

PREVIEW QUESTION BANK

Module Name : Agricultural Physics-ENG
Exam Date : 14-Jul-2023 Batch : 14:30-16:30

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	2001	Choose the incorrect statement regarding the composition of election commission. 1. Appointment of the chief election commissioner and other election commissioners shall be made by the president. 2. President can also appoint regional commissioners after consultation with the election commission. 3. Conditions of service and tenure of office of the election commissioners and regional commissioners shall not be determined by the president. 4. Article 324 under constitution of India is dealing with the composition of election commission. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
2	2002	Which one of the following amendment acts is referred to as the 'mini constitution'? 1. 42nd 2. 44th 3. 46th 4. 48th A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
3	2003		4.0	1.00

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

4 2004

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

5 2005

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

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

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

6	2006	Eisenhower Cup is associated with which among the following sports? 1. Tennis 2. Chess 3. Football 4. Golf A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

7	2007	Who was the first woman President of the Indian National Congress? 1. Kasturba Gandhi 2. Sarojini Naidu 3. Annie Besant 4. Aruna Ali A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

8	2008	The dockyard was found in which of the following sites in Indus Valley Civilization? 1. Chanhudaro 2. Lothal 3. Kalibangan 4. Banawali A1 : 1	4.0	1.00
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		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
9	2009	Who built the famous Charminar of Hyderabad? - Krishndev Rai - Muhammad Quli Qutb Shah - Nadir Shah - Aurangzeb A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
10	2010	Who discovered the right triangle? - Pythagoras - Ancient Egyptians - Archimedes - Michelangelo A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
11	2011	Citrus canker is caused by - Virus - Viriod - Bacteria - Fungus	4.0	1.00

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
12	2012	DBM is a specific insect of 1. Brinjal 2. Tomato 3. Cabbage 4. Bottle gourd A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
13	2013	What is the scientific name of mulberry silkworm? 1. Bombyx mori 2. Antherea paphia 3. Antheraea assama 4. Attacus Ricinii A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
14	2014		4.0	1.00

Subject matter of economics are want, effort and

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

15 2015

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

16 2016

The oldest known agroforestry systems is

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

17	2017	The effect or requirement of the relative length of day and night on flowering is called 1. Photomechanics 2. Transpiration 3. Photoperiodism 4. Phytoperiodism A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

18	2018	Which of the following statements are true? (A) Small pores in epidermis of leaves is called stomata. (B) Guard cells present in the stomata are helpful in exchange of gases with atmosphere (C) Transpiration takes place through stomata 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), (B) and (C). A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

19	2019		4.0	1.00
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Water holding capacity is highest in which of the following soils?

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

20 2020

Certified seed is the progeny of

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

21 151001

The critical ODR value for most crop plants is

1. $0.2 \times 10^{-8} \text{ g/cm}^2\text{-min}$
2. $2.0 \times 10^{-8} \text{ g/cm}^2\text{-min}$
3. $10 \times 10^{-8} \text{ g/cm}^2\text{-min}$
4. $20 \times 10^{-8} \text{ g/cm}^2\text{-min}$

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

22	151002	Matrix potential in saturated soil is 1. Always lower than in an unsaturated soil 2. Always zero 3. Always positive 4. Always negative A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

23	151003	What is the expanded form of JPEG? 1. Joint Photographic Expansion Group 2. Joint Photographic Experts Group 3. Joint Photographs Expansion Group 4. Joint Photographic Expanded Group A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

24	151004	International pipette method of texture analysis is based on the principle of 1. Flocculation 2. Sedimentation 3. Dispersion 4. Aggregation A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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		A4 : 4		
Objective Question				
25	151005	Plant canopy analyzer instrument measures 1. Leaf Area Index 2. Leaf Area Ratio 3. Leaf Area Duration 4. Leaf Area Profile A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
26	151006	In equation $A=RKLSCP$, the term K represents 1. Rainfall erosivity 2. Soil erodibility 3. Length slope factor 4. Conservation practice factor A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
27	151007	The law which states that the rate of flow of liquid or flux through a porous media is proportional to the hydraulic gradient known as 1. Darcy's law 2. Fick's Law 3. Fourier's law 4. Stoke's law A1 : 1	4.0	1.00

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

28	151008	MODIS satellite contains how many spectral bands? 36 32 34 26 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

29	151009	High reflectance from leaves in NIR region is due to phenomenon of - Total internal reflection - Specular reflection - Polarization - Scattering A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

30	151010	How many different colors you can have in a 3 bit/pixel image? 8 16 10 255	4.0	1.00
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		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
31	151011	Given below are two statements: Statement (I) : Decrease in Instantaneous Field of View leads to finer spatial resolution Statement (II) : Decrease in Instantaneous Field of View leads to poor radiometric resolution In light of the above statements, choose the <i>most appropriate</i> answer from the options given below. - Both Statement (I) and Statement (II) are correct. - Both Statement (I) and Statement (II) are incorrect. Statement (I) is correct but Statement (II) is incorrect. Statement (I) is incorrect but Statement (II) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
32	151012	The reflectance/emittance as a function of wavelength is called as - Wavelength plot - Spectral signature - Wavelength signature - Spectral plot A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

33	151013	Meteorological satellites are generally placed in 1. Geostationary orbit 2. Geosynchronous orbit 3. Sun-synchronous orbit 4. Low earth orbit A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

34	151014	GPS is based on the principle of 1. Trilateration 2. Traversing 3. 2-D position 4. Trisection A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

35	151015	What is the primary purpose of increasing dwell time in remote sensing? 1. To capture higher quality and more detailed images 2. To reduce the amount of time required for data transmission 3. To decrease the power consumption of the remote sensing system 4. To minimize the effects of atmospheric distortion on the collected data A1 : 1 A2 : 2 A3 : 3	4.0	1.00
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		A4 : 4		
Objective Question				
36	151016	The basic principle of lysimeters is based on (A) Determining the moisture content in enclosed soil profile (B) Determining the weight of enclosed mass of soil (C) Determining temperature gradient in the soil and crop layers (D) Determining moisture gradient in the soil and crop layers Choose the correct answer from the options given below: (A), (B) and (C) only. (A) and (B) only. (A) only. (B) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
37	151017	The Crop coefficient (Kc value) is given by - Doorenbos and Kassam - Doorenbos and Pruitt - Ritchie - Watson A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
38	151018		4.0	1.00

WRSI stands for

1. Weather Requirement Standard Index
2. Water Requirement Standard Index
3. Water Requirement Satisfaction Index
4. Weather Requirement Satisfaction Index

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

39 151019

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

Assertion (A) : Kc value differs between crops and also between stages of the same crop.

Reason (R) : The value of Kc is dependent on the kind of crop as well as local climatic and irrigation management conditions.

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

40 151020

4.0 1.00

Which of the following is NOT an example of severe weather?

1. Thunderstorms
2. Heat wave
3. Hail storm
4. Fog

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

41 151021

4.0 1.00

Given below are two statements:

Statement (I) : Reference evapo-transpiration (ET_0) indicates evapo-transpiration capacity of the atmosphere

Statement (II) : Reference evapo-transpiration (ET_0) is the evapo-transpiration from any grasses

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

42 151022

4.0 1.00

Which of the following method is used for measurement of actual evapotranspiration?

1. Penman-Monteith method
2. FAO Penman-Monteith method
3. Lysimeter method
4. Remote sensing method

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
43	151023	Thornthwaite method of PET calculation is not applicable for which climate type? 1. Temperate 2. Arid 3. Per-humid 4. Mediterranean A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
44	151024	The concept of greenhouse effect was postulated by which of the following scientist? 1. L Zobler 2. Joseph Fourier 3. CC Park 4. JNN Jafer A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
45	151025		4.0	1.00

The 'still well' is a component of which instrument?

1. Evaporimeter
2. Ordinary Rain gauge
3. Lysimeter
4. AWS

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

46 151026

A strong narrow current concentrating along a quasi horizontal axis in the upper troposphere is called as

1. Jet streams
2. Fronts
3. Tropical cyclone
4. ITCZ

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

47 151027

Given below are two statements:

Statement (I) : Coriolis force a 'deflecting force" due to earth's rotation and is strongest at the poles and zero at the equator.

Statement (II) : Coriolis force a 'deflecting force" due to earth's rotation and is strongest at the equator and zero at the poles.

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.

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

48 151028

4.0 1.00

Given below are two statements:

Statement (I) : Wladimir Koppen, A Russian born meteorologist devoted his life to a scientific career in Canada and classified the climate on the basis of precipitation and rainfall.

Statement (II) : Wladimir Koppen is known as father of modern climates and devised his first climatic classification on the basis of vegetation.

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

49 151029

4.0 1.00

Given below are two statements:

Statement (I) : The light intensity, at which respiration equals to photosynthesis is called as light compensation point

Statement (II) : Light saturation point is the light intensity at which rate of photosynthesis is constant

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

50 151030

4.0 1.00

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

List-I	List-II
(A) La-Nina	(I) Deficit rainfall in India
(B) Albedo	(II) Reflectivity of total shortwave radiation
(C) Reflection coefficient	(III) Excess rainfall in India
(D) El Nino	(IV) Reflection of visible light

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

51 151031

The Royal Bengal Tiger (*Panthera tigris*) is one of the charismatic carnivores in the Indian subcontinent was declared National Animal of India in:

1. April, 1952
2. April, 1972
3. April, 1973
4. April, 1988

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

52 151032

Given below are two statements:

Statement (I) : The Forest Survey of India (FSI), founded in 1981 with headquarterd at Dehradun (Uttarakhand) is an autonomous institute under the Ministry of Environment, Forest and Climate Change, Government of India.

Statement (II) : The Indian Institute of Forest Management (IIFM), founded in 1982 with headquarterd at Bhopal (Madhya Pradesh) is an autonomous institute under the Madhya Pradesh State Forest Department, Government of Madhya Pradesh.

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				
53	151033	Eight (8) cheetahs from Namibia brought in Madhya Pradesh's Kano National Park as part of the programme to reintroduce the feline in India in: 1. March, 2023 2. January, 2023 3. November, 2022 4. September, 2022 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
54	151034	Over the last 5 biennial assessments of India's State of Forest Report (ISFR), the carbon stock of the country's forest has shown: 1. An increasing trend 2. Decreasing trend 3. Neither increasing nor decreasing trend 4. Static trend A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
55	151035	The Ministry of Environment and Forests was established in the year 1985 was renamed to the current title of Ministry of Environment, Forest and Climate Change in the year: 1. 2002 2. 2008 3. 2014 4. 2016 A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

56	151036	is the first African woman appointed as Chief Executive Officer of CIFOR-ICRAF and Director General of ICRAF (2023). 1. Dr Eliane Ubalijora 2. Dr Kaoru Kitajima 3. Dr Kathleen Merrigan 4. Dr Doris Capistrano A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

57	151037	The first Inspector General of Forests in India was: 1. R.S.Troup 2. D. Brandis 3. N.C. Brady 4. V.P. Mathur A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

58	151038	The latest 'Ramgarh Vishdhari Tiger Reserve' of India is situated in the state of and is the.....Tiger Reserve in the country. 1. Rajasthan and fifty-second 2. Gujarat Rajasthan and fifty-fourth 3. Madhya Pradesh and fifty-one 4. Assam and fifty-third	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59 151039

4.0 1.00

Given below are two statements:

Statement (I) : As per the FAO Report (2007), there are about 1200 species of bamboo in 90 genera exists across the word.

Statement (II) : India has about 125 indigenous and 11 exotic species of bamboo from 23 genera.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

60 151040

4.0 1.00

Bharat Vatika' is the first biodiversity park in which the state trees of every state and union territory has been planted is situated in the state:

1. Solan, Himachal Pradesh
2. Bhopal, Madhya Pradesh
3. Trivandrum, Kerala
4. Nainital, Uttarakhand

A1 : 1

A2 : 2

A3 : 3

		A4 : 4		
Objective Question				
61	151041	Generally, Biological Oxygen Demand (BOD) is considered as 1. NBOD 2. CBOD 3. SBOD 4. OBOD A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
62	151042	Which is the dominant source of NO_x into the atmosphere? 1. Thermal NO_x 2. Fuel NO_x 3. Atmospheric reactions 4. Photochemical Smog A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
63	151043	Which one is the best technology to treat the waste rich in organic matter? 1. Anaerobic digestion 2. Composting 3. Sanitary landfills 4. Aerobic digestion A1 : 1 A2 : 2	4.0	1.00

A3 : 3

A4 : 4

Objective Question

64 151044

4.0 1.00

What is the ideal C:N ratio for composting?

1. 25-30:1
2. 15-20:1
3. 35-40:1
4. 30-35:1

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65 151045

4.0 1.00

If different categories of threatened species are written in a sequence, what is the correct order

1. Extinct > Vulnerable > Rare > Endangered
2. Vulnerable > Rare > Endangered > Extinct
3. Vulnerable > Rare > Extinct > Endangered
4. Rare > Vulnerable > Endangered > Extinct

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

66 151046

4.0 1.00

Which of the following food chain is correct?

1. Phytoplankton → Zooplankton → Crab → Turtle
2. Phytoplankton → Zooplankton → Turtle → Crabs
3. Turtle → Crab → Zooplankton → Phytoplankton
4. Zooplankton → Turtle → Crab → Phytoplankton

A1 : 1

		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

67	151047	A major ecological community of organisms maintained under a particular climate zone with a distinct vegetation type, called as 1. Holism 2. Ecosystem 3. Biosphere 4. Biome A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

68	151048	Which of the following gases causes photochemical smog formation? 1. O₃, PAN, CO 2. O₃, PAN, NO₂ 3. O₃, PAN, NO 4. O₃, PAN, CO₂ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

69	151049		4.0	1.00
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In which group all the gases are greenhouse gases (GHGs)?

1. CO₂, CH₄, N₂O, HFCs, O₃, SF₆
2. CO₂, CH₄, N₂O, NO₂, O₃, SF₆
3. CO₂, CH₄, N₂O, HFCs, NO, SF₆
4. CO₂, CH₄, N₂O, CFCs, O₃, SF₄

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

70 151050

Which year Environment Protection Act and Environmental Impact Assessment (EIA) notification were enacted?

1. 1986 & 1991
2. 1986 & 1994
3. 1982 & 1991
4. 1986 & 1992

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

71 1003151

The internal energy of an isolated system is

1. Changeable
2. Remains constant
3. First increase then decrease
4. Increases

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

Objective Question

72 1003152

4.0 1.00

Match List-I with List-II

List-I	List-II
Thermodynamic variable	Phenomenon
(A) First law of thermodynamics	(I) Zero
(B) Second law of thermodynamics	(II) Law of conservation of energy
(C) Zero-point energy	(III) Absolute zero temperature
(D) Change in entropy of a reversible process	(IV) Change in entropy

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

73 1003153

4.0 1.00

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

Assertion (A) : The penetration power of gamma rays higher than beta particles

Reason (R) : The ionization power of gamma rays is an equivalent to alpha particles

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

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

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

Objective Question

74	1003154	In the nuclear reactions, which are correct (A) The total energy of the product particle is equal to the total energy of the initial particles (B) Total electric charge remains conserved (C) The total number of nucleons remains constant (D) The total linear momentum of product particles is not equal to the linear momentum of incident particles 1. (A), (B) and (D) only. 2. (A) and (B) only. 3. (A) and (D) only. 4. (A), (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

75	1003155	The entropy of an irreversible process is 1. Increases 2. Decreases 3. Remains constant 4. First increases then decreases A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

76	1003156	With unit change in pF (say 1 to 2), soil water suction (cm) changes by - One fold - Ten fold - Hundred fold - Thousand fold A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

77	1003157	If two tensiometers A and B are placed at 40 and 80 cm depth each, respectively indicate the same matric potential - the water will flow from A to B - the water will flow from B to A - the water can flow in any direction - the water will not flow in any direction A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

78	1003158	If hydraulic conductivity of an unsaturated soil at a given wetness is 10^{-5} cm/sec and the hydraulic diffusivity is 10^2 cm²/sec, the specific water capacity equals 10^{-2} cm⁻¹ 10^{-4} cm⁻¹ 10^{-7} cm⁻¹ 10^{-8} cm⁻¹ A1 : 1 A2 : 2	4.0	1.00
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		A3 : 3		
		A4 : 4		
Objective Question				
79	1003159	The chroma in Munsell notation 10YR 3/6 is 1. 10 2. YR 3. 3 4. 6 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
80	1003160	Distributed Temperature Sensing Systems (DTS) is based on 1. Photoelectric effect 2. Radiation effect 3. Raman effect 4. Scattering effect A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
81	1003161		4.0	1.00

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

List-I	List-II
Phenomena	Characteristics
(A) Pore size distribution	(I) Partially dried/wetted soils
(B) Scanning curve	(II) Pressure intrusion method
(C) Aluminosilicates	(III) Relative permittivity
(D) Dielectric constant	(IV) Plate/needle- like

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

82 1003162

4.0 1.00

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

List-I	List-II
Parameters	Dimensions
(A) Intrinsic permeability	(I) L
(B) Fluidity	(II) LT^{-1}
(C) Hydraulic conductivity	(III) $L^{-1}T^{-1}$
(D) Cumulative infiltration	(IV) L^2

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

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

		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		
Objective Question				
83	1003163	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Sand deposits have uniformity coefficient of less than 10 Reason (R) : Soils with more sands are nor well aggregated In light of the above statements, choose the <i>most appropriate</i> answer from the options given below: 1. (A) and (R) are true and (R) is the correct explanation of (A) 2. (A) and (R) are true and (R) is NOT the correct explanation of (A) 3. (A) is true but (R) is false 4. (A) is false but (R) is true A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
Objective Question				
84	1003164	The wavelength for emission of maximum intensity radiation of an object is governed by 1. Planck's law 2. Kirchhoff's law 3. Wien's Displacement law 4. Stefan- Boltzmann law A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00

Objective Question

85	1003165	Electromagnetic radiation can be characterized by (A) Frequency and intensity of radiation (B) Direction of travel and plane of polarization (C) Wavelength (D) Scattering Choose the correct answer from th options given below: 1. (A), (B) and (C) only. 2. (A) and (B) only. 3. (A) and (D) only. 4. (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

86	1003166	When the electric field oscillates with the direction of the electric vector in a constant direction, the wave is called (A) Linearly polarized wave (B) Plane polarized wave (C) Reflected wave (D) Scattered wave Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A) and (B) only. 3. (A) and (C) only. 4. (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

87 1003167

4.0 1.00

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

List-I	List-II
(Parameters)	(Characteristics)
(A) Radian intensity	(I) Watt/steradian
(B) Total radiant emittance	(II) $< 20 \text{ Hz}$
(C) Infrasonic radiation	(III) $3.0\text{-}5.0 \mu\text{m}$
(D) Mid wave infrared	(IV) Planck's law

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

88 1003168

4.0 1.00

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

Assertion (A) : Clouds and fog appear whitish because of a mixture of all colours in approximately equal efficiency

Reason (R) : Water droplets with diameter ranging from $5\text{-}100 \mu\text{m}$ scatter wavelengths of visible light with equal efficiency

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

89	1003169	Albedo of ploughed field varies from 1. 8-14% 2. 14-17% 3. 10-12% 4. 23-25% A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

90	1003170	A surface is said to be perfectly smooth if (A) Reflection from the surface obeys Snell's law (B) Angle of reflection is equal to angle of incidence (C) Incident ray, reflected ray and normal to the plane of incidence are in same plane (D) Incident and reflected rays are in different plane Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A) and (B) only. 3. (A) and (C) only. 4. (B) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

91	1003171		4.0	1.00
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Higher wavenumber corresponds to

1. Least energy
2. Lower energy
3. Higher energy
4. Maximum energy

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

92 1003172

4.0 1.00

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

List-I	List-II
EMR Band	Associated motion
(A) Ultraviolet-visible	(I) Molecular vibration
(B) Infrared	(II) Electronic Transition
(C) Microwave	(III) Molecular rotation
(D) Radio frequency	(IV) Nuclear spin (NMR case)

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 1003173

4.0 1.00

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

Assertion (A) : In centrifugation of solution a dense particle moves faster than a less dense one

Reason (R) : The opposing buoyant force is smaller for a dense particle

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

94 1003174

Which is/are correct about HPLC

- (A) If the stationary phase is solid, the technique (HPLC) is called adsorption chromatography
- (B) If the stationary phase is liquid, the technique (HPLC) is called partition chromatography
- (C) In HPLC only stationary phase is found
- (D) In the HPLC stationary phase may be solid or liquid

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

95	1003175	Electrophoresis is a technique in which 1. We separate or resolve charged molecules of a mixture under the influence of magnetic field 2. We separate or resolve charged molecules of a mixture under the influence of electric field 3. We separates the molecules under both electric and magnetic fields 4. We separate a single atom under the influence of magnetic field A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

96	1003176	Mass spectrometers are tools which identify and measure the constituents of a gas or liquid or even solid on the basis of 1. Product of mass and charge 2. Charge to mass ratio 3. Only charge basis 4. Mass- to- charge ratio A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

97	1003177	Consider a satellite sensor is having entrance aperture of 20 cm and placed at the altitude of 800 km. What will be the spatial resolution limit of the sensor for the central wavelength of 0.5 μm. 1. 2.8 m 2. 5.0 m 3. 3.8 m 4. 10.0 m	4.0	1.00
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		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

98	1003178	An image is having maximum and minimum radiance of 5 and 2 brightness unit, respectively. What will be the contrast ratio and contrast modulation of the image. 1. $5/2, 3/7$ 2. $2/5, 7/3$ 3. $7/3, 2/5$ 4. $7/2, 3/5$ A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

99	1003179	What parameters defines the orbit of a satellite in inertial space? (A) Right ascension of ascending node (B) Argument of perigee (C) Inclination angle Choose the correct answer from the options given below: 1. (A) only. 2. (B) only. 3. (A) and (B) only. 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

100	1003180	What phenomenon causes movement in orbital plane of a sun-synchronous satellite ? (A) Natural phenomenon of earth mass imbalance (B) Satellite is being rotated artificially (C) Sun rotate the satellite (D) Tidal movement causes movement in orbital plane Choose the correct answer from the options given below: (A) only. (B) only. (A), (B), (C) and (D). (B), (C) and (D) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

101	1003181	Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R). Assertion (A) : Wet soil generally appears darker. Reason (R) : This is because of increased reflectance in the visible region with increase in percent soil moisture. In light of the above statements, choose the most appropriate answer from the options given below. - Both (A) and (R) are correct and (R) is the correct explanation of (A). - Both (A) and (R) are correct but (R) is NOT the correct explanation of (A). (A) is correct but (R) is not correct. (A) is not correct but (R) is correct. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

102	1003182		4.0	1.00
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Remotely sensed data of five spectral channels is stored band by band for each line. What is the data format of the raster data?

- (A) BSQ
- (B) BIL
- (C) BIP
- (D) BIN

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

103 1003183

4.0 1.00

Match List-I with List-II

List-I	List-II
(Purpose)	(Method)
(A) Contrast manipulation	(I) K - cluster
(B) Spatial feature manipulation	(II) Level slicing
(C) Multi image manipulation	(III) Fourier analysis
(D) Images rectification	(IV) Destripping
(E) Image classification	(V) Band ratio

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

104 1003184

4.0 1.00

Examples of interpolation techniques are

- (A) Nearest neighbourhood
- (B) Inverse distance weighting
- (C) Kriging
- (D) Autocorrelation

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

105 1003185

4.0 1.00

NAVSTAR Global Positioning System was established in

1. 1973
2. 1873
3. 1993
4. 2011

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

106 1003186

4.0 1.00

Each GPS satellite carries _____ number of highly stable and precision atomic clocks

1. 3
2. 7
3. 9
4. 4

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

107	1003187	Variogram model is assumed to predict (A) Spatial interdependence (B) Distance weighting (C) Aspatial variation (D) Root Mean Square Error Choose the correct answer from the options given below: 1. (A), (B) and (C) only. 2. (A) only. 3. (A) and (D) only. 4. (B) and (C) only. A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

108	1003188		4.0	1.00
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List of few available software is given below:

- (A) ArcGIS
- (B) ENVI
- (C) HYDRUS
- (D) QGIS

From the list, open source software is/are

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

109 1003189

The most common datum system of the globe is

1. NAD 83
2. NAD 27
3. WGS 84
4. WGS 100

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

110 1003190

4.0 1.00

What is true about 'Corona' and 'Halo'?

- (A) Corona results from the diffraction of light by water droplet.
- (B) Halo results from the refraction of light by ice-crystals suspended in the air.
- (C) Corona results from the refraction of light by water droplet.
- (D) Halo results from the diffraction of light by ice-crystals suspended in the air.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

113 1003193

4.0 1.00

Given below are two statements:

Statement (I) : Insolation is intercepted on an area equivalent to the cross section of the earth.

Statement (II) : Atmosphere terrestrial radiation is emitted from earth surface area is four times larger than insolation intercepted on an area.

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

114 1003194

4.0 1.00

Richardson Number for characterising the state of atmospheric stability depends on

- (A) Temperature gradient
- (B) Wind gradient
- (C) Pressure gradient

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), (B) and (C) only.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

115 1003195

4.0 1.00

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

List-I	List-II
Wavelength (μm)	Effect on activity in plants
(A) 0.7 – 1.0	(I) Specific elongation effect
(B) 0.61 – 7.0	(II) Strongest absorption of chlorophyll
(C) 0.51 – 0.61	(III) Weak formative activity
(D) 0.40 – 0.51	(IV) Strong photosynthetic and formative effect
(E) 0.315 – 0.40	(V) Fluorescence in plant

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

116 1003196

4.0 1.00

Which measured of agreement between a model and measured data is not a dimensionless?

1. Root mean square error
2. Normalize root mean square error
3. D-Index
4. Modelling efficiency

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

117 1003197

4.0 1.00

What is true about system environment.

- (A) A system environment may include in the real world except the components being studied
- (B) A system environment affects the behaviour of component in the system but are not affected by them
- (C) A system environment is separated by a boundary

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

118 1003198

4.0 1.00

What is/are the reducing factor(s) at production level 2 in crop simulation model ?

- (A) Weather
- (B) Water
- (C) Nutrient
- (D) Pest

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

Objective Question

119 1003199

4.0 1.00

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

List-I	List-II
Form of model	Types
(A) Description in natural language	(I) Physical model
(B) Graphical representation of the object and relations	(II) Formal model
(C) A real physical mock-up of a real system object	(III) Conceptual model
(D) Described usually using algebraic or differential equations	(IV) Diagrammatic model

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

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

120 1003200

What process is followed for calibration of a system model?

1. Model parameterization
2. Model sensitivity analysis
3. Model validation
4. Model uncertainty analysis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00