

UGC NET Paper 3 June 28, 2009 Shift 1 Environmental Sciences Question Paper

Signature and Name of Invigilator

Roll No.

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(In figures as per admission card)

1. (Signature) _____

(Name) _____

2. (Signature) _____

(Name) _____

Roll No. _____

(In words)

Test Booklet No.

J-8909**PAPER – III****Time : 2½ hours] ENVIRONMENTAL SCIENCE [Maximum Marks : 200**

Number of Pages in this Booklet : 32

Number of Questions in this Booklet : 26

Instructions for the Candidates

- Write your roll number in the space provided on the top of this page.
- Answers to short answer/essay type questions are to be given in the space provided below each question or after the questions in the Test Booklet itself.

No Additional Sheets are to be used.

- 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 Test 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.

- Read instructions given inside carefully.
- One page is attached for Rough Work at the end of the booklet before the Evaluation Sheet.
- If you write your name or put any mark on any part of the Answer Sheet, except for the space allotted for the relevant entries, which may disclose your identity, you will render yourself liable to disqualification.
- You have to return the Test booklet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall.
- Use only Blue/Black Ball point pen.
- Use of any calculator or log table etc. is prohibited.

परीक्षार्थियों के लिए निर्देश

- पहले पृष्ठ के ऊपर नियत स्थान पर अपना रोल नम्बर लिखिए।
- लघु प्रश्न तथा निबंध प्रकार के प्रश्नों के उत्तर, प्रत्येक प्रश्न के नीचे या प्रश्नों के बाद में दिये हुये रिक्त स्थान पर ही लिखिये।

इसके लिए कोई अतिरिक्त कागज का उपयोग नहीं करना है।

- 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 उसके कवर पेज पर लगी 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 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।

- अन्दर दिये गये निर्देशों को ध्यानपूर्वक पढ़ें।
- उत्तर-पुस्तिका के अन्त में कच्चा काम (Rough Work) करने के लिए मूल्यांकन शीट से पहले एक पृष्ठ दिया हुआ है।
- यदि आप उत्तर-पुस्तिका पर अपना नाम या ऐसा कोई भी निशान जिससे आपकी पहचान हो सके, किसी भी भाग पर दर्शाते या अंकित करते हैं तो परीक्षा के लिये अयोग्य घोषित कर दिये जायेंगे।
- आपको परीक्षा समाप्त होने पर उत्तर-पुस्तिका निरीक्षक महोदय को लौटाना आवश्यक है और इसे परीक्षा समाप्ति के बाद अपने साथ परीक्षा भवन से बाहर न लेकर जायें।
- केवल नीले/काले बाल प्वाइंट पेन का ही इस्तेमाल करें।
- किसी भी प्रकार का संगणक (कैलकुलेटर) या लाग टेबल आदि का प्रयोग वर्जित है।

ENVIRONMENTAL SCIENCE

PAPER – III

NOTE: This paper is of two hundred (200) marks containing four (4) sections. Candidates are required to attempt the questions contained in these sections according to the detailed instructions given therein.

SECTION - I

Note : This section contains five (5) questions based on the following paragraph. Each question should be answered in about thirty (30) words and each carries five (5) marks.

(5x5=25 marks)

Global Environmental Monitoring System (GEMS)

GEMS is a worldwide collective effort to monitor the global environment and make periodic assessments of the health of its constituents. Data are collected through monitoring and assessment activities covering most of the environmental parameters. One hundred and forty-two countries participate in at least one of these activities. The system involves the collaborations, of which the most important are the FAO, WHO, WMO, UNESCO and IUCN.

GEMS network monitor changes in atmospheric composition and the climatic system, freshwater and coastal pollution, air pollution, food contamination, deforestation, ozone depletion, the build up of greenhouse gases, acid rain, the extend of global ice cover and many issues related to biological diversity.

GEMS was first proposed in 1971 by the Scientific Committee on Problems of Environment (SCOPE) later it was formally created in 1975, as a small secretariat of UNEP.

During 1990's, GEMS took over a newer area of investigation i.e. early warning system for Environmental threats and disasters.

1. What is GEMS ?

This image shows a blank sheet of white paper with horizontal grey ruling lines. At the top center, there is a faint watermark consisting of a blue pen nib icon pointing downwards and the text "Your PE" written in a light blue, sans-serif font. The rest of the page is empty except for the ruling lines.

3. Industrial disaster during 1980 in India.

5. Relate greenhouse gas emission to global warming.

SECTION - II

Note : This section contains fifteen (15) questions, each to be answered in about thirty (30) words. Each question carries five (5) marks.

(5x15=75 marks)

6. Specific ion electrode.

8. Solar energy.

10. Dosimetry and Toxicity.

12. Leachate.

14. Lysochine

16. Global warming potential.

18. Yeasts and moulds.

20. Lysozyme.

SECTION - III

Note : This section contains five (5) questions. Each question carries twelve (12) marks and is to be answered in about two hundred (200) words.
(12x5=60 marks)

21. Significance of rain water harvesting in augmenting ground water resource.
22. Concept of check dam.
23. Role of mycorrhizae in nature.
24. Effect of nitrate fertilizers in contaminating ground water.
25. Process of composting and vermicomposting.

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SECTION - IV

Note : This section consists of one essay type question of forty (40) marks to be answered in about one thousand (1000) words on any one of the following topics.

(40x1=40 marks)

- 26.** Write an essay on any one of the following :
- (a) Environmental impact appraisal in relation to coal mining in India.
OR
 - (b) National Mineral Policy of India
OR
 - (c) Ecosystem structure, its function and material recycling.
OR
 - (d) Role of GIS and Remote Sensing in Environmental Management.
OR
 - (e) Solid Waste Management in urban area.
OR
 - (f) Relationship between soil types and agricultural pattern in India.
OR
 - (g) Role of National Parks in preserving biodiversity in India.
OR
 - (h) Global warming and climate change in the light of recent global events.
OR
 - (i) Critically discuss pollution of water bodies enumerating the source, method of control and water quality standard.

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Total Marks Obtained (in words)
(in figures)
Signature & Name of the Coordinator
(Evaluation) Date