PREVIEW QUESTION BANK(Dual)

Module Name : Environmental Sciences
Exam Date : 15-Jun-2023 Batch : 15:00-18:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negativ Marks
Objective Question				
1	89001	Second law of thermodynamics states that A. Energy flows from higher concentration to lower concentration. B. Order becomes disorder during energy transformations. C. The quality of energy degrades as it is transformed. D. Degraded energy is entropy, dessipated as waste products or heat. E. Enthalpy is wasted in energy transformation. Choose the most appropriate answer from the options given below: 1. A, B and C only 2. B, C and D only 3. A, C, D and E only 4. A, B, C, D and E only Second law of thermodynamics states that A. Energy flows from higher concentration to lower concentration. B. Order becomes disorder during energy transformations. C. The quality of energy degrades as it is transformed. D. Degraded energy is entropy, dessipated as waste products or heat. E. Enthalpy is wasted in energy transformation. Choose the most appropriate answer from the options given below: 1. A, B and C only 2. B, C and D only 3. A, C, D and E only 4. A, B, C, D and E only A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4		
Objective Question				
2	89002			

Arrange the following as a progression of relations from disciplinary reductionism to holism.

A. Cross disciplinary
B. Disciplinary
C. Interdisciplinary
D. Multi disciplinary
E. Transdisciplinary

Choose the correct answer from the options given below:

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

Arrange the following as a progression of relations from disciplinary reductionism to holism.

A. Cross disciplinary
B. Disciplinary
C. Interdisciplinary
D. Multi disciplinary
E. Transdisciplinary

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

3 89003

Which one of the following gas was not released through volcanoes around 4 billion years ago?

1. Hydrogen
2. Nitrogen
3. Oxygen
4. Carbon dioxide

Which one of the following gas was not released through volcanoes around 4 billion years ago?

1. Hydrogen
2. Nitrogen
3. Oxygen
4. Carbon dioxide

A1 : 1

1

A2 : 2

			2
		A3 :	3
			3
		A4 :	4
			4
Objective Question			
4	89004	When reduction in the ambient temperature with height r, is greater than the change in temperature with height induced by a dry adiabatic process, r_d atmosphere is said to be 1. absolutely stable. 2. dry neutral. 3. absolutely unstable. 4. conditionally unstable. When reduction in the ambient temperature with height r, is greater than the change in temperature with height induced by a dry adiabatic process, r_d atmosphere is said to be 1. absolutely stable. 2. dry neutral. 3. absolutely unstable. 4. conditionally unstable.	
		A1 :	1
			1
		A2 :	2
			2
		A3 :	3
			3
		A4 :	4
			4
Objective Question			
5	89005	Absolute humidity in atmosphere at 10°C is 5.0 g/m^3 and maximum amount of water air can hold at same temperature is 10 g m/^{3}. What will be the relative humidity at the same temperature? 1. ~20% 2. ~200% 3. ~50% 4. ~2% Absolute humidity in atmosphere at 10°C is 5.0 g/m^3 and maximum amount of water air can hold at same temperature is 10 g m/^{3}. What will be the relative humidity at the same temperature? 1. ~20% 2. ~200% 3. ~50% 4. ~2%	
		A1 :	1
			1
		A2 :	2

2

A3 : 3

3

A4 : 4

4

Objective Question

6 89006

Match List I with List II

LIST I (Satellites/platforms)		LIST II (Sensors)	
A.	IRS -P6	I.	Advanced space borne thermal emission and reflection radiometer (ASTER)
B.	Landsat 7	II.	Advanced Wide Field Sensor (AWiFS)
C.	SPOT -4	III.	Enhanced Thematic Mapper (ETM)
D.	TERRA	IV.	High Resolution Visible Infrared (HRVIR)

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I (Satellites/platforms)		LIST II (Sensors)	
A.	IRS -P6	I.	Advanced space borne thermal emission and reflection radiometer (ASTER)
B.	Landsat 7	II.	Advanced Wide Field Sensor (AWiFS)
C.	SPOT -4	III.	Enhanced Thematic Mapper (ETM)
D.	TERRA	IV.	High Resolution Visible Infrared (HRVIR)

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

7 89007

Which of the following are spatial resolutions of Terra / Aqua MODIS sensors?

A. 250 m
B. 500 m
C. 750 m
D. 1000 m
E. 1500m

Choose the correct answer from the options given below.

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

Which of the following are spatial resolutions of Terra / Aqua MODIS sensors?

A. 250 m
B. 500 m
C. 750 m
D. 1000 m
E. 1500m

Choose the correct answer from the options given below.

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

8 89008

Match List I with List II

LIST I (Weather parameter)		LIST II (Weather symbol)	
A.	Light rain	I.	
B.	Ice pellets (sleet)	II.	
C.	Showers of hail	III.	
D.	Drifting or blowing snow	IV.	

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I (Weather parameter)		LIST II (Weather symbol)	
A.	Light rain	I.	
B.	Ice pellets (sleet)	II.	
C.	Showers of hail	III.	
D.	Drifting or blowing snow	IV.	

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

9 89009

The unit of k, rate constant for first order reaction will be

1. mol cm^{-3} s^{-1}
2. mol^{-1} cm^3 s^{-1}
3. s^{-1}
4. mol^{-1} cm^3 s

The unit of k, rate constant for first order reaction will be

1. mol cm^{-3} s^{-1}
2. mol^{-1} cm^3 s^{-1}
3. s^{-1}
4. mol^{-1} cm^3 s

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

10	89010	Choose the Incorrect Statement: 1. For a system at equilibrium, chemical potential is same in all phases. 2. Gibb's free energy change is zero at equilibrium state of a system. 3. Gibb's free energy change is positive for reaction to occur spontaneously. 4. ΔG will become more negative with increasing temperature. Choose the Incorrect Statement: 1. For a system at equilibrium, chemical potential is same in all phases. 2. Gibb's free energy change is zero at equilibrium state of a system. 3. Gibb's free energy change is positive for reaction to occur spontaneously. 4. ΔG will become more negative with increasing temperature. A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
11	89011	Which of the following species in a lake/pond not a proton accepter? 1. Al^{3+} 2. Natural Organic matter 3. HS^- 4. $H_3SiO_4^-$ Which of the following species in a lake/pond not a proton accepter? 1. Al^{3+} 2. Natural Organic matter 3. HS^- 4. $H_3SiO_4^-$ A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
12	89012	

Which of the following is NOT involved/required for photochemical smog formation in ambient atmosphere?

1. Volatile organic compounds
2. Nitric and Nitrogen dioxide
3. Sulfur dioxide
4. Ozone

Which of the following is NOT involved/required for photochemical smog formation in ambient atmosphere?

1. Volatile organic compounds
2. Nitric and Nitrogen dioxide
3. Sulfur dioxide
4. Ozone

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

13 89013

Which of the following is a catalytically inactive (or reservoir) molecule containing chlorine in stratosphere?

1. HOCl
2. ClO
3. $ClONO_2$
4. Cl_2

Which of the following is a catalytically inactive (or reservoir) molecule containing chlorine in stratosphere?

1. HOCl
2. ClO
3. $ClONO_2$
4. Cl_2

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

14 89014

Given below are two statements:

Statement I: Major emission of Sulphur into the atmosphere is in the form of SO_2 but longest lived reservoir is OCS.

Statement II: Sulphur in atmosphere leads to aerosol formation and clouds and therefore, cools the planet (Negative green house effect).

In the 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 is correct.

Given below are two statements:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

15 89015

Choose the correct statements about coagulation process.

A. Coagulation makes smaller colloids to adhere to each other to form large floc particles
B. Colloids are continually involved in Brownian moment.
C. Colloids are stable because of their surface charge.
D. Coagulants are preferably trivalent cations.
E. Coagulants are soluble in neutral pH.

Choose the most appropriate answer from the options given below:

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

Choose the correct statements about coagulation process.

A. Coagulation makes smaller colloids to adhere to each other to form large floc particles
B. Colloids are continually involved in Brownian moment.
C. Colloids are stable because of their surface charge.
D. Coagulants are preferably trivalent cations.
E. Coagulants are soluble in neutral pH.

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

16 89016

Standard Bio-chemical oxygen demand test is performed in 300 ml BOD bottle at

1. 25°C after 5 days
2. 15°C after 5 days
3. 20°C after 5 days
4. ambient temperature after 5 days

Standard Bio-chemical oxygen demand test is performed in 300 ml BOD bottle at

1. 25°C after 5 days
2. 15°C after 5 days
3. 20°C after 5 days
4. ambient temperature after 5 days

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

17 89017

Given below are two statements:

Statement I : Phosphorus cycle begins when phosphorous compounds leach from rocks and minerals over long period of time.

Statement II : Phsophorus is mainly taken up by producer organism in the organic form.

In the light of the above statements, choose the correct 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

Given below are two statements:

Statement I : Phosphorus cycle begins when phosphorous compounds leach from rocks and minerals over long period of time.

Statement II : Phsophorus is mainly taken up by producer organism in the organic form.

In the light of the above statements, choose the correct 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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

18 89018

Which of the following metal is NOT used in wood preservatives?

1. Cu
2. Cr
3. As
4. Pb

Which of the following metal is NOT used in wood preservatives?

1. Cu
2. Cr
3. As
4. Pb

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

19 89019

Match List I with List II

LIST I		LIST II (Parameter)	
A.	Spectrophotometer	I.	M/z ratio measurement
B.	Ion chromatography	II.	Conductance of ions
C.	ICPMS	III.	Absorbance
D.	XRD	IV.	d-spacing

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I		LIST II (Parameter)	
A.	Spectrophotometer	I.	M/z ratio measurement
B.	Ion chromatography	II.	Conductance of ions
C.	ICPMS	III.	Absorbance
D.	XRD	IV.	d-spacing

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

20 89020

Which of the following hypothesis account for the relationship of biodiversity to ecosystem functioning?

1. Climate stability hypothesis
2. Intermediate disturbance hypothesis
3. Redundancy hypothesis
4. Spatial heterogeneity hypothesis

Which of the following hypothesis account for the relationship of biodiversity to ecosystem functioning?

1. Climate stability hypothesis
2. Intermediate disturbance hypothesis
3. Redundancy hypothesis
4. Spatial heterogeneity hypothesis

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

21 89021

Which of the following index is used for estimating population density?

1. Cycling Index
2. Biological Clock
3. Lotka Voltera Equation
4. Lincoln Index

Which of the following index is used for estimating population density?

1. Cycling Index
2. Biological Clock
3. Lotka Voltera Equation
4. Lincoln Index

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

22 89022

The stress tolerant (s) species shall have the following life history strategy.

A. Shoot morphology - dense canopy
B. Flowering - Annual monocarpic
C. Reproductive effort - small
D. Growth rate - rapid
E. Resource allocation to seed production - small

Choose the most appropriate answer from the options given below:

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

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A. Shoot morphology - dense canopy
B. Flowering - Annual monocarpic
C. Reproductive effort - small
D. Growth rate - rapid
E. Resource allocation to seed production - small

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

23 89023

Which of the following food webs are defined on the basis of the impacts of species on the structure of community?

1. Connectedness webs
2. Energy flow food webs
3. Functional food webs
4. Community food webs

Which of the following food webs are defined on the basis of the impacts of species on the structure of community?

1. Connectedness webs
2. Energy flow food webs
3. Functional food webs
4. Community food webs

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

24 89024

Who explained - "Succession is an extraordinarily mobile phenomenon whose processes are not to be stated as fixed laws, but only a general principles of exceedingly broad nature and whose results need not and frequently do not occur in any definite predictable way"?

1. F.E. Clement (Relay Floristics view)
2. F.E. Egler (Initial Floristics Composition view)
3. H.A. Gleason (Individualistic Concept)
4. D. Tilman (Resource-ratio hypothesis)

Who explained - "Succession is an extraordinarily mobile phenomenon whose processes are not to be stated as fixed laws, but only a general principles of exceedingly broad nature and whose results need not and frequently do not occur in any definite predictable way"?

1. F.E. Clement (Relay Floristics view)
2. F.E. Egler (Initial Floristics Composition view)
3. H.A. Gleason (Individualistic Concept)
4. D. Tilman (Resource-ratio hypothesis)

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

25 89025

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A: The centers of the greatest biodiversity, the mega-biodiversity regions of the world, tend to be in the tropics.

Reason R: Over long geological times, the tropical areas have had a more stable climate, never been glaciated, therefore, local species continued to thrive and live there itself.

In the 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

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R.

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Reason R: Over long geological times, the tropical areas have had a more stable climate, never been glaciated, therefore, local species continued to thrive and live there itself.

In the 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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

26 89026

Given below are two statements:

Statement I: Ecosystems are closed to flow of energy, materials and biota and are tightly bound in space and time.

Statement II: There are five dynamic interactive controls, (i.e., local climate, supply of resources, functional groups of organisms, disturbance regimes and anthropogenic activities) regulating ecosystem processes.

In the light of the above statements, choose the correct 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

Given below are two statements:

Statement I: Ecosystems are closed to flow of energy, materials and biota and are tightly bound in space and time.

Statement II: There are five dynamic interactive controls, (i.e., local climate, supply of resources, functional groups of organisms, disturbance regimes and anthropogenic activities) regulating ecosystem processes.

In the light of the above statements, choose the correct 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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

27 89027

Match List I with List II

LIST I (Region of Himalayan)		LIST II (Characteristics taxa (Plant)	
A.	Palaearctic	I.	Deodar
B.	Mediterranean	II.	Rhododendrons
C.	Indo-Malayan	III.	Dipterocarpus
D.	Indo-Chinese	IV.	Hippophae

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

Match List I with List II

LIST I (Region of Himalayan)		LIST II (Characteristics taxa (Plant)	
A.	Palaearctic	I.	Deodar
B.	Mediterranean	II.	Rhododendrons
C.	Indo-Malayan	III.	Dipterocarpus
D.	Indo-Chinese	IV.	Hippophae

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

28 89028

Dobzhansky's classifications of reproductive isolating mechanisms include :

A. Habitat selection
B. Flowering time
C. Sexual isolation
D. Isolation by pollinators
E. Hybrid vigour

Choose the most appropriate answer from the options given below:

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

Dobzhansky's classifications of reproductive isolating mechanisms include :

A. Habitat selection
B. Flowering time
C. Sexual isolation
D. Isolation by pollinators
E. Hybrid vigour

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

29 89029

Different species resemble in ecological features but form similar looking vegetation in widely separated geographical regions by assuming similar life forms under the influence of extreme climatic conditions are known as:

1. Endemics
2. Convergences
3. Speciation
4. Adaptive radiation

Different species resemble in ecological features but form similar looking vegetation in widely separated geographical regions by assuming similar life forms under the influence of extreme climatic conditions are known as:

1. Endemics
2. Convergences
3. Speciation
4. Adaptive radiation

			A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question			
30	89030	Sciophytes are: 1. Sun adapted plants 2. Shade adapted plants 3. Snow adapted plants 4. Desert adapted plants	Sciophytes are: 1. Sun adapted plants 2. Shade adapted plants 3. Snow adapted plants 4. Desert adapted plants A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question			
31	89031	Which of the following is involved in denitrification process in terrestrial environment? 1. Rhizobium 2. Spirillum Lipoferum 3. Pseudomonas 4. Nitrosomonas	Which of the following is involved in denitrification process in terrestrial environment? 1. Rhizobium 2. Spirillum Lipoferum 3. Pseudomonas 4. Nitrosomonas A1 : 1 1

		A2 : 2 2 A3 : 3 3 A4 : 4 4

Objective Question

32	89032	Arrange the following components of Tropical Rain forest in decreasing order of organic carbon accumulation. A. Leaf B. Litter C. Soil D. Wood Choose the correct answer from the options given below: 1. B, A, C, D 2. D, C, A, B 3. C, D, B, A 4. A, C, B, D

Arrange the following components of Tropical Rain forest in decreasing order of organic carbon accumulation.

A. Leaf
B. Litter
C. Soil
D. Wood

Choose the correct answer from the options given below:

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

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

Objective Question

33	89033	Which one of the following is a major feature of kandic sub-surface soil horizon? 1. Organic matter Fe and Al oxides accumulation 2. Accumulation of low activity clays 3. Hardpan, strongly cemented by silica 4. carbonate clays accumulation

Which one of the following is a major feature of kandic sub-surface soil horizon?

1. Organic matter Fe and Al oxides accumulation
2. Accumulation of low activity clays
3. Hardpan, strongly cemented by silica
4. carbonate clays accumulation

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

34 89034

Which of the following faults, responsible for earthquakes origin, is initiated only by tensile stress?

1. Normal fault
2. Thrust fault
3. Strike slip fault
4. Oblique slip fault

Which of the following faults, responsible for earthquakes origin, is initiated only by tensile stress?

1. Normal fault
2. Thrust fault
3. Strike slip fault
4. Oblique slip fault

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

35 89035

Which one of the following rock is formed at mid oceanic ridges?

1. Granite
2. Rhyolite
3. Basalt
4. Migmatite

Which one of the following rock is formed at mid oceanic ridges?

1. Granite
2. Rhyolite
3. Basalt
4. Migmatite

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

36 89036

Which one of the following has a composition of calcium phosphate?

1. Dolomite
2. Calcite
3. Aragonite
4. Apatite

Which one of the following has a composition of calcium phosphate?

1. Dolomite
2. Calcite
3. Aragonite
4. Apatite

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

37 89037

Illites contain interlayer cations of

1. Na
2. K
3. Mg
4. Fe

Illites contain interlayer cations of

1. Na
2. K
3. Mg
4. Fe

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

38 89038

Arrange the following mass movements in increasing order of velocity.

A. Rock fall
B. Earth flow
C. debris flow
D. Earth creep

Choose the correct answer from the options given below:

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

Arrange the following mass movements in increasing order of velocity.

A. Rock fall
B. Earth flow
C. debris flow
D. Earth creep

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

39 89039

Pyroxene weathers to produce

A. Silica
B. Fe-oxides
C. Bicarbonate ion
D. Smectite
E. Kaolinite

Choose the correct answer from the options given below:

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

Pyroxene weathers to produce

A. Silica
B. Fe-oxides
C. Bicarbonate ion
D. Smectite
E. Kaolinite

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

40 89040

Match List I with List II

LIST I		LIST II	
A.	Precambrian	I.	Miocene
B.	Palaeozoic	II.	Proterozoic
C.	Mesozoic	III.	Devonian
D.	Cenozoic	IV.	Jurassic

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I		LIST II	
A.	Precambrian	I.	Miocene
B.	Palaeozoic	II.	Proterozoic
C.	Mesozoic	III.	Devonian
D.	Cenozoic	IV.	Jurassic

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

41 89041

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R -

Assertion A : Glacial lakes get stratified during winters.

Reason R : Water has maximum density at $4^{o}C$.

In the 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

Given below are two statements: One is labelled as Assertion A and the other is labelled as Reason R -

Assertion A : Glacial lakes get stratified during winters.

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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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

42 89042

Arrange the following metamorphic facies in increasing order of pressure.

A. Greenschist
B. Eclogite
C. Albite-Epidote hornfels
D. Blueschist

Choose the correct answer from the options given below:

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

Arrange the following metamorphic facies in increasing order of pressure.

A. Greenschist
B. Eclogite
C. Albite-Epidote hornfels
D. Blueschist

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

43 89043

The property of an aquifer that is measure of its ability to transmit water under a sloping piezometric surface is called:

1. Transmissivity
2. Porosity
3. Hydraulic conductivity
4. Hydraulic gradient

The property of an aquifer that is measure of its ability to transmit water under a sloping piezometric surface is called:

1. Transmissivity
2. Porosity
3. Hydraulic conductivity
4. Hydraulic gradient

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

44 89044

The strong and rapidly moving circumpolar upper westerly air circulation in a narrow belt of few kilometers width in the upper limit of troposphere is called as:

1. Westerly
2. Rossby Waves
3. Thermal circulation
4. Jet stream

The strong and rapidly moving circumpolar upper westerly air circulation in a narrow belt of few kilometers width in the upper limit of troposphere is called as:

1. Westerly
2. Rossby Waves
3. Thermal circulation
4. Jet stream

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

45 89045

Which of the following conditions are observed during the phenomenon of La Nina?

1. Warming in the Atlantic Ocean.
2. Water temperature in the eastern tropical pacific is cooler than average.
3. Warming in the eastern tropical pacific ocean.
4. Water temperature in the arctic ocean is cooler than the average.

Which of the following conditions are observed during the phenomenon of La Nina?

1. Warming in the Atlantic Ocean.
2. Water temperature in the eastern tropical pacific is cooler than average.
3. Warming in the eastern tropical pacific ocean.
4. Water temperature in the arctic ocean is cooler than the average.

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

46 89046

Oil shales, which are sedimentary rocks, containing a mixture of hydrocarbon is collectively known as _____

1. Gas Hydrates
2. Kerogen
3. Coal
4. Marsh Gas

Oil shales, which are sedimentary rocks, containing a mixture of hydrocarbon is collectively known as _____

1. Gas Hydrates
2. Kerogen
3. Coal
4. Marsh Gas

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

47 89047

Which test is not required for evaluating the properties of coal for coke making?

1. Gray King
2. Swelling Number
3. Gieseler Plastometric Test
4. Rock Eval pyrolysis

Which test is not required for evaluating the properties of coal for coke making?

1. Gray King
2. Swelling Number
3. Gieseler Plastometric Test
4. Rock Eval pyrolysis

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

48 89048

The increasing order of greenhouse gases in terms of the amount of extra warming they produce in earth's atmosphere is:

A. CO_2
B. CH_4
C. N_2O
D. CFCs

Choose the correct answer from the options given below:

1. A< B< C< D
2. D < C < B < A
3. C< D < B < A
4. C < B < D <A

The increasing order of greenhouse gases in terms of the amount of extra warming they produce in earth's atmosphere is:

A. CO_2
B. CH_4
C. N_2O
D. CFCs

Choose the correct answer from the options given below:

1. A< B< C< D
2. D < C < B < A
3. C< D < B < A
4. C < B < D <A

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

49 89049

Given below are two statements:

Statement I: In terms of hydrocarbon component, natural gas as it exits from ground consist predominantly (60-90%) of CH_4 and other components include ethane, propone and two butane isomers.

Statement II: Enormous quantity of natural gas is held in methane hydrates (Clathrates) in ocean sediments and premafost.

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

1. Both Statement I and Statement II are true
2. Both Statement 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

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1. Both Statement I and Statement II are true
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3. Statement I is true but Statement II is false
4. Statement I is false but Statement II is true

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

50 89050

Fuel cell is a device that directly converts

1. Chemical energy into mechanical energy
2. Chemical energy into electric energy
3. Solar energy into electricity
4. Solar energy into mechanical energy

Fuel cell is a device that directly converts

1. Chemical energy into mechanical energy
2. Chemical energy into electric energy
3. Solar energy into electricity
4. Solar energy into mechanical energy

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

Objective Question

51	89051	Coals are generally associated with A. Limestone B. Sandstone C. Shale D. Granite E. Slate Choose the most appropriate answer from the options given below: 1. B and D only 2. B and C only 3. A and D only 4. B and E only Coals are generally associated with A. Limestone B. Sandstone C. Shale D. Granite E. Slate Choose the most appropriate answer from the options given below: 1. B and D only 2. B and C only 3. A and D only 4. B and E only A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4

Objective Question

52	89052	

The energy that a windmill can gather is proportional to the

1. second power of wind speed (v^2)
2. square of its blade length
3. third power of blade length
4. Wind speed (v)

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1. second power of wind speed (v^2)
2. square of its blade length
3. third power of blade length
4. Wind speed (v)

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

53 89053

Criteria pollutant under National Ambient Air Quality standards (NAAQ) are

A. SO_2
B. NO_x
C. NH_3
D. O_3
E. CO_2

Choose the correct answer from the options given below:

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

Criteria pollutant under National Ambient Air Quality standards (NAAQ) are

A. SO_2
B. NO_x
C. NH_3
D. O_3
E. CO_2

Choose the correct answer from the options given below:

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

A1 : 1

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

Objective Question

54	89054	Which of the following is not applicable to secondary air pollutants? 1. They are important with respect to human health. 2. They have undergone chemical /physical transformation in air. 3. They include both inorganic and organic species/compound. 4. they are non-hazardous air pollutants.

Which of the following is not applicable to secondary air pollutants?

1. They are important with respect to human health.
2. They have undergone chemical /physical transformation in air.
3. They include both inorganic and organic species/compound.
4. they are non-hazardous air pollutants.

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

Objective Question

55	89055	Air Pollution Control techniques applied to reduce gaseous pollutants in ambient atmosphere are A. Cyclone collectors B. Limestone Injection multistage Burner in thermal Power Plants C. Selective catalytic Reduction (SCR) in thermal power plants. D. Electrostatic Precipitators in thermal Power Plants E. Fabric bag filters Choose the most appropriate answer from the options given below: 1. B, C and D only 2. C and D only 3. B, C and E only 4. B and D only

Air Pollution Control techniques applied to reduce gaseous pollutants in ambient atmosphere are

A. Cyclone collectors
B. Limestone Injection multistage Burner in thermal Power Plants
C. Selective catalytic Reduction (SCR) in thermal power plants.
D. Electrostatic Precipitators in thermal Power Plants
E. Fabric bag filters

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

56 89056

Sound pressure is equal to:

1. Total atmospheric pressure only
2. Total Atmospheric Pressure minus Barometric pressure only
3. Barometric pressure only
4. Sum of total atmospheric pressure and barometric pressure

Sound pressure is equal to:

1. Total atmospheric pressure only
2. Total Atmospheric Pressure minus Barometric pressure only
3. Barometric pressure only
4. Sum of total atmospheric pressure and barometric pressure

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

57 89057

"Gas bubble disease" is caused by:

1. excess nitrite in drinking water
2. excess dissolved oxygen in drinking water
3. excess carbon dioxide in drinking water
4. excess chlorine in drinking water

"Gas bubble disease" is caused by:

1. excess nitrite in drinking water
2. excess dissolved oxygen in drinking water
3. excess carbon dioxide in drinking water
4. excess chlorine in drinking water

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

58 89058

Calculate alkalinity of a water sample having a pH of nine (9) and no carbonate or other dissolved proton donors or acceptors.

1. ~10^{-9} mol L^{-1}
2. ~$10^{-4.5}$ mol L^{-1}
3. ~10 μ mol L^{-1}
4. ~5 μ mol L^{-1}

Calculate alkalinity of a water sample having a pH of nine (9) and no carbonate or other dissolved proton donors or acceptors.

1. ~10^{-9} mol L^{-1}
2. ~$10^{-4.5}$ mol L^{-1}
3. ~10 μ mol L^{-1}
4. ~5 μ mol L^{-1}

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

59 89059

Choose the correct statement (s)

A. P occurs naturally in rocks and released in water by weathering.
B. P exist as orthophosphate and organically bound phosphate in water.
C. dissolved inorganic P is also referred as soluble reactive phosphorus.
D. P is limiting nutrient in aquatic system.
E. It is difficult to differentiate between Zooplankton-P, bacterial-P, algae-P and inorganic P.

Choose the most appropriate answer from the options given below:

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

Choose the correct statement (s)

A. P occurs naturally in rocks and released in water by weathering.
B. P exist as orthophosphate and organically bound phosphate in water.
C. dissolved inorganic P is also referred as soluble reactive phosphorus.
D. P is limiting nutrient in aquatic system.
E. It is difficult to differentiate between Zooplankton-P, bacterial-P, algae-P and inorganic P.

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

60 89060

Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Natural acidic soils are found more in tropics as a result of thousands of years of excessive weathering of soil minerals.

Reason R : Year-round high temperature and high rainfall leaches all basic cations from primary rock forming minerals.

In the 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

Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R.

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In the 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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

61 89061

Which of the following does not fall under the category of ionizing radiations?

1. Ultraviolet
2. X-rays
3. Microwave
4. Gamma rays

Which of the following does not fall under the category of ionizing radiations?

1. Ultraviolet
2. X-rays
3. Microwave
4. Gamma rays

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

62 89062

The Gaussian Plume dispersion model is applicable only when

A. Pollutant is conservative.
B. Rate of emission of pollutant is constant.
C. Emission comes from actual height of stack.
D. Pollutants are absorbed, not reflected back, after hitting the ground.
E. Temporal variations in wind speed are considered.

Choose the most appropriate answer from the options given below:

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

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A. Pollutant is conservative.
B. Rate of emission of pollutant is constant.
C. Emission comes from actual height of stack.
D. Pollutants are absorbed, not reflected back, after hitting the ground.
E. Temporal variations in wind speed are considered.

Choose the most appropriate answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

63 89063

Given below are two statements:

Statement I : Process of incineration that destroys highly toxic and hazardous organic waste differs from municipal solid waste incineration where energy is often produced.

Statement II : Incineration process cannot be used with waste that have high concentration of water and non-combustible solids.

In the light of the above statements, choose the correct answer from the options

1. Both Statement I and Statement 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

Given below are two statements:

Statement I : Process of incineration that destroys highly toxic and hazardous organic waste differs from municipal solid waste incineration where energy is often produced.

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In the light of the above statements, choose the correct answer from the options

1. Both Statement I and Statement 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

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

64 89064

In waste pollution prevention hierarchy, arrange following from the most preferred to the least preferred options.

A. Waste concentration
B. Waste separation
C. Recycling or Reuse
D. Waste treatment
E. Land filling

Choose the correct answer from the options given below:

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

In waste pollution prevention hierarchy, arrange following from the most preferred to the least preferred options.

A. Waste concentration
B. Waste separation
C. Recycling or Reuse
D. Waste treatment
E. Land filling

Choose the correct answer from the options given below:

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

A1 : 1

1

		A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
65	89065	The term used to describe the act of recovering materials from the waste stream and reprocessing them so that they can be used as raw material for new applications is called as 1. Reusing 2. Remanufacturing 3. Recycling 4. Repairing The term used to describe the act of recovering materials from the waste stream and reprocessing them so that they can be used as raw material for new applications is called as 1. Reusing 2. Remanufacturing 3. Recycling 4. Repairing A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
66	89066	The input approaches in the strategies for reducing solid waste do not involve: 1. Reduced consumption 2. Increased product durability 3. Decreased materials in product 4. Environmentally safe deposal of waste The input approaches in the strategies for reducing solid waste do not involve: 1. Reduced consumption 2. Increased product durability 3. Decreased materials in product 4. Environmentally safe deposal of waste A1 : 1 1 A2 : 2

			2
		A3 :	3
			3
		A4 :	4
			4

Objective Question

67	89067	Which of the following is dominantly released during third stage (anaerobic) of decomposition in municipal landfill? 1. Ammonia 2. Aldehyde 3. Acetic Acid 4. Methane Which of the following is dominantly released during third stage (anaerobic) of decomposition in municipal landfill? 1. Ammonia 2. Aldehyde 3. Acetic Acid 4. Methane A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4

Objective Question

68	89068	_____ technique in waste management in mainly accomplished in situ and include soil washing and the extraction of contaminant vapour from soil for highly volatile, water-insoluble contaminants such as gasoline. 1. In situ containment 2. Immobilization 3. Mobilization 4. Vitrification _____ technique in waste management in mainly accomplished in situ and include soil washing and the extraction of contaminant vapour from soil for highly volatile, water-insoluble contaminants such as gasoline. 1. In situ containment 2. Immobilization 3. Mobilization 4. Vitrification A1 : 1 1 A2 : 2 2

		A3 : 3 3 A4 : 4 4
Objective Question		
69	89069	Excavated pits, used for solid waste disposal, lined with impermeable synthetic liner and thick impermeable layers of clay are an example of 1. Sanitary landfills 2. Secured landfills 3. Underground dumps 4. Composting dumps Excavated pits, used for solid waste disposal, lined with impermeable synthetic liner and thick impermeable layers of clay are an example of 1. Sanitary landfills 2. Secured landfills 3. Underground dumps 4. Composting dumps A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
70	89070	The use of plants to absorb and accumulate hazardous materials from the soil is termed as 1. Bioremediation 2. Phytoremediation 3. Biodegradation 4. Biotransformation The use of plants to absorb and accumulate hazardous materials from the soil is termed as 1. Bioremediation 2. Phytoremediation 3. Biodegradation 4. Biotransformation A1 : 1 1 A2 : 2 2 A3 : 3

			3
			A4 : 4
			4
Objective Question			
71	89071	In an idealized Environmental Impact Assessment (EIA) process, determining the need for EIA by the regulations operating in the country at the time of assessment for the project that may have significant impacts are covered in the following step of the EIA 1. Decision making 2. Screening 3. Scoping 4. Environmental Statement Review	
		In an idealized Environmental Impact Assessment (EIA) process, determining the need for EIA by the regulations operating in the country at the time of assessment for the project that may have significant impacts are covered in the following step of the EIA 1. Decision making 2. Screening 3. Scoping 4. Environmental Statement Review	
			A1 : 1
			1
			A2 : 2
			2
			A3 : 3
			3
			A4 : 4
			4
Objective Question			
72	89072	"The formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, programme, plan or its alternatives as well as using the findings in publicly accountable decision making is called: 1. Environmental Impact Assessment (EIA) 2. Integrated Impact Assessment (IIA) 3. Ecological Impact Assessment (ECIA) 4. Strategic Environmental Impact Assessment (SEIA)	
		"The formalized, systematic and comprehensive process of evaluating the environmental impacts of a policy, programme, plan or its alternatives as well as using the findings in publicly accountable decision making is called: 1. Environmental Impact Assessment (EIA) 2. Integrated Impact Assessment (IIA) 3. Ecological Impact Assessment (ECIA) 4. Strategic Environmental Impact Assessment (SEIA)	
			A1 : 1
			1
			A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

73 89073

Match List I with List II

LIST I (Acts)		LIST II	
A.	Biological Diversity Act	I.	1972
B.	Environmental (Protection) Act	II.	1982
C.	Indian forest Act (Revised)	III.	1986
D.	Wildlife Protection Act	IV.	2002

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I (Acts)		LIST II	
A.	Biological Diversity Act	I.	1972
B.	Environmental (Protection) Act	II.	1982
C.	Indian forest Act (Revised)	III.	1986
D.	Wildlife Protection Act	IV.	2002

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

74 89074

In dose-response curve of chemical substances, there exists a dose below which none of the animal is affected, which is called as:

1. Absorbed dose
2. Threshold dose
3. Acceptable Daily Intake (ADI)
4. Toxicity Reference Dose (RfD)

In dose-response curve of chemical substances, there exists a dose below which none of the animal is affected, which is called as:

1. Absorbed dose
2. Threshold dose
3. Acceptable Daily Intake (ADI)
4. Toxicity Reference Dose (RfD)

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

75 89075

Life cycle assessment of a product includes:

A. Raw material extraction
B. Product manufacturing
C. Product remanufacture
D. Packaging and distribution
E. Product disposal

Choose the most appropriate answer from the options given below

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

Life cycle assessment of a product includes:

A. Raw material extraction
B. Product manufacturing
C. Product remanufacture
D. Packaging and distribution
E. Product disposal

Choose the most appropriate answer from the options given below

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

76 89076

In a frequency distribution table, having equally spaced class intervals, which of the following measure of central tendency requires three class interval frequencies for its estimation?

1. Mean
2. Median
3. Mode
4. Harmonic Mean

In a frequency distribution table, having equally spaced class intervals, which of the following measure of central tendency requires three class interval frequencies for its estimation?

1. Mean
2. Median
3. Mode
4. Harmonic Mean

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

77 89077

If for a data series the value of skewness is -1, then which of the following relationship between Median (Md) and Third Quartile (Q_3) holds True?

1. Md - Q_3 = 1
2. Md - Q_3 = 0
3. Md - Q_3 = -1
4. Md - Q_3 = -1.5

If for a data series the value of skewness is -1, then which of the following relationship between Median (Md) and Third Quartile (Q_3) holds True?

1. Md - Q_3 = 1
2. Md - Q_3 = 0
3. Md - Q_3 = -1
4. Md - Q_3 = -1.5

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

78 89078

Which of the following condition is FALSE from the validity point of view with respect to Chi-square as a test for 'goodness of fit'?

1. The sample observations should be independent
2. Constraints on cell frequencies, if any, should be linear (i.e. sum of observed frequencies should be equal to expected frequencies)
3. N, the total frequency should be large (> 50)
4. Some of the cell frequencies can be less than 5.

Which of the following condition is FALSE from the validity point of view with respect to Chi-square as a test for 'goodness of fit'?

1. The sample observations should be independent
2. Constraints on cell frequencies, if any, should be linear (i.e. sum of observed frequencies should be equal to expected frequencies)
3. N, the total frequency should be large (> 50)
4. Some of the cell frequencies can be less than 5.

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

79 89079

Which of the following statements are true with respect to stationary and stable population?

A. A stationary population is not always stable.
B. A stationary population is always stable.
C. A stable population need not be stationary.
D. In stationary population, the rate of overall change in the population is zero
E. In stable population, the rate of overall change in population is constant (not necessary zero)

Choose the correct answer from the options given below:

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

Which of the following statements are true with respect to stationary and stable population?

A. A stationary population is not always stable.
B. A stationary population is always stable.
C. A stable population need not be stationary.
D. In stationary population, the rate of overall change in the population is zero
E. In stable population, the rate of overall change in population is constant (not necessary zero)

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

80 89080

Match List I with List II

LIST I (Measure)		LIST II (Idea regarding distribution)	
A.	Central Tendency	I.	Degree of spread
B.	Dispersion	II.	Idea about tail of distribution
C.	Skewness	III.	Idea about peakness of the curve
D.	Kurtosis	IV.	Degree of closeness

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I (Measure)		LIST II (Idea regarding distribution)	
A.	Central Tendency	I.	Degree of spread
B.	Dispersion	II.	Idea about tail of distribution
C.	Skewness	III.	Idea about peakness of the curve
D.	Kurtosis	IV.	Degree of closeness

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

			2 A3 : 3 3 A4 : 4 4
Objective Question			
81	89081	In the application of Chi-square distribution for test of association between two characteristic (say Gender and discomfort due to humidity) arrange following steps in correct sequence A. Compare the calculated value of X^2 - statistic with tabulated value B. Set up the Null Hypothesis C. Tabulate data in the contingency table D. Divide square difference of expected frequency from observed frequency and add the values at each data point E. Calculate the expected frequencies. Choose the correct answer from the options given below: 1. D, B, C, E, A 2. B, C, E, D, A 3. B, C, D, E, A 4. A, B, C, E, D In the application of Chi-square distribution for test of association between two characteristic (say Gender and discomfort due to humidity) arrange following steps in correct sequence A. Compare the calculated value of X^2 - statistic with tabulated value B. Set up the Null Hypothesis C. Tabulate data in the contingency table D. Divide square difference of expected frequency from observed frequency and add the values at each data point E. Calculate the expected frequencies. Choose the correct answer from the options given below: 1. D, B, C, E, A 2. B, C, E, D, A 3. B, C, D, E, A 4. A, B, C, E, D	A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question			
82	89082		

Choose the correct statement(s)

A. O_3 in stratosphere is not completely effective in shielding us from UV-B
B. UV-A is biologically least harmful.
C. Chapman mechanism deals with only O_3 formation in stratosphere.
D. Sunscreen lotions either reflect or absorb or scatter UV-B and UV-A
E. UV-B helps in dissociation of O_3 molecule in stratosphere.

Choose the correct answer from the options given below.

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

Choose the correct statement(s)

A. O_3 in stratosphere is not completely effective in shielding us from UV-B
B. UV-A is biologically least harmful.
C. Chapman mechanism deals with only O_3 formation in stratosphere.
D. Sunscreen lotions either reflect or absorb or scatter UV-B and UV-A
E. UV-B helps in dissociation of O_3 molecule in stratosphere.

Choose the correct answer from the options given below.

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

83 89083

Wangari Muta Maathai, a Kenyan social, environmental and Political activist, Nobel Prize Winner, in the field of Environment Protection was related to

1. Green rating for integrated habitat assessment
2. Green Peace Movement
3. Green Accounting
4. Green Belt Movement

Wangari Muta Maathai, a Kenyan social, environmental and Political activist, Nobel Prize Winner, in the field of Environment Protection was related to

1. Green rating for integrated habitat assessment
2. Green Peace Movement
3. Green Accounting
4. Green Belt Movement

A1 : 1

			1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question			
84	89084	Which of the following is NOT listed as National Mission that comes under National Action Plan for Climate Change (NAPCC) ? 1. National Mission for a clean India 2. National Mission for a Green India 3. National Mission for sustainable habitat 4. National Mission for sustaining Himalayan ecosystem Which of the following is NOT listed as National Mission that comes under National Action Plan for Climate Change (NAPCC) ? 1. National Mission for a clean India 2. National Mission for a Green India 3. National Mission for sustainable habitat 4. National Mission for sustaining Himalayan ecosystem A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question			
85	89085	Which one of the following conservation programs recently (April 01, 2023) completed 50 years? 1. Project Elephant 2. Project Hangul 3. Project Snow Leopard 4. Project Tiger Which one of the following conservation programs recently (April 01, 2023) completed 50 years? 1. Project Elephant 2. Project Hangul 3. Project Snow Leopard 4. Project Tiger A1 : 1 1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

86 89086

Which of the following Sustainable Development Goals (SDGs) focuses on reduced inequalities?

1. SDG-10
2. SDG-3
3. SDG-5
4. SDG-7

Which of the following Sustainable Development Goals (SDGs) focuses on reduced inequalities?

1. SDG-10
2. SDG-3
3. SDG-5
4. SDG-7

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

87 89087

Match List I with List II

LIST I		LIST II	
A.	Disaster Management Act	I.	1987
B.	Kyoto Protocol	II.	2008
C.	Montreal Protocol	III.	2005
D.	National Action Plan on climate change	IV.	1997

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I		LIST II	
A.	Disaster Management Act	I.	1987
B.	Kyoto Protocol	II.	2008
C.	Montreal Protocol	III.	2005
D.	National Action Plan on climate change	IV.	1997

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

88 89088

Match List I with List II

LIST I (National Parks)		LIST II (Stages)	
A.	Balaphakram National Park	I.	Manipur
B.	Dampa National Park	II.	Meghalaya
C.	Intanki National Park	III.	Mizoram
D.	Keibul National Park	IV.	Nagaland

Choose the correct answer from the options given below:

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

Match List I with List II

LIST I (National Parks)		LIST II (Stages)	
A.	Balaphakram National Park	I.	Manipur
B.	Dampa National Park	II.	Meghalaya
C.	Intanki National Park	III.	Mizoram
D.	Keibul National Park	IV.	Nagaland

Choose the correct answer from the options given below:

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

A1 : 1

1

A2 : 2

			2
			A3 : 3
			3
			A4 : 4
			4

Objective Question

89	89089	Which of the following disasters are linked with nuclear accident? A. Bhopal Disaster, 1984 B. Chernobyl Disaster, 1986 C. Fukushima Disaster, 2011 D. Love Canal disaster, 1978 E. Minamata Disaster, 1956 Choose the correct answer from the options given below: 1. A and B only 2. B and C only 3. C and D only 4. D and E only

Which of the following disasters are linked with nuclear accident?

A. Bhopal Disaster, 1984
B. Chernobyl Disaster, 1986
C. Fukushima Disaster, 2011
D. Love Canal disaster, 1978
E. Minamata Disaster, 1956

Choose the correct answer from the options given below:

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

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

Objective Question

90	89090	In epidemiology, the study which first identify a group of individuals who have a specific disease, then attempt to ascertain commonalities in the exposure that group have experienced are referred to as 1. Toxicology study 2. Correlation study 3. Cohort study 4. Case-control study

		In epidemiology, the study which first identify a group of individuals who have a specific disease, then attempt to ascertain commonalities in the exposure that group have experienced are referred to as 1. Toxicology study 2. Correlation study 3. Cohort study 4. Case-control study A1 : 1 1 A2 : 2 2 A3 : 3 3 A4 : 4 4
Objective Question		
91	89091	Read the following passage carefully and answer the questions that follows: Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions. Air was heavier during 1. Carboniferous Period. 2. Permian Period. 3. Neogene Period. 4. Jurassic Period.

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Air was heavier during

1. Carboniferous Period.
2. Permian Period.
3. Neogene Period.
4. Jurassic Period.

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

92 89092

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Carboniferous period was characterized by

1. extensive mid latitude forests and small sized arthropods.
2. extensive desertification on the earth and absence of reptiles
3. extensive mid latitude forests and absence of reptiles
4. extensive mid latitude forests and large bodied arthropods.

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Carboniferous period was characterized by

1. extensive mid latitude forests and small sized arthropods.
2. extensive desertification on the earth and absence of reptiles
3. extensive mid latitude forests and absence of reptiles
4. extensive mid latitude forests and large bodied arthropods.

A1 : 1

1

A2 : 2

			2
		A3 :	3
			3
		A4 :	4
			4

Objective Question

93	89093	Read the following passage carefully and answer the questions that follows: Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions. Large bodied land arthropods got extinct from the blue planet because of: 1. Habitat fragmentation 2. Rise in temperature 3. Drop in atmospheric O_2 levels 4. Mass extinction

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Large bodied land arthropods got extinct from the blue planet because of:

1. Habitat fragmentation
2. Rise in temperature
3. Drop in atmospheric O_2 levels
4. Mass extinction

A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

94 89094

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Present day atmosphere O_2 levels do not permit/encourage large bodied organisms due to

1. Habitat availability
2. Physiological function restrictions
3. Life form variabilities
4. Mass extinction

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

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3. Life form variabilities
4. Mass extinction

A1 : 1

1

A2 : 2

			2
		A3 :	3
			3
		A4 :	4
			4

Objective Question

95	89095	Read the following passage carefully and answer the questions that follows: Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions. Atmospheric O_2 levels reached their highest levels during the geological time on earth ____ ago. 1. 2.2 billion years ago 2. 550 million years ago 3. 330 million years ago 4. 250 million years ago

Read the following passage carefully and answer the questions that follows:

Environmental factors may create conditions that are either negative or positive for various life forms. Free oxygen supercharged respiration and made complex life possible as atmospheric O_2 became increasingly available between 2.2 billion years (by) and 55 million years(my) ago. The O_2 approached todays levels around 550 my, when complex life began to get larger. The O_2 levels reached their highest (>1/3rd of all atmospheric gases) for all time on earth around 300 my. Bugs became bigger i.e. land arthropods were less-limited in size. Massive millipedes grew to a length of over three meters and half a meter wide. This could not happen today, it is obviously genetically possible, but it is not environmentally-possible. The bodies of spiders were as large as man's head; today's O_2 levels do not permit such a physiological possibility. Cockroaches were everywhere, and some were really large (> 10 inches long and 5 inches wide). Predatory dragonflies, flying up into new highly -oxygenated aerial environment, had wingspans exceeding two meters. The First reptiles and the amniotes egg also appeared at this time; the moisture-proof skin and egg allowed these vertebrates to truly become land animals. The warm and moist tropical environment of the Carboniferous Period (354-290 my) with the high oxygen levels (nearly 40% higher than today), gave way to a cooler and drier Permian Period (290-250 my); reptiles continued to flourish. A slight drop in atmospheric oxygen changed the conditions of life for the large land arthropods. Life goes on only if the specific conditions of life can be found. Even though there was no mass extinction at the Carboniferous-Permian transition, the high-atmospheric oxygen-dependent large land arthropods of the Carboniferous Period were never to be seen again. Smaller arthropods continue to exist in the lower atmospheric oxygen conditions.

Atmospheric O_2 levels reached their highest levels during the geological time on earth ____ ago.

1. 2.2 billion years ago
2. 550 million years ago
3. 330 million years ago
4. 250 million years ago

A1: 1

1

A2: 2

2

A3: 3

3

A4: 4

4

Objective Question

96 89096

Insert text from the attached sheet.

Earth quakes are a series of vibrations and shock waves induced by movement along faults, landslides, and other triggering mechanisms. A single earthquake may release energy equivalent to hundreds or thousands of nuclear blasts and may cost billions of rupees in damages, not to mention the toll in human suffering. The energy released by an earthquake, the magnitude, is measured on the Richter scale. In a city X, an earthquake of 8.5 on a Ritcher Scale caused significant havoc. The total economic loss was estimated to be around 20,000 crore and about 2000 individuals were affected severely, 500 extremely, and there were 50 casualties counted. The proportion of economic loss for building was 75% and rest was on livestocks. Based on the above mentioned facts answer the following questions.

The measure of 8.5 on a Ritcher scale is an example of which data type?

1. Categorical
2. Discrete
3. Continuous
4. Ratio

Insert text from the attached sheet.

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3. Continuous
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A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

97 89097

Insert text from the attached sheet.

Earth quakes are a series of vibrations and shock waves induced by movement along faults, landslides, and other triggering mechanisms. A single earthquake may release energy equivalent to hundreds or thousands of nuclear blasts and may cost billions of rupees in damages, not to mention the toll in human suffering. The energy released by an earthquake, the magnitude, is measured on the Richter scale. In a city X, an earthquake of 8.5 on a Ritcher Scale caused significant havoc. The total economic loss was estimated to be around 20,000 crore and about 2000 individuals were affected severely, 500 extremely, and there were 50 casualties counted. The proportion of economic loss for building was 75% and rest was on livestocks. Based on the above mentioned facts answer the following questions.

The data type for affected individuals (severely, extremely, casualties) is an example of which data type?

1. Binomial
2. Nominal
3. Continuous
4. Ordinal

Insert text from the attached sheet.

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A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

98 89098

Insert text from the attached sheet.

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Which of the following is most suitable for presentation of the percent distribution of economic loss due to building damage and livestocks?

1. Pie-chart
2. Line chart
3. Bar chart
4. Histogram

Insert text from the attached sheet.

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A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

99 89099

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What is the estimated cost in crore of the loss due to buildings and livestocks, respectively?

1. 10,000 and 10,000 respectively
2. 12,000 and 8,000 respectively
3. 15,000 and 5,000 respectively
4. 11,000 and 9,000 respectively

Insert text from the attached sheet.

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A1 : 1

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A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

100 89100

Insert text from the attached sheet.

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If economic loss (e-loss) is expressed in terms of linearity with building loss (b-loss) and livestock loss (l-loss) as

e-loss = b-loss + l-loss + ε (ε-error) then this relationship can be modelled by which of following regression analysis?

1. Curvilinear regression
2. Binary logistic regression
3. Simple linear regression
4. Multiple Linear regression

Insert text from the attached sheet.

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A1 : 1

1

A2 : 2

2

A3 : 3

3

A4 : 4

4

Objective Question

101 150501