

A1 VERSION CODE	ELIGIBILITY EXAMINATION-2025 PAPER-2 Total Number of Questions : 100 Maximum Marks : 200 Subject : ENVIRONMENTAL SCIENCES Subject Code : 29	Serial Number :									
	MENTION YOUR REGISTER NUMBER										
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INSTRUCTIONS FOR CANDIDATES
DOs:

1. This question booklet is issued to you at **9.55 AM** by the room invigilator.
2. Check whether the Register Number has been entered and shaded in the respective circles on the OMR answer sheet.
3. The version code of this question booklet should be entered on the OMR answer sheet and the respective circles should also be shaded completely.
4. The Version Code and Serial Number of this question booklet should also be entered on the Nominal Roll without any mistakes.
5. Compulsorily sign at the bottom portion of the OMR answer sheet in the space provided.

DON'Ts:

- **THE TIMING AND MARKS PRINTED ON THE OMR ANSWER SHEET SHOULD NOT BE DAMAGED / MUTILATED / SPOILED.**

IMPORTANT INSTRUCTIONS TO CANDIDATES

1. In case of usage of **signs and symbols** in the questions, the regular textbook connotation should be considered unless stated otherwise.
2. This question booklet contains **100** questions and each question will have one statement and four different options / responses & out of which you have to choose one correct answer.
3. **After 10.00 AM**, remove the paper seal of this question booklet and check that this booklet does not have any unprinted or torn or missing pages or items etc., if so, get it replaced by a complete test booklet within 5 minutes of the commencement of exam. Read each item and start answering on the OMR answer sheet.
4. Completely **darken / shade** the relevant circle with a **blue or black ink ballpoint pen against the question number on the OMR answer sheet.**

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⊗	②	③	④	①	②	③	④	①	●	●	●	④	①	②	③
①	●	③	④	①	②	③	④	①	②	③	④	①	②	③	④

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7. **Once the last Bell rings at 1.00 PM**, stop writing on the OMR answer sheet and hand over the **OMR answer sheet** to the room invigilator as it is.
8. After separating the top sheet (Office copy), the invigilator will return the bottom sheet replica (Candidate's copy) to you.
9. All questions carry equal marks.
10. **There will be no negative marking.**
11. Use of Mobile Phones, Calculators and other Electronic/Communication gadgets of any kind is prohibited inside the Examination venue.

DO NOT WRITE HERE

1. Match List – I with List – II:

List – I

- a) Troposphere
- b) Mesosphere
- c) Stratosphere
- d) Thermosphere

Identify the correct code:

- (1) a – iv, b – ii, c – i, d – iii
- (3) a – iii, b – ii, c – i, d – iv

List – II

- i) Average temperature – 90°C
- ii) Contains maximum atmosphere's ozone
- iii) Important weather phenomenon occurs
- iv) Outward from the mesopause

- (2) a – iii, b – i, c – ii, d – iv
- (4) a – iii, b – iv, c – i, d – ii

2. Dilution of gaseous pollutants in the atmosphere is determined by

- (1) Temperature gradient
- (2) Pollutant source
- (3) Pollutant types
- (4) Constant temperature

3. Biocentrism, Deep ecology and Holism are related to _____

- (1) Environmental Economics
- (2) Environmental Education
- (3) Sustainable Development
- (4) Environmental Ethics

4. Which of the following SDGs ensures availability of clean water and sanitation for all?

- (1) SDG 5
- (2) SDG 6
- (3) SDG 8
- (4) SDG 14

5. Match List – I with List – II.

List – I

(Elements of Earth's Crust)

- a) Oxygen
- b) Silicon
- c) Aluminium
- d) Iron
- e) Calcium

Identify the correct matching:

- (1) a – iii, b – i, c – v, d – iv, e – ii
- (3) a – iv, b – i, c – v, d – ii, e – iii

List – II

(Percentage of Elements)

- i) 8
- ii) 3
- iii) 47
- iv) 28
- v) 4

- (2) a – iv, b – i, c – v, d – iii, e – ii
- (4) a – iii, b – iv, c – i, d – v, e – ii

6. The topmost layer of the earth's surface in the land area is called as _____.
 - (1) Mantle
 - (2) Continental Crust
 - (3) Oceanic Crust
 - (4) Soil
7. A thermodynamic process which takes place at a constant temperature is referred as _____.
 - (1) Isobaric process
 - (2) Isothermal process
 - (3) Adiabatic process
 - (4) Isochoric process
8. An area of land that contains relatively similar living organisms is called as _____.
 - (1) Island
 - (2) Ecotone
 - (3) Biogeographic realm
 - (4) Ecosystem
9. Which of the following systems can exchange both energy and matter with its surroundings?
 - (1) Isolated system
 - (2) Closed system
 - (3) Open system
 - (4) Ideal system
10. The waterbody feature in real world will be represented as _____ shaped vector data in GIS.
 - (1) Point
 - (2) Line
 - (3) Polygon
 - (4) Square
11. The correct statement of comparison of ultimate BOD, COD, Theoretical Oxygen Demand (ThOD) and 5-day BOD (BOD_5) is
 - (1) $BOD_u > COD > ThOD > BOD_5$
 - (2) $ThOD > COD > BOD_u > BOD_5$
 - (3) $COD > ThOD > BOD_u > BOD_5$
 - (4) $COD > BOD_u > BOD_5 > ThOD$
12. Hazen unit is used to express _____ of water
 - (1) Turbidity
 - (2) Color
 - (3) Sedimentation
 - (4) Light
13. "The process where fill gas ions accelerated by an electric field bombard the cathode, dislodging metal atoms from its surface is referred" as
 - (1) Settling
 - (2) Sputtering
 - (3) Scattering
 - (4) Excitation

14. The solubility of a gas in water depends on
- (1) Only nature and temperature of the gas
 - (2) Temperature of the gas
 - (3) Temperature and the pressure of the gas
 - (4) The nature of the gas, the temperature and the pressure of the gas
15. In stoichiometric reaction, the coefficients would indicate the quantity of
- (1) Reactants
 - (2) Products
 - (3) Both Reactants and Products
 - (4) Neither Reactants nor Products

16. Match List – I with List – II and choose the correct answer using the codes given below:

List – I

- a) Coagulation
- b) Thermochemical reaction
- c) Flocculation
- d) Photochemical reaction

List – II

- i) Gentle mixing to bring the destabilized particles together
- ii) The process of combustion, oxidation and thermal decomposition
- iii) Destabilizing suspended particles by adding chemicals
- iv) The reaction of absorption of light energy and the formation of reactive intermediates

Codes:

- | | |
|------------------------------------|------------------------------------|
| (1) a – i, b – ii, c – iii, d – iv | (2) a – iii, b – ii, c – iv, d – i |
| (3) a – iii, b – ii, c – i, d – iv | (4) a – ii, b – iii, c – iv, d – i |

17. In nitrogen cycle, nitrosomonas convert in first step is

- (1) Nitrite convert into nitrate
- (2) Ammonia into nitrite
- (3) Ammonia into nitrate
- (4) Nitrate into nitrogen

18. The largest amount of fresh water is present in

- | | |
|----------------------------|-----------------|
| (1) Rivers | (2) Lakes |
| (3) Polar ice and glaciers | (4) Groundwater |

19. The size of particulates of H_2SO_4 fog lies in the range

- (1) 5 – 100 nm
- (2) 10 – 500 nm
- (3) 500 – 1000 nm
- (4) 1000 – 10,000 nm

20. Which of the following is a natural pesticide?

- (1) DDT
- (2) Heptachlor
- (3) Chlordane
- (4) Rotenone

21. Match List – I with List – II:

List – I

- a) Caulerpa Taxifolia
- b) White bellied Heron
- c) Euphorbia Hirta
- d) Indian Elephants

List – II

- i) Critically endangered in India
- ii) Organism exhibiting ecotypes
- iii) One of 100 worst invasive species on earth
- iv) Keystone species

Codes:

- (1) a – i, b – iii, c – iv, d – ii
- (2) a – iv, b – i, c – ii, d – iii
- (3) a – iii, b – i, c – ii, d – iv
- (4) a – ii, b – i, c – iii, d – iv

22. Consider the following statements:

Statement I: Norman Meyer in 2000, identified 25 terrestrial hotspots of biodiversity all over the world.

Statement II: North American coastal plain was recognized as hotspot of biodiversity in 2016.

Statement III: Before recognizing this above hotspot of biodiversity, a total hotspot of biodiversity of the world was 34.

Which one of the following statement/statements is/are correct?

- (1) Both the statements I and II are correct and III is wrong
- (2) Both the statements II and III are correct and I is wrong
- (3) Both the statements I and III are correct and II is wrong
- (4) Both the statements I and II are wrong and III is correct

23. Which of the following is the classical Levins metapopulation?
- (1) A metapopulation distributed over many patches with significantly less interaction between patches than within a patch
 - (2) In this, colonization comes from a single source, which constantly supplies immigrants to all small patches
 - (3) Local population exists, but patches are so well-connected via dispersal
 - (4) Local population exists, but patches that go extinct are rarely recolonized due to the distance between the patches that are more than the dispersal ability
24. Which of the following traits is a key characteristic of r-selected species?
- (1) Late maturity and reproduction with high parental care
 - (2) Climax species with long life spans
 - (3) High investment in individual offspring and maximum population in undisturbed habitats
 - (4) Early maturity, rapid reproduction with small body size and more juvenile mortality
25. The _____ zone is the home of greater variety of consumers than the other zones in lake.
- (1) Limnetic
 - (2) Profundal
 - (3) Littoral
 - (4) Benthic
26. Which of the following is not entirely a true fact in the ecosystem?
- (1) Resource partitioning among the competing species in a single environment is a mechanism for the co-existence
 - (2) If realized niche of competing species are exactly the same, then both of them cannot co-exist
 - (3) If fundamental niche of competing species are exactly same, then both of them may co-exist
 - (4) If both the fundamental and realized niches of competing species are exactly the same, then both the species can co-exist
27. Match the biosphere reserve with the year of establishment in India.
- | Biosphere Reserve | Year of Establishment |
|-------------------|-----------------------|
| a) Nilgiri | i) 1989 |
| b) Gulf of Mannar | ii) 1986 |
| c) Agasthyamalai | iii) 2011 |
| d) Panna | iv) 2001 |
- Codes:
- (1) a – i, b – ii, c – iv, d – iii
 - (2) a – ii, b – iii, c – iv, d – i
 - (3) a – ii, b – i, c – iv, d – iii
 - (4) a – iii, b – ii, c – i, d – iv

28. _____ is an anaerobic bacterium that converts mercury to methylmercury, which is subsequently converted into mercuric ion by _____

- (1) Pseudomonas species and Desulfovibrio desulfuricans
- (2) Bacillus sp. and Agrobacterium sp.
- (3) Desulfovibrio desulfuricans and Pseudomonas sp.
- (4) Agrobacterium sp. and Bacillus sp.

29. Which is the provisioning service of the ecosystem?

- (1) Purification of water
- (2) Genetic resources
- (3) Nutrient cycling
- (4) Recreational experiences

30. The total carbon stock in forests of India as per State Forest Report, 2023 is _____.

- (1) 8025.5 million tonnes
- (2) 7285.5 million tonnes
- (3) 7556.7 million tonnes
- (4) 7748.5 million tonnes

31. In Sulfur cycle, the Biogeochemical cycle involves which of the following steps?

- (1) Mineralization, Immobilization, Oxidation, Reduction
- (2) Mineralization, Oxidation, Immobilization, Reduction
- (3) Mineralization, Reduction, Immobilization, Oxidation
- (4) Oxidation, Reduction, Mineralization, Immobilization

32. Match List – I with List – II:

Material	Process of formation
a) Basalt	i) Formed from frothy lava
b) Pumice	ii) Formed from rapidly cooling lava with minimal crystallization
c) Obsidian	iii) Formed from metamorphic transformation of limestone
d) Marble	iv) Formed from rapidly cooling lava

Codes:

- (1) a – iv, b – i, c – ii, d – iii
- (2) a – i, b – ii, c – iii, d – iv
- (3) a – ii, b – iii, c – iv, d – i
- (4) a – iii, b – ii, c – iv, d – i

33. Ghyben-Herzberg principle is based on
- | | |
|---------------------|-----------------------------|
| (1) Capillary Water | (2) Hydrostatic Equilibrium |
| (3) Osmosis | (4) Evaporation |
34. Red soil is predominantly present in which of the following states?
- (1) Punjab
 - (2) Karnataka
 - (3) West Bengal
 - (4) Bihar
35. Rocks formed from the accumulation of plants and animal debris is known as _____
- (1) Igneous rock
 - (2) Volcanic rock
 - (3) Metamorphic rock
 - (4) Organically formed sedimentary rocks
36. In the secondary waste water treatment process, which of the following pollutants are removed?
- (1) Large suspended particles
 - (2) Colloidal and dissolved organic matter
 - (3) Settleable organic matter
 - (4) Microplastics
37. The process of water being transferred to the atmosphere from both soil evaporation and plant transpiration is called
- (1) Evaporation
 - (2) Evapotranspiration
 - (3) Transpiration
 - (4) Guttation
38. The process of incorporation of water molecule into the mineral structure without decomposition is known as
- | | |
|-------------------|----------------|
| (1) Hydration | (2) Hydrolysis |
| (3) Hydrogenation | (4) Oxidation |

39. Statement I: El Nino: Climate pattern cooler than average surface temperatures in the eastern Pacific Ocean.

Statement II: La Nina: Climate pattern warmer than average surface temperature in the eastern Pacific Ocean.

- (1) Statement I is correct and II is wrong
- (2) Statement I is wrong and II is correct
- (3) Both the Statements are correct
- (4) Both the Statements are wrong

40. With reference to the Koppen's climatic classifications, match the following:

Group label

Nomenclature

a) A

i) Dry climate

b) B

ii) Cold snow climate

c) C

iii) Tropical climate

d) D

iv) Warm temperate climate

Codes:

(1) a – iii, b – i, c – iv, d – ii

(2) a – ii, b – i, c – iii, d – iv

(3) a – i, b – iii, c – ii, d – iv

(4) a – iv, b – ii, c – iii, d – i

41. With reference to the electromagnetic spectrum, arrange the following from longest to shortest wavelengths.

(1) Radio, Visible, Infrared, Microwave

(2) Microwave, Infrared, Visible, Radio

(3) Radio, Microwave, Infrared, Visible

(4) Visible, Infrared, Radio, Microwave

42. With reference to coal at the global level, match the coal type with carbon content.

Coal type

Percent of carbon content

a) Bituminous

i) 35 – 45

b) Sub-bituminous

ii) 25 – 35

c) Anthracite

iii) 86 – 97

d) Lignite

iv) 45 – 86

Codes:

(1) a – ii, b – iii, c – i, d – iv

(2) a – iii, b – iv, c – ii, d – i

(3) a – iv, b – i, c – iii, d – ii

(4) a – i, b – ii, c – iv, d – iii

43. Consider the following statements with reference to fossil fuels and identify the correct statements.
- The total heat released when a fuel is completely burned, including the heat released when the water vapour produced during combustion condenses is called Gross Calorific Value (GCV)
 - Net Calorific Value (NCV) is more a practical measure of heat available in a fuel.
 - NCV is typically 45% to 65% less than GCV for many fuels.
 - GCV calculations assume that all water vapour produced during combustion is fully condensed.
- Options i and ii are correct; iii and iv are incorrect
 - Options i, ii and iv are correct; iii is incorrect
 - Options i and iii are incorrect; ii and iv are correct
 - Options ii, iii and iv are correct; i is incorrect
44. Choose the correct statements from the following:
- Shale oil and gas are obtained from sedimentary rock formation.
 - Cauvery basin and Krishna-Godavari basin both have shale oil and gas resources.
 - Shale oil has greater calorific value than coal.
 - The most common method of extracting shale oil is by surface mining.
- Options i, ii and iv are correct
 - Options ii, iii and iv are correct
 - Options i, ii and iii are correct
 - Options i, iii and iv are correct
45. Barrages, fences and turbines are commonly used in the production of
- Geothermal energy
 - Tidal energy
 - Wind energy
 - Solar energy
46. As per World Nuclear Association Data, India has _____ operable reactors and _____ reactors under construction.
- 12, 03
 - 32, 08
 - 06, 06
 - 24, 06
47. Match the following with reference to solar energy production:
- | Type of collector | Components involved |
|------------------------------|--|
| a) Flat plate collectors | i) Highly reflective curved elongated mirrors |
| b) Evacuated tube collectors | ii) Large parabolic dishes |
| c) Point focus collectors | iii) Absorber plate with flow tubes |
| d) Line focus collectors | iv) Series of glass tubes with absorbing coating |
- Codes:
- a – ii, b – i, c – iii, d – iv
 - a – iii, b – iv, c – ii, d – i
 - a – iv, b – iii, c – i, d – ii
 - a – i, b – ii, c – iv, d – iii

48. Match the following in the context of Bioenergy:

Process	Nomenclature
a) Pyrolysis of organic matter	i) Pelletisation
b) Compressing/moulding organic material	ii) Biodiesel
c) Anaerobic digestion of organic matter	iii) Biochar
d) Transesterification of vegetable oil or animal fat	iv) Biogas

Codes:

- | | |
|------------------------------------|------------------------------------|
| (1) a – i, b – iii, c – ii, d – iv | (2) a – ii, b – iv, c – iii, d – i |
| (3) a – iii, b – i, c – iv, d – ii | (4) a – iv, b – ii, c – i, d – iii |

49. Impacts on arid land/desert biodiversity, impacts on land cover change and impacts on micro climate, production and waste management problems, effects on albedo are the issues associated with ____.

- (1) Ocean thermal energy conversion
- (2) Large scale solar farms
- (3) Biogas production
- (4) Urban waste to energy conversion

50. _____ is a measure of how the energy balance of the Earth–Atmosphere system is influenced.

- (1) Earth's albedo
- (2) Radiation Potential
- (3) Radiative forcing
- (4) Absorption cooling

51. Centrifugal collectors are used for the removal of particulate matter with size of

- | | |
|--------------------------|------------------------|
| (1) > 50 μm | (2) > 10 μm |
| (3) 5 – 25 μm | (4) > 1 μm |

52. Which of the following methods are used for the sulfur dioxide detection and analysis in air?

- (1) Non-dispersive infrared spectroscopy, Gas chromatography and Catalytic conversion
- (2) Coulometric, Conductometric and Colorimetric methods
- (3) Non-dispersive infrared spectroscopy, Coulometric and Catalytic conversion
- (4) Jacob's - Hockeiser colorimetric, Non-dispersive infrared spectroscopy and Catalytic conversion

53. During a 20-min rain storm, 25 mm of rainfall was recorded in an area of 2.5 ha. Calculate the total volume of water that fell on the area during the storm.
- (1) 525 m^3 (2) 625 m^3
(3) 25000 m^3 (4) 300 m^3
54. The dilution factor P for an unseeded mixture of waste and water is 0.030. The DO of the mixture is initially 9 mg/L and after 5 days it has dropped to 3.0 mg/L. The reaction rate constant ' k ' has been found to be 0.22/day. What would be the remaining oxygen demand after 5 days?
- (1) 300 mg/L (2) 200 mg/L
(3) 100 mg/L (4) 250 mg/L
55. Sound pressure level (SPL) is mathematically expressed as
- (1) $\text{SPL} = 20 * \log(P/P_0)$ (2) $\text{SPL} = 20 * \log(P_0/P)$
(3) $\text{SPL} = 20 * \ln(P/P_0)$ (4) $\text{SPL} = 20 * \ln(P_0/P)$
56. The noise reduction coefficient of a material is 0.8, which means that it
- (1) Absorbs 20 percent and reflects 80 percent of noise that it receives
(2) Absorbs 8 percent and reflects 92 percent of noise that it receives
(3) Absorbs 80 percent and reflects 20 percent of noise that it receives
(4) Absorbs 200 percent and reflects 800 percent of noise that it receives
57. BHC (Benzene Hexachloride) is a well known pesticide. If applied to the field, what is the approximate years of persistence in soil?
- (1) 3 years (2) 5 years
(3) 11 years (4) 25 years
58. The loamy soil consists of
- (1) Gravel and clay (2) Clay, sand and gravel
(3) Sand, silt and clay (4) Sand and gravel
59. Heat island is a common phenomenon in urban cities where their average temperature is
- (1) Hotter than their surroundings
(2) Cooler than their surroundings
(3) Equal as in their surroundings
(4) Neither equal nor cooler than their surroundings

60. Sustainable Development Goals (SDG) insisted to conserve and sustainably use the oceans, sea and marine resources. Under which goal it is discussed?

- | | |
|------------|------------|
| (1) SDG 6 | (2) SDG 13 |
| (3) SDG 14 | (4) SDG 15 |

61. In solid waste management, the measurement of moisture, volatile matter and fixed carbon is called _____.

- (1) Proximate analysis
- (2) Probate analysis
- (3) Ultimate analysis
- (4) Mechanistic analysis

62. Prevention, Reuse, Recycling, Recovery (including energy recovery) and Disposal are the stages of _____.

- (1) Solid waste disposal protocol
- (2) Incineration
- (3) Waste hierarchy
- (4) Waste to energy conversion

63. Match the following with respect to urban solid waste management.

Component of Solid Waste Management	Key Factor
a) Segregation	i) Reduces time
b) Transfer station	ii) Landfill
c) Route optimisation	iii) Waste consolidation from various locations
d) Disposal	iv) At source

Codes:

- | | |
|------------------------------------|------------------------------------|
| (1) a – iv, b – iii, c – i, d – ii | (2) a – i, b – iv, c – ii, d – iii |
| (3) a – ii, b – i, c – iii, d – iv | (4) a – iii, b – ii, c – iv, d – i |

64. Composting and Vermicomposting can be effectively employed when the C:N ratio of organic matter is

- | | |
|---------------------------------|------------------|
| (1) 0:0 both C and N are absent | (2) Wide – 100:1 |
| (3) Narrow – 30 : 1 | (4) 50 : 50 |

65. Choose the correct statements with respect to Refuse Derived Fuel (RDF).
- Shredding and pelletising are the steps of RDF.
 - RDF can be burned in combustion boilers, cement kilns or industrial boilers.
 - RDF reduces the amount of waste sent to landfills.
 - RDF facilities are inexpensive to set up and have zero emissions.
- Statements b, c and d are correct
 - Statements a, c and d are correct
 - Statements a, b and d are correct
 - Statements a, b and c are correct
66. In the Hazardous Wastes (Management, Handling and Transboundary Movement) Rules, 2008, CPCB classifies – Flammable, Explosive, Corrosive, Toxic and Carcinogenic material under
- Class A
 - Class C
 - Class D
 - Class E
67. Biomethanation can be a preferred waste management practice in ____.
- Steel mills
 - Slaughter houses
 - Quarries
 - Mineral water bottling plants
68. According to E-Waste (Management) Rules, 2022, every manufacturer, producer, refurbisher and recycler may store the e-waste for a period not exceeding ____ days.
- 30
 - 180
 - 240
 - 365
69. Reclamation of mine voids, preparation of geo-polymer concrete and mixing with over burden material for backfilling open-cast mines can be an end-use option for
- Urban solid wastes
 - Ore deposits
 - Fly ash
 - Agriculture debris
70. Microplastics typically encompass particles less than 5 mm. Different size classifications are in practice. Match them on nomenclature with particle size.
- | Nomenclature | Particle size |
|------------------|----------------------------|
| a) Microplastics | i) 0.001 – 1 μm |
| b) Nanoplastics | ii) 1 – 1000 μm |
| c) Macroplastics | iii) 1 – 10 mm |
| d) Mesoplastics | iv) > 1 cm |
- Codes:
- a – i, b – iv, c – iii, d – ii
 - a – ii, b – i, c – iv, d – iii
 - a – iii, b – ii, c – i, d – iv
 - a – iv, b – iii, c – ii, d – i

71. Which of the following is important in order to identify, assess and predict the environmental impacts?
- (1) Environmental attributes (2) Environmental impact
(3) Complex system (4) Variable parameter
72. EIA was introduced in India in ____.
- (1) 1976 (2) 1978
(3) 1979 (4) 1989
73. Which document outlines the measures to monitor and manage environmental impacts?
- (1) Environmental Impact Statement (EIS)
(2) Environmental Management Plan (EMP)
(3) Environmental Baseline Report
(4) Project Proposal
74. The theme of NEPA is
- (1) To require federal agencies to assess environmental impacts of their actions
(2) To regulate industrial waste disposal
(3) To set standards for air and water quality
(4) To manage national parks and protected areas
75. Stockholm Convention focuses on
- (1) Persistent Organic Pollutants (POPs) (2) GHGs
(3) Biodiversity loss (4) Marine Pollution
76. The quantity of waste, eligible for generation of Extended Producer Responsibility Certificate shall be calculated by which of the following formula?
- (1) $Q_{EPR} = Q_p \times C_F \times W_P$ (2) $Q_{EPR} = \frac{Q_p \times C_F}{W_P}$
(3) $Q_p = Q_{EPR} \times C_F \times W_P$ (4) $W_P = Q_{EPR} \times Q_p \times C_F$
77. Which of the following CRZ notifications is applicable to Andaman and Nicobar Islands?
- (1) CRZ Notification – I (2) CRZ Notification – II
(3) CRZ Notification – III (4) CRZ Notification – IV

78. The Wildlife (Protection) Act, 1972 was enacted in

- (1) September, 1972 (2) October, 1972
(3) November, 1972 (4) December, 1972

79. Match List – I with List – II and choose the correct answer using the codes given below:

List I

- a) Noise pollution can be effectively controlled under IPC
b) National Green Tribunal Act
c) Penalty for conservation of the provisions of the Forest Act, 1980
d) Hazardous substances defined in Environmental Act, 1986

List II

- i) Section 3A
ii) Section 268
iii) Section 2(c)
iv) 2010

Codes:

- (1) a – ii, b – iv, c – i, d – iii (2) a – iii, b – i, c – ii, d – iv
(3) a – iii, b – ii, c – i, d – iv (4) a – ii, b – i, c – iv, d – iii

80. By the 42nd Amendment of the Constitution of India, 1976, the entries relating to Forest and Protection of Wild Animals and Birds were transferred from state list to concurrent list is a/an

- (1) Partly correct statement
(2) Partly wrong statement
(3) Correct statement
(4) Incorrect statement

81. The purposes of measuring variation are

- a) to test the reliability of an average
b) to serve as a basis for control of variability
c) to compare two (or) more series with regard to their variability
d) to facilitate as a basis for further statistical analysis.

- (1) a, b, c (2) a, c, d
(3) b, c, d (4) a, b, c, d

82. Which one is the most crude measure of variability?

- (1) Median (2) Ratio correlation
(3) Mean (4) Range

83. _____ is the reciprocal of the arithmetic mean of the reciprocals of the individual observations

- (1) Arithmetic mean
(2) Geometric mean
(3) Harmonic mean
(4) Weighted mean

84. Who proposed Lotka-Volterra model?

- a) Alfred James Lotka
- b) Vito-Volterra
- c) James Volterra
- d) Freitas Lotka

Codes:

- | | |
|-------------|-------------|
| (1) a and d | (2) a and b |
| (3) c and d | (4) b and d |

85. Calculate the geometric mean of 3, 9 and 27

- | | |
|-------|--------|
| (1) 3 | (2) 12 |
| (3) 9 | (4) 15 |

86. The first four moments of a distribution are 0, 3.2, 0.8 and 21.2. Find out β_2 .

- | | |
|------------|------------|
| (1) 2.07 | (2) 0.0195 |
| (3) 140.45 | (4) 14.04 |

87. The variable whose value is influenced or is to be predicted is called

- (1) Dependent Variable
- (2) Independent Variable
- (3) Predictable Variable
- (4) Theoretical Variable

88. $X = 0.37y$, $Y = 0.65x$, find r .

- | | |
|----------|----------|
| (1) 0.49 | (2) 0.56 |
| (3) 0.24 | (4) 0.28 |

89. Which one of the following is used to examine the significance of the difference amongst more than two sample means at the same time?

- | | |
|-----------------------|-----------------------|
| (1) Chi-Square test | (2) Students 't' test |
| (3) Ratio correlation | (4) ANOVA |

90. Leslie's matrix model is used to describe the

- a) growth of population
- b) age distribution within the population
- c) Interaction between prey and predator
- d) Energy transfer between trophic level.

- (1) a, b (2) a, b, c
- (3) a, c (4) a, c, d

91. The aim of people biodiversity register is _____.

- (1) To document and reduce the deforestation rates
- (2) To promote sustainable biodiversity
- (3) To document and preserve local knowledge and biodiversity resources
- (4) To enhance the forest cover and tackle climate changes

92. Match the following wildlife conservation projects with the year of initiation:

Projects	Year
a) Project Tiger	i) 1991
b) Project Elephant	ii) 1973
c) Crocodile Conservation Project	iii) 1999
d) Sea Turtle Project in India	iv) 1975

Codes:

- (1) a – i, b – ii, c – iv, d – iii (2) a – ii, b – i, c – iv, d – iii
- (3) a – iii, b – ii, c – iv, d – i (4) a – iv, b – i, c – ii, d – iii

93. The issue that is not related to Narmada Valley Development Project (NVDP) is

- (1) displacement of indigenous communities who have lived in the area for generations
- (2) major loss of forests and wild lives in the unique environment
- (3) human rights violations
- (4) benefits for only few sectors in one or two states

94. _____ are built using local stones, clay and bushes across small streams running downhill slopes.

- (1) Contour bunds
- (2) Gully plugs
- (3) Nala bunds
- (4) Dugwell recharge facilities

95. Match List – I with List – II.

List – I

- a) Nirmal Bharat Abhiyan
- b) Swachh Bharat Abhiyan
- c) Silent Valley Movement
- d) Appiko Movement

List – II

- i) 1973
- ii) 1983
- iii) 1999
- iv) 2014

Codes:

(1) a – ii, b – iv, c – iii, d – i

(3) a – iii, b – iv, c – ii, d – i

(2) a – ii, b – iii, c – iv, d – i

(4) a – iii, b – iv, c – i, d – ii

96. Consider the following statements in relation to the following and choose the correct option.

"Ramsar Convention on Wetlands".

- a) These wetlands are crucial for biodiversity conservation.
- b) These wetlands provide livelihoods for local communities.
- c) India has 85 Ramsar sites as on 14-08-2024.
- d) India has 105 Ramsar sites as on June 2025.

- (1) Statements a and b are correct while c and d are wrong
- (2) Statements a, b and c are correct while d is wrong
- (3) Statements c and d are correct while a and b are wrong
- (4) Statement b is correct and others a, c and d are wrong

97. India pledge to achieve the Paris Agreement are as follows:

- a) Aims to create an additional carbon sink of 2.5 to 3.0 billion tonnes of CO₂ equivalent through afforestation and similar measures by 2030.
- b) Aims to reduce emission intensity by 45% by 2030 from 2025 levels.
- c) India will meet 80% of its energy requirements from renewable sources by 2030.
- d) India will increase its non-fossil fuel energy capacity to 500 GW by 2030.

How many of the above statement/statements is/are correct?

- (1) Statements a and b are correct while others are wrong
- (2) Statements c and d are correct while others are wrong
- (3) Statements a, b and d are correct while c is wrong
- (4) Statements a, b and c are correct while d is wrong

98. Match the global major milestone activities on environmental protections:

Global activity	Year
a) Comprehensive Nuclear Test-Ban-Treaty	i) 2016
b) Aichi Biodiversity Targets	ii) 1996
c) Kigali Amendment to Montreal Protocol	iii) 2001
d) Stockholm Convention on POPs	iv) 2010

Codes:

- | | |
|------------------------------------|------------------------------------|
| (1) a – i, b – iii, c – iv, d – ii | (2) a – i, b – iv, c – ii, d – iii |
| (3) a – ii, b – iii, c – iv, d – i | (4) a – ii, b – iv, c – i, d – iii |

99. Which SDG aims to ensure access to affordable, reliable, sustainable and modern energy for all?

- | | |
|-------------|--------------|
| (1) SDG – 7 | (2) SDG – 13 |
| (3) SDG – 6 | (4) SDG – 15 |

100. According to the 2021 World Air quality report, _____ of the world's 100 most polluted cities are in India.

- | | |
|--------|--------|
| (1) 65 | (2) 62 |
| (3) 63 | (4) 61 |

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