

**COMBINED TECHNICAL SERVICES EXAMINATION
(INTERVIEW POST)**

COMPUTER BASED TEST

DATE OF EXAM: 21.07.2025 AN

**PAPER – II – ENVIRONMENTAL SCIENCE
(DEGREE STANDARD) (CODE: 298)**

1. The Indian body tasked with preparing the state action plans on climate change
- (A) Central pollution control board
 - (B) Indian council of agricultural research
 - (C) Ministry of agriculture
 - ☒ (D) State governments
 - (E) Answer not known
2. In which of the following year the ministry of ocean development was reorganized by the government of India vice presidential notification in to the new ministry of earth sciences.
- (A) July 2000
 - (B) July 2002
 - ☒ (C) July 2006
 - (D) July 2009
 - (E) Answer not known
3. Under environmental Protection Act, the term environment includes
- (A) Living organisms and biodiversity only
 - (B) Air, water and land only
 - (C) Natural resources and public health only
 - ☒ (D) All physical and biological factors and their interaction
 - (E) Answer not known

4. Which of the following statements is/are correct regarding Forest Advisory Committee (FAC)?

- (1) It is a statutory body consists of 7 members under the forest (conservation) Act, 1980.
- (2) It includes only government officials as members.

Select the correct answer from below code:

- ☒ (A) (1) only
- (B) (2) only
- (C) Both (1) and (2)
- (D) Neither (1) nor (2)
- (E) Answer not known

5. Under the Water Act, the power to grant or cancel consent to operate an industry is with one of the following

- (A) National green Tribunal
- (B) Ministry of environment, forest and climate change
- ☒ (C) State pollution control board
- (D) Central water commission
- (E) Answer not known

6. Choose the right answer among type NGO has important key internal functions
- (i) Growth, management, sustainability, survival
 - (ii) Planning, development, survival, consistency
 - (iii) Advancement, growth, projection, sustainability
 - (iv) Survival, sustainability, maintenance, growth
- (A) (ii) and (iii)
(B) (i) and (iv)
(C) ☒ (iv) only
(D) (ii) only
(E) Answer not known
7. World wide, average annual temperatures have increased by about
- (a) 4° C (7°F)
 - (b) 4° C (5°F)
 - (c) 0.6° C (1°F)
 - (d) 0.4° (2°F)
- (A) (d)
(B) (a)
(C) (b)
(D) ☒ (c)
(E) Answer not known

8. The revised national forest policy goal is
- (i) To maintaining environmental balance and the ecological restoration of distributed areas
 - (ii) To manage the private forests
 - (iii) Forest officers appointed under clause
 - (iv) Efficient utilization of forest produce
- (A) (ii) only
(B) (i) and (iv)
(C) ☒ (i) only
(D) (iii) and (iv)
(E) Answer not known
9. IPCC awarded the Nobel Peace prize in the year of
- (i) 2009
 - (ii) 1989
 - (iii) 2000
 - (iv) 2007
- (A) 2000
(B) ☒ 2007
(C) 2009
(D) 1989
(E) Answer not known

10. Representative concentration pathways RCPs, PCP26, RCP4.5, RCP6 and RCP8.5 have been introduced in
- (i) IPCC WGI 2013
 - (ii) IPCC WGI 2010
 - (iii) IPCC 1990
 - (iv) IPCC 1995
 - ☒ (A) (i) only
 - (B) (ii) and (iii) only
 - (C) (iv) and (i) only
 - (D) (iii) and (iv) only
 - (E) Answer not known
11. The Convention on Biological Diversity (CBD) was signed at the Earth summit in the year 1992 and entered into force in the year of
- (A) 1992
 - ☒ (B) 1993
 - (C) 1994
 - (D) 1995
 - (E) Answer not known

12. Which of the following is incorrectly paired?

- (1) ARIS – Agricultural Research Information System
- (2) NATP – National Agricultural Test Programme
- (3) AHRD – Agricultural Human Resource Development
- (4) CBD – Concern on Biological Diversity

- ☒ (A) (2) and (4) are incorrect
- (B) (1) and (3) are incorrect
- (C) (1) and (4) are incorrect
- (D) (3) and (4) are incorrect
- (E) Answer not known

13. The Central Pollution Control Board (CPCB) was constituted under the provisions of

- (A) Environment (protection) Act, 1986
- ☒ (B) Water (prevention and control of pollution) Act, 1974
- (C) Air (prevention and control of pollution) Act, 1981
- (D) Forest (conservation) Act, 1980
- (E) Answer not known

14. In 1986 UNESCO initiated its man and biosphere program which encourages

- (i) To reserve, size, shape and isolation of rain forest
- (ii) To protect and manage the parks
- (iii) The designation of biosphere reserves
- (iv) To protect the freshwater wetland complex
- (A) (ii) and (iv)
- (B) (ii) only
- (C) (i) and (iv)
- ☒ (D) (iii) only
- (E) Answer not known

15. Choose the right answer among the type

- (1) Inter governmental panel of climate change established – in 1998
- (2) United nations environment programme started – in 1945
- (3) World wild life fund for nature established – in 1961
- (4) The environmental training institute established – in 1996
- (A) (1) and (4) are correct
- ☒ (B) (1) and (3) are correct
- (C) (2) and (4) are correct
- (D) (3) and (4) are correct
- (E) Answer not known

16. Which of the following statements about water pollution control measures are true?

- (A) Biological treatment methods like activated sludge processes are effective for removing dissolved solids from water
- ☒ (B) Filtration is an important step in removing particulate matter but is not effective for removing dissolved ions and chemicals
- (C) Chemical treatment method such as chlorination are primarily used to disinfect water is killing pathogens but can sometimes leads to the formation of harmful by products like trihalomethanes.
- (D) Reverse Osmosis is most effective for removing pathogens from water, but it is less effective for removing dissolved salts and minerals
- (E) Answer not known

17. Match the following atmospheric chemical species with their core of class:

Atmospheric chemical species	Class
(a) NO_2	1. Reductant
(b) H_2S	2. Corrosive substance
(c) NH_4HSO_4	3. Photochemically active species
(d) O_3	4. Of the species shown, most likely to dissociate without additional outside input

- | | | | | |
|---|------------------|-----|-----|-----|
| | (a) | (b) | (c) | (d) |
| ☒ (A) | 3 | 2 | 1 | 4 |
| (B) | 1 | 2 | 3 | 4 |
| (C) | 3 | 1 | 4 | 2 |
| (D) | 2 | 4 | 3 | 1 |
| (E) | Answer not known | | | |

18. Which secondary air pollutant is formed through a complex reaction involving nitrogen dioxide and VOC's under sunlight and is a major component of photo chemical smog?

- (A) Sulfuric acid
- ☒ (B) Ozone
- (C) Carbon monoxide
- (D) Ammonia
- (E) Answer not known

19. Assertion (A) : Installation of electrostatic precipitations in thermal plants is an effective method to control SO_2 emissions

Reason (R) : Electrostatic precipitators remove particulate matter from flue gases by applying and electrical change

- (A) Both (A) and (R) are true (R) is correct explanation of (A)
- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- ☒ (C) (A) is false but (R) is true
- (D) (A) is true but (R) is false
- (E) Answer not known

20. Which of the following statements about the effects of lead exposure in adults is correct?

- (i) Lead exposure in adults causes primarily neurological issues with minimal cardiovascular effects
- (ii) Lead exposure in adults can lead to cardiovascular effects, kidney damage and reproductive problems
- (iii) Lead exposure in adults mainly affects bone health, with little impact on the cardiovascular system

- (A) (i) only
- ☒ (B) (ii) only
- (C) (i) and (ii) only
- (D) (ii) and (iii) only
- (E) Answer not known

21. Reason and Assertion type

Assertion (A) : Exposure to high levels of nuclear radiation can cause severe health effects including cancer.

Reason (R) : Ionizing radiation can damage DNA and disrupt cellular processes

- (A) (A) is true but (R) is false
- ☒ (B) Both (A) and (R) are true; and (R) is the correct explanation of (A)
- (C) (A) is false, (R) is true
- (D) Both (A) and (R) are true; but (R) is not the correct explanation of (A) is correct
- (E) Answer not known

22. If the concentration of insecticide DDT in a pond water is 0.04 ppm, which of the following sequence of DDT concentration would be correct?
- (A) Algae > fishes > humans
 - (B) Algae > fishes < humans
 - (C) Algae > fishes = humans
 - ☒ (D) Algae < fishes < humans
 - (E) Answer not known
23. Choose the correct statements
- (1) Plants can uptake soil contaminants through their roots
 - (2) Plants can uptake contaminants through their leaves
 - (3) Contaminants can biomagnificate within food chains
 - (4) Soil contamination can reduce crop yield and impair food safety
- (A) (1) only correct
 - (B) (1) and (2) are correct
 - (C) (1), (2) and (3) are correct
 - ☒ (D) (1), (2), (3) and (4) are correct
 - (E) Answer not known

24. Assertion (A) : Nuclear power plants can cause environmental pollution through radioactive waste and thermal discharges.

Reason (R) : Radioactive waste from nuclear reactors can contaminate soil and water, while thermal discharge can raise water temperatures, affecting aquatic ecosystems

- ☒ (A) Both (A) and (R) are true, and (R) is the correct explanation of (A)
- (B) Both (A) and (R) are true, but (R) is not the correct explanation of (A)
- (C) (A) is true but (R) is false
- (D) (A) is false but (R) is true
- (E) Answer not known

25. Which of the following is a long term environmental effect of a nuclear holocaust?

- (A) Global warming due to radiation
- ☒ (B) "Nuclear winter" Caused by the smoke and dust blocking sunlight
- (C) Increase in ocean levels
- (D) Acid rain
- (E) Answer not known

26. Which organization in India regulates municipal solid waste management?

- (A) World Health Organization (WHO)
- ☒ (B) Central Pollution Control Board (CPCB)
- (C) National Institute for Transforming India (NITI Aayog)
- (D) Indian Space Research Organisation (ISRO)
- (E) Answer not known

27. Which of the following sampling methods employed for the analysis of both natural and waste water?
- (1) The grab sample
 - (2) The composite sample
 - (3) The confined sample
 - (A) (1) and (3)
 - ☒ (B) (1) and (2)
 - (C) (2) and (3)
 - (D) (1), (2) and (3)
 - (E) Answer not known
28. In the sludge treatment process, which of the following methods is most commonly used to stabilize the sludge to reduce its volume and pathogens?
- ☒ (A) Aerobic digestion
 - (B) Filtration
 - (C) Reverse Osmosis
 - (D) Chemical coagulation
 - (E) Answer not known
29. Chernobyl was the first officially acknowledged nuclear accident and reported in the year
- (A) 1956
 - (B) 1976
 - ☒ (C) 1986
 - (D) 1966
 - (E) Answer not known

30. The following statements relate to waste management practices. Indicate whether the statement is true or false.

- (1) Waste generation is the most sustainable form of waste management
 - (2) Waste minimization should be prioritized over waste disposal methods in a circular economy
 - (3) Landfills are considered a sustainable and environmentally friendly method of waste disposal
 - (4) The "3RS" (Reduce, Reuse, Recycle) are fundamental concepts in waste management
- (A) ✓ 1-False, 2-True, 3-False, 4-True
(B) 1-True, 2-False, 3-True, 4-false
(C) 1-True, 2-True, 3-False, 4-True
(D) 1-False, 2-False, 3-True, 4-True
(E) Answer not known

31. Assertion (A) : The biomedical waste management rules, 2016 mandate the segregation of biomedical waste into color coded bins to ensure safe disposal

Reason (R) : This is because biomedical waste becomes non hazardous after chemical disinfection and color coding is used only for aesthetic reasons in hospitals.

- (A) Both (A) and (R) are true, and (R) is correct explanation for (A)
- (B) Both (A) and (R) are true, but (R) is not the correct explanation for (A)
- (C) ✓ (A) is true but (R) is false
- (D) (A) is false but (R) is true
- (E) Answer not known

32. Which of the following statements regarding characteristics of hazardous waste are true?

- (1) A waste that shows ignitability has a flash point below 60 °C and can easily cause fire
 - (2) Corrosive hazardous wastes are always acidic in nature and have a pH less than 2
 - (3) Reactive hazardous waste can explode or release toxic gases when mixed with water
 - (4) Toxicity characteristic of a hazardous waste is determined using toxicity characteristics leaching Procedure (TCLP)
- (A) ✓ (1), (3), (4) only
- (B) (1), (2) only
- (C) (2), (4) only
- (D) (1), (4) only
- (E) Answer not known

33. Assertion (A) : Primary succession begins in an area where no soil or life exists, such as a newly formed volcanic island.

Reason (R) : The available soil helps to establish quickly the pioneer organism.

- (A) ✓ The assertion is true but the reason is false
- (B) The assertion and reason are false
- (C) The assertion and reason are true
- (D) The assertion is false and the reason is correct
- (E) Answer not known

34. Reason and assertion type

Assertion (A) : Soil pollution due to detergents affects the root growth of the plants and depress the growth of soil microorganisms

Reason (R) : The presence of detergents in soil makes the soil more acidic

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

- (A) Both (A) and (R) are correct, and (R) is correct explanation of (A)
- (B) Both (A) and (R) are correct but (R) is not correct explanation of (A)
- ☒ (C) (A) is correct but (R) is not correct
- (D) (A) is not correct but (R) is correct
- (E) Answer not known

35. Match the correct nuclear pollution control measures with their respective descriptions. Select the option that shows the wrong match :

Column I		Column II	
(a)	Radiation shielding	1.	Using materials viz concrete or lead to block radiation
(b)	Waste disposal systems	2.	Process of safely storing or recycling spent nuclear fuel
(c)	Decommisioning of nuclear plants	3.	Safe dismantling of nuclear plants after their operational life
(d)	Limiting the use of nuclear energy	4.	Reducing the over all use of nuclear energy

- | | (a) | (b) | (c) | (d) |
|---|------------------|-----|-----|-----|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 1 | 3 | 2 | 4 |
| (C) | 2 | 1 | 3 | 4 |
| ☒ (D) | 1 | 2 | 4 | 3 |
| (E) | Answer not known | | | |

36. Which of the following statements best describes the process of eutrophication and its primary environmental consequences.
- (A) Eutrophication is caused primarily by the accumulation of heavy metals in water bodies which disrupts aquatic food chain and decreases biodiversity
 - ☒ (B) Eutrophication leads to rapid increase in nutrient levels (especially 'N' and 'P') which stimulates excessive growth of algae depleting oxygen levels and causing hypoxia
 - (C) Eutrophication is mainly driven by thermal pollution where increased temperature from industrial effluents lead to a decrease in nutrient availability restricting plankton growth
 - (D) Eutrophication is a natural process that results from the gradual accumulation of organic matter and leads to neutralization of acidic water bodies
 - (E) Answer not known
37. Which of the following soil pollutants are non degradable in nature?
- ☒ (A) Potentially toxic elements
 - (B) Organic pollutants
 - (C) Persistent organic pollutants
 - (D) Both (B) and (C)
 - (E) Answer not known
38. According to CPCB guidelines, which of the following is moderate air quality index?
- (A) 0-50
 - (B) 51-100
 - ☒ (C) 101-200
 - (D) 201-300
 - (E) Answer not known

39. Reason and assertion type

Assertion (A) : Sewage decomposition depletes the level of oxygen content of H_2O

Reason (R) : Aerobic decomposition of the organic matters tends to exhaust the oxygen content of water

(A) (A) is true but (R) is false

☒ (B) Both (A) and (R) are true, and (R) is the correct explanation of (A)

(C) (A) is false (R) is true

(D) Both (A) and (R) are true, but (R) is not the correct explanation of (A)

(E) Answer not known

40. Choose the right matches among type

(1) Motor cycle – 90 dB

(2) Rocket engine – 180 dB

(3) Jet plane taking off – 105 dB

(4) Food blender – 25 dB

☒ (A) (1) and (2) are correct

(B) (1) and (3) are correct

(C) (2) and (3) are correct

(D) (2) and (4) are correct

(E) Answer not known

41. Which of the following statements (s) is/are false about methodologies employed in environmental impact assessment (EIA)
- (1) Methodologies do not provide complete answers to all questions related to impacts
 - (2) Checklist is an universal methodology that fits for all projects
 - (3) Checklists provide a structured approach for identifying key impacts
 - (4) Leopold network is a methodology
- (A) (4) only
(B) ☒ (2) and (4) only
(C) (2) only
(D) (1), (2) and (4) only
(E) Answer not known
42. Which is/are the objectives of public participation in EIA (Environmental impact Assessment) process?
- (i) Project information dissemination
 - (ii) Compensation assessment
 - (iii) Feedback on proposals
 - (iv) Problem solving
- (A) (i), (ii), (iii) only
(B) (iii) and (iv) only
(C) (ii) and (iv) only
(D) ☒ (i), (iii), (iv) only
(E) Answer not known

43. Which of the following statement are true about prior environmental clearance (EC) process

- (i) Category B are appraised by expert appraisal committee (EAC)
- (ii) 6 stages exist in EC process
- (iii) Category B2 projects shall not require scoping
- (iv) Environment management plan (EMP) is not required for all EIA reports

- (A) (i) only
- ☒ (B) (iii) only
- (C) (iii) and (iv) only
- (D) (iii) and (i) only
- (E) Answer not known

44. Match correctly the impact identification method with their unique advantage:

- | | |
|----------------|--|
| (a) Checklists | 1. Handles direct and indirect impacts |
| (b) Matrices | 2. Excellent for impact identification |
| (c) GIS | 3. Good for displaying EIA results |
| (d) Networks | 4. Goods for site selection |

- | | (a) | (b) | (c) | (d) |
|---|------------------|-----|-----|-----|
| (A) | 3 | 1 | 4 | 2 |
| (B) | 4 | 1 | 2 | 3 |
| (C) | 3 | 4 | 2 | 1 |
| ☒ (D) | 4 | 3 | 2 | 1 |
| (E) | Answer not known | | | |

45. Assertion (A) : Category B2 projects are exempted from both EIA and public consultation
- Reason (R) : Category B1 projects require both EIA and public consultation before approval
- (A) (A) is true but (R) is false
- (B) Both (A) and (R) are true, and (R) is the correct explanation of (A)
- (C) (A) is false (R) is true
- ☒ (D) Both (A) and (R) are true, but (R) is not the correct explanation of (A) is correct
- (E) Answer not known
46. The tool which helps in minimizing the negative impact of various development projects is
- (A) Environment Analysis Plan (EAP)
- (B) Environment Mitigating Plan (EMP)
- ☒ (C) Environment Impact Assessment (EIA)
- (D) Environmental Conservation Plan (ECP)
- (E) Answer not known

47. The main objective of EIA is

- (a) To bring a national policy governing environment
- (b) To promote efforts to prevent damage to the environment
- (c) To increase the understanding of ecological systems and natural resources
- (d) To promote project related to natural resource utilization
- (A) (b), (c) and (d)
- (B) (a), (b) and (d)
- (C) (a), (c) and (d)
- ☒ (D) (a), (b) and (c)
- (E) Answer not known

48. Which of the following is incorrectly paired?

- (1) EIA – Environmental Impact Assessment
- (2) EAC – Expert Appraisal Committee
- (3) SEIAA – State Ecological Impact Analysis Authority
- (4) SEA – State Environmental Assessment
- (A) (1) and (3) in correct
- (B) (2) and (4) in correct
- ☒ (C) (3) and (4) in correct
- (D) (1) and (2) in correct
- (E) Answer not known

49. Which of the following statements are true about environmental impact assessment (EIA)?
- (i) EIA must look into physical, biological and social parameters.
 - (ii) EIA must define what impact the development project would have on water, soil and air
 - (iii) EIA looks into only physical and biological parameters.
- (A) (i) only
(B) (i) and (ii) only
(C) (i) and (iii) only
(D) (ii) and (iii) only
(E) Answer not known
50. India's first vegetation type map was prepared from the satellite data of
- (A) IRS LISS-3
(B) L and Sat-1
(C) ALOS-3
(D) IRS VEG-1
(E) Answer not known

51. Which of the following statement/s is/are correct about GIS (Geographic Information System)

- (i) GIS consists of two types of data namely spatial and attribute
- (ii) Entities are things in digital world
- (iii) Objects are things in real world
- (A) (ii) and (iii) only
- (B) (ii) only
- (C) (iii) only
- ☒ (D) (i) only
- (E) Answer not known

52. World's first Geographical Information System (GIS) was used for Environmental Impact Assessment (EIA) to study which project in Canada?

- | | |
|----------------------|--|
| (A) Township | ☒ (B) Dam |
| (C) Hydroelectric | (D) Mining |
| (E) Answer not known | |

53. Which of the following is NOT a satellite?

- | | |
|----------------------|--|
| (A) INSAT | (B) GMS |
| (C) LANDSAT | ☒ (D) GOETSAT |
| (E) Answer not known | |

54. Which of the following is correctly paired?
- (1) API – Aerial Photo Interpretation
 - (2) ATS – Applications Technology Satellite
 - (3) CEOS – Committee on Environmental Observation Satellites
 - (4) EOS – Environmental Observing System
 - (A) (1) and (3) are correct
 - ☒ (B) (1) and (2) are correct
 - (C) (2) and (3) are correct
 - (D) (3) and (4) are correct
 - (E) Answer not known
55. In remote sensing, which of the following sensor type is used to measure the reflected sunlight from the Earth's surface?
- (A) Active sensors
 - ☒ (B) Passive sensors
 - (C) Thermal sensors
 - (D) Hyper spectral sensors
 - (E) Answer not known
56. What is the role of Geographic Information system in disaster management planning?
- (A) To predict disasters with 100% accuracy
 - ☒ (B) To provide spatial data for risk assessment and resource allocation
 - (C) To replace emergency response teams
 - (D) To monitor social media for disaster – related posts
 - (E) Answer not known

57. Which of the following statements are true about the salient features of Water Act?

- (i) It provides for maintenance and restoration of quality of all types of surface and ground water.
 - (ii) It provides for the establishment of central and state boards for pollution control.
 - (iii) It does not provides for the establishment of central or state boards for pollution control
- (A) (i) only
(B) ☒ (i) and (ii) only
(C) (i) and (iii) only
(D) (ii) and (iii) only
(E) Answer not known

58. Which of the following statements are true about coastal zone management?

- (i) Rural area comes under CRZ-II
 - (ii) Ecologically sensitive area comes under CRZ-I
 - (iii) Developed area comes under CRZ-III
- (A) (i) only
(B) ☒ (ii) only
(C) (iii) only
(D) (i) and (ii) only
(E) Answer not known

59. Assertion [A] : Class SW-II is designated for bathing, contact water sports and commercial fishing.

Reason [R] : Class SW-II water allow for the highest level of human activity and are the least regulated regarding water quality.

☒ (A) [A] is true but [R] is false

(B) Both [A] and [R] are true; and [R] is the correct explanation of [A]

(C) [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

(E) Answer not known

60. Which of the following is correct regarding noise standards of fire-crackers?

(A) Fire-crackers generating noise above 150 dB(AI) at 4 meters are prohibited

☒ (B) Fire-crackers generating noise about 125 dB(AI) or 145 dB(C) pk at 4 meters are prohibited

(C) Noise standards were notified under the Environment (Protection) Act, 1999

(D) Fire crackers above 120dB (AI) at 4 meters are permitted

(E) Answer not known

61. Which of the following are true about the functions of the Department of Environment and Climate Change, Government of Tamil Nadu?

- (i) Coastal zone management
- (ii) ECO-restoration
- (iii) Urban planning and waste management
- (A) (i) only
- (B) (i) and (iii) only
- ☒ (C) (i) and (ii) only
- (D) (ii) and (iii) only
- (E) Answer not known

62. Which of the following statements are true about wildlife Act?

- (i) Wildlife Act promote hunting of animals
- (ii) It preserve biodiversity
- (iii) It aims the conservation of species
- (iv) It explore the availability of natural resources
- (A) (i) and (ii) only
- (B) (i) and (iii) only
- (C) (iii) and (iv) only
- ☒ (D) (ii) and (iii) only
- (E) Answer not known

63. What is the main purpose of the National River Conservation Plan (NRCP) launched in India?
- (A) To conserve endangered rivers
 - ☒ (B) To clean and rejuvenate polluted rivers
 - (C) To promote sustainable fishing practices
 - (D) To manage river ecosystem services
 - (E) Answer not known
64. Which section of the Environmental (Protection) Act, 1986, empowers the government of make rules for controlling environmental pollution?
- ☒ (A) Section 5
 - (B) Section 9
 - (C) Section 12
 - (D) Section 15
 - (E) Answer not known
65. The Environmental (Protection) Act, 1986, was enacted in response to which environmental disaster?
- (A) Gujarat Earthquake
 - ☒ (B) Bhopal gas tragedy
 - (C) Delhi Smog
 - (D) Mumbai floods
 - (E) Answer not known
66. The biomass pyramid can be converted into a graph of the chemical energy in the various trophic levels. This graph is called an
- ☒ (A) energy pyramid
 - (B) biomass pyramid
 - (C) succession
 - (D) climax
 - (E) Answer not known

67. Which of the following term used to specify the physical and behavioral changes developed tens of thousand year in response to prey to predator vice versa?
- (A) ☒ Co-evolution
 - (B) Predator mediated competition
 - (C) Symbiosis
 - (D) Predation
 - (E) Answer not known
68. Which form of the carbon is present in the atmosphere?
- (A) Carbonate
 - (B) Carbonic acid
 - (C) ☒ Carbondioxide
 - (D) Carbon particulates
 - (E) Answer not known
69. Which of the following describe where the energy and nutrients go as they move from one organisms to another?
- (A) ☒ Food chain
 - (B) Food web
 - (C) Trophic level
 - (D) Biomagnification
 - (E) Answer not known

70. Match the following :

- | | |
|------------------------|----------------|
| (a) Primary consumer | 1. Game fish |
| (b) Secondary consumer | 2. Lion |
| (c) Top carnivores | 3. Crabs |
| (d) Detritivores | 4. Zooplankton |

- | | (a) | (b) | (c) | (d) |
|-------|------------------|-----|-----|-----|
| (A) ✓ | 4 | 1 | 2 | 3 |
| (B) | 1 | 3 | 4 | 2 |
| (C) | 1 | 4 | 3 | 2 |
| (D) | 1 | 2 | 4 | 3 |
| (E) | Answer not known | | | |

71. The interaction among fungus and algae on tree is an example for which of the following interaction type?

- | | |
|----------------------|------------------|
| (A) Amensalism | (B) Commensalism |
| (C) Competition | (D) ✓ Mutualism |
| (E) Answer not known | |

72. Arrange Dry to wet ecosystem

- (i) Tall grass
(ii) Short grass
(iii) Temperate desert
(iv) Deciduous forest
- (A) (i), (iii), (iv), (ii)
(B) ✓ (iii), (ii), (i), (iv)
(C) (i), (ii), (iv), (iii)
(D) (iii), (iv), (ii), (i)
(E) Answer not known

73. Arrange the following

- (1) Exposed rocks
- (2) Lichen, mosses
- (3) White spruce, balsam fir
- (4) Grasses, herbs, shrubs
- (A) (4), (3), (1), (2)
- (B) (3), (1), (2), (4)
- ☒ (C) (1), (2), (4), (3)
- (D) (1), (2), (3), (4)
- (E) Answer not known

74. The process of species colonisation and replacement in which the environment is initially virtually free of life i.e the process starts with glacial debris and it ends when climax reached is

- ☒ (A) PRESERE
- (B) SUBSERE
- (C) Xerosere
- (D) Lithosere
- (E) Answer not known

75. Which of the following type of succession occur in a highly disturbed or eroded area and modify the environment and in turn the communities?

- (A) Autogenic
- ☒ (B) Allogenic
- (C) Primary succession
- (D) Reaction
- (E) Answer not known

76. Arrange the zones of pond based on depth and distance from shore line

- (1) Littoral zone
- (2) Limnetic zone
- (3) Profundal zone
- (4) Benthic zone
- (A) (1), (2), (4), (3)
- (B) (4), (3), (2), (1)
- (C) (4), (3), (1), (2)
- ☒ (D) (1), (2), (3), (4)
- (E) Answer not known

77. Which of the following is correct?

Biome	Temperature	Rainfall
(i) Desert	2-57°C	0-25 cm
(ii) Tropical rain forest	-18-35°C	125-1250 cm
(iii) Grass land	-8 - 17°C	25-75 cm
(A) (i), (ii), (iii)		
☒ (B) (i)		
(C) (ii)		
(D) (iii)		
(E) Answer not known		

78. A water body which possess less quantity of TDS and occurs seasonal vertical stratifications is

- (A) Estuary
- ☒ (B) Lake ecosystem
- (C) Pelagic ecosystem
- (D) Fresh water ecosystem
- (E) Answer not known

79. Which of the following ecosystem are categorised as lentic ecosystem?
- (i) Industrial effluents
 - (ii) Pond
 - (iii) Lake
 - (iv) Streams
- (A) (i) and (iv) ☒ (ii) and (iii)
(C) (i) only (D) (iv) only
(E) Answer not known
80. The bottom layer of the lake is the _____ zone. It's home to organisms that tolerate cool temperature and low oxygen level.
- ☒ (A) Benthic zone (B) Profoundal zone
(C) Thermocline (D) Hypolimnion
(E) Answer not known
81. Which pollutant is most strongly associated with the formation of photochemical smog?
- (A) Sulphur dioxide (B) Methane
☒ (C) Nitrogen oxides (D) Carbon monoxide
(E) Answer not known

82. Which of the following is the correct pair?

Environmental Issue		International Agreement
---------------------	--	-------------------------

- | | | |
|-------|-------------------|-----------------------|
| (i) | Desertification | – Ramsar convention |
| (ii) | Ozone depletion | – Kyoto protocol |
| (iii) | Biodiversity loss | – Cartagena protocol |
| (iv) | Mercury pollution | – Minamata convention |

- (A) (i) and (ii) only
(B) (ii) only
(C) (iii) and (iv) only
(D) ☒ (iv) only
(E) Answer not known

83. Assertion [A] : Fisherman in pens were the first to notice irregular cycles of rising temperature

Reason [R] : The fishes disappeared use the water warmed this is ELNINO

- (A) ☒ Both [A] and [R] are true; and [R] is the correct explanation of [A]
(B) Both [A] and [R] are false
(C) [A] is true but [R] is false
(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]
(E) Answer not known

84. Which of the following gases has both global warming potential and ozone-depleting potential?

- | | |
|----------------------|---|
| (A) CO ₂ | (B) ☒ Chlorofluorocarbons |
| (C) Methane | (D) Nitrous oxide |
| (E) Answer not known | |

85. Which global environmental problem is most closely linked with the hypoxic "dead zones" in oceans?
- (A) Over fishing
 - (B) Climate change
 - ☒ (C) Eutrophication from agricultural runoff
 - (D) Oil spills
 - (E) Answer not known
86. Which of the following global initiatives aims to protect food contamination from all sources?
- (A) The Kyoto Protocol
 - ☒ (B) The United Nations Environment Programme (UNEP)
 - (C) The International Whaling Commission (IWC)
 - (D) The Convention of Biological Diversity
 - (E) Answer not known
87. Plants requiring low calcium amounts are called
- (i) Calciphytes
 - (ii) Oxylophytes
 - (iii) Hygroscopic
 - (iv) Chernozems
- | | |
|--|-----------|
| (A) (i) | (B) (iii) |
| ☒ (C) (ii) | (D) (iv) |
| (E) Answer not known | |

88. The circulatory pattern of wind flow on the planet earth occurs in the ways

- (i) The earth spins on its axis from west to east
- (ii) In Northern Hemisphere the winds are deflected to the right
- (iii) In Southern Hemisphere the simple flow pattern of air
- (A) (iii) only
- ☒ (B) (i) and (ii) only
- (C) (i) only
- (D) (i) and (iii) only
- (E) Answer not known

89. Choose the wrong matches from the following statements.

- (1) O Horizon – Uppermost horizon of soil profile
- (2) A Horizon – Much of the material leached out of the zone of eluviation
- (3) R Horizon – It proves a single genetic model soil profile is great value
- (4) C Horizon – It is coarse textured and deep coloured with aluminium, iron and organic colloids
- (A) (1) and (2) are wrongly matched
- (B) (2) and (3) are wrongly matched
- ☒ (C) (2) and (4) are wrongly matched
- (D) (1) and (4) are wrongly matched
- (E) Answer not known

90. Law of tolerance "that the factors could be limiting at their maximum as well as minimum quantities was incorporated formulated by
- (A) Smith 1977 (B) ☒ V.E. Shelford in 1913
(C) Warming 1909 (D) Moen 1973
(E) Answer not known
91. Choose the right answer
Earth's area covered by ocean is
- (A) 341 Million km² (B) 351 Million km²
(C) ☒ 361 Million km² (D) 371 Million km²
(E) Answer not known
92. From space, this atmospheric layer due to its luminousing, looks like geo corona, this is called as
- (A) Stratosphere (B) Mesosphere
(C) Thermosphere (D) ☒ Exosphere
(E) Answer not known
93. Fresh water makes up any 2.5% of the total water in the plant within this the largest proportion about 68% of the fresh water is contributing in the form of
- (A) River
(B) Lakes
(C) Ground water
(D) ☒ Ice and permanent snow
(E) Answer not known

94. Choose the right matches of the elements composition of earth crust.

- (1) Oxygen – 49.85
- (2) Calcium – 4.18
- (3) Potassium – 2.33
- (4) Iron – 36.03
- (A) (1) and (2) are correct
- ☒ (B) (1) and (3) are correct
- (C) (2) and (3) are correct
- (D) (4) and (3) are correct
- (E) Answer not known

95. Assertion [A] : The lithosphere is constantly charging due to chemical, physical and biological weathering. .

Reason [R] : There process breakdown rocks and minerals at the earth surface.

- (A) [A] is true but [R] is false
- (B) [A] is false and [R] is true
- ☒ (C) Both [A] and [R] are true; and [R] is correct explanation of [A]
- (D) Both [A] and [R] are true, but [R] is not the correct to explanation of [A]
- (E) Answer not known

96. The scope of environmental science includes which of the following?

- (1) Study of interrelationship between living and non-living components.
- (2) Understanding the impact of human activities on natural systems.
- (3) Developing technologies for sustainable development.
- (4) Legal and policy frameworks for environmental protection.

Select the correct answer

- (A) (1) and (2) only
- (B) (1), (2) and (3) only
- (C) (2), (3) and (4) only
- ☒ (D) (1), (2), (3) and (4)
- (E) Answer not known

97. The important components of environmental studies include.

- (1) Biology, Geology, Chemistry and Physics
- (2) Engineering, Sociology and health
- (3) Anthropology, Economics, Statistics, Computers and Philosophy
- (4) Economic benefits and industrial growth

- (A) (1) and (3) only
- (B) (1) and (2) only
- ☒ (C) (1), (2) and (3) only
- (D) (1), (2) and (4) only
- (E) Answer not known

98. How does environmental science contribute to public health?
- (1) It helps identifying environmental sources of diseases.
 - (2) It supports sanitation and clean water access program.
 - (3) It provides strategies for controlling pollution.
- (A) (1) and (2) only
(B) (1) and (3) only
(C) (2) and (3) only
(D) ☒ (1), (2) only (3)
(E) Answer not known
99. Which of the following international environmental initiatives is most reflective of a multidisciplinary approach?
- (A) Kyoto protocol
 - (B) Paris agreement
 - (C) ☒ The UN Sustainable Development Goals (SDGs)
 - (D) Ramsar Convention on wetlands
 - (E) Answer not known

100. Choose the right option

In particular, pollutants may act in a way that causes organisms to become more vulnerable is called

- (i) Sinkhole
- (ii) Terracing
- (iii) Synergism
- (iv) Castings
- ☒ (iii)
- (B) (iv)
- (C) (i)
- (D) (ii)
- (E) Answer not known

101. Assertion (A) : Much improvement in environmental quality can be achieved by individual life style decisions.

Reason (R) : If the couples may decide to have only two children and thus help in population control, individuals can use energy more efficiently.

- (A) (A) is true but (R) is false
- ☒ (B) Both (A) and (R) are true; and (R) is the correct explanation of (A)
- (C) (A) is false but (R) is true
- (D) Both (A) and (R) are true; but (R) is not the correct explanation of (A)
- (E) Answer not known

102. Choose the correct option :

The intimately local and immediate surrounding of the organism is

- (A) Ecosphere
- (B) ☒ Microenvironment
- (C) Ecological rich
- (D) Habitats
- (E) Answer not known

103. Choose the correct option :

Ecology considered to be “the science of community” is defined by the scientist.

- (i) Taylor 1936
 - (ii) Woodbury 1955
 - (iii) Frederick Clements 1916
 - (iv) Ernst Haeckel 1866
- (A) ☒ (iv)
 - (B) (ii)
 - (C) ☒ (iii)
 - (D) (i)
 - (E) Answer not known

104. A substance present in nature, is greater than natural abundance due to human activity, which make detrimental effect on environment is called as

- (A) ☒ Containment
- (B) Antibodies
- (C) ☒ Pollutant
- (D) Antigens
- (E) Answer not known

105. Choose the right answer among the type :

The basic concept of ecology are

- (i) All living organisms and their environment are mutually reactive and affected each other
- (ii) The Environment which is a complex phenomenon of several interrelated factors, is highly dynamic
- (iii) Each population did not occupy the specific Niche
- (A) (i) only
- (B) (i) and (ii) only
- (C) (i) and (iii) only
- (D) (ii) and (iii) only
- (E) Answer not known

106. Match the following scientists with their respective discovery of pathogens :

- | | |
|------------------------|----------------------------|
| (a) Robert Koch | 1. HIV |
| (b) Baruch Blumberg | 2. <i>Vibrio cholerae</i> |
| (c) Luc Montagnier | 3. <i>Salmonella typhi</i> |
| (d) Karl Joseph Eberth | 4. HBV |

- | | (a) | (b) | (c) | (d) |
|-----|------------------|-----|-----|-----|
| (A) | 4 | 1 | 3 | 2 |
| (B) | 2 | 3 | 4 | 1 |
| (C) | 3 | 4 | 1 | 2 |
| (D) | 2 | 4 | 1 | 3 |
| (E) | Answer not known | | | |

107. The pulmonary irritant found in polluted air is

- (A) Water vapour (B) Oxygen
(C) Sulphur oxides (D) Nitrogen gas
(E) Answer not known

108. Which of the following statement(s) is/are true about Diabetes?

- (i) People with Type 1 diabetes can produce insulin but in smaller amounts.
- (ii) Type 2 diabetes is more common in adults and is associated with insulin resistance.
- (iii) People with diabetes are at higher risk for developing heart disease.

(A) (i) only

(B) (i) and (ii) only

(C) (i) and (iii) only

(D) ☒ (ii) and (iii) only

(E) Answer not known

109. Match correctly the terms related to their respective diseases :

(a) Cholera

1. Orthomyxovirus

(b) Typhoid

2. Dane Particle

(c) Influenza

3. EL Tor

(d) Hepatitis B

4. Mary Mallon

(A) ☒ (a) 4, (b) 3, (c) 2, (d) 1

(B) ☒ (a) 3, (b) 4, (c) 1, (d) 2

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

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

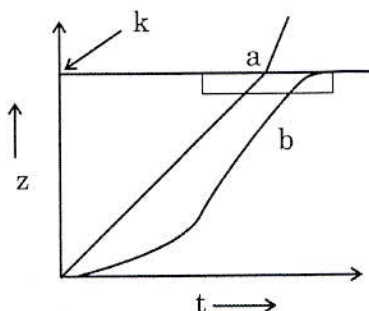
(E) Answer not known

110. Which of the following statements are true about Reverse Transcriptase in HIV replication?

- (i) Reverse transcriptase converts HIV's RNA into DNA which is then integrated into the host genome.
- (ii) Reverse transcriptase has a low mutation rate, making it easier for drug development.
- (iii) Reverse transcriptase inhibitors are effective in preventing HIV replication by blocking RNA to DNA conversion.

- (A) (i) only
- (B) (i) and (ii) only
- (C) (i) and (iii) only
- (D) (ii) and (iii) only
- (E) Answer not known

111. Observe the population growth curve and identify the true statement(s)



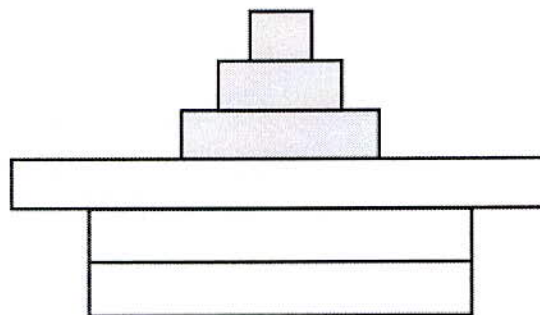
- (i) 'a' is exponential growth curve or J shaped curve
- (ii) 'b' is logistic growth curve or S shaped curve
- (iii) 'k' denotes the density of a population

- (A) (i) only
- (B) (ii) only
- (C) (i) and (ii) only
- (D) (iii) only
- (E) Answer not known

112. Which of the following is incorrectly paired?

- (1) ZPG – Zero Population Growth
- (2) IMR – Initial Mother Rationale
- (3) CBR – Crude Birth Rate
- (4) TFR – True Fatality Race
- (A) (1) and (3) are correct
- (B) (1) and (2) are correct
- (C) (2) and (3) are correct
- (D) (2) and (4) are correct
- (E) Answer not known

113. The following histogram shows the following type(s) of population



- (i) Increasing and Constant
- (ii) Constant and Reducing
- (iii) Reducing alone
- (iv) Increasing and Reducing
- (A) (i) only
- (B) (ii) only
- (C) (i) and (iii) only
- (D) (iii) only
- (E) Answer not known

114. Which of the following is/are key characteristics of Zero Population Growth (ZPG)?

- (i) ZPG occurs when birth rates are much higher than death rates
- (ii) The birth rate and death rate are equal, no population growth
- (iii) ZPG results in a stable population size with no growth or decline
- (A) (i) only
- (B) ☒ (ii) and (iii) only
- (C) (i) and (ii) only
- (D) (i) and (iii) only
- (E) Answer not known

115. Arrange the following Environmental movements in the order of their inception starting from oldest to the recent.

- (1) Chipko movement
(2) Green Belt movement
(3) Greenpeace foundation
(4) Earth Day first celebration
- (A) (3), (2), (4), (1) (B) (2), (4), (3), (1)
(C) (4), (1), (3), (2) (D) (4), (3), (1), (2)
(E) Answer not known

116. What is/are the primary objectives of the UN commission on Human Rights?

- (i) All human beings are born free and equal in dignity and rights.
- (ii) To investigate and address human rights violations and promote respect for human rights worldwide.
- (iii) To primarily focus on regulating international trade and economic policies.
- (A) (i) only
- (B) (i) and (ii) only
- (C) (ii) and (iii) only
- (D) (i) and (iii) only
- (E) Answer not known

117. Mention the article regarding “The convention on the Rights of the child (1989)” Which emphasis to combat disease and malnutrition?

- (A) Article 24(2)(c) (B) Article 34(2)(c)
(C) Article 20(1)(b) (D) Article 28(1)(a)
(E) Answer not known

118. Assertion (A) : The commission on Human Rights was established by the UN General Assembly in 1946.

Reason (R) : The UN economic and social council is responsible for setting up commissions related to economic, social and human rights issues.

- (A) Both (A) and (R) are true and (R) is correct explanation of (A)
- (B) Both (A) and (R) are true, but (R) is not correct explanation of (A)
- (C) (A) is true but (R) is false
- (D) ✓ (A) is false but (R) is true
- (E) Answer not known

119. Which of the following is not a responsibility of the Ministry of Tribal affairs?

- (A) Social security and insurance for the STs
- (B) Scholarship schemes for the STs student
- (C) ✓ Regulation of criminal justice related to STs
- (D) Tribal welfare planning, project formulation of research
- (E) Answer not known

120. Which of the following is an example of an International Depository Authority (IDA) under the Budapest?

- (A) WorldVeg Genebank
- (B) NCBI
- (C) ✓ MTCC
- (D) USPTO
- (E) Answer not known

121. Which of the following statements are false about Disaster Management?

- (i) United Nations Development Programme responsible for mitigation and prevention aspects of disasters
- (ii) In disaster management, the Chief Secretary of the state heads a state level committee which is in overall charge of the relief operations in the state
- (iii) Ministry of Environment, Forest and climate change is nodal ministry for drought

- (A) (i) False only
- (B) (ii) False only
- (C) ✓ (iii) False only
- (D) (ii) and (iii) False only
- (E) Answer not known

122. Which of the following statement are true about decision-making and standing bodies which are responsible for disaster management at central level?

- (i) Cabinet, headed by the Prime Minister
- (ii) Crisis management group headed by Cabinet Secretary
- (iii) National Disaster Management Authority is being contemplated by the Ministry of Home Affairs

- (A) (i) only
- (B) ~~(ii)~~ only
- (C) (i) and (ii) only
- (D) ☒ (i) and (iii) only
- (E) Answer not known

123. Identify the organisation which is also the convener of the Government of India NGO Committee on emergency preparedness.

- (A) IERC
- (B) IRCS
- (C) ☒ CARE-INDIA
- (D) ICRC
- (E) Answer not known

124. When a disaster occurs which of the following organization is informed of the relief required by one of its local counterparts and has the capacity to immediately release up to 50 metric tones of food relief supplies?

- (A) LWS
- (B) CARITAS
- (C) ☒ CRS
- (D) NOVIB
- (E) Answer not known

125. Choose the right answer :

Which one of the following agency help by donating funds to the Prime Minister's Relief Fund during disaster situations?

- (A) WBDMF
- (B) USAID
- (C) DFID
- (D) ☒ UNICEF
- (E) Answer not known

126. Find out the correct statement :

GIS and other geo-technologies are used for

- (i) Mapping of disaster-affected areas and assessing disaster loss and damage
 - (ii) Risk mapping and modelling
 - (iii) Real time monitoring
 - (iv) ☒ Spatial decision support system
- (A) ☒ (i), (ii), (iii), (iv)
 - (B) (i), (ii) and (iii) only
 - (C) (i), (iii) and (iv) only
 - (D) (i) and (ii) only
 - (E) Answer not known

127. Which of the following is the correct sequence of the key phases in disaster management?

- (A) ☒ During Disaster → Post Disaster → Pre-Disaster
- (B) ☒ Pre-Disaster → During Disaster → Post Disaster
- (C) Post Disaster → Pre-Disaster → During Disaster
- (D) Pre-Disaster → Post Disaster → During Disaster
- (E) Answer not known

128. Choose the right answer among type.

Aerosols are tiny particles suspended in the following environmental component.

(i) Air

(ii) Water

(iii) Soil

(A) ☒ (i) only

(B) (i) and (iii) only

(C) (i) and (ii) only

(D) (ii) and (iii) only

(E) Answer not known

129. Seismic history of Gujarat reveals that severe earthquake occurs in every following years.

(A) ☒ 10 years

(B) 20 years

(C) ☒ 30 years

(D) 40 years

(E) Answer not known

130. Assertion (A) : National Disaster Management division which deals with all kinds of Disaster Management other than drought.

Reason (R) : The Nodal ministry for drought is the ministry of agriculture.

(A) ☒ (A) is true but (R) is false

(B) ☒ Both (A) and (R) are true and (R) is the correct explanation of (A)

(C) (A) is false (R) is true

(D) Both (A) and (R) are true but (R) is not correct explanation of (A) is correct

(E) Answer not known

131. When annual RF is deficient by 20% of normal or more is called?

- (A) Severe drought year
- (B) ☒ Drought year
- (C) Seasonal drought
- (D) Agricultural drought
- (E) Answer not known

132. Hurricane is measure with

- (A) Richter scale
- (B) ☒ Saffir-Simpson scale
- (C) Enhanced Fujita scale
- (D) Dobson unit
- (E) Answer not known

133. Assertion (A) : Land slide is a major environmental hazard found especially in the mountain region.

Reason (R) : Depending upon the nature of domain materials in the movement of surface matter, they are known as rock falls, land slides or avalanches.

- (A) ☒ (A) is true but (R) is false
- (B) ☒ Both (A) and (R) are true and (R) is the correct explanation of (A)
- (C) (A) is false (R) is true
- (D) Both (A) and (R) are true but (R) is not the correct explanation
- (E) Answer not known

134. The condition that increase the susceptibility of an individual, a community or a system to the impacts of hazards is known as

(i) Vulnerability

(ii) Desertification

(iii) Green Accounting

(A) ☒ (i) only

(B) (i) and (iii) only

(C) (i) and (ii) only

(D) (ii) and (iii) only

(E) Answer not known

135. Which of the following is true about natural disaster?

(i) Hurricanes

(ii) Tornados

(iii) Chernobyl disaster

(A) ☒ (i) only

(B) (i) and (iii) only

(C) ☒ (i) and (ii) only

(D) (ii) and (iii) only

(E) Answer not known

136. In order to provide accurate and relevant information to understand human-induced climate change, the UN Environmental program and the World Meteorological Society established the

(A) ☒ International program on climate change

(B) ☒ Intergovernmental panel on climate change

(C) International Environmental program on climate change

(D) World Meteorological Society for climate change

(E) Answer not known

137. An innovative market-based solution to the problem of reducing greenhouse gas emissions is
- (A) Carbon Economy (B) Hydrogen Economy
(C) Hydrogen Trading (D) ☒ Carbon Trading
(E) Answer not known
138. The most notable development that happened in COP 26 in Glasgow was
- (A) ☒ Reducing CH₄ emission (B) Reducing CO₂ emission
(C) Reducing CFCs emission (D) Reducing N₂O emission
(E) Answer not known
139. Identify the misconceptions about ozone depletion
- (i) CFCs are too heavy to reach the stratosphere
(ii) The 'ozone hole' is a hole in the ozone layer
(iii) The ozone hole is only present above Antarctica
(iv) Man-made chlorine is insignificant compared to Natural sources
- (A) (ii) and (iii) (B) (ii), (iii) and (iv)
(C) (i), (ii) and (iii) (D) ☒ (i), (ii), (iii) and (iv)
(E) Answer not known
140. What is the main purpose of UNFCCC?
- (A) To enforce penalties for Carbon emission
(B) ☒ To take all practicable steps to implement carbon reduction activities
(C) To invest in Green energy technologies
(D) To promote nuclear energy as climate solutions
(E) Answer not known

141. Which of the following is a key benefit of nuclear fusion energy in the context of global climate change?

- (A) ✓ Fusion energy has a zero carbon footprint
- (B) Fusion produces significant amount of CO₂ during energy generation
- (C) Fusion energy directly converts CO₂ into usable energy
- (D) Fusion energy requires large-scale mining of coal
- (E) Answer not known

142. Which of the following statement are true about the Kyoto mechanisms?

- (i) Joint implementation allows industrialised countries to implement projects that reduce emissions in the territories of other industrial countries.
 - (ii) CDM allows industrialised countries to implement projects that reduce emission in developing countries.
 - (iii) Emissions trading allows developing countries to purchase assigned amount of units of emissions from industrialised countries.
- (A) (i) only
 - (B) ✓ (i) and (ii) only
 - (C) (i) and (iii) only
 - (D) All of these
 - (E) Answer not known

143. Under the UNFCCC classification, India is categorised as

- (A) Annex I country
- (B) Annex II country
- (C) ✓ Non Annex I country
- (D) LDC
- (E) Answer not known

144. Assertion (A) : Fossils found in sediments provide proxy evidence about ancient climates and climatic change.

Reason (R) : They are especially suitable sources of information for periods before Cambrian Era.

(A) (A) is true but (R) is false

(B) Both (A) and (R) are true and (R) is the correct explanation of (A)

(C) ☒ (A) is false (R) is true

(D) Both (A) and (R) are true but (R) is not the correct explanation of (A) is correct

(E) Answer not known

145. Which of the following agreement outlined the world is on track to exceed the 1.5°C warming threshold?

(A) ☒ Paris agreement

(B) UNESCO agreement

(C) America agreement

(D) Hongkong agreement

(E) Answer not known

146. Identify the man-made substance which is a main cause of ozone depletion?

(A) Nitrous oxide

(B) ☒ Chlorofluorocarbon

(C) Sulphur dioxide

(D) Zinc oxide

(E) Answer not known

147. In different regions, changes in Monsoon track and timing can lead to

(A) Heavy Rainfall and land slide (B) ☒ Storm and Rainfall

(C) Flood and Drought

(D) Heavy Rainfall and Drought

(E) Answer not known

148. What is the main cause of enhanced green house effect in respect to climate change?

- (A) ☒ Human action
- (B) Natural activity
- (C) Volcanic activity
- (D) External forces
- (E) Answer not known

149. Which of the following is a measure of its radiation reflectivity?

- (A) ☒ Radiative forcing
- (B) Global warming potential
- (C) ☒ Albedo
- (D) Radiation variability
- (E) Answer not known

150. Which of the following is the main cause of coral bleaching?

- (A) ☒ Overfishing
- (B) Marine pollution
- (C) ☒ Warmer ocean temperatures
- (D) Ozone depletion
- (E) Answer not known

151. Assertion (A) : To sink to the deep ocean, water needs to be particularly dense.

Reason (R) : Cold and dense water do not undergo thermohaline circulation.

- (A) Both (A) and (R) are true
- (B) ☒ (A) is true ; (R) is false
- (C) (A) is false ; (R) is true
- (D) Both (A) and (R) are false
- (E) Answer not known

152. Which of the following statement/s is/are False regarding El.Nino

- (i) El Nino event brings warm water along the Peruvian coast
- (ii) El Nino causes trade winds to flow from the East to the West
- (iii) El Nino results in heavy rains in South America
- (iv) El Nino causes drought in South-East Asia
- (A) (iii) and (iv)
- (B) (i) only
- (C) ~~(iv)~~ only
- (D) ✓ (ii) only
- (E) Answer not known

153. Which of the following is one of the major exhaust emissions from compressed engines compared spark ignition engines?

- (A) Oxides of Nitrogen
- (B) ✓ Particulates
- (C) CO and CO₂
- (D) Unburnt hydrocarbon
- (E) Answer not known

154. Which region is most vulnerable to the effects of global warming, especially in terms of rising sea levels?

- (A) Northern Europe
- (B) ~~Sub~~ Saharan Africa
- (C) ✓ Small Island nations in the Pacific and Indian Oceans
- (D) Eastern Asia
- (E) Answer not known

155. Which of the following is a significant source of carbondioxide that results from deforestation?

- (i) The burning of Trees
- (ii) The decomposition of fallen trees
- (iii) The decay of soil organic matter
- (A) (i) and (ii) only
- (B) (ii) and (iii) only
- (C) (i) and (iii) only
- (D) ☒ (i), (ii) and (iii) only
- (E) Answer not known

156. Which of the following is a non-greenhouse gas?

- (A) ☒ Sulphur dioxide (SO_2)
- (B) Methane
- (C) Chlorofluoro carbons
- (D) Nitrous oxide
- (E) Answer not known

157. Consider the following :

- (i) Methane
- (ii) Nitrous oxide
- (iii) Carbondioxide

Which of the above is/are the agricultural emissions?

- (A) only (i)
- (B) (i) and (ii) only
- (C) (ii) and (iii) only
- (D) ☒ All of these
- (E) Answer not known

158. Identify the incorrectly matched pair/s among the following green house gases regarding their sources

- | | | |
|--------------------------|---|------------------------------------|
| (i) Methane | – | Decomposition of organic matter |
| (ii) Nitrous oxide | – | Evaporation of industrial solvents |
| (iii) Ozone | – | Hydrocarbon and Nitrogen oxide |
| (iv) Chlorofluorocarbons | – | Plastic foam production |

- (A) (iii), (iv)
(B) ~~(ii)~~, (iii), (iv)
(C) ✓ (ii) only
(D) (iv) only
(E) Answer not known

159. Green house effect is the trapping of heat by the atmosphere. The temperature at the earth's surface is determined by

- (i) The amount of sun light earth receive
(ii) The amount of sun light earth reflects
(iii) Retention of heat by the atmosphere
(iv) Evaporation and condensation of water vapour

- (A) (i) and (ii) only
(B) (iii) and (iv) only
(C) ~~(i)~~ and (iii) only
(D) ✓ (i), (ii), (iii) and (iv)
(E) Answer not known

160. Select the major carbon sink/s among the following :

- (i) Troposphere
(ii) Oceans
(iii) Forests
(iv) Tropopause

- | | |
|----------------------|-------------------|
| (A) (i) only | (B) (i) and (iii) |
| (C) ✓ (ii) and (iii) | (D) (i) and (iv) |
| (E) Answer not known | |

161. Which is/are the factor that increases the risk faced by threatened species?

- (i) Poor dispersal ability
- (ii) Lower rates of population increase
- (iii) Species of wide tolerance ability
- (A) ✓ (i) and (ii) only (B) (i) and (iii) only
- (C) (ii) and (iii) only (D) (iii) only
- (E) Answer not known

162. Consumptive use value of biodiversity refers to

- (A) Assessing Ecosystem services
- (B) ✓ Assessing value of commercial natural resources
- (C) Assessing ecotourism value
- (D) Assessing faunal resources only
- (E) Answer not known

163. Which of the following values of biodiversity refers to its ability to support various ecosystems that benefit human society?

- (A) Cultural value (B) ✓ Functional value
- (C) Aesthetic value (D) Economic value
- (E) Answer not known

164. Which of the following is an endemic species of India?

- (A) Peacock (B) ✓ Nilgiri Tahr
- (C) Indian Elephant (D) Tiger
- (E) Answer not known

165. Which of the following statements are true about a key stone species?

- (i) Key stone species have profound influence on the community composition and survivability of other species
- (ii) Key stone species play pivotal role in ecosystem functioning
- (iii) Removal of a key stone species does not have any effect on dependent species

- (A) (i) and (iii) only
- (B) (i) and (ii) only
- (C) (ii) and (iii) only
- (D) (iii) only
- (E) Answer not known

166. Consider the following ecosystem

- (1) Coral reefs
- (2) Mangroves
- (3) Tropical rain forests
- (4) Alpine Meadows

Which of the above are known for high ecosystem productivity and diversity?

- (A) (1) and (3) only
- (B) (2) and (4) only
- (C) (1), (2) and (3) only
- (D) (1), (2), (3) and (4)
- (E) Answer not known

167. Which of the following is not a part of the 12 biogeographic zones of India?

- (A) The Indian Desert
- (B) The Coastal zone
- (C) The tropical rainforest zone
- (D) The Islands
- (E) Answer not known

168. Consider the following ecosystem services :

- (1) Nutrient cycling
- (2) Soil formation
- (3) Carbon sequestration
- (4) Recreation and tourism

Which of the above are considered “regulatory services” under the Millennium Ecosystem Assessment framework?

- (A) (1), (2) and (3) only
- (B) (2), (3) and (4) only
- (C) (1) and (2) only
- (D) ✓ (1) and (3) only
- (E) Answer not known

169. Consider the following statements :

- (1) Species diversity refers to the number of different species in a particular area.
- (2) Ecosystem diversity includes variations in both terrestrial and aquatic ecosystems.
- (3) Genetic diversity can occur within the same species.

Which of the above statement is/are correct?

- (A) (1) and (2) only
- (B) (2) and (3) only
- (C) (1) and (3) only
- (D) ✓ (1), (2) and (3)
- (E) Answer not known

170. The Earth's surface is categorized into biogeographic regions on the basis of their

- (A) Ecosystem diversity
- (B) ☒ Biotic composition
- (C) Abiotic factors only
- (D) Species composition
- (E) Answer not known

171. Match correctly the protected areas and the related species.

- | | |
|--|------------------------|
| (1) Kalakad - Mundanthurai | – Grizzled squirrel |
| (2) Srivilliputhur | – Dugong |
| (3) Gulf of Mannar | – Birds |
| (4) Vedanthangal | – Tiger |
| (A) (4), (2), (1), (3) | (B) (2), (4), (3), (1) |
| (C) ☒ (4), (1), (2), (3) | (D) (2), (3), (1), (4) |
| (E) Answer not known | |

172. Which one of the following is a protective function of forest?

- (A) Timber production and wood harvesting
- (B) ☒ Prevent soil erosion, protect watersheds, regulate water flow
- (C) Contribute, recreational and aesthetic values
- (D) Used for fuel wood collection
- (E) Answer not known

173. Which of the tribal community living inside or near the Anaimalai Tiger Reserve?

- (A) ☒ Malasar
- (B) Toda
- (C) Kurumba
- (D) Irula
- (E) Answer not known

174. What is the primary reason for the coral breachy in the Gulf of Mannar?
- (A) ✓ Increase in water temperature
 - (B) Over fishing
 - (C) Pollution
 - (D) Destructive fishing method
 - (E) Answer not known
175. What role do traditional rituals and beliefs play in the conservations of sacred groves?
- (A) They discourage human access, preventing the collection of valuable resources
 - (B) They promote large scale deforestation to clean land for agricultural use
 - (C) ✓ They strengthen the spiritual connection between local communities and nature, fostering conservation
 - (D) They lead to the destruction of biodiversity by encouraging over exploitation of natural resources
 - (E) Answer not known
176. In soil profile the organic horizon (O) located at which position?
- (A) Below B horizon
 - (B) ✓ Top most
 - (C) Bottom most
 - (D) Above C horizon
 - (E) Answer not known
177. The lower most horizon in the soil profile is
- (A) A horizon
 - (B) B horizon
 - (C) ✓ C horizon
 - (D) O horizon
 - (E) Answer not known

178. Neyveli aquifer occurs in

- (A) ☒ Neyveli in Cuddalore district of Tamilnadu (Southern India)
- (B) ☒ South Arcot District of Tamil Nadu (Southern India)
- (C) Indo Gangetic Plains (Northern India)
- (D) Uttarpradesh (Northern India)
- (E) Answer not known

179. Electrical conductivity of saline soil is lies between

- (A) ☒ Greater than 4.0 mm hos/cm
- (B) 2-4 mm hos/cm
- (C) Lesser than 4.0 mm hos/cm
- (D) Lesser than 2.0 mm hos/cm
- (E) Answer not known

180. Arrange the following in increasing order of land use pattern in India.

- (i) Agricultural land
- (ii) Dense forest
- (iii) Permanent pastures and meadow
- (iv) Barren land

- (A) ☒ (iv), (ii), (iii), (i)
- (B) (iv), (iii), (ii), (i)
- (C) (iv), (i), (ii), (iii)
- (D) (iii), (iv), (ii), (i)
- (E) Answer not known

181. The factors which degrade soil quality are

- (1) Water logging
- (2) Modern agricultural practices
- (3) Terracing
- (4) Shifting cultivation
- (A) (1), (3) (B) only (3)
- (C) ✓ (1), (2), (4) (D) (2), (3)
- (E) Answer not known

182. Choose the right matches among type

- | | |
|-----------------------------|-----------------------------|
| (1) Anaerobic digestion | – Biogas production |
| (2) Fermentation | – Dry process |
| (3) Pyrolysis | – Wet process |
| (4) Hydrogenation | – Ethanol production |
| (A) (1) and (3) are correct | (B) (1) and (2) are correct |
| (C) (2) and (3) are correct | (D) ✓ (1) alone correct |
| (E) Answer not known | |

183. Percentage of fresh water available in ice caps and glaciers that cannot be utilized

- | | |
|----------------------|------------|
| (A) 2.8 % | (B) 0.01 % |
| (C) ✓ 2.15 % | (D) 2.2 % |
| (E) Answer not known | |

184. The amount of ground water within 800 m from the ground surface is over. How many times the amount in all fresh water lakes and reservoirs?

- (A) 10 times
- (B) 60 times
- (C) 300 times
- (D) 500 times
- (E) Answer not known

185. Assertion [A] : Instead of few large dams a chain of small dams can be constructed at appropriate sites.

Reason [R] : This dam is safe from every angle

- (A) [A] is true but [R] is false
- (B) Both [A] and [R] are true and [R] is the correct explanation of [A]
- (C) [A] is false [R] is true
- (D) Both [A] and [R] are true but [R] is not the correct explanation of [A]
- (E) Answer not known

186. The purpose of groundwater modelling is

- (a) To predict weather patterns
 - (b) To simulate and understand groundwater flow
 - (c) To measure soil acidity
 - (d) To monitor seismic activity
- (A) (b) is correct
 - (B) (a) and (b) are correct
 - (C) (b) and (c) are correct
 - (D) (a) is correct
 - (E) Answer not known

187. A natural gas stored under high pressure is
- (A) ☒ CNG (B) LPG
(C) KLG (D) PNP
(E) Answer not known

188. Assertion [A] : Global energy consumption has grown by nearly 2.2 % per year.

Reason [R] : The energy consumption is twice the rate of population growth.

- (A) [A] is true but [R] is false
(B) ☒ Both [A] and [R] are true, and [R] is the correct explanation of [A]
(C) [A] is false, [R] is true
(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]
(E) Answer not known

189. Match the column I – Resources with column II examples :

Resources	Examples
(a) Biological	1. Coal energy
(b) Renewable	2. Wildlife
(c) Non-renewable	3. Solar energy

- (a) (b) (c)
(A) ☒ 2 3 1
(B) 3 2 1
(C) 1 2 3
(D) 2 1 3
(E) Answer not known

190. Give an example of Non-Metallic minerals

- (A) ☒ Graphite
- (B) Copper
- (C) Silver
- (D) Gold
- (E) Answer not known

191. The primary cause of over fishing is

- (A) ☒ Climate change
- (B) ☒ Unsustainable high fishing practices
- (C) Natural predator prey relation
- (D) Pollution
- (E) Answer not known

192. On which rank does India stand in fish production?

- (A) 1st
- (B) ☒ 2nd
- (C) 3rd
- (D) 4th
- (E) Answer not known

193. The fishing gears used on the Malabar coast are

- (A) Stake nets
- (B) Cast nets
- (C) ☒ Seine nets
- (D) Drift nets
- (E) Answer not known

194. Assertion [A] : An optimum temperature is essential for the metabolism, growth and reproduction of fishes.

Reason [R] : The variation in water temperature has great effect on productivity of pond

(A) [A] is true but [R] is false

(B) Both [A] and [R] are true and [R] is the correct explanation of [A]

(C) [A] is false, [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

(E) Answer not known

195. The following state has the highest marine fish production in India

(A) Maharastra

(B) Gujarat

(C) Kerala

(D) Tamilnadu

(E) Answer not known

196. Assertion [A] : Over-grazing in forest area has reduced the regenerative capacity of the forests.

Reason [R] : Crop productivity is affected adversely due to soil infertility.

(A) [A] is true but [R] is false

(B) Both [A] and [R] are true and [R] is the correct explanation of [A]

(C) [A] is false and [R] is true

(D) Both [A] and [R] are true, but [R] is not the correct explanation of [A]

(E) Answer not known

197. The International Agreement aimed at preventing over fishing is

- (A) Kyoto protocol
- (B) ~~Convention on Biological diversity~~
- (C) ✓ Common fisheries policy
- (D) Paris Agreement
- (E) Answer not known

198. The primary source of freshwater fish production is in?

- (A) ~~River~~
- (B) Lakes
- (C) ✓ Ponds
- (D) Reservoirs
- (E) Answer not known

199. Which one of the following is the critical role of forest in maintaining ecological balance?

- (A) ~~Production of timber at other forest products~~
- (B) ✓ Regulation of water cycle, climate, preventing erosion
- (C) Providing habitat for wildlife
- (D) Offering recreational space for humans
- (E) Answer not known

200. Commonly used food for fish farming

- (A) ~~Algae~~
- (B) Insects
- (C) ✓ Fishmeal
- (D) Plankton
- (E) Answer not known