

SUBJECT CODE		SUBJECT		PAPER	
<b>B-28-17</b>		<b>ENVIRONMENTAL SCIENCE</b>		<b>II</b>	
HALL TICKET NUMBER			QUESTION BOOKLET NUMBER		
			200246		
OMR SHEET NUMBER					
DURATION		MAXIMUM MARKS	NUMBER OF PAGES	NUMBER OF QUESTIONS	
<b>1 Hour 15 Minutes</b>		<b>100</b>	<b>16</b>	<b>50</b>	

This is to certify that, the entries made in the above portion are correctly written and verified.

Candidate's Signature

Name and Signature of Invigilator

**INSTRUCTIONS FOR THE CANDIDATES**

- Write your Hall Ticket Number in the space provided on the top of this page.
- This paper consists of fifty multiple-choice type of questions.
- At the commencement of examination, the question booklet will be given to you. In the first 5 minutes, you are requested to open the booklet and compulsorily examine it as below :
  - To have access to the Question Booklet, tear off the paper seal on the edge of this cover page. Do not accept a booklet without sticker-seal and do not accept an open booklet.
  - Tally the number of pages and number of questions in the booklet with the information printed on the cover page. Faulty booklets due to pages/questions missing or duplicate or not in serial order or any other discrepancy should be got replaced immediately by a correct booklet from the invigilator within the period of 5 minutes. Afterwards, neither the Question Booklet will be replaced nor any extra time will be given.
  - After this verification is over, the Test Booklet Number should be entered in the OMR Sheet and the OMR Sheet Number should be entered on this Test Booklet.
- Each item has four alternative responses marked (A), (B), (C) and (D). You have to darken the circle as indicated below on the correct response against each item.  
Example :  (A)  (B)  (C)  (D)  
where (C) is the correct response.
- Your responses to the items are to be indicated in the OMR Answer Sheet given to you. If you mark at any place other than in the circle in the OMR Answer Sheet, it will not be evaluated.
- Read instructions given inside carefully.
- Rough Work is to be done in the end of this booklet.
- If you write your name or put any mark on any part of the OMR Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, you will render yourself liable to disqualification.
- The candidate must handover the OMR Answer Sheet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. The candidate is allowed to take away the carbon copy of OMR Sheet and used Question Paper Booklet at the end of the examination.
- Use only Blue/Black Ball point pen.
- Use of any calculator or log table etc., is prohibited.
- There is no negative marks for incorrect answers.

**అభ్యర్థులకు సూచనలు**

- ఈ పుట పై భాగంలో ఇవ్వబడిన స్థలంలో మీ హాల్ టికెట్ నంబరు రాయండి.
- ఈ ప్రశ్న పత్రము యాభై బహుళైచ్ఛిక ప్రశ్నలను కలిగి ఉంది.
- పరీక్ష ప్రారంభమున ఈ ప్రశ్నపత్రము మీకు ఇవ్వబడుతుంది. మొదటి ఐదు నిమిషములలో ఈ ప్రశ్నపత్రమును తెరిచి కింద తెలిపిన అంశాలను తప్పనిసరిగా సరిచూసుకోండి.
  - ఈ ప్రశ్న పత్రమును చూడడానికి కవర్ పేజీ అంచున ఉన్న కాగితపు సీలును చించండి. స్టిక్కర్ సీలులేని మరియు ఇదివరకే తెరిచి ఉన్న ప్రశ్నపత్రమును మీరు అంగీకరించవద్దు.
  - కవరు పేజీ పై ముద్రించిన సమాచారం ప్రకారం ఈ ప్రశ్నపత్రములోని పేజీల సంఖ్యను మరియు ప్రశ్నల సంఖ్యను సరిచూసుకోండి. పేజీల సంఖ్యకు సంబంధించి గానీ లేదా సూచించిన సంఖ్యలో ప్రశ్నలు లేకపోవుట లేదా నిజప్రతి కాకపోవుట లేదా ప్రశ్నలు క్రమపద్ధతిలో లేకపోవుట లేదా ఏదైనా తేడాలు ఉండుట వంటి దోషపూరితమైన ప్రశ్న పత్రాన్ని వెంటనే మొదటి ఐదు నిమిషాల్లో పరీక్షా పర్యవేక్షకునికి తిరిగి ఇచ్చివేసి దానికి బదులుగా సరిగ్గా ఉన్న ప్రశ్నపత్రాన్ని తీసుకోండి. తదనంతరం ప్రశ్నపత్రము మార్చబడదు అదనపు సమయం ఇవ్వబడదు.
  - పై విధంగా సరిచూసుకొన్న తర్వాత ప్రశ్నపత్రం సంఖ్యను OMR పత్రము పై అదేవిధంగా OMR పత్రము సంఖ్యను ఈ ప్రశ్నపత్రము పై నిర్దిష్టస్థలంలో రాయవలెను.
- ప్రతి ప్రశ్నకు నాలుగు ప్రత్యామ్నాయ ప్రతిస్పందనలు (A), (B), (C) మరియు (D) లుగా ఇవ్వబడ్డాయి. ప్రతి ప్రశ్నకు సరైన ప్రతిస్పందనను ఎన్నుకొని కింద తెలిపిన విధంగా OMR పత్రములో ప్రతి ప్రశ్నా సంఖ్యకు ఇవ్వబడిన నాలుగు వృత్తాల్లో సరైన ప్రతిస్పందనను సూచించే వృత్తాన్ని బాల్ పాయింట్ పెన్ తో కింద తెలిపిన విధంగా ఘరించాలి.  
ఉదాహరణ :  (A)  (B)  (C)  (D)  
(C) సరైన ప్రతిస్పందన అయితే
- ప్రశ్నలకు ప్రతిస్పందనలను ఈ ప్రశ్నపత్రముతో ఇవ్వబడిన OMR పత్రము పై సరిగ్గా ఇవ్వబడిన వృత్తాల్లోనే ఘరించి గుర్తించాలి. అలాకాక సమాధాన పత్రంపై వేరొక చోట గుర్తిస్తే మీ ప్రతిస్పందన మూల్యాంకనం చేయబడదు.
- ప్రశ్న పత్రము లోపల ఇచ్చిన సూచనలను జాగ్రత్తగా చదవండి.
- చిత్తుపనిని ప్రశ్నపత్రము చివర ఇచ్చిన భాగీస్థలములో చేయాలి.
- OMR పత్రము పై నిర్దిష్ట స్థలంలో సూచించవలసిన వివరాలు తప్పించి ఇతర స్థలంలో మీ గుర్తింపును తెలిపే విధంగా మీ పేరు రాయడం గానీ లేదా ఇతర చిహ్నాలను పెట్టడం గానీ చేసినట్లయితే మీ అనర్హతకు మీరే బాధ్యులువుతారు.
- పరీక్ష పూర్తయిన తర్వాత మీ OMR పత్రాన్ని తప్పనిసరిగా పరీక్ష పర్యవేక్షకుడికి ఇవ్వాలి. వాటిని పరీక్ష గది బయటకు తీసుకువెళ్లకూడదు. పరీక్ష పూర్తయిన తరువాత అభ్యర్థులు ప్రశ్న పత్రాన్ని, OMR పత్రం యొక్క కార్బన్ కాపీని తీసుకువెళ్లవచ్చు.
- నీలి/నల్ల రంగు బాల్ పాయింట్ పెన్ మాత్రమే ఉపయోగించాలి.
- లాగరిథమ్ టేబుల్స్, క్యాలిక్యులేటర్లు, ఎలక్ట్రానిక్ పరికరాలు మొదలగునవి పరీక్షగదిలో ఉపయోగించడం నిషేధం.
- తప్ప సమాధానాలకు మార్కులు తగ్గింపు లేదు.





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## ENVIRONMENTAL SCIENCE

### Paper - II

1. Species richness :

- (A) Increases towards equator
- (B) Decreases towards equator
- (C) Remains same throughout the planet
- (D) Has no effect on change in latitude

2. Assertion (A) :

Carbondioxide molecule wise global warming potential is low. However its overall contribution is more than 50%.

Reason (R) :

Total carbondioxide molecules are much more than any other greenhouse gases.

Codes :

- (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

3. Arrange the atmospheric layers in their order :

- (a) Exosphere
- (b) Mesosphere
- (c) Troposphere
- (d) Stratosphere

Codes :

- (A) (c), (d), (b), (a)
- (B) (d), (c), (a), (b)
- (C) (b), (a), (d), (c)
- (D) (a), (b), (c), (d)

4. The sequence of IUCN threatened species incorporated in Red Data Book is as follows :

- (a) Rare
- (b) Vulnerable
- (c) Endangered
- (d) Extinct

Codes :

- (A) (a), (b), (c), (d)
- (B) (b), (d), (c)
- (C) (c), (a), (d)
- (D) (d), (b), (c), (a)



5. Match the following :

- |   |                    |
|---|--------------------|
| (a) Dealing with threatened plants and animals of any region        | (i) Green book     |
| (b) Rare plants growing in protected area like botanical gardens    | (ii) Red data book |
| (c) IUCN - endangered species of the world                          | (iii) Yellow book  |
| (d) Approved drug products with therapeutic equivalence evaluations | (iv) Blue book     |

Codes :

- |           |       |      |       |
|-----------|-------|------|-------|
| (a)       | (b)   | (c)  | (d)   |
| (A) (ii)  | (i)   | (iv) | (iii) |
| (B) (iv)  | (iii) | (ii) | (i)   |
| (C) (iii) | (i)   | (ii) | (iv)  |
| (D) (iii) | (iv)  | (i)  | (ii)  |

6. Recent statistics shows that the total deaths from infectious diseases are estimated as 15 million by the WHO, in which the highest percentage is due to :

- (A) HIV/AIDS
- (B) Malaria
- (C) Acute B...

7. Assertion (A) :

Organic farming is a production system, which avoids or largely excludes the use of synthetically compounded fertilisers, pesticides, growth regulators and livestock feed additives.

Reason (R) :

Organic farming systems rely upon crop rotations, crop residues, animal manures, legumes, green manures, off-farm organic wastes, mechanical cultivation, mineral bearing rocks, and assets of biological pest control to maintain soil productivity and tilth, to supply plant nutrients and to control insects, weeds and other pests.

Codes :

- (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

8. Find the right order for the production of the energy in India, as on 2016 :

- (a) Wind
- (b) Nuclear
- (c) Solar
- (d) Tidal

Codes :

- (A) (b) (c) (a) (d)

9. Match the following :

**List - I**

- |                       |                   |
|-----------------------|-------------------|
| (a) Earth day         | (i) March 22      |
| (b) World water day   | (ii) April 22     |
| (c) World ozone day   | (iii) February 2  |
| (d) World wetland day | (iv) September 16 |

**List - II**

**Codes :**

- |                         |     |     |     |
|-------------------------|-----|-----|-----|
| (a)                     | (b) | (c) | (d) |
| (A) (i) (ii) (iii) (iv) |     |     |     |
| (B) (iii) (iv) (ii) (i) |     |     |     |
| (C) (iv) (iii) (i) (ii) |     |     |     |
| (D) (ii) (i) (iv) (iii) |     |     |     |
10. An association between two individuals or populations where both are benefitted and where neither can survive without the other is :
- (A) Competition
- (B) Commensalism
- (C) Mutualism
- (D) Proto - Co-operation

11. Assertion (A) :

A 1984 study conducted by Dr. Kay Kilburn, showed that children raised in the South Coast Air Basin suffer at 10-15% decrease in lung function compared to children who grow up where the air is less polluted.

Reason (R) :

Children exposed to summer ozone pollution year in, year out have a great susceptibility to respiratory infections because chronic exposure to smog impairs their immune system.

Codes :

- (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
12. Identify the correct sequence :
- (a) Ecosystem
- (b) Population
- (c) Community
- (d) Organism
- Codes :
- (A) (d), (b), (c), (a)
- (B) (a), (c), (b), (d)
- (C) (b), (a), (d), (c)
- (D) (c), (d), (a), (b)



13. Soil gets polluted by a number of ways and major kind(s) of soil pollution are :

- (a) Acidification
- (b) Salinisation and sodification
- (c) Agrochemical pollution
- (d) Contamination by metalliferous water

**Codes :**

- (A) (a), (c) are correct
- (B) (c), (d), (b) are correct
- (C) (a), (b), (c), (d) are correct
- (D) (d), (a) are correct

14. The concept that population tends to increase geometrically while food supply increases arithmetically was put forward by :

- (A) Adam Smith
- (B) Charles Darwin
- (C) Thomas Malthus
- (D) Stuart Mill

15. Assertion (A) :

Red sunset is the common phenomenon of polluted cities.

**Reason (R) :**

Fine aerosols from the industrial emissions are responsible for this phenomenon.

**Codes :**

- (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

16. The sequence of genetic diversity is as follows :

- (a) Populations
- (b) Individuals
- (c) Chromosomes
- (d) Genes
- (e) Nucleotides

**Codes :**

- (A) (a), (b), (c) are correct
- (B) (e), (b), (c), (d) are correct
- (C) (b), (a), (d), (e) are correct

17. Match the following :

**List - I**

**List - II**

- |  |                     |
|--|---------------------|
| (a) Convention on wetlands                     | (i) Johannesburg    |
| (b) The Earth Summit                           | (ii) Stockholm      |
| (c) World Summit on Sustainable Development    | (iii) Ramsar        |
| (d) United Conference on the Human Environment | (iv) Rio de Janerio |

**Codes :**

- |           |       |       |       |
|-----------|-------|-------|-------|
| (a)       | (b)   | (c)   | (d)   |
| (A) (iv)  | (ii)  | (iii) | (i)   |
| (B) (i)   | (iii) | (ii)  | (iv)  |
| (C) (iii) | (iv)  | (i)   | (ii)  |
| (D) (ii)  | (i)   | (iv)  | (iii) |

18. Major pollution sources of the aquatic environment are :

- (a) Domestic wastes
- (b) Agricultural wastes
- (c) Industrial effluents
- (d) Materials of Biological origin

**Codes :**

- (A) (a), (d) are correct
- (B) (c), (a), (b) are correct
- (C) (b), (d) are correct
- (D) (a), (b), (c), (d) are correct

19. Compared to entrophic lake, an oligotrophic lake tends to have a greater :

- (A) Supply of oxygen in the deep waters
- (B) Number of blue-green algae
- (C) Biological oxygen Demand
- (D) Amount of degradable organic matter

20. Assertion (A) :

Xenobiotics are toxic to soil biota, inhibit seed germination and suppress plant growth.

Reason (R) :

The primary approach to managing xenobiotics in soil is to utilize the ability of soil microorganisms to degrade these compounds.

**Codes :**

- (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



21. Identify the correct sequence :

- (a) Skimming
- (b) Screening
- (c) Degritting
- (d) Sedimentation

Codes :

- (A) (c), (b), (d), (a)
- (B) (b), (c), (a), (d)
- (C) (d), (a), (c), (b)
- (D) (a), (d), (b), (c)

22. The sequential steps involved in treatment are :

- (a) Separation of solids from liquid
- (b) Oxidation of organic and oxygen demanding materials
- (c) Neutralization
- (d) Removal of poisonous substances and disposal of residues

Codes :

- (A) (c), (b), (d), (a)
- (B) (d), (b), (a), (c)
- (C) (a), (b), (c), (d)
- (D) (b), (d), (c), (a)

23. Match the following :

Energy available in kilocalories at different trophic levels :

List - I

List - II

- |                   |       |     |
|-------------------|-------|-----|
| (a) Zooplankton   | (i)   | 1   |
| (b) Phytoplankton | (ii)  | 0.1 |
| (c) Human         | (iii) | 10  |
| (d) Fish          | (iv)  | 100 |

Codes :

(a) (b) (c) (d)

- (A) (i) (ii) (iii) (iv)
- (B) (iii) (iv) (ii) (i)
- (C) (ii) (i) (iv) (iii)
- (D) (iv) (iii) (i) (ii)

24. Terrestrial ecosystems :

- (a) Tundra : arctic and alpine
- (b) Tropical grassland and savanna
- (c) Semi-evergreen tropical forest
- (d) Wetlands : marshes and swamp forests

Codes :

- (A) (a), (b), (d) are correct
- (B) (b), (c), (d) are correct
- (C) (a), (b), (c) are correct
- (D) (a), (c), (d) are correct





25. The extent of the input and output environment varies extremely and depends on the following variables :

- (a) Size of the system
- (b) Metabolic intensity
- (c) Autotrophic - heterotrophic balance
- (d) Edge effect

Codes :

- (A) (a), (b), (c) are correct
- (B) (b), (c), (d) are correct
- (C) (a), (c), (d) are correct
- (D) (a), (b), (d) are correct

26. Assertion (A) :

Fluoride concentration below 0.5 ppm over a period of 5 - 10 years result in fluorosis terminating in crippling or paralysis.

Reason (R) :

Fluoride is not absorbed in the blood stream. It has an affinity for calcium and gets accumulated in the bones resulting in molting of teeth, pain the bones and joints and outward bending of legs from the knee.

Codes :

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

27. Identify the correct sequence :

- (a) Regulatory decision
- (b) Hazard identification
- (c) Risk characterization
- (d) Exposure assessment

Codes :

- (A) (d), (a), (b), (c)
- (B) (b), (d), (c), (a)
- (C) (a), (c), (d), (b)
- (D) (c), (b), (a), (d)

28. Match the following protected Areas with the state to which they belong :

List - I

List - II

Protected Areas

States

- |                 |                    |
|-----------------|--------------------|
| (a) Khajiranga  | (i) Odisha         |
| (b) Jim Corbett | (ii) Uttar Pradesh |
| (c) Ranthambore | (iii) Assam        |
| (d) Gahirmatha  | (iv) Rajasthan     |
|                 | (v) Uttarakhand    |

Codes :

- |     |       |      |       |       |
|-----|-------|------|-------|-------|
|     | (a)   | (b)  | (c)   | (d)   |
| (A) | (ii)  | (i)  | (iii) | (iv)  |
| (B) | (iii) | (v)  | (iv)  | (i)   |
| (C) | (i)   | (ii) | (v)   | (iii) |
| (D) | (v)   | (iv) | (ii)  | (i)   |



29. The sequence of pollution monitoring agencies is :

- (a) Village, Block, District level
- (b) State level
- (c) Country level
- (d) Inter - Governmental level

Codes :

- (A) (a), (b) are correct
- (B) (a), (b), (c), (d) are correct
- (C) (c), (a), (d) are correct
- (D) (d), (a), (c) are correct

30. On land biomes, Zonation based on productivity and respiration or thermal stratification of a pond with :

- (a) Limnetic ( $P/R > 1$ )
- (b) Profundal ( $P/R < 1$ )
- (c) Metacline ( $P/R = 0$ )
- (d) Compensation depth ( $P/R = 1$ )

Codes :

- (A) (a), (b), (c) are correct
- (B) (b), (c), (d) are correct
- (C) (a), (b), (d) are correct
- (D) (a), (c), (d) are correct

31. Farmers, plough the soil as early as possible in the spring in order to restore oxygen to the soil. This process is to avoid :

- (A) Nitrification
- (B) Denitrification
- (C) Ammonification
- (D) Humification

32. Assertion (A) :

*Desulfovibrio* and other varieties of sulfate reducing bacteria are ecologically important examples of anaerobic respiration.

Reason (R) :

They reduce  $SO_4$  in deep sediments and in anoxic waters to  $H_2S$  gas. The  $H_2S$  can rise to surface waters where it can be oxidised by other organisms.

Codes :

- (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



33. Choose the correct sequence :

'Biotic succession'

- (a) Pioneers
- (b) Competition
- (c) Reaction
- (d) Climax
- (e) Invaders elimination
- (f) Nudation

Codes :

- (A) (f), (a), (b), (c), (e), (d)
- (B) (b), (c), (a), (d), (f), (e)
- (C) (f), (d), (e), (c), (a), (b)
- (D) (b), (a), (d), (f), (c), (e)

34. Match the following :

List - I

List - II

- |                                |                     |
|--------------------------------|---------------------|
| (a) Activated Carbon           | (i) Reducing Smog   |
| (b) Electrostatic Precipitator | (ii) Oxidizing Smog |
| (c) London Smog                | (iii) Bad odour     |
| (d) Los Angeles Smog           | (iv) Dust           |

Codes :

- |     |       |       |       |       |
|-----|-------|-------|-------|-------|
|     | (a)   | (b)   | (c)   | (d)   |
| (A) | (iii) | (iv)  | (i)   | (ii)  |
| (B) | (ii)  | (i)   | (iv)  | (iii) |
| (C) | (i)   | (iii) | (ii)  | (iv)  |
| (D) | (iv)  | (ii)  | (iii) | (i)   |

35. UNESCO's programmes on Environment and Natural Resource Management aim at :

- (a) Providing the scientific basis and training personnel for solving the environmental problems
- (b) Understanding the relationship between natural and human components of development
- (c) Research by Interdisciplinary teams on ecological and social systems
- (d) Application of statistics

The sequence is :

- (A) (b), (c), (d) are correct
- (B) (d), (a), (b) are correct
- (C) (a), (b), (c) are correct
- (D) (a), (d), (b) are correct



36. Equations for measuring species richness and species appointment are :

(a) Margalef ( $D = S - 1/\ln N$ )

(b) J-Curve  $\left(\frac{dN}{dt} = rN\right)$

(c) Information theory

$$\left(\bar{H} = - \sum P_i \ln P_i\right)$$

(d) Evenness ( $e = F_i/\ln S$ )

**Codes :**

(A) (a), (b), (c) are correct

(B) (b), (c), (d) are correct

(C) (a), (b), (d) are correct

(D) (a), (c), (d) are correct

37. Assertion (A) :

Mangroves act as nurseries for several marine organisms and contribute to the replenishment of marine populations.

Reason (R) :

Mangroves act as depositories of silt and nutrients brought from rivers and provide relatively low turbulent environment.

**Codes :**

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

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

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

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

38. Arrange the Zonation of the sea in proper order :

(a) Pelagic Zone

(b) Neritic Zone

(c) Benthic Zone

(d) Littoral Zone

**Codes :**

(A) (c), (b), (d), (a)

(B) (d), (b), (a), (c)

(C) (d), (c), (b), (a)

(D) (a), (b), (c), (d)

39. Match the following :

List - I

List - II

- (a) The square of the coefficient of correlation, the relative measure of the closeness of the association
- (b) The ratio of the wall shearing stress to the dynamic head of the stream
- (c) The standard deviation of a distribution divided by the mean. It may be expressed as percentage
- (d) The product moment correlation between the actual values of the dependent variate in multiple regression. It measures the closeness of the combined association between a number of independent variables
- (i) Co-efficient of multiple correlation
- (ii) Co-efficient of variation
- (iii) Co-efficient of determination
- (iv) Co-efficient of friction

Codes :

- (a) (b) (c) (d)
- (A) (ii) (iii) (iv) (i)
- (B) (iv) (iii) (ii) (i)
- (C) (iv) (iii) (i) (ii)
- (D) (iii) (iv) (ii) (i)

40. Hydrological cycle includes and sequence is :

- (a) Evaporation from oceans
- (b) Condensation
- (c) Precipitation
- (d) Lakes, oceans

Codes :

- (A) (d), (b) are correct
- (B) (b), (c), (d) are correct
- (C) (a), (c), (d) are correct
- (D) (a), (b), (c), (d) are correct

41. Match the following :

List - I

List - II

- (a) Ozone depleting substance
- (b) Green House Gas
- (c) Acidic gas
- (d) Radioactive gas
- (i) SO<sub>x</sub>
- (ii) Radon
- (iii) CO<sub>2</sub>
- (iv) CFC

Codes :

- (a) (b) (c) (d)
- (A) (ii) (i) (iii) (iv)
- (B) (iv) (iii) (i) (ii)
- (C) (iii) (ii) (iv) (i)
- (D) (i) (iv) (ii) (iii)

42. Which act created the provision of PIL ?

- (A) The biological diversity Act 2002
- (B) The factories (amendment) Act 1987
- (C) The national environmental tribunal Act 1995
- (D) The environmental protection Act 1986



**43. Assertion (A) :**

Energy flow is one way; some of the incoming solar energy is transformed and upgraded in quality by the community, but most input energy is degraded and passes through and out of the system as low quality heat energy.

**Reason (R) :**

Energy can be stored, then 'fed back', or exported and reused. Materials, including the nutrients necessary for life (Carbon, nitrogen and phosphorus) and water cannot be used over and over again.

**Codes :**

- (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

**44. When body temperature rises, several mechanisms help in losing heat but mechanism that helps in reducing heat production is :**

- (A) Reduced breathing
- (B) Reduced rate of metabolism
- (C) Excessive sweating
- (D) Excessive vasodilation

**45. Spectrum of electromagnetic radiation consists of :**

- (a) Ultraviolet rays
- (b) Visible rays
- (c) Radio waves
- (d) Cosmic rays

**Codes :**

- (A) (a), (b), (c) are correct
- (B) (b), (c), (d) are correct
- (C) (a), (b), (d) are correct
- (D) (a), (c), (d) are correct

**46. A decrease in pH results in :**

- (A) Increase in primary productivity
- (B) Increase in microbial productivity
- (C) Increase in toxic metal availability
- (D) Increase in soil fertility



47. Match the following :

**List - I**

**List - II**

- |                          |       |               |
|--------------------------|-------|---------------|
| (a) The population Bomb  | (i)   | Club of Rome  |
| (b) Silent Spring        | (ii)  | Lester Brown  |
| (c) State of the World   | (iii) | Rachel Carson |
| (d) The limits to Growth | (iv)  | Paul Ehrlich  |

**Codes :**

- |     |       |       |       |       |
|-----|-------|-------|-------|-------|
| (a) | (b)   | (c)   | (d)   |       |
| (A) | (iii) | (iv)  | (i)   | (ii)  |
| (B) | (i)   | (ii)  | (iii) | (iv)  |
| (C) | (iv)  | (iii) | (ii)  | (i)   |
| (D) | (ii)  | (i)   | (iv)  | (iii) |

48. Atmosphere is stable if :

- (A)  $ELR > ALR$
- (B)  $ELR < ALR$
- (C)  $ELR > SALR$
- (D)  $ELR > DALR$

49. The Thar desert is in :

- (A) Africa
- (B) Asia
- (C) Australia
- (D) North America

50. Match the following :

**List - I**

**List - II**

- |            |       |                              |
|------------|-------|------------------------------|
| (a) DDT    | (i)   | Oxidizing agent              |
| (b) Teflon | (ii)  | Ozone depleting substance    |
| (c) CFC    | (iii) | Polymer                      |
| (d) Ozone  | (iv)  | Persistent organic pollutant |

**Codes :**

- |     |       |       |       |       |
|-----|-------|-------|-------|-------|
| (a) | (b)   | (c)   | (d)   |       |
| (A) | (ii)  | (iv)  | (i)   | (iii) |
| (B) | (iii) | (i)   | (iv)  | (ii)  |
| (C) | (i)   | (ii)  | (iii) | (iv)  |
| (D) | (iv)  | (iii) | (ii)  | (i)   |

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Space For Rough Work

SEAL