

PAPER-II ENVIRONMENTAL SCIENCES

Signature and Name of Invigilator

1. (Signature) _____

(Name) _____

2. (Signature) _____

(Name) _____

J 8916

Time : 1 ¼ hours]

[Maximum Marks : 100

Number of Pages in this Booklet : 12

Number of Questions in this Booklet : 50

Instructions for the Candidates

1. Write your roll number in the space provided on the top of this page.
2. This paper consists of fifty multiple-choice type of questions.
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 :
 - (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.
 - (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.**
 - (iii) After this verification is over, the Test Booklet Number should be entered on the OMR Sheet and the OMR Sheet Number should be entered on this Test Booklet.
4. Each item has four alternative responses marked (1), (2), (3) and (4). You have to darken the circle as indicated below on the correct response against each item.
Example : ① ② ● ④
where (3) is the correct response.
5. Your responses to the items are to be indicated in the **OMR Sheet given inside the Booklet only**. If you mark your response at any place other than in the circle in the OMR Sheet, it will not be evaluated.
6. Read instructions given inside carefully.
7. Rough Work is to be done in the end of this booklet.
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, such as change of response by scratching or using white fluid, you will render yourself liable to disqualification.
9. You have to return the 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 original question booklet and duplicate copy of OMR Sheet on conclusion of examination.
10. **Use only Black Ball point pen provided by C.B.S.E.**
11. **Use of any calculator or log table etc., is prohibited.**
12. **There is no negative marks for incorrect answers.**

OMR Sheet No. :

(To be filled by the Candidate)

Roll No.

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(In figures as per admission card)

Roll No. _____

(In words)

परीक्षार्थियों के लिए निर्देश

1. इस पृष्ठ के ऊपर नियत स्थान पर अपना रोल नम्बर लिखिए ।
2. इस प्रश्न-पत्र में पचास बहुविकल्पीय प्रश्न हैं ।
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) प्रश्न-पुस्तिका खोलने के लिए पुस्तिका पर लगी कागज की सील को फाड़ लें । खुली हुई या बिना स्टीकर-सील की पुस्तिका स्वीकार न करें ।
 - (ii) कवर पृष्ठ पर छपे निर्देशानुसार प्रश्न-पुस्तिका के पृष्ठ तथा प्रश्नों की संख्या को अच्छी तरह चेक कर लें कि ये पूरे हैं । दोषपूर्ण पुस्तिका जिनमें पृष्ठ/प्रश्न कम हों या दुबारा ओं 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) इस जाँच के बाद प्रश्न-पुस्तिका का नंबर OMR पत्रक पर अंकित करें और OMR पत्रक का नंबर इस प्रश्न-पुस्तिका पर अंकित कर दें ।
4. प्रत्येक प्रश्न के लिए चार उत्तर विकल्प (1), (2), (3) तथा (4) दिये गये हैं । आपको सही उत्तर के वृत्त को पेन से भरकर काला करना है जैसा कि नीचे दिखाया गया है :
उदाहरण : ① ② ● ④
जबकि (3) सही उत्तर है ।
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. अन्दर दिये गये निर्देशों को ध्यानपूर्वक पढ़ें ।
7. कच्चा काम (Rough Work) इस पुस्तिका के अन्तिम पृष्ठ पर करें ।
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 अशुद्ध भाषा का प्रयोग करते हैं, या कोई अन्य अनुचित साधन का प्रयोग करते हैं, जैसे कि अंकित किये गये उत्तर को मिटाना या सफेद स्याही से बदलना तो परीक्षा के लिये अयोग्य घोषित किये जा सकते हैं ।
9. आपको परीक्षा समाप्त होने पर मूल OMR पत्रक निरीक्षक महोदय को लौटाना आवश्यक है और परीक्षा समाप्त के बाद उसे अपने साथ परीक्षा भवन से बाहर न लेकर जायें । हालाँकि आप परीक्षा समाप्त पर मूल प्रश्न-पुस्तिका तथा OMR पत्रक की डुलीकेट प्रति अपने साथ ले जा सकते हैं ।
10. केवल C.B.S.E. द्वारा प्रदान किये गये काले बाल प्वाइंट पेन का ही इस्तेमाल करें ।
11. किसी भी प्रकार का संगणक (कैलकुलेटर) या लाग टेबल आदि का प्रयोग वर्जित है ।
12. गलत उत्तरों के लिए कोई नकारात्मक अंक नहीं हैं ।

J-89-16



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P.T.O.

ENVIRONMENTAL SCIENCES

Paper – II

Note : This paper contains **fifty (50)** objective type questions of **two (2)** marks each. **All** questions are compulsory.

1. In term of atmospheric residence times, identify the correct sequence :
 - (1) $\text{NO}_x > \text{CF}_4 > \text{CH}_3\text{Br} > \text{CH}_3$
 - (2) $\text{CH}_3 > \text{CH}_3\text{Br} > \text{CF}_4 > \text{NO}_x$
 - (3) $\text{CH}_3\text{Br} > \text{NO}_x > \text{CH}_3 > \text{CH}_4$
 - (4) $\text{CF}_4 > \text{NO}_x > \text{CH}_4 > \text{CH}_3\text{Br}$

2. The surface winds generally blow from the east in the areas over
 - (1) Tropical Equator zone
 - (2) Midlatitudinal zone
 - (3) High latitudinal zone
 - (4) Subtropical zone

3. Period (epoch) associated with the interference of human beings with nature is termed as
 - (1) Eocene
 - (2) Miocene
 - (3) Anthropocene
 - (4) Holocene

4. The harmonic mean of the number 5, 10 and 20 is
 - (1) ~ 2.51
 - (2) ~ 6.25
 - (3) ~ 8.57
 - (4) ~ 2.857

5. Choose the correct statement among the following :
 - (1) The upper asymptote of the sigmoid curve of a population represents carrying capacity.
 - (2) In 'J' form of population growth, the equilibrium level is not imposed by environmental factors.
 - (3) All population growth forms are independent of environment.
 - (4) In 'J' shaped growth curve, a relatively un-restricted growth suddenly halt only due to diapause.

6. Trophic relationship between an arbitrary number of species can best be explained using
- (1) Leslies matrix model
 - (2) Lefkovitch matrix
 - (3) Generalized Lotka-Volterra equation
 - (4) Box model
7. The length (cm) of six earthworms used in an experiment are 5.37, 5.11, 6.42, 7.26, 3.99 and 2.6. Corresponding weight (g) are 5.88, 6.35, 8.11, 8.36, 4.40 and 3.5 respectively. The relationship between length and weight of the earthworms is
- (1) -vely correlated
 - (2) +vely correlated
 - (3) non-correlated
 - (4) insignificantly correlated
8. The geometric mean of the number 1, 4 and 16 is :
- (1) 6
 - (2) 3
 - (3) 4
 - (4) 2
9. Mercury is particularly hazardous to the human health because :
- (1) As a pure metal it is soluble in water, hence can easily be absorbed through drinking water.
 - (2) It is light and volatile and so is widely dispersed through the environment.
 - (3) It bioaccumulate high up in the food chain.
 - (4) It can cause serious impact by physical contact.
10. According to the Public Liability Insurance Act, 1991, the inquiry on an application for relief is conducted by
- (1) C.E.O.
 - (2) Session Judge
 - (3) Collector
 - (4) Police Commissioner

11. Discarded paint drums, pesticide cans, CFL bulbs, tube lights, expired medicines, broken mercury thermometers, used batteries etc., generated at the household level are collected as
- (1) Household dry waste (2) e-waste
(3) Domestic hazardous waste (4) Composite waste
12. Which one of the following is a Schedule-I animal of the Wildlife (Protection) Act, 1972 ?
- (1) Ferret Badgers (2) Himalayan Crestless Porcupine
(3) Bengal Porcupine (4) Fishing Cat
13. The effluent and emission standards for industries have been notified under ;
- (1) The Environment (Protection) Act, 1986.
(2) Motor Vehicle Act, 1988.
(3) The Air (Prevention and Control of Pollution) Act, 1981.
(4) The Water (Prevention and Control of Pollution) Act, 1974.
14. Which one of the following does not belong to the EIA process ?
- (1) Establishing the baseline environmental status.
(2) Identification, prediction and assessment of environmental impacts.
(3) Suggesting the mitigation and compensation measures.
(4) Implementation of EMS auditing procedures.
15. In India, the validity of EIA clearance period for a mining project is
- (1) 10 years (2) 20 years
(3) 5 years (4) 30 years