# PAPER-III
# ENVIRONMENTAL SCIENCE

**Signature and Name of Invigilator**

1. (Signature) _____

   (Name) _____

2. (Signature) _____

   (Name) _____

J | 8 | 9 | 1 | 2

Time : 2 ¹/₂ hours]

Number of Pages in this Booklet : **12**

OMR Sheet No. : ..................................

(To be filled by the Candidate)

Roll No. ☐☐☐☐☐☐☐☐

(In figures as per admission card)

Roll No._____

(In words)

[Maximum Marks : **150**

Number of Questions in this Booklet : **75**

| Instructions for the Candidates | परीक्षार्थियों के लिए निर्देश |
|---|---|
| 1. Write your roll number in the space provided on the top of this page. | 1. पहले पृष्ठ के ऊपर नियत स्थान पर अपना रोल नम्बर लिखिए । |
| 2. This paper consists of seventy five multiple-choice type of questions. | 2. इस प्रश्न-पत्र में पचहत्तर बहुविकल्पीय प्रश्न हैं । |
| 3. 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 : | 3. परीक्षा प्रारम्भ होने पर, प्रश्न-पुस्तिका आपको दे दी जायेगी । पहले पाँच मिनट आपको प्रश्न-पुस्तिका खोलने तथा उसकी निम्नलिखित जाँच के लिए दिये जायेंगे, जिसकी जाँच आपको अवश्य करनी है : |
| (i) 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. | (i) प्रश्न-पुस्तिका खोलने के लिए उसके कवर पेज पर लगी कागज की सील को फाड़ लें । खुली हुई या बिना स्टीकर-सील की पुस्तिका स्वीकार न करें । |
| (ii) **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.** | (ii) **कवर पृष्ठ पर छपे निर्देशानुसार प्रश्न-पुस्तिका के पृष्ठ तथा प्रश्नों की संख्या को अच्छी तरह चैक कर लें कि ये पूरे हैं । दोषपूर्ण पुस्तिका जिनमें पृष्ठ/प्रश्न कम हों या दुबारा आ गये हों या सीरियल में न हों अर्थात् किसी भी प्रकार की त्रुटिपूर्ण पुस्तिका स्वीकार न करें तथा उसी समय उसे लौटाकर उसके स्थान पर दूसरी सही प्रश्न-पुस्तिका ले लें । इसके लिए आपको पाँच मिनट दिये जायेंगे । उसके बाद न तो आपकी प्रश्न-पुस्तिका वापस ली जायेगी और न ही आपको अतिरिक्त समय दिया जायेगा ।** |
| (iii) After this verification is over, the OMR Sheet Number should be entered on this Test Booklet. | (iii) इस जाँच के बाद OMR पत्रक की क्रम संख्या इस प्रश्न-पुस्तिका पर अंकित कर दें । |
| 4. 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.<br>**Example :** Ⓐ Ⓑ ● Ⓓ<br>where (C) is the correct response. | 4. प्रत्येक प्रश्न के लिए चार उत्तर विकल्प (A), (B), (C) तथा (D) दिये गये हैं । आपको सही उत्तर के वृत्त को पेन से भरकर काला करना है जैसा कि नीचे दिखाया गया है ।<br>**उदाहरण :** Ⓐ Ⓑ ● Ⓓ<br>जबकि (C) सही उत्तर है । |
| 5. Your responses to the items are to be indicated in the **OMR Sheet given inside the Booklet only.** If you mark at any place other than in the circle in the OMR Sheet, it will not be evaluated. | 5. प्रश्नों के उत्तर **केवल प्रश्न पुस्तिका के अन्दर दिये गये OMR पत्रक पर ही** अंकित करने हैं । यदि आप OMR पत्रक पर दिये गये वृत्त के अलावा किसी अन्य स्थान पर उत्तर चिह्नांकित करते हैं, तो उसका मूल्यांकन नहीं होगा । |
| 6. Read instructions given inside carefully. | 6. अन्दर दिये गये निर्देशों को ध्यानपूर्वक पढ़ें । |
| 7. Rough Work is to be done in the end of this booklet. | 7. कच्चा काम (Rough Work) इस पुस्तिका के अन्तिम पृष्ठ पर करें । |
| 8. If you write your Name, Roll Number, Phone Number or put any mark on any part of the OMR Sheet, except for the space allotted for the relevant entries, which may disclose your identity, or use abusive language or employ any other unfair means, you will render yourself liable to disqualification. | 8. यदि आप OMR पत्रक पर नियत स्थान के अलावा अपना नाम, रोल नम्बर, फोन नम्बर या कोई भी ऐसा चिह्न जिससे आपकी पहचान हो सके, अंकित करते हैं अथवा अभद्र भाषा का प्रयोग करते हैं, या कोई अन्य अनुचित साधन का प्रयोग करते हैं, तो परीक्षा के लिये अयोग्य घोषित किये जा सकते हैं । |
| 9. You have to return the test question booklet and Original OMR Sheet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are, however, allowed to carry duplicate copy of OMR Sheet on conclusion of examination. | 9. आपको परीक्षा समाप्त होने पर प्रश्न-पुस्तिका एवं मूल OMR पत्रक निरीक्षक महोदय को लौटाना आवश्यक है और परीक्षा समाप्ति के बाद उसे अपने साथ परीक्षा भवन से बाहर न लेकर जायें । हालांकि आप परीक्षा समाप्ति पर OMR पत्रक की डुप्लीकेट प्रति अपने साथ ले जा सकते हैं । |
| 10. Use only Blue/Black Ball point pen. | 10. केवल नीले/काले बाल प्वाईंट पेन का ही इस्तेमाल करें । |
| 11. Use of any calculator or log table etc., is prohibited. | 11. किसी भी प्रकार का संगणक (कैलकुलेटर) या लाग टेबल आदि का प्रयोग वर्जित है । |
| 12. There is no negative marks for incorrect answers. | 12. गलत उत्तरों के लिए कोई अंक काटे नहीं जाएँगे । |

J-89-12          1          **P.T.O.**

# ENVIRONMENTAL SCIENCE

## Paper – III

**Note :** This paper contains **seventy five (75)** objective type questions, each question carrying **two (2)** marks. **All** questions are compulsory.

1. If the standard deviation of a population is 20, the population and sample means are 35 and 33, respectively and the t-statistic at 95% confidence level is 2.5, the sample size is

   (A) 100     (B) 125

   (C) 250     (D) 625

2. For 5 degrees of freedom, the variance of $\chi^2$ distribution is

   (A) 10     (B) 5

   (C) 16     (D) 4

3. Identify the random sampling method among the following :

   (A) Judgement sampling

   (B) Quota sampling

   (C) Convenience sampling

   (D) Stratified sampling

4. Consider a Box model for an urban area. Assuming that the pollutants are conservative and that the mixing is rapid inside the Box, the concentration (C) of pollutants varies with the mixing height as

   (A) $C \propto \dfrac{1}{H}$     (B) $C \propto \dfrac{1}{H^2}$

   (C) $C \propto \dfrac{1}{\sqrt{H}}$     (D) $C \propto H^{-3/2}$

5. At higher pH, majority of iron is present as

   (A) $Fe^{2+}$

   (B) $Fe^{3+}$

   (C) $Fe^{2+}$ and $Fe^{3+}$

   (D) $Fe(OH)_2$ and $Fe(OH)_3$

6. In living organisms phosphorous is largely associated with

   (A) Carbohydrate     (B) Lipids

   (C) Nucleic acids     (D) Proteins

7. Molar extinction coefficient of malondialdehyde at 532 nm is 0.155 $M^{-1}cm^{-1}$. The concentration of malondialdehyde in a solution which has absorbance of 0.31 in a 1 cm curette will be

   (A) 0.5 M     (B) 1.0 M

   (C) 1.5 M     (D) 2.0 M

8. pOH of 0.001 M solution of HC$l$ is

   (A) 0.1     (B) 1

   (C) 10     (D) 11

9. The molecular weight of DDT is 354.5. The quantity of DDT required to prepare one litre of 10 ppm DDT solution is

   (A) 10 mg     (B) 35.45 mg

   (C) 354.5 mg     (D) 354.5 µg

**10.** Which one of the following is referred to as superoxide radical ?

(A)  O  (B)  $O_2$

(C)  $O_2^{\circ-}$  (D)  $O_3$

**11.** The net primary productivity of an ecosystem is

(A) the gross primary productivity minus plant respiration

(B) the primary productivity at herbivore level

(C) the primary productivity at consumer level

(D) the productivity at top consumer level minus respiration at all levels

**12.** Which of the following habitats has not been included as Indian biodiversity hot spots ?

(A)  The Eastern Ghats

(B)  The Western Ghats

(C)  North-Eastern Hills

(D)  South-Eastern Hills

**13.** The area of the biosphere which is protected entirely, without any experimentation and research and no biotic interference, is known as

(A)  Undisturbed zone

(B)  Buffer zone

(C)  Core zone

(D)  Principal zone

**14.** When a mixture of Azospirillum, Azotobacter and Vibrio was applied to rhizosphere, fixation of atmospheric nitrogen was increased. It was due to activity of

(A)  All the three

(B)  Azospirillum and Vibrio

(C)  Azotobacter and Vibrio

(D)  Azotobacter and Azospirillum

**15.** Which type of forests are found at an altitude of 5300 ft chiefly on mountains of Himalayas and Nilgiri ?

(A)  Dry deciduous forest

(B)  Moist tropical forest

(C)  Temperate forest

(D)  Tropical moist deciduous forest

**16.** The sequence of events that occur during primary succession is as follows :

(A)  Nudation – Colonisation – Ecesis – Aggregation

(B)  Aggregation – Colonization – Ecesis – Nudation

(C)  Ecesis – Nudation – Aggregation – Colonization

(D)  Nudation – Ecesis – Colonization – Aggregation

17. As per Raunkaiers law of frequency, five different frequency classes (A, B, C, D and E) in a natural undisturbed community exhibit one of the following relationship :

(A) $A < B > C \gtreqless D < E$

(B) $A > B > C \gtreqless D < E$

(C) $A < B > C \gtreqless D > E$

(D) $A < B < C \gtreqless D > E$

18. Which one of the following category of earthworms is most suitable for Vermicomposting ?
   (A) Epigeic
   (B) Anecic
   (C) Endogeic
   (D) All the above

19. Which one of the following is an in situ method of biodiversity conservation ?
   (A) Reserve forest
   (B) National parks
   (C) Sanctuaries
   (D) All the above

20. Match the contaminant in Column – I with the disease in Column – II :

   | Column – I | Column – II |
   |---|---|
   | (i) Mercury | 1. Methamoglobinemia |
   | (ii) Nitrate Nitrogen | 2. Itai Itai |
   | (iii) Cadmium | 3. Silicosis |
   | (iv) Coal | 4. Minamata |

   Choose the correct code :
   **Codes :**

   |  | (i) | (ii) | (iii) | (iv) |
   |---|---|---|---|---|
   | (A) | 2 | 3 | 4 | 1 |
   | (B) | 3 | 4 | 2 | 1 |
   | (C) | 1 | 2 | 3 | 4 |
   | (D) | 4 | 1 | 2 | 3 |

21. Which of the following types of coal contains higher percentage of volatile matter ?
   (A) Peat
   (B) Lignite
   (C) Bituminous
   (D) Anthracite

22. Carbon dioxide evolved from soil mainly comes from
   (A) Microbial respiration
   (B) Root respiration
   (C) Soil animals respiration
   (D) All the above

23. Which one of the following pesticides persists for a long period in soil ?
   (A) Lindane
   (B) Monocrotophos
   (C) Carbaryl
   (D) Parathion

24. Organic matter (OM) content of soil can be calculated from organic carbon (OC) by using the formula
   (A) OM (%) = OC (%) × 1.724
   (B) OM (%) = OC (%) × 1.247
   (C) OM (%) = OC (%) × 1.472
   (D) OM (%) = OC (%) × 1.427

25. The problem of thermal pollution can be alleviated by using
   (A) Cooling ponds
   (B) Cooling towers
   (C) More efficient electricity generating plants
   (D) All the above

**26.** According to Recycled Plastics (Manufacture and Usage) Rules 1999, the minimum thickness of carry bags shall not be less than

(A) 10 microns     (B) 20 microns

(C) 30 microns     (D) 50 microns

**27.** Match the Act mentioned in Column – I with the year of enactment mentioned in Column – II :

| Column – I | Column – II |
|---|---|
| (i) The Water (Prevention and Control of Pollution) Act | 1. 2002 |
| (ii) The Air (Prevention and Control of Pollution) Act | 2. 1986 |
| (iii) The Environmental (Protection) Act | 3. 1974 |
| (iv) The Biological Diversity Act | 4. 1981 |

Choose the correct code :

**Codes :**

|     | (i) | (ii) | (iii) | (iv) |
|-----|-----|------|-------|------|
| (A) | 1   | 4    | 3     | 2    |
| (B) | 3   | 4    | 2     | 1    |
| (C) | 3   | 2    | 1     | 4    |
| (D) | 2   | 4    | 3     | 1    |

**28.** Which one of the following is not an energy recovery method of solid waste management ?

(A) Pelletisation

(B) Biomethanation

(C) Pyrolysis

(D) Composting

**29.** The colour code of the container for collection of waste scrap generated from Hospitals is

(A) Red          (B) Blue

(C) White        (D) Green

**30.** Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R) :

**Assertion (A) :** When quantitative probabilistic risk assessment is performed on hazardous waste sites they usually turn out to be of relatively low threats.

**Reason (R) :** In hazardous waste sites the chance of exposure is low because of isolation of drinking water supplies and prevention of access.

Choose the correct answer :

(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.

**31.** In India, an Environment Impact Assessment report of a proposed mining project after environmental clearance is applicable for a maximal period of how many years ?

(A) 5 years      (B) 10 years

(C) 30 years     (D) 2 years

**32.** An increase of one unit of Richter Scale represents an increase in amplitude by a factor of

(A) 10       (B) 100

(C) 1000     (D) 2

**33.** Which rare earth element is not present in the earth's crust but for commercial purpose comes from the Nuclear reactors ?

(A) Promethium   (B) Lanthanum

(C) Cerium       (D) Samarium

**34.** To display green colour in the monitor the amount of RGB should be

(A) 255 : 0 : 0

(B) 255 : 255 : 255

(C) 0 : 0 : 0

(D) 0 : 255 : 0

**35.** When the temperature range in geothermal resource is generally low, electrical power generation from such resources require the use of secondary low boiling point fluid. This is generally known as

(A) Rankine cycle

(B) Production well cycle

(C) Flash stem cycle

(D) Hard Dry Rock cycle

**36.** The Global Warming Potential (GWP) is the least for which of the following greenhouse gases ?

(A) $CH_4$       (B) $CO_2$

(C) $N_2O$       (D) $SF_6$

**37.** The maximum specific power output (p) from a MHD power generator varies with the velocity (u) of hot ionized gas as

(A) $p \propto u$       (B) $p \propto u^2$

(C) $p \propto u^{3/2}$    (D) $p \propto u^3$

**38.** Given below are two statements. One labelled as Assertion (A) and the other labelled as Reason (R).

**Assertion (A) :** Electrostatic precipitators (ESPs) can be harmful if not operated properly.

**Reason (R) :** Corona discharge in ESPs produces ozone.

Choose the correct answer :

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

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

(C) (A) is true, but (R) is false.

(D) Both (A) and (R) are false.

**39.** Given below are two statements. One labelled as Assertion (A) and the other labelled as Reason (R) :

**Assertion (A) :** Vegetation hedges are the best way to control noise.

**Reason (R) :** Vegetation hedges scatter noise.

Choose the correct answer.

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

(B) Both (A) and (R) are correct, 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.

**40.** If w and ws are mixing ratio and saturation mixing ratio respectively; T and Td are the ambient temperature and dew point temperature respectively, then identify the correct expression of relative humidity (RH).

(A)  $RH = \dfrac{w \text{ at Td}}{w \text{ at T}}$

(B)  $RH = \dfrac{w \text{ at T}}{w \text{ at Td}}$

(C)  $RH = \dfrac{ws \text{ at Td}}{ws \text{ at T}}$

(D)  $RH = \dfrac{ws \text{ at T}}{ws \text{ at Td}}$

**41.** Identify mesoscale phenomenon.

(A)  Tornado

(B)  Sea breeze

(C)  Cyclone

(D)  Eddies

**42.** For elevations less than few hundred metres, if the wind speeds are $u_1$ and $u_2$ at elevations $z_1$ and $z_2$ respectively, the following equation holds $\left(\dfrac{u_1}{u_2}\right) = \left(\dfrac{z_1}{z_2}\right)^p$.
The value of the exponent p is

(A)  $\leq 0.6$

(B)  $= 1$

(C)  $\geq 0.6$

(D)  negative

**43.** Given below are two statements. One labelled as Assertion (A) and the other labelled as Reason (R).

**Assertion (A) :** Noise gets attenuated more in dry atmosphere.

**Reason (R) :** Moist air is less denser than dry air.

Choose the correct answer :

(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.

**44.** $OH^{\bullet}$ radicals in atmosphere play a role of

(A)  scavenger

(B)  acidifier

(C)  reducing agent

(D)  greenhouse gas

**45.** The slow neutrons initiating nuclear fission with $U^{235}$ have energies of the order of

(A)  0.25 MeV

(B)  0.15 MeV

(C)  0.25 eV

(D)  0.025 eV

**46.** The most suitable range of wind speeds for wind power generation is

(A)  1 – 5 m/s

(B)  4 – 12 m/s

(C)  10 – 20 m/s

(D)  20 – 50 m/s

**47.** For energy to be produced from nuclear fusion of Deuterium (D) and Tritium (T), the mixture of D + T has to be heated up to energies of at least

(A) 1 KeV

(B) 10 KeV

(C) 500 eV

(D) 1 MeV

**48.** Element contaminating the water body is determined and quantified by using one of the following methods :

(A) Colorimeter

(B) Spectrophotometer

(C) Atomic absorption spectrometer

(D) All the above

**49.** In which type of chromatography four modes viz, Absorption, partition, Ion exchange and exclusion, are present ?

(A) HPLC

(B) Liquid-liquid chromatography

(C) Ion-exchange chromatography

(D) Adsorption chromatography

**50.** The metal which is generally absorbed by plants along with Zn and causes "Ouch Ouch" disease in human beings is

(A) Pb

(B) Cd

(C) Hg

(D) Cr

**51.** Radioactive isotopes of which of the elements in human body decay every second ?

(A) $K^{40}$ and $C^{14}$

(B) $C^{14}$ and $N^{6}$

(C) $N^{16}$ and $K^{40}$

(D) None of the above

**52.** Which of the following techniques is most appropriate for determining crystalline structure of environmental samples ?

(A) Infrared spectroscopy

(B) X-ray diffraction

(C) Microspectrophotometry

(D) Raman spectroscopy

**53.** Which one of the following is the most predominant element in a majority of igneous rocks ?

(A) A*l*　　　　(B) Fe

(C) O　　　　(D) Si

**54.** Match the entries in Group-I with the process parameters in Group-II :

| Group-I | Group-II |
|---|---|
| (i) Clark electrode | 1. Dissolved Oxygen |
| (ii) Redox Probe | 2. pH |
| (iii) Load cell | 3. Liquid level |
| (iv) Diaphragm gauge | 4. Vessel pressure |

Choose the correct code :

**Codes :**

| | (i) | (ii) | (iii) | (iv) |
|---|---|---|---|---|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 2 | 1 | 4 | 3 |
| (C) | 1 | 4 | 3 | 2 |
| (D) | 4 | 3 | 2 | 1 |

**55.** Which one of the following is used to determine total organic matter by Walkley and Black method ?

(A) KOH and $H_2SO_4$

(B) $Na_2S_2O_3$ and $H_2SO_4$

(C) $K_2Cr_2O_7$ and $H_2SO_4$

(D) $HNO_3$ and $H_2SO_4$

**56.** As per WHO standards the maximum permissible level of coliform organisms per 100 m*l* of drinking water is

(A) 10          (B) 100

(C) 150          (D) 1000

**57.** Progressive increase in concentration of a xenobiotic compound when it passes through the food chain is called

(A) Biomagnification

(B) Hyper accumulation

(C) Bioaccumulation

(D) None of the above

**58.** Highest level of biotic interaction is

(A) Mutualism

(B) Predation

(C) Parasitism

(D) Amensalism

**59.** Which one of the following is considered as indicator of aquatic pollution ?

(A) Rotifers

(B) Copepods

(C) Mysids

(D) Calanoids

**60.** Poorly nourished lakes are known as

(A) Oligotrophic

(B) Eutrophic

(C) Mesotrophic

(D) Xerotrophic

**61.** Identify a sampling method which is not non-destructive.

(A) Sub-surface coring

(B) Using of neutron probes to measure soil water

(C) Fourier transform infrared spectroscopy

(D) Time domain refractometry to measure soil water

**62.** Ministry of Environment and Forests amended the EIA notification making public hearing mandatory for environmental clearance on

(A) 27th January 1996

(B) 10th April 1997

(C) 27th January 1997

(D) None of the above

**63.** The allochthonous microorganisms of an ecosystem are

(A) Indigenous microorganisms

(B) Migrant

(C) Parasitic

(D) Pathogenic

**64.** The rate of evaporation of oil spilled into the sea depends on

(A) The elemental concentration of sea water

(B) The composition of sea water microflora

(C) Composition of the crude oil

(D) The temperature of the sea

**65.** The most dangerous and heat resistant spoilage organism in canning industry is

(A) <u>Clostridium</u> <u>cellulolyticum</u>

(B) <u>Bacillus</u> <u>subtilis</u>

(C) <u>E.coli</u>

(D) <u>Clostridium</u> <u>botulinum</u>

**66.** Oxygen concentrations in compost developed in static piles usually

(A) Ten times lower than in ambient air

(B) Five times lower than in ambient air

(C) Two times more than in ambient air

(D) Five times more than in ambient air

**67.** If a bacterium with a 20 minute generation time is grown under optimal conditions (37 °C), one cell would multiply to $10^3$ (1000) cells in 3.3 hours, then how much time it will take to multiply to $10^6$ cells ?

(A) 5.3 hrs. (B) 6.6 hrs.

(C) 9.9 hrs. (D) 6.3 hrs.

**68.** The biodegradation of plant material is slow because of presence of

(A) Cellulose

(B) Xylene

(C) Extensin/protein

(D) Lignin

**69.** The widely used aerobic suspension type of liquid waste treatment system is

(A) Rotating Biological Contactor (RBC)

(B) Percolating filter

(C) Activated sludge process

(D) Septic tank

**70.** The treatment designed to remove non-biodegradable organic pollutants and mineral nutrients from waste water is

(A) Lagoons

(B) Imhoff tank

(C) Secondary treatment

(D) Tertiary treatment

**71.** An ecotype is

(A) Genetically different forms of the same organisms

(B) Genetically similar forms of the same organisms

(C) Morphologically different forms of the same organisms

(D) Both (A) and (B)

**72.** Ultraviolet radiations are lethal due to inactivation of

(A) Proteins, nucleic acids and pigments

(B) Minerals, water and air

(C) Carbohydrates, fats and vitamins

(D) $O_2$, $CO_2$ and water

**73.** The following are the characters of species diversity :

(i) More richness

(ii) More evenness

(iii) More dominance

(iv) Less dominance

(v) Less richness

(vi) Less evenness

Point out the combination of conditions in which species diversity of an ecosystem will be more.

(A) (i), (ii) and (iii)

(B) (v), (ii) and (iii)

(C) (i), (ii) and (iv)

(D) (i), (vi) and (iv)

**74.** Given below are two statements, one labelled as Assertion (A) and the other labelled as Reason (R).

**Assertion (A) :** If natality is greater than mortality, it leads to population explosion.

**Reason (R) :** The scientific study of various species of human population is called demography.

Choose the correct answer :

(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) Both (A) and (R) are false.

**75.** Match Column – I with Column – II :

| Column – I | Column – II |
|---|---|
| (i) Chipko Movement | 1. Medha Patkar |
| (ii) Narmada Bacchao Andolan | 2. Al Gore |
| (iii) Climate Change | 3. Rachel Carson |
| (iv) Silent Spring | 4. Sundarlal Bahuguna |

Choose the correct code :

**Codes :**

|  | (i) | (ii) | (iii) | (iv) |
|---|---|---|---|---|
| (A) | 1 | 2 | 3 | 4 |
| (B) | 2 | 3 | 4 | 1 |
| (C) | 4 | 1 | 2 | 3 |
| (D) | 3 | 4 | 1 | 2 |

**Space For Rough Work**