S	(I) Hyderabad
(B) I I H R	(II) Bangalore
(C) C R I D A	(III) Jodhpur
(D) C A Z R I	(IV) Bhopal

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

35	535	<p>The characteristics of Imogolite are</p> <p>(A) They are found in Andisol</p> <p>(B) They have low bulk density and high plasticity</p> <p>(C) They have a high Potassium fixation capacity</p> <p>(D) They are paracrystalline in nature</p> <p>Choose the correct answer from the options given below :</p> <p>1. (A) and (B) only</p> <p>2. (B) and (C) only</p> <p>3. (A) and (C).only</p> <p>4. (A) and (D) only</p>	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			
Objective Question				



36	536	<p>A soil 80 cm deep has a volume water content = 0.12. Find out the quantity of water that must be added to bring the volume water content to 0.30.</p> <ol style="list-style-type: none"> 1. 9.6 2. 24.0 3. 14.4 4. 18.4 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

37	537	<p>When structure of two soils is compared, it will be better in that soil whose cumulative mean weight diameter (CMWD) is :</p> <ol style="list-style-type: none"> 1. unity 2. zero 3. lower 4. higher <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

38	538		4.0	1.00
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Unit of Mixing Ratio is

1. %
2. kg/m^3
3. kg/kg
4. m^3/m^3

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question



Match List-I with List-II

List-I	List-II
(Soil parameters)	(Measurement)
(A) Bulk Density	(I) Cl^{36}
(B) Soil water content	(II) C^{13}
(C) Seepage	(III) H^2
(D) Soil salinity	(IV) Am – Be
(E) Soil aggregation	(V) Cs^{137}

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

What is the average life of a radioactive element whose half-life of 30 days ?

1. 60.03
2. 15.21
3. 20.79
4. 43.29

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

41 541

Which of the following is a representation of vector map ?

(a) Point, (b) Pixel, (c) Polygon

1. (a) only
2. (b) only
3. (a) and (b) only
4. (a) and (c) only

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

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

List-I	List-II
(Element)	(Electronic Configuration)
(A) Mg	(I) 2, 1
(B) Na	(II) 2, 8, 7
(C) Li	(III) 2, 8, 1
(D) Cl	(IV) 2, 8, 2

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

43	543	<p>Water has Maximum density at temperature</p> <ol style="list-style-type: none">1. 273 ⁰K2. 277 ⁰K3. 289 ⁰K4. 298 ⁰K <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

44	544	<p>Normalized Difference Vegetation Index to monitor crop health is determined from</p> <ol style="list-style-type: none">1. Reflectance of red band2. Reflectance of blue and red band3. Reflectance of shortwave and red band4. Reflectance of near-infrared and red band <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

45	545	<p>Vertical movement of air and heat from earth surface to the atmosphere is</p> <ol style="list-style-type: none"> 1. Convection 2. Conduction 3. Advection 4. Sublimation <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

46	546	<p>Training dataset is used to identify desired features in remote sensed images in</p> <ol style="list-style-type: none"> 1. Supervised classification method 2. Self-learning image analysis method 3. Classification using manually 4. Un-supervised classification method <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

47	547	<p>The equation governing flow of water in saturated soil is</p> <ol style="list-style-type: none"> 1. Poiseuille's equation 2. Bernoulli equation 3. Darcy's equation 4. Navier-Stokes equation <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

48	548	<p>The capillary rise in soil (h, cm) with average pore radius (r, cm) is related as</p> <ol style="list-style-type: none"> 1. $hr = 0.15$ 2. $hr = 1.5$ 3. $hr = 0.30$ 4. $hr = 3.0$ <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

49	549	<p>The value of tortuosity in soil is</p> <ol style="list-style-type: none"> 1. 0 2. <1 3. >1 4. 1 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p>	4.0	1.00
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		A4 : 4		
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Objective Question

50	550	<p>The term “Infiltrability” is coined by</p> <ol style="list-style-type: none"> 1. Robert E. Horton 2. Daniel Hillel 3. J.R. Philip 4. Green, W. H., and G. A. Ampt <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

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

List-I	List-II
Physical parameter	Unit
(A) Surface tension	(I) Kilogram per cubic meter
(B) Viscosity	(II) Newton per meter
(C) Soil permeability	(III) Meter per hour
(D) Particle density	(IV) Pascal
(E) Soil water potential	(V) Pascal-second

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

The soil hydraulic head is expressed by

- (A) Potential energy per unit mass of soil water
- (B) Potential energy per unit volume of soil water
- (C) Potential energy per unit weight of soil water
- (D) Height of standing water on the soil surface

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



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

Assertion (A) : Soil clay has maximum influence on soil behavior.

Reason (R) : Clay has greater surface area per unit mass and is most physicochemical active.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

54	554	<p>Arrange the following soil texture with decreasing field capacity water content.</p> <p>(A) Sandy loam</p> <p>(B) Sandy</p> <p>(C) Silty loam</p> <p>(D) Clay</p> <p>(E) Clay loam</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <p>1. (A), (B), (C), (D), (E)</p> <p>2. (A), (C), (D), (E), (B)</p> <p>3. (B), (A), (C), (E), (D).</p> <p>4. (D), (E), (C), (A), (B)</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

55	555	4.0	1.00
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Given below are two statements :

Statement (I) : Alluvial soils are the largest group of soils in India.

Statement (II) : Alluvial soils are rich in nitrogen but deficient in potassium.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

56 556

Given below are two statements :

Statement (I) : At field capacity matric potential, the soil water content is higher when dry soil is getting wet.

Statement (II) : The drying of soil depends on the narrow radii of the connecting channels, whereas the wetting process depends on large pore diameters.

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

1. Both **Statement (I)** and **Statement (II)** are true.
2. Both **Statement (I)** and **Statement (II)** are false.
3. **Statement (I)** is true but **Statement (II)** is false.
4. **Statement (I)** is false but **Statement (II)** is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

Microwave remote sensing is useful in monitoring

- (A) Soil moisture
- (B) Canopy structure
- (C) Snow cover
- (D) Moisture profiling in the atmosphere
- (E) Ocean circulation

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

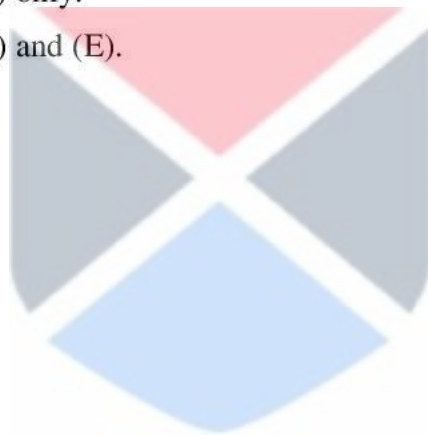
1. (A), (B) and (D) only.
2. (B), (C) and (D) only.
3. (A), (B), (C) and (D) only.
4. (A), (B), (C) and (D) and (E).

A1 : 1

A2 : 2

A3 : 3

A4 : 4





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

List-I	List-II
(Book etc.)	(Author, etc.)
(A) Soil Physics	(I) Sehgal
(B) A Text Book on Pedology	(II) Bahl and Bahl
(C) A Text Book on Organic Chemistry	(III) Chakraborty and Sahoo
(D) Fundamentals of Geographic Information System	(IV) Ghildyal and Tripathi

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Arrange the following minerals in terms of increasing stability

- (A) Biotite
- (B) Quartz
- (C) Hornblende
- (D) Muscovite

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



60	560	<p>Arrange the following atmospheric gases in terms of increasing global warming potential</p> <p>(A) CH_4</p> <p>(B) N_2O</p> <p>(C) CO_2</p> <p>(D) SF_6</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <p>1. (C), (A), (B), (D).</p> <p>2. (B), (A), (C), (D).</p> <p>3. (A), (B), (D), (C).</p> <p>4. (C), (B), (D), (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

61	561		4.0	1.00
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Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : The sky is blue due to scattering of sunlight.

Reason (R) : The sky reflects the sea and ocean, which are blue.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



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

Assertion (A) : Raster data is obtained from satellite images, aerial cameras, and scanned maps.

Reason (R) : Georeferencing allows you to viewed, query, and analyze raster data with other geographic data.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Sequence the steps for georeferencing a map in QGIS

- (A) Select transformation type
- (B) Open the image to be georeferenced
- (C) Open the map that you want to georeference
- (D) Find ground control points

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



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

Assertion (A) : Primary objective of summer ploughing is opening of the soil crust and turn the soil underneath

Reason (R) : It facilitates to sow the crops immediately after onset of monsoon

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

65	565	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Sentinel satellite mission is one of the European Space Agency's next-generation earth-observation missions.</p> <p>Reason (R) : There are six Sentinel satellites which provide free data to the user.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is correct but (R) is not correct. (A) is not correct but (R) is correct. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

66	566		4.0	1.00
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Match **List-I** with **List-II**

List-I	List-II
(Characteristic)	(Terminology)
(A) Si^{4+} is replaced by Al^{3+} ions	(I) Ionic double layer
(B) Attachment of Ca^{2+} on clay surface	(II) pH dependent charge
(C) Na^+ replacing other cations on clay surface	(III) Dispersion of clay
(D) H dissociated from hydroxyl ions on clay surface	(IV) Isomorphous substitution

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

Assertion (A) : Crop residue on soil surface in conservation tillage systems can decrease the rate of soil temperature change.

Reason (R) : Surface residue increases the reflection of incident solar radiation.

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


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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

68	568	<p>Arrange the following space mission (earlier to most recent)</p> <p>(A) Radar Imaging Satellite-1</p> <p>(B) Chandrayan-2</p> <p>(C) Mars orbital mission</p> <p>(D) Indian National Satellite-1A</p> <p>Choose the correct answer from the options given below :</p> <p>1. (A), (B), (C), (D).</p> <p>2. (D), (C), (B), (A).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (D), (A), (C), (B).</p>	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

69	569		4.0	1.00
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Order the following electromagnetic radiation in terms of their decreasing energy level

- (A) Infrared rays
- (B) Gamma rays
- (C) Visible rays
- (D) Radio waves

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



70	570	<p>Remote sensing of vegetation characteristics is obtained by using</p> <p>(A) UV rays</p> <p>(B) Visible light</p> <p>(C) Microwave</p> <p>(D) Infrared rays</p> <p>Choose the correct answer from the options given below :</p> <ol style="list-style-type: none"> (A), (B) and (D) only. (A), (B) and (C) only. (A), (B), (C) and (D). (B), (C) and (D) only. 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		



Objective Question				
71	571	<p>_____ is the determination of one or few constituents from the sample.</p> <ol style="list-style-type: none"> Partial analysis Completer analysis Proximate ultimate 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

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Objective Question

72	572	<p>The pH range at which the desirable colour change occurs for a particular indicator is _____.</p> <ol style="list-style-type: none">1. pH2. pF3. Rh4. pT <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

73	573	Equivalent weight of a salt depends on _____.	4.0	1.00
		<ol style="list-style-type: none"> 1. No. of equivalent weight of an acid that combine into salt 2. Basicity 3. Acidity 4. Weight of oxygen 		

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

74	574	Error in measurement caused by factors which vary with measurements is _____.	4.0	1.00
		<ol style="list-style-type: none"> 1. Crude error 2. Reagent error 3. Random error 4. Operational error 		
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

75	575	<p>Which of the following is true ?</p> <ol style="list-style-type: none"> 1. Uptake of Mo by plant reduces with S application 2. Boron toxicity decreases with decreasing concentration of calcium 3. Iron plays a synergistic role in relation to zinc 4. High copper in soil cause dieback in citrus <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

76	576		4.0	1.00
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Active absorption is governed by _____ theory.

1. Diffusion
2. Mass flow
3. Lecithin
4. Donnan equilibrium

A1 : 1

A2 : 2


A3 : 3

A4 : 4

Objective Question

77	577	Mass of sample in picogram method is _____ gram. 1. 1-10 2. $<10^{-12}$ 3. 10^{-6} -0.001 4. 0.05-0.5g A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

78	578		4.0	1.00
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Phosphorus is immobile in soil because

- (A) phosphate ions are held by anion exchange
- (B) Phosphate ions are held by ligand exchange
- (C) Phosphate ions are adsorbed as sparingly soluble phosphates of Fe/Al/Ca
- (D) Phosphate ions are leached as completely soluble phosphates of Fe/Al/Ca

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



79	579	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Surface tension of water is very high (72.7dynes/cm) compared to other liquids.</p> <p>Reason (R) : High attraction of water molecules for each other is because of H bond.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">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. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0 1.00
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80	580	<p>When the original value of N in urea is 46% and the estimated value is 45.5 %,then the relative error is _____%.</p> <ol style="list-style-type: none"> 0.5 1.068 0.005 0.1068 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
----	-----	---	-----	------

Objective Question

81	581	<p>Point out the mobile nutrients in soil</p> <p>(A) Cu^{2+}, NO_3^-, Fe^{2+}, H_3BO_3^-</p> <p>(B) NO_3^-, Cl^-, H_2PO_4^-, MoO_4^{2-}</p> <p>(C) NO_3^-, Cl^-, H_3BO_3^-</p> <p>(D) NO_3^-, Cl^-, H_3BO_3^-, NH_4^+</p> <p>Choose the correct answer from the options given below :</p> <ol style="list-style-type: none"> (A), (B) and (D) only. (C) only. (A), (B), (C) and (D). (A) and (D) only. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

82	582	<p>Arrange the minerals based on the descending order of weatherability</p> <p>(A) Biotite>Augite>Garnet >Quartz</p> <p>(B) Zircon>Tourmaline>Olivine> Muscovite</p> <p>(C) Albite>Ilmenite>Hornblende>Olivine</p> <p>(D) Anorthite> apatite>Zircon>Titanite</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <ol style="list-style-type: none"> Only (A) (A) and (B) (A), (B) and (C) (A), (B), (C) and (D) <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
----	-----	--	-----	------

Objective Question

83	583	<p>Quantity of Na_2CO_3 required to prepare 500 ml of 0.1N Na_2CO_3 is _____.</p> <ol style="list-style-type: none"> 2.65 0.265 26.5 0.00265 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

84 584

4.0 1.00

Estimating the colored complex with chelating agent is _____.

1. Preciptometry
2. Complexometry
3. Argentometry
4. Thiocyanometry

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question



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

List-I (Theory proposed)	List-II (Author)
(A) Father of fertilizer Chemistry	(I) Jackson
(B) Nutrient index	(II) Stanley A Barber
(C) Root interception	(III) Liebig
(D) Weathering index	(IV) Parker

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

Arrange the soil particles in the ascending order of its diameter (mm)

- (A) silt
- (B) clay
- (C) fine sand
- (D) coarse sand

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



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

List-I (Theory proposed)	List-II (Author/formula)
(A) Textural triangle	(I) Sorenson
(B) Ideal gas	(II) Schofield
(C) pH	(III) Whitney
(D) pF	(IV) $PV=nRT$

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I (Theory proposed)	List-II (Author)
(A) Contact exchange	(I) Bray
(B) Air capacity of soil	(II) Jenny and Overstreet
(C) Mobility of nutrients	(III) Mitscherlich
(D) Growth factor and yield	(IV) Khonke

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

Arrange the minerals in the order of decreasing weathering index

- (A) Kaolinite
- (B) Montmorillonite
- (C) Vermiculite
- (D) Mica

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



90	590	<p>Given below are two statements :</p> <p>Statement (I) : International pipette method is regarded as the standard method for particle size analysis due to its accuracy.</p> <p>Statement (II) : The hydrometer method is rapid but less accurate.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none">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. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
Objective Question				



Arrange the soil in the decreasing order of soil wetness

- (A) Friable/firm
- (B) Very plastic
- (C) Hard
- (D) Indurated

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4





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

List-I	List-II
Soil type	Bulk density (Mg m^{-3})
(A) Peat	(I) 2.0
(B) Compact	(II) 1.1 to 1.4
(C) Fine textured	(III) 1.4 to 1.75
(D) Coarse textured	(IV) 0.5

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

93	593	<p>Given below are two statements :</p> <p>Statement (I) : Olivine is least stable.</p> <p>Statement (II) : Has independent silica tetrahedron and held together by forming bonds with hydrolysable Magnesium or oxidisable Iron.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none">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. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
Objective Question				

94 594

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

Assertion (A) : Mobility is the overall process where by nutrients reach the root surface and sorption into plant.

Reason (R) : Mobility involves the solution or exchange of nutrients and movement to root surface.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



4.0 1.00

Objective Question

95 595

4.0 1.00

Consider the following statements :

Characteristic feature of Minerals are.

- (A) Minerals have a definite chemical composition
- (B) Minerals are inorganic in nature
- (C) The atoms that make up minerals are not arranged in an orderly pattern
- (D) Minerals are the “Building Blocks” of rocks

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



96	596	<p>When the benzene ring is a substitution in a molecule, it is known as :</p> <ol style="list-style-type: none">1. Phenyl group2. Phenol group3. Imidazole group4. Prosthetic group <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

97	597	<p>What is the common formula for the alkanes ?</p> <ol style="list-style-type: none">1. C_nH_{2n}2. C_nH_{2n+2}3. C_nH_{2n-2}4. C_nH_n <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

98	598	<p>What is the common name of Butan-1-ol ?</p> <ol style="list-style-type: none"> 1. Methanol 2. n-Butyl alcohol 3. n-Butanol n-Butyl alcohol 4. Isobutyl alcohol <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

99	599	<p>What type of covalent bonds link the amino acids in a protein ?</p> <ol style="list-style-type: none"> 1. Peptide bonds 2. Hydrogen bonds 3. Glycosidic bonds 4. Ester bonds <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

100 600

Mutations are errors in DNA that :

4.0 1.00

1. Always harmful
2. Increase tumor growth
3. Occur spontaneously at a low rate
4. Only occur on the X chromosome

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question



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

List-I	List-II
Column A	Column B
(A) n- hexadecanoic acid	(I) Watson and Crick
(B) Secondary amino group	(II) Proline
(C) Double helical DNA	(III) Palmitic acid
(D) Enantiomer	(IV) Optical isomer

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

102	602	<p>Arrange the following carbohydrate molecules in the increasing molecular weights :</p> <p>(A) Starch</p> <p>(B) Sucrose</p> <p>(C) Glucose</p> <p>(D) Amylopectin</p> <p>Choose the correct answer from the options given below :</p> <p>1. (A), (B), (C), (D)</p> <p>2. (B), (A), (C), (D)</p> <p>3. (B), (A), (D), (C)</p> <p>4. (A), (D), (C), (B)</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

103	603	<p>Arrange the following amino acids on the basis of increasing side chain size</p> <p>(A) Alanine</p> <p>(B) Glycine</p> <p>(C) Isoleucine</p> <p>(D) Leucine</p> <p>Choose the correct answer from the options given below :</p> <p>1. (A), (B), (C), (D).</p> <p>2. (B), (D), (A), (C).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (A), (D), (C), (B).</p> <p>A1 : 1</p> <p>A2 : 2</p>	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

104 604

Photochemical smog formation in urban areas is mainly due to the presence in the atmosphere of.

1. Ozone, PAN, and Nitrogen dioxide.
2. Fog and Smoke.
3. Particulates and fog.
4. Winter climate and high humidity

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

105 605

Under which law the industries likely to cause environmental pollution should be examined by

1. The Factories Act,1948
2. The Water Act 1974.
3. The Environment Protection Act 1986
4. The Air Act 1981

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

106	606	<p>Riparian Erosion occurs at</p> <ol style="list-style-type: none"> 1. Clear cut forest land 2. Harvested croplands 3. Banks of streams 4. Places having excessive grazin 	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

107	607	<p>The Environment Protection Act was enacted in India in the year</p> <ol style="list-style-type: none"> 1. 1988 2. 1987 3. 1989 4. 1986 	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108	608	<p>The process of self purification process of polluted waters can be noted by the</p> <ol style="list-style-type: none"> 1. Physical changes 2. Chemical changes 3. Biological changes 4. Physical, chemical and biological changes. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

109	609		4.0	1.00
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Which of the following is an amino acid

1. Cysteine
2. Histidine
3. Proline
4. Glycine

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

110	610	<p>Which of the following statement is incorrect :</p> <ol style="list-style-type: none"> 1. Amylose is water soluble fraction of starch 2. Amylopectin is water-insoluble fraction of starch 3. α- D Glucose units are present in amylose and amylopectin. 4. Amylose is water-insoluble fraction of starch <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

111	611	<p>In plants, the photoassimilates are translocated as</p> <ol style="list-style-type: none"> 1. Sucrose 2. Sorbitol 3. Stachyose 4. Sucrose, Sorbitol and Stachyose <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

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

List-I	List-II
(Column A)	(Columns B)
(A) DNA is found at the end of the linear eukaryotic chromosome	(I) Centromere
(B) Protein structure on eukaryotic chromosomes where spindle fiber attaches	(II) Telomere
(C) DNA site where kinetochores are found	(III) Nucleolar organizer
(D) DNA sequence that serves as the template for synthesis and amplification	(IV) Kinetochores

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

- (A) Enzymes enhance reaction rate by a factor of 2 to 10.
- (B) Activation energy of a reaction is lowered by enzymes.
- (C) Interactions between enzymes and substrates are hydrogen, ionic and hydrophobic bonds.
- (D) Substrate concentration does not affect the rate of enzyme-catalyzed reactions.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(Mineral Element)	(Function)
(A) Molybdenum	(I) Water Oxidation
(B) Manganese	(II) Chlorophyll Structure
(C) Magnesium	(III) Nitrogen fixation
(D) Zinc	(IV) Auxin Synthesis

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

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

List-I	List-II
(Discover)	(Scientist)
(A) Nutrient essentiality criteria	(I) Y.L. Nene
(B) Stages of cell	(II) Arnon and Stout
(C) Cell	(III) Robert Hooke
(D) Khaira disease	(IV) Walther Fleming

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

Which of the following group of compounds is produced by *Streptomyces hygrosopicus* ?

- Tetranactin
- Avermectins
- Strobilurins
- Milbemycin

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

117 617

Which of the following is not insecticide synergist ?

4.0 1.00

1. Dillapiole
2. Sesamol
3. Nimbinol
4. PBO

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

118	618	<p>Given below are two statements :</p> <p>Statement (I) : Black gram as a cover crop reduces surface runoff and soil loss during rainy seasons.</p> <p>Statement (II) : Black gram as a live mulch crop reduces surface runoff and soil loss during rainy seasons.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> 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. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
Objective Question			4.0	1.00
119	619			

The following is the list of pesticides

- (A) B.H.C.
- (B) D.D.T
- (C) NaCN
- (D) Heptachlor
- (E) Carbendazim

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

1. (A) to (E) Pesticide are banned for use in India
2. Only (E) is banned for use in India
3. (A) to (E) are not banned for use in India
4. (A) to (D) are banned for use in India except (E)

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Given below are Four statements :

Statement (I) : Bromadiolone is used as a rodenticide.

Statement (II) : Atrazine is a herbicide.

Statement (III) : Carbamate group of pesticides was related to the Bhopal gas incident.

Statement (IV) : Rotenone a, natural compound is used as an insecticide and herbicide.

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

1. **Statements (I) and (II) and Statements (III) and (IV)** are true.
2. **Statements (I) and (II) and Statements (III) and (IV)** are false.
3. **Statement (I)** is true but **Statement (II)** is false.
4. **Statement (III)** is false but **Statement (IV)** is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

