

# OFFICERS IAS ACADEMY

**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO**

**Serial No.** 1701125

**Test Booklet Series**

## GENERAL STUDIES

**Test series- 4 Ecology & Environment**



**Time Allowed : Two Hours**

**Maximum Marks : 200**

### INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS TEST BOOKLET DOES NOT HAVE ANY UNPRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC, IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.
2. ENCODE CLEARLY THE TEST BOOK SERIES **A, B, C, or D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET,
3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. DO NOT write anything else on the Test Booklet.
4. This Test Booklet Contains **100 items** (questions). Each item is printed in **English**. Each item Comprises four responses (answers) You will select the response which you want to make on the Answer Sheet. In Case you feel that there is more than one correct response, mark the response which you consider the best. In any Case, Choose **ONLY** response for each item,
5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided, See directions in the Answer Sheet.
6. All items carry equal marks.
7. Sooner than you proceed to mark in the Answer Sheet the response to various items in the test Booklet, you have to fill in some particulars in the Answer sheet as per instruction sent to you with your Admission Certificate.
8. After you have Completed filling in all your responses on the Answer Sheet and the examination has concluded, you should hand over to the invigilator only the Answer Sheet You are permitted to take away with you the Test Booklet.
9. Sheet for rough work are appended in the Test Booklet at the end.
10. **Penalty for Wrong answers**  
THERE WILL BE PENALTY FOR WRONG ANSWER MARKED BY A CANDIDATE IN THE OBJECTIVE TYPE QUESTION PAPERS.
  - i) There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-third (0.66)** of the marks assigned to that question will be deducted as penalty.
  - ii) If a Candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that Question.
  - iii) If a question is left blank i.e., no answer is given by the candidate, there will be **no penalty** for that question.

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1. Which of the following are projects of IUCN

- i) Integrated Tiger Habitat Conservation Programme
- ii) Save Our Species (SOS)
- iii) Amphibian Survival Alliance .

Choose the appropriate option.

- a. i only
- b. i, ii only
- c. i ,iii only
- d. All of the above

2. Which of the following are correct

- i ) The functional characteristics of a species in its habitat is referred to as “niche”.
- ii ) The term niche means the sum of all the activities and relationships of a species by

Which it uses the resources in its habitat for its survival and reproduction.

Choose the appropriate option

- a. i only
- b. ii only
- c. Both i& ii
- d. Neither I nor ii

3. Which of the following are examples of basic adaptations that help animals and plants to survive in their respective environments.

i) Shape of bird’s beak.

ii) The thickness or thinness of fur.

iii) Presence of feathers and wings in birds.

iv) Evergreen and deciduous nature of trees.

Choose the appropriate option

- a. i only
- b. ii,iii only
- c. i, iv only
- d. All of the above.

4. Which of the following is correct order of hierarchy with respect to a Biome.

- i) Individual
- ii ) Population
- iii) Ecosystem
- iv) Community
- v) Biosphere
- vi) Biome

Choose the correct option

- a. i,ii,iii,v,iv,vi.
- b. i,ii,iv,iii,vi,v.
- c. ii,i,iii,iv,vi,v.
- d. i,iii,iv,vi,v,ii.

5. Which of the following is correct?

i) Ecological isolation is caused by interference in interbreeding between members of different populations of species.

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ii) Reproductive isolation is caused by differences in temperature, humidity, pH etc. in the environment of the two populations.

Choose the appropriate option

- a. i only
- b. ii only
- c. Both i& ii
- d. Neither i nor ii

6. What is the process by which communities of plant and animal species in an area are replaced or changed into another over a period of time is known as

- a. Habitat succession
- b. Ecological succession
- c. Species succession
- d. Biosphere succession.

7. Which of the following are true about Primary succession & Secondary Succession?

- i) Primary succession takes a very long time as compared to secondary succession as the soil is to be formed during primary succession while secondary succession starts in an area where soil is already present.
- ii) The pioneer community after some time gets replaced by another

community with different species combination.

Choose the appropriate option

- a. i only
- b. ii only
- c. Both i& ii
- d. Neither i nor ii

8. Which of the following are correctly matched?

- i) Community that initially inhabits a bare area - A. sere
- ii) The terminal stage of succession - B. Climax community.
- iii) Sequence of communities in a given area during the course of succession - C. Pioneer community.

Choose the appropriate option

- a. i only
- b. i,ii only
- c. ii only
- d. i,iii only.

9. The practice of keeping fishes in captivity for the first few years in floating cages in coastal lagoons and releasing them from captivity into water bodies is called..

- a. Fish ranching
- b. Fish Farming
- c. Fish culture

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d. Fish community.

10. The solution to many of the environmental problems is Eco-industrial revolution. What does Eco Industrial revolution refers to..
- a. It refers to a new resource and efficient production system generating minimum waste.
  - b. Recycling or reutilizing most of the industrial waste.
  - c. Networking of different industries in complex resource exchange web where the waste of one industry is used as a raw material by for the other.
  - d. Industry should strive for higher efficiency of energy and resource use.

11. Consider the following statements

- i) Agro ecosystems have created many environmental problems such as soil erosion, ground water depletion and environmental pollution by fertilizers and pesticides.
- ii) Eco-industrial systems should be encouraged to protect the environment.

Choose the correct option

- a. i only
- b. ii only
- c. Both i & ii
- d. Neither i nor ii

12. Consider the following statements regarding Mangroves

- 1. India accounts for nearly 10% of world's mangrove vegetation
- 2. There has been a net decreases in the mangrove cover of India over last few years
- 3. Andhra Pradesh has more mangrove cover than Gujarat

Select the correct code

- a. Only 1
- b. 1 and 2
- c. 1, 2 and 3
- d. None

13. Consider the following with respect to 'Ecotones and Ecoclines'

- 1. An ecocline describes a variation in species prevalence and is often not strictly dependent on a major physical factor separating an ecosystem from another, with resulting habitat variability.
- 2. An ecotone is a variation of the physicochemical environment dependent of one or two physico-chemical factors of life, and thus presence/absence of certain species.

Select the correct code

- a. Only 1
- b. Only 2
- c. Both

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d. None

14. Consider the following statements:

1. Eurythermal organisms can tolerate and thrive in wide range of temperature.
2. Warm blooded animals can maintain a constant body temperature even when the surrounding temperature is changing.
3. Stenothermal organisms are restricted to a small range of temperature.
4. Cold blooded animals generally hibernate to protect themselves from extreme climatic conditions.

Which of the above statements are correct:

- a. 1 and 3
- b. 2 and 4
- c. All of the above
- d. None of the above

15. In Equatorial rainforest, the undergrowth on the floor is very less.

The correct reason behind this is:

- a. Very less sunlight reaches the ground for survival of plants due to thick canopies.
- b. The hardwood trees excrete toxic resins which do not allow the plants to grow.

c. Due to high population of herbivorous species.

d. The soil of rainforest is less fertile due to heavy leaching of minerals.

16. Consider the following statements:

1. The exchange of air (breathing) in plants takes place only through stomata present in the leaves.
2. Many desert plants have their stomata in deep pits to minimize water loss by evaporation.
3. Desert plants have a mechanism that their stomata remain closed during day time.

Which of the above statements are incorrect:

- a. 1 and 2
- b. 2 and 3
- c. 1 and 3
- d. None of the above.

17. Consider the following statements regarding 'Humus':

1. Humus is a finely divided partially decomposed organic material in soil, whose origin cannot be traced by looking at it.
2. Humus is colloidal and helps in binding minerals in the top soil and making them available to the roots of trees.

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3. It is highly resistant to microbial action and decomposes at a very slow rate.

Which of the above statements are correct:

- a. 1 and 2
- b. 2 and 3
- c. 1 and 3
- d. All of the above

- 2. The renewal of a forest after a fire
- 3. A flooded land
- 4. The renewal of a crop after harvesting

Select the correct option

- a. 1, 2 and 3
- b. 2, 3 and 4
- c. 1, 3 and 4
- d. All

18. Consider the following statements regarding energy flow from one trophic level to other trophic level:

- 1. The energy flow is always unidirectional, i.e. from lower trophic level to higher trophic level.
- 2. The energy transfer in trophic levels follows a 10% law, i.e. only 10 percent energy is transferred from lower trophic level to the next trophic level.

Which of the above statements are correct:

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

19. Which among the following can effectively be examples of 'Secondary Succession'?

- 1. Formation of a new Island after volcanic eruption

20. Which of the following are true about Invasive Alien species.

- i) An alien species is a species introduced by humans intentionally outside of its natural past or present distribution.
- ii) All alien species have negative impacts.

Choose the appropriate option.

- a. i only
- b. i, ii only
- c. Neither i nor ii
- d. All of the above.

21. The ecological footprint is a measure of human demand on the Earth's ecosystems. It measures-

- 1. How much of the biological capacity of the planet is demanded by a given human activity or population
- 2. Ecological Footprints is calculated for overall activity of a nation or

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population and activities such as industrialization etc.

3. The disadvantage of Ecological Footprint is that it cannot be calculated for individual people or area.

Select the incorrect statement/s

- a. 1 and 2
- b. Only 2
- c. 1 and 3
- d. Only 3

22. With reference to oil spills, consider the following statements :

1. Oil spills can block the penetration of sunlight into the water and thereby cause death of marine organisms.

2. National Oil Spill Disaster Contingency Plan aims to develop appropriate and effective systems for the detection and reporting of spillage of oil..

Which of the statements given above is/are correct ?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

23. Consider the following statements related to National Air Quality Index.

1. National Air Quality Index was launched under Swachh Bharat.

2. AQI to act as 'One Number- One Colour-One Description' to judge the Air Quality for Common Man

Which of the above statements is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

24. Regarding Carbon Credit, which of the following statements is correct?

- a. They are traded at a price fixed from time to time by United Nations Environment Programme
- b. Carbon credits was ratified in conjunction with Nagoya Protocol
- c. It is the total emission of GHGs over a period of time by any country
- d. A carbon credit is a tradable unit to emit one tonne of carbon dioxide or equivalent amount of the mass of another greenhouse gas .

25. Which of the following is an indicator of air pollution?

- a) Algae
- b) Lichen
- c) Bryophytes
- d) Cycas

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26. Which of the following is/are primary air pollutant?

1. Ground level ozone
2. Photochemical smog
3. Sulphur dioxide
4. Volatile Organic Compounds
5. Particulate Matter

Select the correct answer using the codes given below.

- a. 2,3,4 and 5 only
- b. 3,4 and 5 only
- c. 4 and 5 only
- d. 3 and 5 only

27. Lead ingested or inhaled, is a health hazard. After the addition of lead to petrol has been banned, what still are the sources of lead poisoning?

1. Pigments
2. Stained Glass
3. Paints
4. Jewellery and toys

Select the correct answer using the codes given below:

- a. 1,2 & 3 only
- b. 1 and 3 only
- c. 2 & 4 only
- d. 1,2,3& 4

28. Which of the following are some important pollutants released by steel industry in India?

1. Oxides of sulphur
2. Oxides of nitrogen
3. Carbon monoxide
4. Compounds of Chlorine

Select the correct answer using the code given below.

- a. 1, 3 and 4 only
- b. 2 and 3 only
- c. 1 and 4 only
- d. 1, 2, 3 and 4

29. With reference to 'fly ash' produced by the power plants using the coal as fuel, which of the following statements is/are correct?

1. It is made of Silica, Aluminium oxide, calcium oxide and some potentially toxic elements.
2. Fly Ash is added as a mixture to cement for building construction, laying of roads and landfills.
3. The bricks and blocks made of fly-ash are stronger and cheaper than conventional bricks

Select the correct answer using the code given below

- a. 1 and 2
- b. 2 and 3
- c. All the above
- d. 1 and 3



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30. What can be the impact of excessive /inappropriate use of nitrogenous fertilizers in agriculture?

1. Proliferation of nitrogen –fixing microorganism in soil can occur.
2. Increase in the acidity of soil can take place
3. Leaching of nitrate to the ground – Water can occur

Select the correct answer using the code given below

- a. 1 and 3 only
- b. 2 only
- c. 2 and 3 only
- d. 1,2 and 3

31. Consider the following international agreements.

1. The international treaty on plant genetic resources for food and agriculture
2. The United Nations convention to combat desertification
3. The world heritage convention

Which of the above has/have a bearing on the biodiversity?

- a. 1 and 2 only
- b. 3 only
- c. 1 and 3 only
- d. 1,2 and 3

32. There is some concern regarding the nanoparticles of some chemical elements that are used by the Industry in the manufacture of various products, why?

1. They can accumulate in the environment, and contaminate water and soil
2. They can enter the food chains .
3. They can trigger the production of free radicals

Select the correct answer using the code given below

- a. 1 and 2 only
- b. 3 only
- c. 1 and 3 only
- d. 1,2 and 3

33. Acid rain is caused by the pollution of environment by

- a. Carbon dioxide and nitrogen
- b. Carbon Monoxide and carbon dioxide
- c. Ozone and carbon dioxide
- d. Nitrous oxide and sulphur dioxide

34. Photochemical smog is a resultant of the reaction among

- a. NO<sub>2</sub>, O<sub>3</sub> and peroxyacetyl nitrate in the presence of sunlight
- b. CO, O<sub>2</sub> and peroxyacetyl nitrate in the presence of sunlight

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- c. CO,CO<sub>2</sub> and NO<sub>2</sub> at low temperature
- d. High concentration of NO<sub>2</sub>,O<sub>3</sub> and CO in the evening .

35.Which of the following can be found as pollutants in the drinking water in some parts of India?

- 1. Arsenic
- 2. Sorbitol
- 3. Fluoride
- 4. Formaldehyde
- 5. Uranium

Select the correct answer using the codes given below.

- a. 1 and 3 only
- b. 2, 4 and 5 only
- c. 1,3 and 5 only
- d. 1, 2, 3, 4 and 5

36.Due to improper/ indiscriminate disposal of old and used computers or their parts which of the following are released environment e waste?

- 1.Beryllium
- 2.Cadmium
- 3.Chromium
- 4.Heptachlor
- 5. Mercury
- 6.Lead
- 7.Plutonium

Select the correct answer using the codes given

- a. 1, 3, 4, 6 and 7 only
- b. 1 ,2 ,3, 5 and 6 only
- c. 2, 4 ,5 ,7 only
- d. 1 ,2 ,3 ,4 ,5 ,6, 7

37.Which toxic compound is not found in e-waste?

- a. Mercury
- b. Cadmium
- c. Neon
- d. Lead

38.Consider the following regarding Mission Innovation:

1) MI was announced by the leaders of 20 countries that have a shared desire to accelerate global clean energy innovation during COP 21 in Paris.

2) India is Founding Member of the Steering Committee

Which of the above statements are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. None of the above

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39. Consider the following regarding CORDEX:

- 1) Coordinated Regional Climate Downscaling Experiment (CORDEX) is a World Climate Research Programme (WCRP) sponsored program to produce regional climate change scenarios globally.
  - 2) A Global Climate Model (GCM) can provide reliable prediction information on scales of around 1000 by 1000 km covering what could be a vastly differing landscape
- Which of the above statements are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. None of the above

40. Which of the following statements are true about E-waste management rules, 2016

1. The rules in 2016 have excluded Compact Fluorescent Lamp (CFL) and other mercury containing lamps from the purview of E-waste rules.
  2. Producers have been made responsible for collection of E-waste.
- Select the correct answer using the code given below

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

41. The European Union and European Space Agency's 'Copernicus' programme is associated with which one of the following?

- a. An Earth Observation programme, it will provide information to improve the management of the environment
- b. Aims to send humans further into space than ever before, and ESA's European Service Module will provide the essentials for keeping the astronauts alive and on course
- c. Similar to ISRO's EDUSAT, this programme will launch satellites to provide tele education access to children in remote regions of Sahel-Saharan countries
- d. None of the above

42. As per World Meteorological Organization, globally averaged concentrations of CO<sub>2</sub> in 2016 raised up from 2015 levels because of

1. Human activities
  2. Weak El Nino event
- a. Only 1
  - b. Only 2

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- c. Both
- d. Neither

43. Which of the following are correct:

(i) The Intergovernmental Panel on Climate Change (IPCC) is the leading international body for the assessment of climate change.

(ii) It was established by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO).

Choose one

- a. i only
- b. ii only
- c. Both i & ii
- d. None

44. The presence of excess nitrate in drinking water causes which of the following disease?

- a. Methemoglobinemia
- b. Minamata
- c. Fluorosis
- d. Silicosis

45. Arrange the following gases in the decreasing order of their greenhouse potential:

1. Carbon dioxide
2. Methane
3. Nitrous oxide

4. Chlorofluorocarbons

Select the correct answer using the code given below.

- a. 1-2-3-4
- b. 1-3-2-4
- c. 2-1-3-4
- d. 1-2-4-3

46. With reference to thermal pollution, consider the following factors:

1. Water as Cooling Agent in Power, Manufacturing and Industrial plants
2. Soil Erosion
3. Deforestation
4. Volcanoes and geothermal activity

Which of the above can be a possible cause of thermal pollution?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 2, 3 and 4 only
- d. All the above

47. Which of the following methods can be used to control air pollution from a thermal power plant?

1. Scrubber
2. Electrostatic precipitator
3. Particulate filter

Select the correct answer using the code given below.

- a. 1 only
- b. 1 and 2 only

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- c. 2 and 3 only
- d. 1, 2 and 3

48. Which of the following pollutants are released by the motor vehicle exhaust?

- 1. Carbon monoxide
- 2. Volatile Organic Compounds
- 3. Fine particulate matter
- 4. Oxides of Nitrogen

Select the correct answer using the code given below.

- a. 1, 2 and 3 only
- b. 3 and 4 only
- c. 1 and 4 only
- d. 1, 2, 3 and 4

49. Which of the following is/are the possible impacts of acid rain?

1. It leads to leaching away of aluminium from soil.

2. Loss of marine life

Select the correct answer using the code given below.

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

50. Which of the following are non-degradable wastes?

- 1. Stale food
- 2. Glass bottles

3. Dry leaves

4. Scrap metals

Select the correct answer using the code given below.

- a. 1 only
- b. 2 only
- c. 1 and 3 only
- d. 2 and 4 only

51. Consider the following regarding Anti-Greenhouse effect:

i) Anti-greenhouse effect is about atmosphere not letting radiation in, while letting thermal radiation out, which lowers the equilibrium surface temperature.

ii) Such effect is seen in Titan.

Which of the above statements are correct?

- a) i only
- b) ii only
- c) Both i and ii
- d) None of the above

52. Which is true regarding saturation horizon in oceans ?

- a. level below which calcium carbonate minerals undergo dissolution
- b. level above which calcium carbonate minerals undergo dissolution

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c. level at which calcium carbonate minerals undergo dissolution

d. None of the above

53. Which among the following are naturally occurring greenhouse gases.

1) Water vapour

2) CO<sub>2</sub>

3) Methane

4) HCFC

5) CFC

6) O<sub>3</sub>

a. 1,2,3,4

b. 1,2,3,6

c. 1,2,4,6

d. All of the above

54. Consider the following regarding Global warming potential:

(i) The larger the GWP, lesser warming the gas causes but longer the time it stays in the atmosphere

(ii) PFC's has higher global warming potential than SF<sub>6</sub> and HFC.

Which of the above statements are correct?

a. i only

b. ii only

c. Both i and ii

d. None of the above

55. Consider the following:

(i) Cryosphere is that part of the earth where the temperature is subjected to 32 F at least for part of a year.

(ii) IPCC in its 43rd session decided to prepare a special report on climate change and the cryosphere.

Which of the above statements are correct?

a. i only

b. ii only

c. Both i and ii

d. None of the above

56. match the following

1) Nekton                      a. living in bottom of the water mass

2) Neuston                    b. swimmers

3) Benthos                    c. attached to stems

4) Periphyton                d. unattached organisms

Options

a. 1-b ,2-d , 3-a, 4-c

b. 1-a, 2-b, 3-c ,4-d

c. 1-d 2-c, 3-a, 4-b

d. 1-c, 2-d, 3-a, 4-b

57. which is true regarding ecological pyramids

a. Pyramid of numbers is always upright

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- b. Pyramid of biomass is both upright and inverted
- c. Pyramid of energy is always inverted.
- d. Flow of energy in pyramids is bidirectional

58. Which among the following country/countries have decided to part away from Paris Climate change agreement.

- 1) India
  - 2) USA
  - 3) North Korea
  - 4) UK
- a. 1,4
  - b. 1,2,4
  - c. 2
  - d. 2,3

59. Consider the following regarding COP-23 of UNFCCC

- (i) It was held in Bonn, Germany.
- (ii) In the latest conference, a new Transport Decarbonisation Alliance has been declared

Which of the above statements are correct?

- a. i only
- b. ii only
- c. Both i and ii
- d. None of the above

60. Consider the statements with reference to 'Blue Carbon'

- 1. It is carbon stored in coastal, terrestrial and marine ecosystem
- 2. The Blue Carbon Initiative focuses on mangroves, salt marshes and seagrasses, which are found on every continent except Antarctica.
- 3. The rates of blue carbon sequestration and storage capacities in ecosystems are comparable to (and often higher than) those in carbon-rich terrestrial ecosystems such as tropical rainforests and peatlands.

Which of the above statements are correct?

- a. 1
- b. 3
- c. 2 and 3
- d. All of the above

61. HFCs are posing a great danger to environment as it is a potent global warming gas. Scientists are finding ways to phase out HFCs and looking for its substitution. Among the following, the suitable substitution for HFCs can be

- 1. Carbon dioxide
- 2. Hydrocarbons like Propane and Iso-Butane
- 3. Hydrofluoro-Olefins

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4. Fatty Acids

5. Ammonia

a. 1,2,4 and 5

b. 2, 4, and 5

c. 1, 2, 3 and 5

d. All of the above

62. Carbon Footprint' is a measure of carbon dioxide emitted due to daily activities. Consider the statements with reference to Carbon Footprint

1. Five out of six Kyoto Greenhouse gases are considered in Carbon Footprint.
2. It measures the emission in terms of carbon dioxide equivalent.

Correct statement is/are

- a. Only 1
- b. Only 2
- c. Both
- d. None

63. Which of the following is responsible for maximum GHGs emission?

- a. Industrial processes
- b. Agriculture
- c. Thermal power stations
- d. Transportation fuels

64. Which of the following are not included in NAPCC?

- a. National Water Mission

b. National Mission for Enhanced Energy Efficiency

c. National Mission for a Green India

d. National Soil Mission

65. Consider the following statements regarding coral bleaching

- 1) It is loss of zooxanthalae either due to loss or expulsion of algae
- 2) It happens only due to increase in ocean temperature
- 3) All the corals undergoing bleaching are dead corals

Which of the above statements are correct?

Option

- a. 1 and 3
- b. 2 only
- c. 3 only
- d. 2 and 3

66. Identify the correct statement

1. The Bio-safety protocol deals with genetically modified organism
2. The Bio-safety protocol is also called as Nagoya Protocol
3. Both Nagoya and Cartagena Protocol deals with genetic resources

Option

- a. 1 and 2
- b. 2 and 3



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- c. 1,2 and 3
- d. 1 and 3

67. With reference to the 'Carbon Credit', consider the following statements.

1. It is a tradable certificate representing the right to emit metric tonne of carbon dioxide equivalent (tCO<sub>2</sub>e).
2. Company can reduce the GHG (Green House Gases) by adopting new technology to attain the new norms for emission of gases.
3. Company can tie up with developing nations and help them set up new technology that is eco-friendly.

Which of the above statements are correct?

- a. 1 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

68. Where can we commercially use the sequestered CO<sub>2</sub>?

1. In Horticulture.
  2. For dry ice production.
  3. For developing new kind of plastic.
- a. 1 only
  - b. 1 and 2 only
  - c. 2 only

- d. 1, 2 and 3

69. Forest Carbon Partnership Facility is an initiative under :

- a. REDD+
- b. IMF
- c. GCF
- d. None of the above

70. With reference to Clean Development Mechanism (CDM) of the Kyoto Protocol, consider the following statements:

1. The CDM allows emission-reduction projects in developing countries to earn certified emission reduction (CER) credits.
2. Such CERs cannot be traded and sold, and used by industrialized countries to meet a part of their emission reduction targets.
3. It is the main source of income for the UNFCCC Adaptation Fund.

Which of the above statements are correct?

- a. 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. None of the above

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71. Consider the following statements

- 1) Sundarban delta hosts the largest tidal halophytic mangrove forest in the world
- 2) Sunderbans delta is facing potential threats due to Global warming induced sea level rise leading to coastal erosion

Which of the above statements are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. None of the above

72. Consider the following statements regarding International Centre for Climate Governance:

- 1) It is an organisation under UN and was founded in 2009.
- 2) The main focus of ICCG activities is the design of climate policy and related governance issues.
- 3) The Energy Resources Institute (TERI) was ranked second among world's best climate think tank by the International Centre for Climate Governance.

Which of the above statements are correct?

- a. 1 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1 and 2 only

73. Which of these account for natural factors affecting Climate change?

- 1) Continental drift
  - 2) Volcanoes
  - 3) The earth's tilt
  - 4) Pattern of land use
  - 5) Comets and meteorites
- a. 1,2,4,5
  - b. 1,2,3,5
  - c. 1,3,4,5
  - d. All of the above

74. Tropospheric Ozone consists of

1. Sulphur Dioxide
2. Methane
3. Nitrogen Oxides
4. Volatile Organic Compounds
5. Carbon Monoxide

Choose the correct options

- a. 1,2,4 and 5
- b. 2,3,4 and 5
- c. 1,2,3 and 4
- d. 1,2,3,4 and 5

75. Consider the following statements

- 1) The Biological Oxygen Demand (BOD) is the measure of organic matter present in the water.
  - 2) Greater the BOD, lesser is the polluting potential.
  - 3) Microbes in sewage treatment plants increases the BOD of the effluent
- Which of the above are NOT correct

- a. 1 and 2
- b. 2 and 3
- c. Only 3
- d. Only 2

76. Which of the following impurities are found in groundwater?

1. Arsenic from smelting processes.
2. Fluoride from municipal water supplies.
3. Lead from industry & mining.
4. Nitrate from agricultural fields.

Codes:

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

77. Which of the following statements is/are true about Ozone?

1. Ozone is always beneficial for human beings on earth.

2. Refrigeration process leads to destruction of ozone molecules.

3. Halogen compounds are responsible for ozone depletion.

Codes:

- (a) Only 1
- (b) 2 and 3
- (c) Only 3
- (d) All

78. Which of the following metals can be recovered from processing e-waste?

1. Copper
2. Iron
3. Silicon
4. Nickel
5. Gold

Select the correct answer from the code given below:

- (a) 1 and 2
- (b) 1, 2 and 5
- (c) 1, 2, 3 and 4
- (d) 1, 2, 3, 4 and 5

79. Consider the following statements:

1. UV-B radiations are Short wave Ultraviolet radiations.
2. A high dose of UV-B causes inflammation of cornea and mutation.

Which of the above statements given is/are correct?

- (a) Only 1

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- (b) Only 2
- (c) Both
- (d) None

80. Consider the following statements regarding Coal Gasification:

1. Coal gasification produces syngas.
2. Coal gasification can be used for making ammonia and methanol.
3. Coal gasification produces less carbon dioxide than traditional coal plants.

Which of the above statements are true?

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

81. Soil pH refers to the degree of soil acidity or alkalinity. Which of the following are the sources of acidity in the soil?

1. Excess rainfall leaches base cation from the soil.
2. Outflow of waste from metal mines or coal mines increases acidity.
3. Weathering of soil leads to increment in concentrations of Fe and Al oxides.

Codes:

- (a) 1 and 3
- (b) 2 and 3

- (c) Only 2
- (d) All

82. Which of the following is not the objective of the Street Light National Programme?

- (a) To mitigate climate change by implementing energy efficient CFL based street lighting.
- (b) Reduce energy consumption in lighting which helps DISCOMs to manage peak demand.
- (c) Enhance municipal services of providing street lights.
- (d) To replace conventional street lights with energy efficient LED lights.

83. Which of the following will be the proposed benefits of International Solar Alliance?

1. Increase in employment opportunities.
2. Rural development due to enhancement in economic activity.
3. Improvement in educational and health outcomes.

Codes:

- (a) 1 and 2
- (b) 2 and 3
- (c) All
- (d) None

84. In which of the following sectors solar technologies can be utilized for mitigating climate change?

1. Desalination
2. Sterilization
3. Pasteurization
4. Telecommunication

Codes:

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

85. Which of the following activities will contribute to coral bleaching?

1. Acidification of oceans.
2. Rising sea surface temperature.
3. Uncontrolled Fishing.
4. Uncontrolled Navigation.

Codes:

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

86. Consider the following statements about Dissolved oxygen and Biological Oxygen Demand:

1. Higher amount of wastes decreases the dissolved oxygen content of water.

2. Higher value of BOD indicates high level of microorganisms in water.

3. BOD is limited to biodegradable materials thus reliable for measuring pollution load.

Which of the above statements is/are correct?

- (a) Only 3
- (b) 1 and 2
- (c) All
- (d) Only 2

87. Consider the following statements about Colony collapse disorder:

1. It is rapid loss of a Bee colony's working population.

2. It occurs due to overuse of Pesticides

Which of the above statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both
- (d) None

88. Which of the following are the part of the stages of Environment Impact Assessment?

1. Screening
2. Scoping
3. Public hearing
4. Appraisal

Codes:

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- (a) 1 and 4
- (b) 2 and 4
- (c) 1, 2 and 4
- (d) All

89. The water pollution level in India is rising and has doubled in recent years. What can be the possible reasons for surface water pollution in India?

1. About 70-80% of the pollution is brought by rivers because of weathering.
2. Gaps in the sewage water treatment plants.
3. Poor maintenance of Septic tanks and pit latrines.
4. Lack of coordination between Centre and State.

Codes:

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

90. What is the correct sequence for treatment of polluted surface water?

1. Disinfection
2. Screening and mixing
3. Flocculation and sedimentation
4. Filtration and sludge processing

Select the correct answer using the code given

below:

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

91. Which of the following is/are the negative impacts of Green Revolution?

1. Inter crop disparity increased
2. Unemployment
3. Depletion in groundwater
4. Air and water pollution

Select the correct answer from the code given below:

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

92. What is the emission norms included under Bharat stage VI?

1. Carbon dioxide
2. Hydro carbons
3. Nitrogen oxides
4. Particulate Matter

Select the correct answer using the code given below:

- (a) 1, 2, 3 and 4
- (b) 1 and 4

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(c) 2, 3 and 4

(d) 1, 3 and 4

93. Which of the following statements is NOT correct?

(a) If there was no CO<sub>2</sub> in the atmosphere; the earth's temperature would be higher than the present.

(b) Stratification is more common in tropical rain forest.

(c) Ultra-violet light causes destruction of hydrogen bonds between complementary DNA strands

(d) Minamata disease is due to pollution of Industrial waste mercury into fishing Water

94. Which of the following is/are true about Environment (Protection) Act, 1986?

1. This act has a bearing with the Article 48A of the constitution.

2. This act only provided for penalty but not for imprisonment.

3. It has tightened the definition of locus standi so that only aggrieved persons can approach the court.

Codes:

(a) Only 1

(b) 1 and 2

(c) Only 3

(d) All

95. Which of the following species have been given protection under UN Conservation of Migratory Species of Wild Animals (CMS)?

1. Dugong

2. Marine Turtles

3. Siberian crane

Codes:

(a) 2 and 3

(b) 1 and 2

(c) Only 3

(d) All

96. Consider the following statements about Agasthyamala biosphere reserve:

1. Biosphere Reserve area falls in the Malabar rainforests and is one of the noted hotspot in the Western Ghats.

2. It includes the Indian eco-regions of moist deciduous forests.

Which of the above statements is/are correct?

(a) Only 1

(b) Only 2

(c) Both

(d) None

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97. Which of the following state has launched the Sloth Bear Habitat project for their conservation?

- (a) Gujarat
- (b) Rajasthan
- (c) Maharashtra
- (d) Andhra Pradesh

98. Which of the following statement related to International Plant Protection Convention is incorrect?

- (a) It aims at fair and equitable sharing of the benefits arising out of plant genetic resources.
- (b) The convention provides the mechanisms to develop the International Standards for Phytosanitary Measures (ISPMs).
- (c) The Secretariat of the IPPC is hosted by the Food and Agriculture Organization of the United Nations (FAO).
- (d) It aims to protect world plant resources, including cultivated and wild plants by preventing the introduction and spread of plant pests.

99. International Consortium on Combating Wildlife Crime mission has been formed to strengthen criminal justice systems and provide coordinated support at national,

regional and international level to combat wildlife and forest crime. Which of the following organizations are the part of it?

- 1. INTERPOL
- 2. World Bank
- 3. United Nations Office on Drugs and Crime.
- 4. Secretariat of the Convention on International Trade in Endangered Species of Wild Fauna and Flora.

Codes:

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

100. Consider the following statements about Electric Vehicles:

- 1. It uses either direct battery source or converted hydrogen fuel to electricity as a fuel.
- 2. It reduces noise and air pollution.
- 3. It is the cheaper than the conventional vehicle.

Which of the above mentioned statements is/ are true?

- (a) Only 1
- (b) 2 and 3
- (c) 1 and 2
- (d) 1, 2 and 3