

DO NOT OPEN THIS TEST BOOKLET UNTIL YOU ARE TOLD TO DO SO

T.B.C. : STS-K-TPT
Serial No.:

Test Booklet Series

TEST BOOKLET

Subject : Test 17 – Environment
Answer Key



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, GOT IT REPLACED BY A COMPLETE TEST BOOKLET.

2. Please note that it is the candidate's responsibility to encode and fill in the Roll Number and Test Booklet Series A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.

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 100/80 items (questions). Each item is printed in English. Each item comprises of four responses (answers). You will select the response which you want to mark 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 ONE 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. Before 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 instructions 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. Sheets for rough work are appended in the Test Booklet at the end.

10. Penalty for wrong answers:

THERE WILL BE PENALTY FOR WRONG ANSWERS 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** if 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 lake types are correctly matched with the Nutrient content

1. Eutrophic : Low Nutrient
2. Oligotrophic : Medium Nutrient
3. Mesotrophic : High Nutrient

Select the answer from the below codes

- a) 1 and 2 only
- b) 1 only
- c) 2 and 3 only

d) None of the above

2. Match List I and List II and select the correct answer using the code given below List

Element/Compound	Diseases
A. Methylmercury	1. Methaemoglobinemia
B. Arsenic	2. Ouch Ouch disease
C. Nitrates	3. Minamata disease
D. Cadmium	4. Blackfoot disease

Code:

	A	B	C	D
a)	2	1	4	3
b)	2	4	1	3
c)	3	4	1	2
d)	3	1	4	2

3. With reference to Clean Ganga Fund, which of the following statement is correct?

1. It will be financed by imposing a cess on the leather tanneries and other polluting industries in the vicinity of river Ganga
2. It will be used to finance activities outlined under the 'Namami Gange' Program
3. It will be administered by a trust headed by the finance minister

Select the correct answer using the codes given below

- a) 1 only
- b) 1 and 3 only
- c) 2 and 3 only**
- d) 1, 2 and 3

4. Match List I and List II and select the correct answer using the code given below List

Method	Description
A. Incineration	1. Decomposition of organic waste into humus
B. Pyrolysis	2. Process of burning waste
C. Composting	3. Process of molding a waste into a defined shape
D. Pelletisation	4. Combustion in the absence of oxygen

Code:

	A	B	C	D
a)	2	1	4	3
b)	2	4	1	3
c)	3	4	1	2
d)	3	1	4	2

5. The Kozhikode Corporation in Kerala has recently used a plant *Ludwigia peruviana* or Peruvian primrose, a small aquatic plant with yellow flowers found in marshy parts of Wayanad that can absorb metals such as iron, lead, cadmium, chromium, nickel, copper and zinc from water. This technique purifies water by absorbing metal content. This method is called as

- a) Bioremediation
- b) Phytoremediation**
- c) Chemoremediation
- d) Rhizoremediation

6. Consider the following statements

1. Biomagnification refers to increase in concentration of a toxin at successive trophic levels
2. Bioaccumulation is the gradual increase in concentration of a toxin over a period of time in an organism

Which of the statements given above is true

- a) 1 only correct
- b) 2 only correct
- c) Both 1 and 2 is correct**
- d) Neither 1 nor 2 is correct

7. Which of the following is a Point Source of pollution of water bodies?

1. Excess fertilizers, insecticides from agricultural land
2. Oil, grease and toxic chemicals from Urban runoff
3. Bacteria and nutrients from livestock, animal excreta
4. Effluent discharge from Industrial unit and power plant

Select the answer from the below codes

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

8. Which of the following are factors that decrease the amount of Dissolved Oxygen in water

1. Increase in temperature
2. Increase in Salinity
3. Decrease in surface area of water
4. Increase in organic and inorganic waste in water

waste in water

Select the answer from the below codes

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

9. Which of the following phenomenon can lead to desertification?

1. Overgrazing
2. Soil Salinity
3. Unscientific Irrigation of arid lands
4. Uncontrolled exploitation of ground water

Select the correct answer using the codes given below

- a) 1 and 3 only
- b) 2, 3 and 4 only
- c) 1, 2 and 4 only
- d) All of the above**

10. The Minister for Environment, Forests & Climate Change launched the Air Quality Index. Which of the following element is part of Air Quality Index?

1. Sulphur dioxide
2. Nitrogen dioxide
3. Nitrous Oxide
4. Ammonia
5. Lead
6. Carbon dioxide

Select the answer from the codes given below

- a) 1, 2, 3 and 4
- b) 1, 3, 5 and 6
- c) 2, 4, 5 and 6
- d) 1, 2, 4 and 5**

11. Consider the following statements regarding National Air Quality Index:

1. It gives real time data about the level of pollutants for all the urban areas in India
2. It is based on the standards prescribed by World Meteorological Organisation

3. It considers eight pollutants including lead and ozone

Which of the statements above are true

- a) 3 only**
- b) 1 and 2 only
- c) 2 and 3 only
- d) 1, 2 and 3

12. Climate and Clean Air Coalition is associated with Short Lived Climate Pollutants.

Which of the following is not a Short Lived Climate Pollutant administered by CCAC ?

- a) black carbon
- b) methane
- c) hydrofluorocarbon
- d) DDT**

13. Which of the following are correctly matched

1. Basel Convention - Methyl chloroform
2. Montreal Protocol - Incinerator Ash
3. Stockholm Convention – Aldrin, Chlordane

Select the answer from the below codes

- a) 1 and 2 only
- b) 3 only**
- c) 1 and 3 only
- d) 1, 2 and 3

14. The first bio-toilet fitted train was Gwalior-Varanasi-Bundelkhand Express. Bio-Toilet is a system which decomposes human excretory waste in a digester tank with the help of specific high grade bacteria. Which of the following statements are true with reference to Bio-Toilets?

1. Bacteria used in the bio-toilet is collected by Defence Research and Development Organisation
2. The Bacteria can work in extreme climatic conditions
3. The anaerobic environment in the digester tank inactivates the pathogens
4. Bio toilets do not require sewage connectivity

Select the answer from the codes given below

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

15. Consider the following statement regarding Photochemical Smog?

1. It occurs in the presence of sunlight
2. It requires the presence of unsaturated hydrocarbons and nitrogen oxides
3. It increases the corrosion of metals

Which of the statements given above is correct?

- a) 1 and 3 only b) 2 and 3 only
c) 2 only d) **1, 2 and 3**

16. Ganga Action Plan(GAP) Phase I was launched by erstwhile Prime Minister Rajiv Gandhi in June 1986, whereas Namami Gange program was introduced in 2014. Which of the following are the true about Namami Gange Program

1. National Mission for Clean Ganga (NMCG) registered as a society under the Societies Registration Act 1860, is the implementation arm of National Ganga River Basin Authority(NGRBA)
2. NGRBA headed by Prime Minister is dissolved in 2016
3. National Council for Rejuvenation, Protection and Management of River Ganga (referred as National Ganga Council) is headed by the Union Minister of Water Resources

Which of the above statements are true

- a) 1 and 3 only b) **1 and 2 only**
c) 2 and 3 only d) 1, 2 and 3

17. Which of the following statement is true about 'Net Zero Building'

1. Net Zero Building does not consume any energy for electricity
2. Energy used by the building is roughly equal to the amount of renewable energy created on the site
3. Net Zero building contribute less Green House Gas in the atmosphere
4. They don't consume energy from the conventional grid electricity supply

Select the answer from the codes given below

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

18. Which of the following statement is true with reference to Paris Climate Change COP 2015?

1. It is the first ever universal, legally binding global climate deal
2. It comes into effect in 2020 and replace the 1997 Kyoto Protocol
3. Aim of Paris deal is to reduce temperature rise below 2 degrees Celsius above pre-industrial levels

Select the answer from the codes given below

- a) 1 and 2 only
b) 3 only
c) 2 and 3 only
d) **1, 2 and 3**

19. Which of the following may be the possible outcomes of Ocean Acidification?

1. It distorts or collapses the food chain
2. It disrupts the global carbon cycle
3. Warmer temperature reduces the ability of the ocean to absorb CO₂ from the atmosphere.
4. Cold water absorbs more Carbon dioxide

Select the answers from the below codes

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

20. Identify the correct statement about UNFCCC meet in 2017?

1. The presidency of UNFCCC meet is held by Fiji
2. Fiji is the Summit host but Bonn city in Germany is the geographic host of the summit 2017
3. Fiji is located in the territorial waters of Germany, hence Fiji hosted the summit in Germany due to lack of space in Fiji

Select the answer from the codes given below

- a) **1 and 2 only**
b) 3 only
c) 2 and 3 only
d) 1, 2 and 3

21. Arrange the following Countries in the decreasing order of their volume in the emitting green house gases in the atmosphere

1. European Union
2. United States
3. China
4. India

Select the answer from the below codes

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

22. Which of the following is not a tool of Kyoto Protocol

- a) Certified Emission Reduction Units (CER)
- b) Clean Development Mechanism (CDM)
- c) Joint Implementation
- d) Persistent Organic Pollutants (POP)**

23. In the context of mitigating the impending global warming due to anthropogenic emissions of carbon dioxide, which of the following can be the potential sites for carbon sequestration?

1. Abandoned and uneconomic coal seams
2. Depleted Oil and gas reservoirs
3. Subterranean deep saline formations

Select the answer using the code below

- a) 1 and 2 only
- b) 3 only
- c) 1 and 3 only
- d) 1, 2 and 3**

24. Which of the following is not an outcome of Rio Earth Summit 1992

- a) Agenda 21
- b) United Nations Framework Convention on Climate Change (UNFCCC)
- c) United Nations Environment Program**
- d) United Nations Convention on Biological Diversity

25. Talanoa dialogue (Story telling & Participative dialogue) was launched in 2017 Bonn climate change summit. Which of the following additional initiatives were launched as part of BONN SUMMIT?

1. Ocean Pathway Partnership
2. Powering Past Coal Alliance
3. InsuResilience Global Partnership
4. Ministerial on Climate Action (MOCA) coalition

Select the answer from the below codes

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

26. Which of the following can be an air pollutant as per the Air (Prevention and Control) of Pollution Act, 1981?

1. Lead
2. Ozone
3. Noise
4. Suspended Particulate Matter

Select the correct answer using the code given below:

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

27. Match the following pairs:

List I	List II
A. Black Carbon	1. Stored in the form of aquatic biomass
B. Brown Carbon	2. Originates from the incomplete combustion of fossil fuels
C. Blue Carbon	3. Stored in the soil of natural ecosystems
D. Green Carbon	4. Released by the combustion of organic matter

Select the correct answer using the code given below:

	A	B	C	D
(a)	2	4	3	1
(b)	2	4	1	3
(c)	4	2	1	3
(d)	4	2	3	1

28. Which of the following gases has high Global Warming Potential (GWP)

- a) Carbon dioxide
- b) Methane
- c) Nitrous Oxide

d) Fluorinated Gases

29. Consider the following statements:

- 1. The carbon footprint is a measure of human demand on the Earth's ecosystems.
- 2. The carbon footprint tells the demand on the Earth that results from burning fossil fuels.
- 3. Earth Overshoot Day is calculated by the Global Footprint Network.

Which of the above statements are correct?

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

30. Increase in atmospheric carbon dioxide concentrations leads to acidic oceans. What can be the possible impacts of ocean acidification?

- 1. It leads to shallowing of Carbonate Compensation Depth (CCD).
- 2. It will cause saturation horizon to rise vertically in the water column.
- 3. It converts carbonate ions to bicarbonates thus resulting in thicker shells.

Select the correct answer using the code given below:

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

31. With reference to smog, consider the following statements:

- 1. The primary component of classical smog is sulphur dioxide.
- 2. Photochemical smog requires neither smoke nor fog for its formation.
- 3. Classical smog is also known as 'Los Angeles smog'.
- 4. Photo-chemical smog is aggravated by dampness in the air.

Which of the above statements are correct?

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

32. With reference to extra-terrestrial causes of climate change, consider the following statements:

- 1. An increase in the number of sunspots leads to warmer and drier conditions on Earth.
- 2. As the orbital eccentricity of earth increases, summer days increase in both the hemispheres.
- 3. The axial tilt of Earth's rotational axis controls the duration of seasons.

Which of the above statements is/are correct?

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

33. Which of the following statements related to the role of Arsenic in ground water pollution in India are correct?

- 1. Arsenic in groundwater is highly toxic in its organic form.
- 2. Arsenic as a natural component of the earth's crust is scarcely distributed throughout the environment.
- 3. Arsenic in ground water is caused by natural geological processes.
- 4. It is an odorless and tasteless contaminant.

Select the correct answer using the code given below:

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

34. Arctic Amplification usually refers to greater climate change near the pole as compared to the rest of the hemisphere or globe. What are the reasons for this phenomenon?

- 1. Changes in cloud cover.
- 2. Increase in atmospheric water vapour.
- 3. Declining sea ice.
- 4. Heat transport from lower latitudes.

Select the correct answer using the code given below:

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

35. Consider the following pairs:

1. Bio venting: ex-situ method of treating soils contaminated by petroleum hydrocarbons.

2. Land farming: in situ technique of removing oily sludge from refinery wastes.

3. Bioleaching: use of microorganisms in extraction of metals from their ores.

4. Bio reactors: ex-situ technique of treating groundwater contaminants.

Which of the above are correctly matched?

(a) 1 and 2 only

(b) 3 and 4 only

(c) 2 and 3 only

(d) 1, 2, 3 and 4

36. With reference to impacts of fertilizers use on environment, consider the following statements:

1. Nitrogen fertilizers are water soluble and can remain in groundwater for long time.

2. Urea contributes to acid rain, groundwater contamination and ozone depletion.

3. Nitrate contaminated water leads to Blue baby syndrome and west Nile virus.

Which of the above statements is/are correct?

(a) 1 and 3 only

(b) 2 only

(c) 2 and 3 only

(d) 1, 2 and 3

37. 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.

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 2 only

(c) 3 and 4 only

(d) 1, 2, 3 and 4

38. What is Buffering in the context of eliminating the sources of pollution?

(a) It is a process of destroying the pollutants by thermal or catalytic combustion.

(b) It is the practice of adding a neutralizing agent to the acidified water to increase the pH.

(c) It is a treatment of sewage water and the industrial effluents before releasing it into water bodies.

(d) It decreases the amount of ammonia in the soil by increasing the rate of decomposition.

39. Which of the following statements is /are correct about the Biochemical Oxygen Demand (BOD)?

1. It is the amount of dissolved oxygen needed by bacteria in decomposing the inorganic waste present in water.

2. The higher value of BOD indicates the low DO content of water.

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

40. Johannesburg Declaration, 2002 is concerned with which of the following?

(a) Disaster management cooperation among UN nations.

(b) Climate change directives for the developed world.

(c) Sustainable development agenda by the UN.

(d) Cooperation on energy efficient grids among African nations.

41. Which of the following is/are correct regarding Non-ionising radiations?

(a) They include X-rays and radiations emitted by radioactive elements.

(b) They have high penetration power and cause breakage of macromolecules.

(c) They injure the cells of skin and blood capillaries producing blisters.

(d) All of the above

42. Which of the following are man-made sources of radioactive pollution?

1. Terrestrial radiations from radio-nuclides present in earth's crust
2. Uranium mining
3. Radiation therapy
4. Transportation of nuclear material

Select the correct answer using code given below:

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

43. Sustainability measurement is the quantitative basis for the informed management of sustainability. Which of the following methodologies is/are used as the measures of sustainability?

1. Triple Bottom Line accounting.
2. Environmental Performance Index.
3. Environmental Sustainability Index.

Select the correct answer using the code given below:

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

44. Consider the following statements related to Green-House effect:

1. Clouds are effective at absorbing infrared radiation and therefore exert a large greenhouse effect.
2. Warmer global temperature cause sea level to rise due to the thermal expansion of seawater.
3. Fluorinated gases are the greenhouse gases that do not occur naturally, but have been developed by man for industrial purposes.

Which of the above statements is/are correct?

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

45. Consider the following statements with respect to Black Carbon:

1. Black carbon is the result of incomplete combustion of fossil fuels, biofuel, and biomass.
2. It is directly emitted in the atmosphere as fine particles PM5.
3. Black carbon warms the atmosphere by reducing albedo when deposited on snow and ice.
4. Life time of black carbon in the atmosphere is more than 100 years.

Which of the above statements is/are correct?

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

46. Consider the following statements regarding the United Nations Framework Convention on Climate Change (UNFCCC):

1. It is an international treaty drawn at UN Conference on Environment and Development, Rio de Janeiro, 1992.
2. Kyoto Protocol implemented the objectives of UNFCCC to fight global warming by reducing the concentration of greenhouse gases.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2**
- (d) Neither 1 nor 2

47. Consider the following statements with respect to the Acid Rain:

1. In Acid rain sulfuric and nitric acids formed in the atmosphere fall to the ground mixed with rain, snow, fog, or hail.
2. Acid rain falling on a forest's soil disrupts soil nutrients and kills microorganisms in the soil.
3. Acid rain increases the methane emission from wetlands by disturbing their pH levels.

Which of the above statements is/are correct?

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

48. Consider the following statements with respect to Fly Ash:

1. Fly Ash is referred to as a residue which rises with gases into the atmosphere and tends to travel far in the air.
2. Fly Ash can be used in cement making and pavement construction.

Which of the above statements is/are correct?

- (a) 1 only**
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

49. Fly Ash coming from thermal power plants contains which of the following gases?

1. Carbon monoxide
2. Aluminum oxide
3. Silicon dioxide
4. Calcium oxide

Select the correct answer using the code given below:

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

50. Which of the following can be the possible impacts of climate change on agriculture?

1. Increased crop yields in temperate regions.
2. Decreased amount of arable land in highlatitude region.
3. Increased fertilizer requirement.
4. Reduction in agricultural production variability.

Select the correct answer using the code given below:

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

51. Solid wastes are discarded materials such as garbage and sludge. In light of this statement, which of the following are the effects of solid waste?

- (a) Leaching of toxic dyes.
(b) Spread of Dioxin due to the burning of PVC.
(c) Disturbance in soil microbe activity
(d) All of the above

52. Eutrophication can be most appropriately defined as

(a) Enhanced plankton growth due to excess supply of nutrients

- (b) Amount of dissolved oxygen needed to break down organic material
(c) An increase in the concentration of a nutrient as you move up the food chain
(d) A decrease in biotic potential of the aquatic ecosystem

53. Identify an incorrect pair regarding the types of solid wastes and their sources:

- (a) Municipal waste: Construction and demolition debris
(b) Hazardous waste: Shoe polish and medicine bottles
(c) Biomedical waste: Discarded medicines and disposable syringe
(d) None of the above

54. With reference to the ban on single-use plastic in India, consider the following statements:

1. It has been imposed from 5th June 2019.
2. It will stop manufacturing, usage and import of single-use plastics.
3. It is a part of ongoing Swacch Bharat Mission.

Which of the above statements are correct?

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

55. Consider the following statements:

1. All heavy metal firecrackers are banned in India.
2. Petroleum and Explosive Safety Organisation (PESO) under the Ministry of Commerce and Industry is responsible to control the production of banned heavy metal firecrackers.

Which of the above statements is/are correct?

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

56. The use of living microorganism to degrade environmental pollutant is called:

- (a) Micro meditation
- (b) Biomining
- (c) Bioremediation**
- (d) Bioaugmentation

57. Consider the following statements regarding Katowice Climate Package:

1. The Paris Agreement Work Programme (PAWP) was adopted at the 23rd session of the UNFCCC Climate Change Conference in Katowice, Poland.
2. Parties have also agreed to initiate the work on setting up the new collective finance goals post-2020.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only**
- (c) Both 1 and 2
- (d) Neither 1 nor 2

58. With reference to the burning of crop residue, consider the following statements:

1. Crop residue burning release global warming gases and particulate matters.
2. It improves the fertility of soil as in slashand- burn agriculture.
3. Crop residue burning is being regulated under the Air (Prevention and Control of Pollution) Act, 1981.

Which of the above statements is/are correct?

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

59. Which of the following is/are categorized as Hospital waste?

1. Anatomical waste
2. Discarded medicines
3. Swabs
4. Body fluids

Select the correct answer using the given below:

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

60. Consider the following statements regarding waste treatment processes:

1. Pyrolysis is a process of burning waste in large furnaces at high temperatures.
2. Incineration is a process of combustion in the absence of oxygen or the material burnt under a controlled atmosphere of oxygen.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2**

61. Consider the following statements regarding Waste Minimization Circles (WMC):

1. It is implemented by the Central Pollution Control Board with the assistance of the United Nations Environment Programme (UNEP).
2. It aims to realize the objectives of the Policy Statement for Abatement of Pollution (1992).

Which of the above statement is/are incorrect?

- (a) 1 only**
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

62. Consider the following statements regarding the ecological effects of warm water Thermal pollution:

1. It causes a decrease in the level of dissolved oxygen (DO) in water.
2. It decreases the metabolic rate of aquatic animals.
3. It increases the plant growth rate of primary producers.
4. It promotes the phenomenon of an algae bloom.

Which of the above statements are correct?

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

63. In the context of Thermal Pollution, which of the following statements is incorrect?

- (a) It is the addition of toxic substances to the waterbodies released by factories.
- (b) Its main cause is globalization, urbanization, and deforestation of the shoreline.
- (c) It leads to the rise and fall in the temperature of natural aquatic habitat.

(d) None of the above

64. With reference to the artificial rains, consider the following statements:

- 1. Silver iodide or dry ice is dumped onto the clouds to create artificial rains.
- 2. Cloud seeding cannot help in fighting pollution.
- 3. Only convective clouds can be seeded to create artificial rains.

Which of the above statements are correct?

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

65. Consider the following statements:

- 1. The Vienna Convention of 1985 requires countries to take concrete actions to control ozone-depleting substances.
- 2. The Vienna Convention and its Montreal Protocol are the first treaties to achieve universal ratification.
- 3. Hydro-fluorocarbons do not deplete the ozone layer.

Which of the above statements are correct?

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

66. Nusa Dua Summit, recently seen in news, is related to which of the following global concerns?

- (a) Terrorism
- (b) Religious conflicts
- (c) Political freedom
- (d) Climate change**

67. Consider the following statements regarding 'Arsenic contamination':

- 1. People are exposed to elevated level arsenic through contaminated water, food and smoking tobacco.
- 2. Long-term exposure to arsenic can cause cancer and skin lesions.
- 3. It is naturally present at high levels in the groundwater of a number of countries.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3**

68. With reference to the 'Heat budget' of the planet, consider the following statements:

- 1. Melting of the snow and ice-covered areas of the Earth will lead to increase in the 'albedo of the earth'.
- 2. There is a surplus of net radiation balance between 40 degrees north and south of the equator.

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

69. Consider the following statements:

- 1. Honolulu Strategy seeks to tackle pollution on Marine Debris
- 2. Global Partnership on Marine Litter is a program by United Nations Environment Partnership

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

70. Which of the following statements about Photosynthetically Active Radiation (PAR) not correct?

- a) It is the amount of light available for photosynthesis
- b) It changes seasonally and varies depending on the latitude and time of day.
- c) Higher PAR promotes plant growth
- d) Air pollution does not have an effect on PAR**

71. The major difference in standards between the BS-IV and the new BS-VI auto fuel norms is with regards to the reduction of:

- a) Sulphur**
- b) Carbon dioxide
- c) Arsenic
- d) Lead

72. Which of the following pollutants are directly emitted from motor vehicles?

- 1. Particulate matter
- 2. Unburnt hydrocarbons
- 3. Ozone
- 4. Carbon monoxide
- 5. Methane

Select the correct answer using the code given below:

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

73. Consider the following statements about Bioplastics:

- 1. They can be made from used plastic bottles and other such containers.
- 2. All bioplastics are biodegradable.
- 3. They can increase stratospheric ozone depletion compared to conventional plastics

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only
- c) 1 and 3 only**
- d) 1, 2 and 3

74. Consider the following statements about Bioaerosols:

- 1. Bioaerosols can be formed from fungi and bacteria only.
- 2. Plants, soil, water, animals and humans all serve as sources of bioaerosols.
- 3. With higher humidity, higher bioaerosol levels can prevail.

Which of the statements given above is/are correct?

- a) 1 and 2 only
- b) 2 and 3 only**
- c) 1 and 3 only
- d) 1, 2 and 3

75. It is a voluntary partnership of governments, intergovernmental organizations, businesses, scientific institutions and civil society organizations committed to improving air quality and protecting the climate through actions to reduce short-lived climate pollutants. Which of the conventions/organisation is described in the above passage?

- a) Climate and Clean Air Coalition**
- b) Clean Air Campaign
- c) European Environment Agency
- d) Clean Air Network

76. Which of the following sets of pair(s) is/are correctly matched?

Agreement/initiative	Convention/protocol
1. Nairobi declaration :	Stockholm convention
2. Delhi declaration :	United Nations Convention to Combat Desertification (UNCCD)
3. Changwon declaration :	Ramsar Wetlands

Select the correct answer using the code given below:

- a) 1 only
- b) 2 and 3 only
- c) 1 and 2 only
- d) 1, 2 and 3**

77. The term 'Kappaphycus Alvarezii', recently in the news, is related to:

- a) It is an indigenous herb with special medicinal value found in Arunachal Pradesh.
- b) It is a rare species of lizard found in western ghats
- c) It is a parasite that spreads malaria in tropical regions.
- d) It is an invasive seaweed which killed coral reefs in Gulf of Mannar**

78. Which of the following gases are considered to degrade ambient air quality?

- 1. Sulphur Dioxide
- 2. Water vapour
- 3. Nitrogen Dioxide
- 4. Carbon Dioxide

Select the correct answer using the codes given below:

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

79. Arrange the following sectors of India in descending order of their carbon emissions:

- 1. Energy
- 2. Agriculture
- 3. Industrial Process
- 4. Waste

Select the correct answer using the code given below:

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

80. Consider the following statements about Disability Adjusted Life Years (DALY):

- 1. It is the potential life lost due to premature death and years of productivity lost due to disability.
- 2. 1 DALY is equivalent to loss of 1 month of full health.

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

81. Consider the following statements regarding the 'India Cooling Action Plan':

- 1. It aims to provide sustainable cooling and thermal comfort for all while securing environmental and socio-economic benefits for the society.
- 2. It will also map the technologies available to cater the cooling requirements including passive interventions, refrigerant-based technologies and alternative technologies.

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

82. Consider the following statements regarding the Mobilize Your City Programme:

- 1. It was launched in CoP21 Paris Summit in December 2015.
- 2. It aims to achieve SDG 11 and SDG13.
- 3. In India the pilot projects are initiated in all the state capital cities.

Which of the statements given above is/are correct?

- a) 1 and 2 only**
- b) 1 and 3 only
- c) 2 and 3 only
- d) 1, 2 and 3

83. The increasing amount of carbon dioxide in the air is slowly raising the temperature of the atmosphere, because it absorbs:

- a) the water vapour of the air and retains its heat
- b) the UV part of the solar radiation
- c) all the solar radiations
- d) the infrared part of the solar radiation**

84. Which of the following are the characteristics of Sea weeds?

1. Seaweeds are macroscopic algae having leaf-like appendages.
2. They are used as a drug for goiter treatment.
3. Biodegradation of seaweeds produce methane gas.
4. Seaweeds are used as the potential indicators of pollution in coastal ecosystem.

Select the correct answer using the code given below:

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

85. Which of the following statements is /are correct about the point source of water pollution?

1. Pollutant travels directly from source to water.
2. These sources are difficult to regulate.

Select the correct answer using code given below:

- (a) 1 only**
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

86. Although they may seem to be two very different issues, climate change and air pollution are closely interlinked. Consider the following statements in this regard:

1. Particulate matter that causes air pollution also reduces albedo in Polar Regions.
2. Aerosols act as both positive and negative climatic feedbacks.

Which of the above statements is/are incorrect?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2**

87. With reference to the impacts of livestock on environment, consider the following statements:

1. The meat industries emit large amounts of carbon dioxide and methane.
2. Animal wastes contain excess phosphorous which is harmful to the environment.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2**
- (d) Neither 1 nor 2

88. Which of the following gas is released by incomplete combustion of petrol and wood and it lowers the amount of oxygen if inhaled in human blood?

- (a) Carbon Dioxide (CO₂)
- (b) Methane (CH₄)
- (c) Carbon Monoxide (CO)**
- (d) Hydrogen Sulphide (H₂S)

89. The real estate sector requires construction of green buildings to address all pollution related issues of a building in an integrated manner. In this regard, consider the following statements:

1. Green buildings aim to minimize the demand for non-renewable resources.
2. GRIHA is a rating tool developed by the Bureau of Energy Efficiency (BEE) to assess the performance of their buildings against nationally acceptable benchmarks.
3. Energy Conservation Building Code (ECBC) has been designed by The Energy and Resources Institute (TERI) to integrate renewable energy into building design.

Which of the above statements is/are correct?

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

90. Which of the following best represents the Greenhouse Gases (GHGs) in the descending order of their Green House Warming Potential for the time period of 100 years?

(a) Sulphur Hexafluoride, Nitrous Oxide, Perfluorocarbon, Methane, Carbon dioxide

(b) Hydrofluorocarbons, Sulphur Hexafluoride, Perfluorocarbon, Methane, Nitrous Oxide

(c) Sulphur Hexafluoride, Perfluorocarbon, Hydrofluorocarbons, Nitrous oxide, Methane

(d) Hydrofluorocarbons, Sulphur Hexafluoride, Methane, Nitrous Oxide, Perfluorocarbon

91. Methane (CH₄) is one of the six greenhouse gases under the Kyoto protocol. Which of the following is/are sources of methane?

1. Gas drilling
2. Paddy fields
3. Bio fuels

Select the correct answer using the code given below:

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

92. The Katowice Rulebook is a precise and detailed agreement according to which the Paris agreement will be implemented. In this context consider the following statements:

1. The rulebook provides for uniform standards of reporting, monitoring and evaluation for all countries.

2. As per the rulebook, the developed countries can meet their financial commitments from public funds as well as private sources.

3. The special report of IPCC on impacts of 1.5°C global warming was accepted unanimously.

4. Finalization of rules regarding carbon market is a significant achievement of the rulebook.

Which of the above statement are correct?

(a) 1 and 2 only

(b) 1, 2 and 3 only

(c) 2, 3 and 4 only

(d) 3 and 4 only

93. Increased level of carbon dioxide in the atmosphere would impact the plants in which of the following ways?

1. A decrease in photosynthetic productivity of plants.

2. Proliferation of weeds.

3. Increase in number of insects and other pests.

Select the correct answer using the code given below.

(a) 1 and 2 only

(b) 1 and 3 only

(c) 2 and 3 only

(d) 1, 2 and 3

94. "Soil pollution is defined as the 'addition of substances to the soil, which adversely affects physical, chemical and biological properties of soil and reduces its productivity.'" In this context, consider the following causes of soil pollution:

1. Indiscriminate use of fertilizers.

2. Dumping of solid waste

3. Soil erosion

Which of the above factors is/are responsible for soil pollution?

(a) 1 and 2 only

(b) 2 and 3 only

(c) 1 only

(d) 1, 2 and 3

95. Which of the following are major sources of e-waste used in the manufacturing of electronics?

1. Mercury

2. Chromium

3. Rare earth elements

4. Poly Brominated Diphenyl ethers

5. Poly Vinyl Chlorides

Select the correct answer using the code given below:

(a) 1, 2, 4 and 5 only

(b) 3 and 4 only

(c) 1, 3 and 4 only

(d) 1, 2, 3, 4 and 5

96. Consider the following statements with respect to the Air Pollutants:

1. Primary pollutants are usually produced from a process, such as ash from a volcanic eruption.
2. Secondary pollutants are not emitted directly thus are less harmful than the primary pollutants.
3. Ground level ozone is a prominent example of a Primary pollutant.

Which of the above statements is/are correct?

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

97. The Green Climate Fund (GCF) is a multilateral fund created to support the efforts of developing countries to respond to the challenge of climate change. Green Climate Fund comes under the framework of

- a) World Wildlife Fund (WWF)
- b) United Nations Framework Convention on Climate Change (UNFCCC)**
- c) United Nations Environment Program (UNEP)
- d) International Union for Conservation of Nature (IUCN)

98. REDD + or UN-REDD program is associated with

- a) Desertification
- b) Climate Change
- c) Forest Protection**
- d) Biodiversity conservation

99. Which of the following statements are true?

- a) Acid rain has a high pH scale number causing environmental damage
- b) Acid rain is caused only due to human activities; there is no scope for Acidification of atmosphere naturally
- c) NO₂ and S₂O are major components that are responsible for Acidification**
- d) Catalytic convertor used in vehicles adds more NO₂ and S₂O in the atmosphere increasing acidification

100. Which of the following are correctly matched ?

1. Cartagena Protocol : Bio Safety
2. Montreal Protocol : Ozone Depletion
3. Nagoya Protocol : Differential Responsibility
4. Kyoto Protocol : Benefit Sharing

Select the answer from the below codes

- a) 1 and 2 only
- b) None of the above**
- c) 2, 3 and 4 only
- d) 1, 2, 3 and 4