# National Testing Agency

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| **Question Paper Name :** | 89 Environmental Sciences 30th June 2026 Shift 1 |
| **Subject Name :** | 89 Environmental Sciences |
| **Creation Date :** | 2026-06-30 16:30:01 |
| **Duration :** | 180 |
| **Total Marks :** | 300 |
| **Display Marks:** | Yes |

## Environmental Sciences and General Paper

| | |
|---|---|
| **Group Number :** | 1 |
| **Group Id :** | 76878161 |
| **Group Maximum Duration :** | 0 |
| **Group Minimum Duration :** | 180 |
| **Show Attended Group? :** | No |
| **Edit Attended Group? :** | No |
| **Break time :** | 0 |
| **Group Marks :** | 300 |

## General Paper

| | |
|---|---|
| **Section Id :** | 768781127 |
| **Section Number :** | 1 |
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 42 |
| **Number of Questions to be attempted :** | 42 |
| **Section Marks :** | 100 |
| **Maximum Instruction Time :** | 0 |

| | |
|---|---|
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 768781377 |
| **Question Shuffling Allowed :** | No |
| **Is Section Default? :** | No |

**Question Id : 7687819676 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (1 to 5)**

The following table shows the percentage(%) of illiterate population of six cities (A-F). The ratio of the population of these six cities is 8 : 7 : 4 : 5 : 10 : 6. Based on the data in the table, answer the questions that follow.

**City-wise Details of Illiterate Population**

| City | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| Percentage of Illiterate population | 36% | 40% | 32% | 45% | 50% | 30% |

**Sub questions**

**Question Number : 1 Question Id : 7687819677 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the Illiterate population of City D is 1.8 lakh, then what is the population of City F (in lakh) ?

(1) 3.2

(2) 4.2

(3) 4.8

(4) 5.4

**Options :**

76878137701. 1

76878137702. 2

76878137703. 3

76878137704. 4

**Question Number : 2 Question Id : 7687819678 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the total population of all the six cities together is 80 lakh, then the population of City F is _____% of the population of City A.

(1) 60

(2) 75

(3) 80

(4) 120

**Options :**

76878137705. 1

76878137706. 2

76878137707. 3

76878137708. 4

**Question Number : 3 Question Id : 7687819679 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the total population of all six cities together is 96 lakh, then what is the literate population of City B (in lakh) ?

(1) 8.42

(2) 9.20

(3) 9.60

(4) 10.08

**Options :**

76878137709. 1

76878137710. 2

76878137711. 3

76878137712. 4

**Question Number : 4 Question Id : 7687819680 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the total population of City A and City C together is 6 lakh, then what is the illiterate population of City C ?

(1) 48000

(2) 64000

(3) 72000

(4) 80000

**Options :**

76878137713. 1

76878137714. 2

76878137715. 3

76878137716. 4

**Question Number : 5 Question Id : 7687819681 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the total population of City E is 2.5 lakh, then the illiterate population of City A is _____% more than the illiterate population of City C.

(1) 120

(2) 64

(3) 96

(4) 125

**Options :**

76878137717. 1

76878137718. 2

76878137719. 3

76878137720. 4

**Question Id : 7687819676 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (1 to 5)**

निम्न तालिका में छह नगरों (A-F) की निरक्षर जनसंख्या का प्रतिशत (%) दर्शाया गया है। इन छह नगरों की जनसंख्या का अनुपात 8 : 7 : 4 : 5 : 10 : 6 है। तालिका में प्रदत्त आंकड़ों के आधार पर, आगे पूछे गए प्रश्नों के उत्तर दीजिए :

**निरक्षर जनसंख्या का नगर बार विवरण**

| नगर | A | B | C | D | E | F |
|---|---|---|---|---|---|---|
| निरक्षर जनसंख्या का प्रतिशत | 36% | 40% | 32% | 45% | 50% | 30% |

**Sub questions**

**Question Number : 1 Question Id : 7687819677 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि नगर D की निरक्षर जनसंख्या 1.8 लाख है, तो नगर F की जनसंख्या (लाख में) कितनी है?

(1) 3.2

(2) 4.2

(3) 4.8

(4) 5.4

**Options :**

76878137701. 1

76878137702. 2

76878137703. 3

76878137704. 4

**Question Number : 2 Question Id : 7687819678 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि सभी छह नगरों को मिलाकर वहां की कुल जनसंख्या 80 लाख है, तो नगर F की जनसंख्या नगर A की जनसंख्या का _____% है।

(1) 60
(2) 75
(3) 80
(4) 120

**Options :**

76878137705. 1
76878137706. 2
76878137707. 3
76878137708. 4

**Question Number : 3 Question Id : 7687819679 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि सभी छह नगरों को मिलाकर वहां की कुल जनसंख्या 96 लाख है, तो नगर B की साक्षर जनसंख्या (लाख में) कितनी है ?

(1) 8.42
(2) 9.20
(3) 9.60
(4) 10.08

**Options :**

76878137709. 1
76878137710. 2
76878137711. 3
76878137712. 4

**Question Number : 4 Question Id : 7687819680 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि नगर A तथा नगर C को मिलाकर वहां की कुल जनसंख्या 6 लाख है, तो नगर C की निरक्षर जनसंख्या क्या है ?

(1) 48000
(2) 64000
(3) 72000
(4) 80000

**Options :**

76878137713. 1
76878137714. 2
76878137715. 3
76878137716. 4

**Question Number : 5 Question Id : 7687819681 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि नगर E की कुल जनसंख्या 2.5 लाख है, तो नगर A की निरक्षर जनसंख्या नगर C की निरक्षर जनसंख्या से _____% अधिक है।

(1) 120
(2) 64
(3) 96
(4) 125

**Options :**

76878137717. 1
76878137718. 2
76878137719. 3
76878137720. 4

**Sub-Section Number :** 2
**Sub-Section Id :** 768781378
**Question Shuffling Allowed :** Yes

**Is Section Default? :** No

**Question Number : 6 Question Id : 7687819682 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

_____ is not the part of ICT based teaching.

(1) Chalk and talk

(2) Learning Management System (LMS)

(3) Smart Boards

(4) Presentation of Slides

**Options :**

76878137721. 1

76878137722. 2

76878137723. 3

76878137724. 4

**Question Number : 6 Question Id : 7687819682 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

_____ आई.सी.टी. शिक्षण का भाग नहीं है।

(1) चॉक से लिखना और वार्तालाप करना

(2) अधिगम वातावरण व्यवस्था (LMS)

(3) स्मार्ट बोर्ड

(4) स्लाइड के द्वारा प्रस्तुती

**Options :**

76878137721. 1

76878137722. 2

76878137723. 3

76878137724. 4

**Question Number : 7 Question Id : 7687819683 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is not a level of teaching ?

(1) Memory Power

(2) Reflective

(3) Analytical

(4) Understanding

**Options :**

76878137725. 1

76878137726. 2

76878137727. 3

76878137728. 4

**Question Number : 7 Question Id : 7687819683 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन-सा शिक्षण का स्तर नहीं है?

(1) स्मरण शक्ति

(2) विमर्शक

(3) विश्लेषणात्मक

(4) समझना

**Options :**

76878137725. 1

76878137726. 2

76878137727. 3

76878137728. 4

**Question Number : 8 Question Id : 7687819684 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Rearrange the preplanning of teaching learning process :

A. Make a list of all the teaching aids that will be used in teaching-learning process

B. Clearly list all the resources and references that are used in whole teaching-learning process

C. Make the topics in a sequence manner such that students feel comfortable in the teaching-learning process

D. Carefully scrutinize the subject matter to be taught by the teacher

E. Make a list of the important topics that teacher will teach

Choose the **correct** answer from the options given below :

(1) D, E, C, A, B

(2) E, D, A, B, C

(3) A, B, C, E, D

(4) B, C, A, D, E

**Options :**

76878137729. 1

76878137730. 2

76878137731. 3

76878137732. 4

**Question Number : 8 Question Id : 7687819684 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

शिक्षण अधिगम प्रक्रिया की पूर्व योजना निर्माण को पुनः व्यवस्थित कीजिए।

A. उन सभी शिक्षण सहायक सामग्रियों की सूची तैयार करना जिनका प्रयोग शिक्षण अधिगम प्रक्रिया में किया जाएगा।

B. स्पष्ट रूप से उन सभी संसाधनों और संदर्भों की सूची तैयार करना जिनका प्रयोग संपूर्ण शिक्षण-अधिगम प्रक्रिया में किया जाता है।

C. ऐसे क्रम में विषयों (टापिक) का निर्धारण करना कि छात्र शिक्षण-अधिगम प्रक्रिया में आरामदेह महसूस करें।

D. शिक्षक द्वारा पढ़ाई जाने वाली विषय-वस्तु की जाँच सावधानीपूर्वक करना।

E. उन महत्वपूर्ण विषयों की सूची तैयार करना जिन्हें अध्यापक पढ़ाएगा।

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) D, E, C, A, B

(2) E, D, A, B, C

(3) A, B, C, E, D

(4) B, C, A, D, E

**Options :**

76878137729. 1

76878137730. 2

76878137731. 3

76878137732. 4

**Question Number : 9 Question Id : 7687819685 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What among the following are known as Assessment instruments ?

A. Tests

B. Examinations

C. Rubrics

D. Work Sheets

E. Quizzes

Choose the **correct** answer from the options given below :

(1) A, B and E Only

(2) B, C, D and E Only

(3) D and E Only

(4) A, B, D and E Only

**Options :**

76878137733. 1

76878137734. 2

76878137735. 3

76878137736. 4

**Question Number : 9 Question Id : 7687819685 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से किन्हें आँकलन के साधन के रूप में जाना जाता है?

A. टेस्ट

B. परीक्षाऐं

C. अनुष्ठान-निर्देश

D. कार्य शीट

E. प्रश्नोतरी

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A, B और E

(2) केवल B, C, D और E

(3) केवल D और E

(4) केवल A, B, D और E

**Options :**

76878137733. 1

76878137734. 2

76878137735. 3

76878137736. 4

**Question Number : 10 Question Id : 7687819686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Stage)** | | **List - II (Years)** |
|---|---|---|---|
| A. | Sensorimotor Stage | I. | 2 to 7 years |
| B. | Intuitive Stage | II. | 7 to 16 years |
| C. | Preoperational Stage | III. | 0 to 2 years |
| D. | Operational Stage | IV. | 4 to 7 years |

Choose the **correct** answer from the options given below :

(1) A-III, B-IV, C-I, D-II

(2) A-III, B-IV, C-II, D-I

(3) A-IV, B-III, C-I, D-II

(4) A-IV, B-I, C-III, D-II

**Options :**

76878137737. 1

76878137738. 2

76878137739. 3

76878137740. 4

**Question Number : 10 Question Id : 7687819686 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| | **सूची - I (स्टेज/चरण)** | | **सूची - II (वर्ष)** |
|---|---|---|---|
| A. | संवेदात्मक गतिक स्टेज | I. | 2 से 7 वर्ष |
| B. | अंन्त: ज्ञानात्मक स्टेज | II. | 7 से 16 वर्ष |
| C. | पूर्व संक्रियात्मक स्टेज | III. | 0 से 2 वर्ष |
| D. | संक्रियात्मक स्टेज | IV. | 4 से 7 वर्ष |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-III, B-IV, C-I, D-II

(2) A-III, B-IV, C-II, D-I

(3) A-IV, B-III, C-I, D-II

(4) A-IV, B-I, C-III, D-II

**Options :**

76878137737. 1

76878137738. 2

76878137739. 3

76878137740. 4

**Question Number : 11 Question Id : 7687819687 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What is not a type of Scientific Research ?

(1) Exploratory, it attempts to gain better understanding of different dimensions of the problem

(2) Descriptive, which provides answer to the questions related to who, what, when and how

(3) Explanatory, it explains causes of problem

(4) Opinion based arguments, it collects facts or compile information without a clear purpose or analysis or transferring facts from one source to another

**Options :**

76878137741. 1

76878137742. 2

76878137743. 3

76878137744. 4

**Question Number : 11 Question Id : 7687819687 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्न में से कौन वैज्ञानिक शोध का एक प्रकार नहीं है?

(1) गवेषणात्मक, यह समस्या के विभिन्न आयामों की बहतर समझ प्राप्त करने का प्रयास करता है।

(2) वर्णनात्मक जो कौन, क्या, कब और कैसे से संबधित प्रश्नों के उत्तर देता है।

(3) व्याख्यात्मक, यह समस्या के कारणों की व्याख्या करता है।

(4) मत आधारित तर्क, यह बिना किसी स्पष्ट उद्देश्य अथवा विश्लेषण के तथ्य अथवा सूचना एकत्र करता है या तथ्यों का एक स्त्रोत से दूसरे स्त्रोत तक अंतरण होता है।

**Options :**

76878137741. 1

76878137742. 2

76878137743. 3

76878137744. 4

**Question Number : 12 Question Id : 7687819688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What is the main purpose of research question ?

(1) To define the scope of the research, i.e, to determine what is to be studied and to what extent it may be studied

(2) Research questions are not required to conduct a research

(3) Research questions are based on personal experience of the researcher

(4) Research questions give clarity about the respondents

**Options :**

76878137745. 1

76878137746. 2

76878137747. 3

76878137748. 4

**Question Number : 12 Question Id : 7687819688 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

शोध प्रश्नों का मुख्य उद्देश्य क्या होता है ?

(1) शोध के कार्यक्षेत्र को परिभाषित करना, अथति, यह निर्धारित करना कि क्या अध्ययन किया जाए और उसका किस सीमा तक अध्ययन किया जाए।

(2) शोध प्रश्नों से शोध करने की अपेक्षा नहीं की जाती है।

(3) शोध प्रश्न शोधकर्ता के वैयक्तिक अनुभव पर आधारित होते है।

(4) शोध प्रश्न उत्तरदाताओं के संबंध में स्पष्टता प्रदान करते हैं।

**Options :**

76878137745. 1

76878137746. 2

76878137747. 3

76878137748. 4

**Question Number : 13 Question Id : 7687819689 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Mean (M) and Variance (V) of different datasets are given in A – D below. Compute the coefficient of variation of each dataset and arrange in ascending order :

A. $M = 80, V = 25$

B. $M = 70, V = 256$

C. $M = 60, V = 196$

D. $M = 90, V = 16$

Choose the **correct** answer from the options given below :

(1) D, B, A, C

(2) B, C, D, A

(3) D, A, B, C

(4) C, A, B, D

**Options :**

76878137749. 1

76878137750. 2

76878137751. 3

76878137752. 4

**Question Number : 13 Question Id : 7687819689 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

भिन्न-भिन्न डाटासेटों के माध्य (M) और प्रसरण (V) नीचे A – D में दिए गए हैं। प्रत्येक डाटा सेट के विचरण गुणांक की गणना कीजिए और आरोही क्रम में व्यवस्थित कीजिए :

A. $M = 80, V = 25$

B. $M = 70, V = 256$

C. $M = 60, V = 196$

D. $M = 90, V = 16$

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) D, B, A, C

(2) B, C, D, A

(3) D, A, B, C

(4) C, A, B, D

**Options :**

76878137749. 1

76878137750. 2

76878137751. 3

76878137752. 4

**Question Number : 14 Question Id : 7687819690 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Functions of Research Design are :

A. It does not discuss about any research plan

B. It provides a blueprint

C. It does not provide a blueprint

D. It limits (dictates) boundaries of research activity

E. It enables investigation to anticipate potential problems

Choose the **correct** answer from the options given below :

(1) A and C Only

(2) A, B and C Only

(3) B, D and E Only

(4) A, C and E Only

**Options :**

76878137753. 1

76878137754. 2

76878137755. 3

76878137756. 4

**Question Number : 14 Question Id : 7687819690 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

शोध-अभिकल्प के कार्य हैं :

A. यह किसी शोध-योजना के बारे में चर्चा नहीं करता है।

B. यह एक रूप-रेखा प्रस्तुत करता है।

C. यह एक रूप रेखा प्रस्तुत नहीं करता है।

D. यह शोध-गतिविधि की सीमाएँ सीमित (निर्देशित) करता है।

E. यह सम्भाव्य समस्याओं का अनुमान लगाने में अनुसन्धान को सक्षम बनाता है।

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A और C

(2) केवल A, B और C

(3) केवल B, D और E

(4) केवल A, C और E

**Options :**

76878137753. 1

76878137754. 2

76878137755. 3

76878137756. 4

**Question Number : 15 Question Id : 7687819691 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Research Type)** | | **List - II (Meaning)** |
|---|---|---|---|
| A. | Quantitative Research | I. | Quest for knowledge, developing hypothesis and theories |
| B. | Pure Research | II. | Search for ways of using scientific knowledge to solve practical problems |
| C. | Applied Research | III. | It involves the study of the problem or the same body of phenomenon over a period of time |
| D. | Longitudinal Research | IV. | Based on measurement of quantity or amount |

Choose the **correct** answer from the options given below :

(1) A-IV, B-I, C-II, D-III

(2) A-I, B-II, C-III, D-IV

(3) A-IV, B-III, C-II, D-I

(4) A-III, B-II, C-IV, D-I

**Options :**

76878137757. 1

76878137758. 2

76878137759. 3

76878137760. 4

**Question Number : 15 Question Id : 7687819691 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| | **सूची - I (शोध-प्रकार)** | | **सूची - II (अर्थ)** |
|---|---|---|---|
| A. | मात्रात्मक शोध | I. | ज्ञान के लिए अन्वेषण, अवधारणाओं और सिद्धान्तों का विकास |
| B. | शुद्ध शोध | II. | व्यावहारिक समस्याओं के समाधान के लिए वैज्ञानिक ज्ञान का प्रयोग करने के तरीकों की खोज |
| C. | अनुप्रयुक्त शोध | III. | इसमें एक निश्चित कालखंड में समस्या परिघटना के एक ही निकाय का अध्ययन होता है। |
| D. | अनुदैर्ध्य शोध | IV. | मात्राया राशि के मापन पर आधारित |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-IV, B-I, C-II, D-III

(2) A-I, B-II, C-III, D-IV

(3) A-IV, B-III, C-II, D-I

(4) A-III, B-II, C-IV, D-I

**Options :**

76878137757. 1

76878137758. 2

76878137759. 3

76878137760. 4

**Question Number : 16 Question Id : 7687819692 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

When we do not use any words or speech while communicating, this type of communication is known is :

(1) Oral communication

(2) Group communication

(3) Inter-personal communication

(4) Non verbal communication

**Options :**

76878137761. 1

76878137762. 2

76878137763. 3

76878137764. 4

**Question Number : 16 Question Id : 7687819692 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

जब हम संप्रेषण के दौरान कोई शब्द अथवा वाक् प्रयोग नहीं करते हैं, तो इस सम्प्रेषण को निम्न रूप में जाना जाता है :

(1) मौखिक संप्रेषण

(2) सामूहिक संप्रेषण

(3) अंतर्वैयक्तिक (इन्टर-पर्सनल) संप्रेषण

(4) अशाब्दिक संप्रेषण

**Options :**

76878137761. 1

76878137762. 2

76878137763. 3

76878137764. 4

**Question Number : 17 Question Id : 7687819693 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What is the disadvantage of oral communication ?

(1) Oral words spoken disappear into the air. The words are temporary

(2) Oral communication is spontaneous and natural

(3) Oral communication is easy for others to understand

(4) The communicator is always physically available

**Options :**

76878137765. 1

76878137766. 2

76878137767. 3

76878137768. 4

**Question Number : 17 Question Id : 7687819693 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

मौखिक संप्रेषण की क्या हानि होती है?

(1) मुंह से बोले गए शब्द बोलने के बाद हवा में विलीन हो जाते हैं। ये शब्द अस्थायी होते हैं।

(2) मौखिक संप्रेषण स्वत: स्फूर्त और प्राकृतिक होता है।

(3) मौखिक संप्रेषण को समझना दूसरों के लिए सुगम होता है।

(4) यह संप्रेषण भौतिक रूप से हमेशा उपलब्ध होता है।

**Options :**

76878137765. 1

76878137766. 2

76878137767. 3

76878137768. 4

**Question Number : 18 Question Id : 7687819694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following film-magazines in chronological order as per their year of publication (from earliest to the latest) :

A. 'Film World', Weekly (Mumbai)

B. 'Screen', Weekly (Mumbai)

C. 'Moving Picture', Monthly (Mumbai)

D. 'Cinemaya', Monthly (Delhi)

E. 'Stardust', Monthly (Mumbai)

Choose the **correct** answer from the options given below :

(1) A, B, C, D, E

(2) C, B, E, D, A

(3) E, D, C, B, A

(4) D, C, B, A, E

**Options :**

76878137769. 1

76878137770. 2

76878137771. 3

76878137772. 4

**Question Number : 18 Question Id : 7687819694 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्न फिल्म पत्रिकाओं को उनके प्रकाशन के आरंभ होने के वर्ष के कालक्रमानुसार (सर्वाधिक आरंभिक से नवीनतम) व्यवस्थित कीजिए :

A. 'फिल्म वर्ल्ड' साप्ताहिक (मुंबई)

B. 'स्क्रीन' साप्ताहिक (मुंबई)

C. 'मूविंग पिक्चर' मासिक (मुंबई)

D. 'सिनेमाया', मासिक (दिल्ली)

E. 'स्टारडस्ट', मासिक (मुंबई)

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A, B, C, D, E

(2) C, B, E, D, A

(3) E, D, C, B, A

(4) D, C, B, A, E

**Options :**

76878137769. 1

76878137770. 2

76878137771. 3

76878137772. 4

**Question Number : 19 Question Id : 7687819695 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What among the following are different types of mass media ?

A. Newspaper

B. Photography

C. University

D. Face to face communication

E. Television

Choose the **correct** answer from the options given below :

(1) A, B and E Only

(2) C and D Only

(3) A, B and C Only

(4) C, D and E Only

**Options :**

76878137773. 1

76878137774. 2

76878137775. 3

76878137776. 4

**Question Number : 19 Question Id : 7687819695 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्न में से कौन-कौन भिन्न-भिन्न प्रकार के जन माध्यम (मास मीडिया) है?

A. समाचार पत्र

B. फोटोग्राफी

C. विश्वविद्यालय

D. मुखाभिमुख संप्रेषण

E. टेलीविजन

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A, B और E

(2) केवल C और D

(3) केवल A, B और C

(4) केवल C, D और E

**Options :**

76878137773. 1

76878137774. 2

76878137775. 3

76878137776. 4

**Question Number : 20 Question Id : 7687819696 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Films)** | | **List - II (Directors)** |
|---|---|---|---|
| A. | Lanka Dahan | I. | Satyajit Ray |
| B. | Pather Panchali | II. | Dadasaheb Phalke |
| C. | Garam Hawa | III. | Kamal Amrohi |
| D. | Pakeezah | IV. | M.S. Sathyu |

Choose the **correct** answer from the options given below :

(1) A-I, B-III, C-II, D-IV

(2) A-II, B-I, C-IV, D-III

(3) A-I, B-II, C-III, D-IV

(4) A-IV, B-III, C-II, D-I

**Options :**

76878137777. 1

76878137778. 2

76878137779. 3

76878137780. 4

**Question Number : 20 Question Id : 7687819696 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| | **सूची - I (फिल्में)** | | **सूची - II (निर्देशक)** |
|---|---|---|---|
| A. | लंका दहन | I. | सत्यजीत रे |
| B. | पाथेर पांचाली | II. | दादा साहब फाल्के |
| C. | गरम हवा | III. | कमाल अमरोही |
| D. | पाकीज़ा | IV. | एम.एस. सथ्यू |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-I, B-III, C-II, D-IV

(2) A-II, B-I, C-IV, D-III

(3) A-I, B-II, C-III, D-IV

(4) A-IV, B-III, C-II, D-I

**Options :**

76878137777. 1

76878137778. 2

76878137779. 3

76878137780. 4

**Question Number : 21 Question Id : 7687819697 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Find the number that can replace question mark(?) in the series given below :

1, 6, 15, 28, 45, ?

(1) 72

(2) 66

(3) 73

(4) 63

**Options :**

76878137781. 1

76878137782. 2

76878137783. 3

76878137784. 4

**Question Number : 21 Question Id : 7687819697 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

उस संख्या का पता लगाएं जो निम्न श्रृंखला में प्रश्न चिन्ह (?) को प्रतिस्थापित कर सके।

1, 6, 15, 28, 45, ?

(1) 72

(2) 66

(3) 73

(4) 63

**Options :**

76878137781. 1

76878137782. 2

76878137783. 3

76878137784. 4

**Question Number : 22 Question Id : 7687819698 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

In a certain code language :

'4 5 6' means 'pack green carpet'

'7 3 6' means 'spread one carpet'

'3 5 6' means 'one green carpet'

What is the code for 'pack' and 'spread' respectively ?

(1) 5 and 7

(2) 4 and 3

(3) 4 and 7

(4) 7 and 5

**Options :**

76878137785. 1

76878137786. 2

76878137787. 3

76878137788. 4

**Question Number : 22 Question Id : 7687819698 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

कतिपय कूट भाषा में :

'4 5 6' का अर्थ है – 'pack green carpet'

'7 3 6' का अर्थ है – 'spread one carpet'

'3 5 6' का अर्थ है – 'one green carpet'

'pack' and 'spread' का क्रमश: कूट क्या है ?

(1) 5 और 7

(2) 4 और 3

(3) 4 और 7

(4) 7 और 5

**Options :**

76878137785. 1

76878137786. 2

76878137787. 3

76878137788. 4

**Question Number : 23 Question Id : 7687819699 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Mohan and Sohan can do a piece of work in 18 days, Sohan and Shyam can do the same work in 24 days and Mohan and Shyam can do the same work in 36 days. How long will Mohan, Sohan and Shyam will take to do the work working together ?

(1) 20 days

(2) 18 days

(3) 15 days

(4) 16 days

**Options :**

76878137789. 1

76878137790. 2

76878137791. 3

76878137792. 4

**Question Number : 23 Question Id : 7687819699 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

मोहन और सोहन एक कार्य को 18 दिन में कर सकते हैं, सोहन और श्याम उसी कार्य का 24 दिन में कर सकते हैं और मोहन व श्याम उस कार्य को 36 दिन में कर सकते हैं। मोहन, सोहन और श्याम साथ कार्य करके उसी कार्य को कितने दिन में करेंगे ?

(1) 20 दिन

(2) 18 दिन

(3) 15 दिन

(4) 16 दिन

**Options :**

76878137789. 1

76878137790. 2

76878137791. 3

76878137792. 4

**Question Number : 24 Question Id : 7687819700 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Question)** | | **List - II (Answer)** |
|---|---|---|---|
| A. | If $\left(x+\frac{1}{x}\right)=2$, then $\left(x^2+\frac{1}{x^2}\right)=?$ | I. | 7 |
| B. | If $\frac{x-1}{x}=3$, then $\left(1+\frac{1}{x^2}\right)=?$ | II. | 3 |
| C. | If $\left(x-\frac{1}{x}\right)=1$, then $\left(x^2+\frac{1}{x^2}\right)=?$ | III. | 5 |
| D. | If $\frac{x^2-1}{x+1}=6$, then $x=?$ | IV. | 2 |

Choose the **correct** answer from the options given below :

(1) A-III, B-II, C-IV, D-I

(2) A-IV, B-III, C-II, D-I

(3) A-I, B-II, C-III, D-IV

(4) A-II, B-I, C-III, D-IV

**Options :**

76878137793. 1

76878137794. 2

76878137795. 3

76878137796. 4

**Question Number : 24 Question Id : 7687819700 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| **सूची - I (प्रश्न)** | **सूची - II (उत्तर)** |
|---|---|
| A. यदि $\left(x+\frac{1}{x}\right)=2$, तो $\left(x^2+\frac{1}{x^2}\right)=?$ | I. 7 |
| B. यदि $\frac{x-1}{x}=3$, तो $\left(1+\frac{1}{x^2}\right)=?$ | II. 3 |
| C. यदि $\left(x-\frac{1}{x}\right)=1$, तो $\left(x^2+\frac{1}{x^2}\right)=?$ | III. 5 |
| D. यदि $\frac{x^2-1}{x+1}=6$, तो $x=?$ | IV. 2 |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-III, B-II, C-IV, D-I
(2) A-IV, B-III, C-II, D-I
(3) A-I, B-II, C-III, D-IV
(4) A-II, B-I, C-III, D-IV

**Options :**

76878137793. 1
76878137794. 2
76878137795. 3
76878137796. 4

**Question Number : 25 Question Id : 7687819701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

An amount of ₹ 4650 was lent partly at 5% and partly at 8% per annum at simple interest. The total interest received after 3 years was ₹ 900. Find the ratio of the money lent at 5% to that lent at 8%.

(1) 16 : 15

(2) 4 : 7

(3) 7 : 8

(4) 15 : 17

**Options :**

76878137797. 1

76878137798. 2

76878137799. 3

76878137800. 4

**Question Number : 25 Question Id : 7687819701 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

₹ 4650 की धनराशि को आंशिक रूप से प्रतिवर्ष 5% और आंशिक रूप से 8% ब्याज पर उधार दिया गया है। 3 वर्ष के बाद प्राप्त कुल ब्याक ₹ 900 प्राप्त होता है। तो 5% ब्याज और 8% ब्याज पर दी गई धनराशि का अनुपात है :

(1) 16 : 15

(2) 4 : 7

(3) 7 : 8

(4) 15 : 17

**Options :**

76878137797. 1

76878137798. 2

76878137799. 3

76878137800. 4

**Question Number : 26 Question Id : 7687819702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following can neither both be true nor can they both be false ?

A. All ducks are birds

B. No ducks are birds

C. Some ducks are birds

D. Some ducks are not birds

Choose the **correct** answer from the options given below :

(1) B and D Only

(2) B and C Only

(3) A and B Only

(4) C and D Only

**Options :**

76878137801. 1

76878137802. 2

76878137803. 3

76878137804. 4

**Question Number : 26 Question Id : 7687819702 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन-से कथन, साथ-साथ न तो सत्य हो सकते हैं, और न ही दोनों असत्य हो सकते हैं?

A. सभी बत्तख पक्षी होते हैं।

B. कोई भी बत्तख पक्षी नहीं होते।

C. कुछ बत्तख पक्षी होते हैं।

D. कुछ बत्तख पक्षी नहीं होते।

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल B और D

(2) केवल B और C

(3) केवल A और B

(4) केवल C और D

**Options :**

76878137801. 1

76878137802. 2

76878137803. 3

76878137804. 4

**Question Number : 27 Question Id : 7687819703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the statements "All birds are egg-laying animals" is given as true which of the following statements can be inferred to be false ?

A. No egg-laying animals are birds

B. Some birds are not egg-laying animals

C. No birds are egg-laying animals

D. Some birds are non-egg-laying animals

Choose the **correct** answer from the options given below :

(1) B and C Only

(2) B and D Only

(3) A and C Only

(4) A, B, C and D

**Options :**

76878137805. 1

76878137806. 2

76878137807. 3

76878137808. 4

**Question Number : 27 Question Id : 7687819703 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि ''सभी पक्षी अंडा देने वाले जानवर हैं'' कथन को सत्य माना जाता है, तो निम्नलिखित कथनों के असत्य होने का अनुमान लगाया जा सकता है ?

A. अंडा देने वाला कोई भी जानवार पक्षी नहीं होते।

B. कुछ पक्षी अंडा देने वाले जानवार नहीं होते हैं।

C. कोई भी पक्षी अंडा देने वाला जानवार नहीं होता।

D. कुछ पक्षी, गैर- अंडा देने वाले जानवार होते हैं।

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल B और C

(2) केवल B और D

(3) केवल A और C

(4) A, B, C और D

**Options :**

76878137805. 1

76878137806. 2

76878137807. 3

76878137808. 4

**Question Number : 28 Question Id : 7687819704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which logical fallacy is involved in the following statement :
"The word 'God' is not meaningless ; therefore it has a meaning." ?

(1) Hasty Generalization
(2) Slippery Slope
(3) Irrelevant Conclusion
(4) Begging the question

**Options :**

76878137809. 1
76878137810. 2
76878137811. 3
76878137812. 4

**Question Number : 28 Question Id : 7687819704 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित कथन में कौन-सा तर्कदोष विद्यमान है :
''ईश्वर शब्द निरर्थक नहीं हैं, इसलिए इसका एक अर्थ है''?

(1) अविचारित सामानीकरण
(2) फिसलनयुक्त ढलान
(3) प्रतिज्ञांतर सिद्धि दोष
(4) आत्माश्रप दोष

**Options :**

76878137809. 1
76878137810. 2
76878137811. 3
76878137812. 4

**Question Number : 29 Question Id : 7687819705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following in order of decreasing connotation.

A. Natural Science

B. Physics

C. Science

D. Nano science

Choose the **correct** answer from the options given below :

(1) C, A, B, D

(2) A, C, B, D

(3) B, D, A, C

(4) D, B, A, C

**Options :**

76878137813. 1

76878137814. 2

76878137815. 3

76878137816. 4

**Question Number : 29 Question Id : 7687819705 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित को घटते गुणार्थ के क्रम में व्यवस्थित कीजिए।

A. प्राकृतिक विज्ञान

B. भौतिक शास्त्र

C. विज्ञान

D. नैनो विज्ञान

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) C, A, B, D

(2) A, C, B, D

(3) B, D, A, C

(4) D, B, A, C

**Options :**

76878137813. 1

76878137814. 2

76878137815. 3

76878137816. 4

**Question Number : 30 Question Id : 7687819706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

According to the Classical Indian School of logic (Nyāya), which of the following instrument of knowledge (Pramāna) is defined in terms of sense-object concourse (Indriyārtha Sannikarṣa) ?

(1) Pratyakṣa (perception)

(2) Anumāna (inference)

(3) Upmana (analogy)

(4) S'abda (verbal testimony)

**Options :**

76878137817. 1

76878137818. 2

76878137819. 3

76878137820. 4

**Question Number : 30 Question Id : 7687819706 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

प्राचीन भारतीय तर्कशास्त्र (न्यायं) के अनुसार निम्नलिखित में से ज्ञान के किस साधन (प्रमाण) को इंद्रिय सन्निकर्ष के रूप में परिभाषित किया गया है ?

(1) प्रत्यक्ष

(2) अनुमान

(3) उपमान

(4) शब्द

**Options :**

76878137817. 1

76878137818. 2

76878137819. 3

76878137820. 4

**Question Number : 31 Question Id : 7687819707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is not a service of Internet ?

(1) Electronic mail

(2) Voice over IP (VoIP)

(3) HTML

(4) Chat

**Options :**

76878137821. 1

76878137822. 2

76878137823. 3

76878137824. 4

**Question Number : 31 Question Id : 7687819707 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन सी इंटरनेट की सेवा **नहीं** है ?

(1) इलेक्ट्रॉनिक मेल

(2) वॉइस ओवर आई.पी. (वी.ओ.आई पी.)

(3) एच.टी.एम.एल.

(4) चैट

**Options :**

76878137821. 1

76878137822. 2

76878137823. 3

76878137824. 4

**Question Number : 32 Question Id : 7687819708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is incorrect IP address ?

(1) 192.168.178.0

(2) 199.160.0.200

(3) 254.16.192.0

(4) 16.0.256.192

**Options :**

76878137825. 1

76878137826. 2

76878137827. 3

76878137828. 4

**Question Number : 32 Question Id : 7687819708 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन सा गलत आई.पी. एड्रेस है ?

(1) 192.168.178.0

(2) 199.160.0.200

(3) 254.16.192.0

(4) 16.0.256.192

**Options :**

76878137825. 1

76878137826. 2

76878137827. 3

76878137828. 4

**Question Number : 33 Question Id : 7687819709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which is the correct sequence of increasing memory storage cost per bit ?

A. Magnetic tapes

B. ROM

C. Magnetic disk

D. CPU Registers

Choose the **correct** answer from the options given below :

(1) A, D, B, C

(2) B, C, A, D

(3) C, B, D, A

(4) A, C, B, D

**Options :**

76878137829. 1

76878137830. 2

76878137831. 3

76878137832. 4

**Question Number : 33 Question Id : 7687819709 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन सा प्रति बिट की बढ़ती स्मृति भंडारण लागत का सही क्रम है?

A. मैग्नेटिक टेप

B. रोम

C. मैग्नेटिक डिस्क

D. सी.पी.यू. रजिस्टर्स

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A, D, B, C

(2) B, C, A, D

(3) C, B, D, A

(4) A, C, B, D

**Options :**

76878137829. 1

76878137830. 2

76878137831. 3

76878137832. 4

**Question Number : 34 Question Id : 7687819710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If $(L)_M$ represents a number L in base-M number system, which of the numbers A-D given below are equivalent to $(BD)_{16}$ ?

A. $(275)_8$

B. $(10111101)_2$

C. $(189)_{10}$

D. $(1223)_5$

Choose the **correct** answer from the options given below :

(1) A, C and D Only

(2) B and D Only

(3) A and B Only

(4) A, B and C Only

**Options :**

76878137833. 1

76878137834. 2

76878137835. 3

76878137836. 4

**Question Number : 34 Question Id : 7687819710 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

यदि बेस-M नंबर सिस्टम में, $(L)_M$ नंबर L का प्रतिनिधित्व करता है तो नीचे दिए गए कौन से नंबर A-D, $(BD)_{16}$ के समतुल्य हैं?

A. $(275)_8$

B. $(10111101)_2$

C. $(189)_{10}$

D. $(1223)_5$

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A, C और D

(2) केवल B और D

(3) केवल A और B

(4) केवल A, B और C

**Options :**

76878137833. 1

76878137834. 2

76878137835. 3

76878137836. 4

**Question Number : 35 Question Id : 7687819711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Malware)** | | **List - II (Function)** |
|---|---|---|---|
| A. | Keyloggers | I. | Gathering information |
| B. | Adware | II. | Does not self replicate |
| C. | Trojan | III. | Generate revenue for its developer |
| D. | Spyware | IV. | Can be either hardware or software |

Choose the **correct** answer from the options given below :

(1) A-IV, B-III, C-II, D-I

(2) A-III, B-II, C-I, D-IV

(3) A-II, B-III, C-IV, D-I

(4) A-I, B-II, C-IV, D-III

**Options :**

76878137837. 1

76878137838. 2

76878137839. 3

76878137840. 4

**Question Number : 35 Question Id : 7687819711 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| | **सूची - I (मालवेयर)** | | **सूची - II (कार्य)** |
|---|---|---|---|
| A. | कीलॉगर्स | I. | सूचना एकत्र करना |
| B. | एड्वेयर | II. | स्वयं की प्रतिकृति नहीं बनाता है |
| C. | ट्रोजन | III. | इसके डेवलपर (विकासकर्ता) के लिए राजस्व उत्पन्न करता है |
| D. | स्पाईवेयर | IV. | हार्डवेयर या सॉफ्टवेयर दोनों में से एक हो सकता है |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-IV, B-III, C-II, D-I
(2) A-III, B-II, C-I, D-IV
(3) A-II, B-III, C-IV, D-I
(4) A-I, B-II, C-IV, D-III

**Options :**

76878137837. 1

76878137838. 2

76878137839. 3

76878137840. 4

**Question Number : 36 Question Id : 7687819712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are true about $CO_2$ present in natural waters ?

A. It comes from the atmosphere

B. It increases the pH of water

C. It comes due to decomposition of organic material in water by bacteria

D. It makes water acidic

E. It results into formation of bicorbonates

Choose the **correct** answer from the options given below :

(1) A, B, D and E Only

(2) A, C, D and E Only

(3) B, C and D Only

(4) A, B, C and E Only

**Options :**

76878137841. 1

76878137842. 2

76878137843. 3

76878137844. 4

**Question Number : 36 Question Id : 7687819712 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित में से कौन से कथन प्राकृतिक जल में विद्यमान $CO_2$ के बारे में सत्य है?

A. यह वायुमंडल से आता है।

B. यह जल में pH की वृद्धि करता है।

C. यह बैक्टीरिया (जीवाणु) द्वारा जल में जैव सामग्री के अपघटन के कारण आता है।

D. यह जल को अम्लीय बनाता है।

E. इसका परिणाम बाइकोर्बोनेट्स का विरचन होता है।

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A, B, D और E

(2) केवल A, C, D और E

(3) केवल B, C और D

(4) केवल A, B, C और E

**Options :**

76878137841. 1

76878137842. 2

76878137843. 3

76878137844. 4

**Question Number : 37 Question Id : 7687819713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Grit chamber is the part of which of the following Sewage Treatment process ?

(1) Primary Treatment

(2) Secondary Treatment

(3) Tertiary Treatment

(4) Biological Treatment

**Options :**

76878137845. 1

76878137846. 2

76878137847. 3

76878137848. 4

**Question Number : 37 Question Id : 7687819713 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

ग्रिट चैम्बर निम्नलिखित में से किस वाहित मल उपचार (शोधन) प्रक्रिया का अंग है ?

(1) प्राथमिक उपचार

(2) द्वितीयक उपचार

(3) तृतीयक उपचार

(4) जैविक उपचार

**Options :**

76878137845. 1

76878137846. 2

76878137847. 3

76878137848. 4

**Question Number : 38 Question Id : 7687819714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What was the correct sequence of the following gases in terms of their contribution (from maximum to minimum) to Global Warming upto the year 1990 ?

A. Methane ($CH_4$)

B. Nitrous Oxide ($N_2O$)

C. Carbon dioxide ($CO_2$)

D. Chlorofluoro carbons (CFCs)

Choose the **correct** answer from the options given below :

(1) C, A, D, B

(2) C, A, B, D

(3) D, C, B, A

(4) D, B, A, C

**Options :**

76878137849. 1

76878137850. 2

76878137851. 3

76878137852. 4

**Question Number : 38 Question Id : 7687819714 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

ग्लोबल वार्मिंग (वैश्विक तापन) में 1990 तक निम्नलिखित गैसों को उनके अधिकतम से न्यूनतम योगदान का सही क्रम क्या है?

A. मेथेन ($CH_4$)

B. नाइट्रस ऑक्साइड ($N_2O$)

C. कार्बन डाइऑक्साइड ($CO_2$)

D. क्लोरोफ्लूरो कार्बन (CFCs)

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) C, A, D, B

(2) C, A, B, D

(3) D, C, B, A

(4) D, B, A, C

**Options :**

76878137849. 1

76878137850. 2

76878137851. 3

76878137852. 4

**Question Number : 39 Question Id : 7687819715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is a Geologic Natural Hazard ?

(1) Drought

(2) Earthquake

(3) Cyclones

(4) Blizzards

**Options :**

76878137853. 1

76878137854. 2

76878137855. 3

76878137856. 4

**Question Number : 39 Question Id : 7687819715 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्न में से कौन एक भूवैज्ञानिक प्राकृतिक संकट है?

(1) सूखा (ड्रॉट)

(2) भूकंप

(3) चक्रवात

(4) बर्फानी तूफान

**Options :**

76878137853. 1

76878137854. 2

76878137855. 3

76878137856. 4

**Question Number : 40 Question Id : 7687819716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following power plants is responsible for the significant release of methane ($CH_4$), a green house gas, in the atmosphere ?

(1) Nuclear Power Plants

(2) Wind Power Plants

(3) Hydroelectric Power Plants

(4) Solar Power Plants

**Options :**

76878137857. 1

76878137858. 2

76878137859. 3

76878137860. 4

**Question Number : 40 Question Id : 7687819716 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

वातावरण में मिथेन ($CH_4$) नामक एक ग्रीन हाउस गैस की बड़ी मात्रा के उत्सर्जन के लिए निम्न में से कौन से संयंत्र उत्तरदायी हैं?

(1) नाभिकीय शक्ति संयंत्र

(2) पवन शक्ति संयंत्र

(3) जल विद्युत् शक्ति संयंत्र

(4) सौर शक्ति संयंत्र

**Options :**

76878137857. 1

76878137858. 2

76878137859. 3

76878137860. 4

**Question Number : 41 Question Id : 7687819717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

DIKSHA, SWAYAM and SWAYAMPRABHA are the platforms which also have the provision of _____.

(1) Virtual library
(2) Virtual reality
(3) Virtual memory
(4) Virtual labs

**Options :**

76878137861. 1
76878137862. 2
76878137863. 3
76878137864. 4

**Question Number : 41 Question Id : 7687819717 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

'दीक्षा', 'स्वयम्' और 'स्वयंप्रभा' ऐसे प्लेटफार्म (मंच) हैं, जो निम्न का भी प्रावधान करते हैं :

(1) आभासी पुस्तकालय
(2) आभासी वास्तविकता
(3) आभासी स्मरण
(4) आभासी प्रयोगशाला

**Options :**

76878137861. 1
76878137862. 2
76878137863. 3
76878137864. 4

**Question Number : 42 Question Id : 7687819718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The main objective of Rama Rao Committee was to enhance the quality of _____.

(1) Under graduate to post doctoral research

(2) Only doctoral research

(3) Science stream at Post-graduate level

(4) Post-graduate and doctoral research

**Options :**

76878137865. 1

76878137866. 2

76878137867. 3

76878137868. 4

**Question Number : 42 Question Id : 7687819718 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

रामा राव समिति का मुख्य उद्देश्य निम्नलिखित की गुणवत्ता में वृद्धि करना है :

(1) पूर्व-स्नातक से पोस्ट-डॉक्टोरल शोध तक गुणवत्ता में वृद्धि

(2) केवल डॉक्टोरल शोध की गुणवत्ता बढ़ाना

(3) परास्नातक स्तर पर विज्ञान-वर्ग को बढ़ाना

(4) परा-स्नातक और डॉक्टोरल शोध

**Options :**

76878137865. 1

76878137866. 2

76878137867. 3

76878137868. 4

**Question Number : 43 Question Id : 7687819719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following developmental in order in view of the period they started functioning :

A. Sakshar Bharat

B. National Extension Service

C. National Adult Education Program

D. Community Development Program

E. National Literacy Mission

Choose the **correct** answer from the options given below :

(1) A, C, D, B, E

(2) D, B, C, E, A

(3) B, A, E, D, C

(4) C, D, A, E, B

**Options :**

76878137869. 1

76878137870. 2

76878137871. 3

76878137872. 4

**Question Number : 43 Question Id : 7687819719 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

निम्नलिखित विकास कार्यक्रमों को उनके प्रारम्भ होने के कालक्रम में व्यवस्थित कीजिए।

A. साक्षर भारत

B. राष्ट्रीय विस्तार सेवा (नेशनल एक्सटेंशन सर्विस)

C. राष्ट्रीय प्रौढ़ शिक्षा कार्यक्रम

D. कम्युनिटी डेवेलपमेंट (सामुदायिक विकास) कार्यक्रम

E. राष्ट्रीय साक्षरता मिशन

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A, C, D, B, E

(2) D, B, C, E, A

(3) B, A, E, D, C

(4) C, D, A, E, B

**Options :**

76878137869. 1

76878137870. 2

76878137871. 3

76878137872. 4

**Question Number : 44 Question Id : 7687819720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Four guiding principle for planning with reference to higher education are :

A. Quality

B. Accountability

C. Equity

D. Assessment

E. Access

Choose the **correct** answer from the options given below :

(1) A, B, C and E Only

(2) B, C, D and E Only

(3) A, C, D and E Only

(4) A, B, C and D Only

**Options :**

76878137873. 1

76878137874. 2

76878137875. 3

76878137876. 4

**Question Number : 44 Question Id : 7687819720 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

उच्चतर शिक्षा के लिए योजना बनाते समय चार मार्गदर्शक सिद्धान्त ये हैं :

A. गुणवत्ता

B. उत्तरदायित्व

C. समता (इक्विटी)

D. आंकलन

E. सुगमता

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) केवल A, B, C और E

(2) केवल B, C, D और E

(3) केवल A, C, D और E

(4) केवल A, B, C और D

**Options :**

76878137873. 1

76878137874. 2

76878137875. 3

76878137876. 4

**Question Number : 45 Question Id : 7687819721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List - I** with **List - II** :

| | **List - I (Goals of Education)** | | **List - II (Description)** |
|---|---|---|---|
| A. | National Integration | I. | It includes a spirit of large-hearted tolerance |
| B. | Development of values among the people | II. | Linked with productivity and work-experience |
| C. | Development of physical resources | III. | Ensure inclusive and equitable quality education |
| D. | Sustainable Development | IV. | Harmonizing religions, Language, Colour, caste and Creed etc. |

Choose the **correct** answer from the options given below :

(1) A-I, B-II, C-III, D-IV

(2) A-II, B-III, C-IV, D-I

(3) A-IV, B-I, C-II, D-III

(4) A-III, B-IV, C-I, D-II

**Options :**

76878137877. 1

76878137878. 2

76878137879. 3

76878137880. 4

**Question Number : 45 Question Id : 7687819721 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

**सूची - I** को **सूची - II** से सुमेलित करे :

| **सूची - I**<br>**( शिक्षा के लक्ष्य )** | | **सूची - II**<br>**( वर्णन )** |
|---|---|---|
| A. | राष्ट्रीय एकीकरण | I. इसमें उदात्त-हृदय सहिष्णुता का भावना सन्निहित है। |
| B. | लोगों में मूल्यों का विकास | II. उत्पादकता और कार्य-अनुभव से जुड़ा हुआ। |
| C. | भौतिक संसाधनों का विकास | III. समावेशी तथा समतापूर्ण गुणवत्तापूर्ण शिक्षा को सुनिश्चित करना। |
| D. | सतत विकास | IV. धर्म, भाषा, रंग, जाति और नस्ल आदि में सामंजस्यता। |

नीचे दिए गए विकल्पों में से **सही** उत्तर चुनें :

(1) A-I, B-II, C-III, D-IV
(2) A-II, B-III, C-IV, D-I
(3) A-IV, B-I, C-II, D-III
(4) A-III, B-IV, C-I, D-II

**Options :**

76878137877. 1
76878137878. 2
76878137879. 3
76878137880. 4

| | |
|---|---|
| **Sub-Section Number :** | 3 |
| **Sub-Section Id :** | 768781379 |
| **Question Shuffling Allowed :** | No |
| **Is Section Default? :** | No |

**Question Id : 7687819722 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (46 to 50)**

**Read the following paragraph and answer the questions :**

Over-eating is one of the most surprising practices among those who think they can afford it. In fact, authorities say that nearly all who can get as much as they desire, over-eat to their disadvantage. This class of people could save a great amount of food by missing one meal per week and at the same time they could improve their health. A heavy meal at night, the so-called 'dinner', is the fashion with many and is often taken shortly before retiring to bed. It is unnecessary and could be forgone, not only once a week but daily without loss of strength. Three to five hours are needed to digest food. While sleeping, this food not being required to give energy for work, is in many cases converted into excess fat, giving rise to excess weight. The evening meal should be light, taken three or four hours before retiring. This prevents over-eating, conserves energy, and reduces one's expenditure on food.

**Sub questions**

**Question Number : 46 Question Id : 7687819723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Why should people who overeat refrain from doing so ?

(1) Because overeating leads to muscle gain

(2) Because overeating is detrimental to health

(3) Because overeating conserves food

(4) Because overeating is an unethical practice

**Options :**

76878137881. 1

76878137882. 2

76878137883. 3

76878137884. 4

**Question Number : 47 Question Id : 7687819724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The writer wants the readers :

(1) to skip heavy dinner and take light evening meal instead

(2) not to eat anything at night

(3) to take food once a day

(4) to take meal before the sunset

**Options :**

76878137885. 1

76878137886. 2

76878137887. 3

76878137888. 4

**Question Number : 48 Question Id : 7687819725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What is the most appropriate time for having evening meal ?

(1) Two hours before the sunset

(2) Soon after the sunset

(3) Three or four hours before going to bed

(4) just before sleeping

**Options :**

76878137889. 1

76878137890. 2

76878137891. 3

76878137892. 4

**Question Number : 49 Question Id : 7687819726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

According to the passage how many times in a day one is expected to have food ?

(1) Three times in a day

(2) Two times in a day

(3) Once in a day

(4) Not clearly specified

**Options :**

76878137893. 1

76878137894. 2

76878137895. 3

76878137896. 4

**Question Number : 50 Question Id : 7687819727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

According to the passage, people overeat because _____.

(1) they can afford it

(2) they feel like eating

(3) they have to work more

(4) they want energy to be conserved

**Options :**

76878137897. 1

76878137898. 2

76878137899. 3

76878137900. 4

**Question Id : 7687819722 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (46 to 50)**

**निम्न गद्यांश को पढ़िए और प्रश्न सं. के उत्तर दीजिए :**

अत्यधिक भोजन करना ऐसे व्यक्तियों के बीच एक सर्वाधिक आश्चर्यजनक चलन है जो सोचते हैं कि वे इसे वहन कर सकते हैं। वास्तव में, प्राधिकारियों का कहना है कि लगभग वे सभी लोग जिन्हें अपनी इच्छानुसार मात्रा में भोजन मिल जाता है, वे हानि महुंचने की हद तक खाना खाते हैं। इस वर्ग के व्यक्ति प्रति सप्ताह एक समय का भोजन न करके अत्यधिक भोजन की बचत कर सकते हैं और साथ ही अपने स्वास्थ्य में भी सुधार कर सकते हैं। रात्रि में अत्यधिक भोजन, तथाकथित 'रात्रि भोजन' बहुतेरों के लिए फैशन है और बहुधा इसे रात्रि विश्राम से तत्काल पूर्व लिया जाता है। यह अनावश्यक है और इसे बिना किसी बल की हानि के सप्ताह में एक बार नहीं अपितु प्रतिदिन छोड़ा जा सकता है। भोजन को पचाने में तीन से पांच घंटे का समय लगता है। सोते समय कार्य के लिए ऊर्जा देने हेतु इस भोजन की आवश्यकता न होने के कारण अनेक मामलों में यह भोजन अत्यधिक वसा में बदल जाता है जिसके कारण भार अत्यधिक हो जाता है। सायंकालिन भोजन हल्का होना चाहिए और इसे सोने से तीन या चार घंटे पूर्व लिया जाना चाहिए। इससे अत्यधिक भोजन करने को रोका जा सकता है। ऊर्जा संरक्षण हो सकता है और भोजन पर होने वाले खर्च को भी कम किया जा सकता है।

**Sub questions**

**Question Number : 46 Question Id : 7687819723 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

अत्यधिक भोजन करने वालों को इसका परिहार क्यों करना चाहिए?

(1) क्योंकि अत्यधिक भोजन करने से घन की हानि होती है।

(2) क्योंकि अत्यधिक भोजन करना स्वास्थ्य के लिए हानिकारक है।

(3) क्योंकि अत्यधिक भोजन करने से खाद्य संरक्षण होता है।

(4) क्योंकि अत्यधिक भोजन करना अनैतिक व्यवहार है।

**Options :**

76878137881. 1

76878137882. 2

76878137883. 3

76878137884. 4

**Question Number : 47 Question Id : 7687819724 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

लेखक चाहता है कि पाठक _____ ।

(1) रात्रिकाल में गरिष्ठ भोजन न करें और इसके स्थान पर हल्का सायंकालिन भोजन करें।

(2) रात्रि में कुछ भी न खाएं।

(3) दिन में एक बार भोजन करें।

(4) सूयस्ति से पूर्व भोजन करें।

**Options :**

76878137885. 1

76878137886. 2

76878137887. 3

76878137888. 4

**Question Number : 48 Question Id : 7687819725 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

सायंकालिन भोजन का सर्वाधिक उपयुक्त समय कौन सा है?

(1) सूयस्ति से दो घंटे पूर्व

(2) सूयस्ति के शीध्र पश्चात

(3) सोने से तीन या चार घंटे पूर्व

(4) सोने से तत्काल पूर्व

**Options :**

76878137889. 1

76878137890. 2

76878137891. 3

76878137892. 4

**Question Number : 49 Question Id : 7687819726 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

गद्यांश के अनुसार हमसे निम्न में से दिन में कितनी बार भोजन करने की आशा की जाती है?

(1) दिन में तीन बार

(2) दिन में दो बार

(3) दिन में एक बार

(4) स्पष्ट रूप से निर्दिष्ट नहीं है।

**Options :**

76878137893. 1

76878137894. 2

76878137895. 3

76878137896. 4

**Question Number : 50 Question Id : 7687819727 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

गद्यांश के अनुसार लोग अत्यधिक भोजन करते हैं क्योंकि _____ ।

(1) वे इसे वहन कर सकते हैं।

(2) वे खाना चाहते हैं।

(3) उन्हें अधिक कार्य करना होता है।

(4) वे ऊर्जा संरक्षित रखना चाहते हैं।

**Options :**

76878137897. 1

76878137898. 2

76878137899. 3

# Environmental Sciences

| | |
|---|---|
| **Section Id :** | 768781128 |
| **Section Number :** | 2 |
| **Section type :** | Online |
| **Mandatory or Optional :** | Mandatory |
| **Number of Questions :** | 92 |
| **Number of Questions to be attempted :** | 92 |
| **Section Marks :** | 200 |
| **Maximum Instruction Time :** | 0 |
| **Sub-Section Number :** | 1 |
| **Sub-Section Id :** | 768781380 |
| **Question Shuffling Allowed :** | Yes |
| **Is Section Default? :** | No |

**Question Number : 51 Question Id : 7687819728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assume that same amount of water must condense and be removed from the atmosphere each year through precipitation as is evaporated into it from the land and ocean. If 25% of all the surface water evaporated goes to form ice, what is the mass of water precipitated globally in one year?

(The latent heats of fusion and evaporation are 332 $kJkg^{-1}$ and 2660 $kJkg^{-1}$, respectively and the annual latent heat flux over the globe is $10^{21}$ kJ.)

(1) $\sim 1.8 \times 10^{18}$ kg

(2) $\sim 4.3 \times 10^{17}$ kg

(3) $\sim 5.9 \times 10^{17}$ kg

(4) $\sim 2.8 \times 10^{18}$ kg

**Options :**

76878137901. 1

76878137902. 2

76878137903. 3

76878137904. 4

**Question Number : 51 Question Id : 7687819728 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assume that same amount of water must condense and be removed from the atmosphere each year through precipitation as is evaporated into it from the land and ocean. If 25% of all the surface water evaporated goes to form ice, what is the mass of water precipitated globally in one year?

(The latent heats of fusion and evaporation are 332 $kJkg^{-1}$ and 2660 $kJkg^{-1}$, respectively and the annual latent heat flux over the globe is $10^{21}$ kJ.)

(1) ~ $1.8 \times 10^{18}$ kg

(2) ~ $4.3 \times 10^{17}$ kg

(3) ~ $5.9 \times 10^{17}$ kg

(4) ~ $2.8 \times 10^{18}$ kg

**Options :**

76878137901. 1

76878137902. 2

76878137903. 3

76878137904. 4

**Question Number : 52 Question Id : 7687819729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

For the given temperature and elevation data and considering g = 10 m/s$^2$ and $C_p$ = 1.00 J/kg/°C :

| Elevation (m) | Temperature (°C) |
|---|---|
| 3.00 | 13.35 |
| 425 | 9.13 |

Which of the following correctly represents the status of dry atmosphere below ~ 425 m altitude?

(1) Unstable

(2) Stable

(3) Neutral

(4) Conditionally unstable

**Options :**

76878137905. 1

76878137906. 2

76878137907. 3

76878137908. 4

**Question Number : 52 Question Id : 7687819729 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

For the given temperature and elevation data and considering g = 10 m/s$^2$ and $C_p$ = 1.00 J/kg/°C :

| Elevation (m) | Temperature (°C) |
|---|---|
| 3.00 | 13.35 |
| 425 | 9.13 |

Which of the following correctly represents the status of dry atmosphere below ~ 425 m altitude?

(1) Unstable

(2) Stable

(3) Neutral

(4) Conditionally unstable

**Options :**

76878137905. 1

76878137906. 2

76878137907. 3

76878137908. 4

**Question Number : 53 Question Id : 7687819730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are the components of ecological footprint?

A. Forest

B. Fishing grounds

C. Grazing land

D. Cropland

E. Built-up land

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) A, B, C and D only

(3) A, B, C, D and E

(4) A, C and D only

**Options :**

76878137909. 1

76878137910. 2

76878137911. 3

76878137912. 4

**Question Number : 53 Question Id : 7687819730 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are the components of ecological footprint?

A. Forest

B. Fishing grounds

C. Grazing land

D. Cropland

E. Built-up land

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) A, B, C and D only

(3) A, B, C, D and E

(4) A, C and D only

**Options :**

76878137909. 1

76878137910. 2

76878137911. 3

76878137912. 4

**Question Number : 54 Question Id : 7687819731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The following four air parcels A, B, C and D are given with their temperatures (T) and water vapour mixing ratios (w). Arrange the air parcels in ascending order of their virtual temperatures.

A. T= 30°C and w= 5 g/kg

B. T= 20°C and w= 15 g/kg

C. T= 30°C and w= 25 g/kg

D. T= 20°C and w= 30 g/kg

Choose the **correct** answer from the options given below:

(1) A, B, C, D

(2) D, C, B, A

(3) D, B, C, A

(4) B, D, A, C

**Options :**

76878137913. 1

76878137914. 2

76878137915. 3

76878137916. 4

**Question Number : 54 Question Id : 7687819731 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The following four air parcels A, B, C and D are given with their temperatures (T) and water vapour mixing ratios (w). Arrange the air parcels in ascending order of their virtual temperatures.

A. T= 30°C and w= 5 g/kg

B. T= 20°C and w= 15 g/kg

C. T= 30°C and w= 25 g/kg

D. T= 20°C and w= 30 g/kg

Choose the **correct** answer from the options given below:

(1) A, B, C, D

(2) D, C, B, A

(3) D, B, C, A

(4) B, D, A, C

**Options :**

76878137913. 1

76878137914. 2

76878137915. 3

76878137916. 4

**Question Number : 55 Question Id : 7687819732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following elements in decreasing order of their abundance (on weight percentage basis) in global average Earth's crust.

A. Oxygen

B. Aluminium

C. Silica

D. Magnesium

E. Iron

Choose the **correct** answer from the options given below:

(1) A, B, C, D, E

(2) E, D, B, A, C

(3) A, C, B, E, D

(4) B, A, C, E, D

**Options :**

76878137917. 1

76878137918. 2

76878137919. 3

76878137920. 4

**Question Number : 55 Question Id : 7687819732 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following elements in decreasing order of their abundance (on weight percentage basis) in global average Earth's crust.

A. Oxygen

B. Aluminium

C. Silica

D. Magnesium

E. Iron

Choose the **correct** answer from the options given below:

(1) A, B, C, D, E

(2) E, D, B, A, C

(3) A, C, B, E, D

(4) B, A, C, E, D

**Options :**

76878137917. 1

76878137918. 2

76878137919. 3

76878137920. 4

**Question Number : 56 Question Id : 7687819733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following distinct zones of the Sun starting from the outermost to innermost.

A. Chromosphere

B. Photosphere

C. Corona

D. Radiative zone

E. Convective zone

Choose the **correct** answer from the options given below:

(1) D, E, B, A, C

(2) A, C, B, E, D

(3) A, B, E, D, C

(4) C, A, B, E, D

**Options :**

76878137921. 1

76878137922. 2

76878137923. 3

76878137924. 4

**Question Number : 56 Question Id : 7687819733 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following distinct zones of the Sun starting from the outermost to innermost.

A. Chromosphere

B. Photosphere

C. Corona

D. Radiative zone

E. Convective zone

Choose the **correct** answer from the options given below:

(1) D, E, B, A, C

(2) A, C, B, E, D

(3) A, B, E, D, C

(4) C, A, B, E, D

**Options :**

76878137921. 1

76878137922. 2

76878137923. 3

76878137924. 4

**Question Number : 57 Question Id : 7687819734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

For a stable manmade satellite in its circular orbit, which of the following are correct statements?

A. Speed of the satellite does not depend on the mass of the satellite.

B. Speed of the satellite does not depend on the mass of the planet.

C. Speed of the satellite decreases as orbital altitude increases.

D. Orbital period of satellite increases as orbital altitude increases.

E. Orbital period of satellite does not depend on the radius of the planet.

Choose the **correct** answer from the options given below:

(1) A, B, C and D only

(2) B, C and E only

(3) A, C and D only

(4) A, B, C, D and E

**Options :**

76878137925. 1

76878137926. 2

76878137927. 3

76878137928. 4

**Question Number : 57 Question Id : 7687819734 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

For a stable manmade satellite in its circular orbit, which of the following are correct statements?

A. Speed of the satellite does not depend on the mass of the satellite.

B. Speed of the satellite does not depend on the mass of the planet.

C. Speed of the satellite decreases as orbital altitude increases.

D. Orbital period of satellite increases as orbital altitude increases.

E. Orbital period of satellite does not depend on the radius of the planet.

Choose the **correct** answer from the options given below:

(1) A, B, C and D only

(2) B, C and E only

(3) A, C and D only

(4) A, B, C, D and E

**Options :**

76878137925. 1

76878137926. 2

76878137927. 3

76878137928. 4

**Question Number : 58 Question Id : 7687819735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are correct in view of cloud formation?

(Read VP as vapour pressure, SVP as saturation vapour pressure, and LCL as lifting condensation level)

A. Actual VP of an air parcel becomes equal to SVP at LCL.

B. Temperature of an air parcel is higher than its dew point temperature at LCL.

C. Atmospheric pressure at level of free convection is always higher than that at LCL.

D. An air parcel will always follow dry adiabatic lapse rate below LCL.

E. Theoretically, the relative humidity of an air parcel will always be equal to 100% at LCL.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A and B only

(3) A, C, D and E only

(4) A, D and E only

**Options :**

76878137929. 1

76878137930. 2

76878137931. 3

76878137932. 4

**Question Number : 58 Question Id : 7687819735 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are correct in view of cloud formation?

(Read VP as vapour pressure, SVP as saturation vapour pressure, and LCL as lifting condensation level)

A. Actual VP of an air parcel becomes equal to SVP at LCL.

B. Temperature of an air parcel is higher than its dew point temperature at LCL.

C. Atmospheric pressure at level of free convection is always higher than that at LCL.

D. An air parcel will always follow dry adiabatic lapse rate below LCL.

E. Theoretically, the relative humidity of an air parcel will always be equal to 100% at LCL.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A and B only

(3) A, C, D and E only

(4) A, D and E only

**Options :**

76878137929. 1

76878137930. 2

76878137931. 3

76878137932. 4

**Question Number : 59 Question Id : 7687819736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Terms in solar geometry)** | **List II (Definition)** |
|---|---|
| A. Solar Zenith Angle | I. Sun's position along the horizon |
| B. Declination Angle | II. Angle between Sun's rays and horizontal plane |
| C. Solar Azimuth Angle | III. Angle between Sun's rays and vertical direction (Zenith) |
| D. Solar Altitude Angle | IV. Angular position of Sun at solar noon with respect to plane of the Earth's equator. |

Choose the **most appropriate** answer from the options given below:

(1) A-III, B-II, C-I, D-IV

(2) A-IV, B-III, C-II, D-I

(3) A-III, B-IV, C-I, D-II

(4) A-III, B-I, C-IV, D-II

**Options :**

76878137933. 1

76878137934. 2

76878137935. 3

76878137936. 4

**Question Number : 59 Question Id : 7687819736 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Terms in solar geometry)** | **List II (Definition)** |
|---|---|
| A. Solar Zenith Angle | I. Sun's position along the horizon |
| B. Declination Angle | II. Angle between Sun's rays and horizontal plane |
| C. Solar Azimuth Angle | III. Angle between Sun's rays and vertical direction (Zenith) |
| D. Solar Altitude Angle | IV. Angular position of Sun at solar noon with respect to plane of the Earth's equator. |

Choose the **most appropriate** answer from the options given below:

(1) A-III, B-II, C-I, D-IV

(2) A-IV, B-III, C-II, D-I

(3) A-III, B-IV, C-I, D-II

(4) A-III, B-I, C-IV, D-II

**Options :**

76878137933. 1

76878137934. 2

76878137935. 3

76878137936. 4

**Question Number : 60 Question Id : 7687819737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement, related to climate classification.

(1) Empirical classifications of climate are based on the observable features of climate.

(2) Genetic classification attempt to organize climates according to their causes.

(3) Applied classifications of climate define class limits in terms of the effect of climate on other phenomena.

(4) In the Koeppen's climate classification scheme such as **Af, Bsh, Cfb, Dwa** etc., second letter refers to temperature characteristics.

**Options :**

76878137937. 1

76878137938. 2

76878137939. 3

76878137940. 4

**Question Number : 60 Question Id : 7687819737 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement, related to climate classification.

(1) Empirical classifications of climate are based on the observable features of climate.

(2) Genetic classification attempt to organize climates according to their causes.

(3) Applied classifications of climate define class limits in terms of the effect of climate on other phenomena.

(4) In the Koeppen's climate classification scheme such as **Af, Bsh, Cfb, Dwa** etc., second letter refers to temperature characteristics.

**Options :**

76878137937. 1

76878137938. 2

76878137939. 3

76878137940. 4

**Question Number : 61 Question Id : 7687819738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Consider the following equation of Gibbs free energy

$$\Delta_r G^o = \Delta_r H^o - T\Delta_r S^o = -RTlnK$$

All letters and symbols in the equation have standard meaning.

Which of the following in Incorrect?

(1) Sign and magnitude of $\Delta_r G^o$ of a reaction can predict spontaneity of the reaction.

(2) Sign and magnitude of $\Delta_r G^o$ of a reaction can make prediction of the useful work that could be extracted from it.

(3) It is possible to estimate K and $\Delta_r G^o$ from the measurements of $\Delta_r H^o$ and $\Delta_r S^o$ at any given temperature.

(4) It is possible to calculate the rate of a reaction at any given temperature directly using free energy change ($\Delta_r G^o$) data.

**Options :**

76878137941. 1

76878137942. 2

76878137943. 3

76878137944. 4

**Question Number : 61 Question Id : 7687819738 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Consider the following equation of Gibbs free energy

$$\Delta_r G^o = \Delta_r H^o - T\Delta_r S^o = -RTlnK$$

All letters and symbols in the equation have standard meaning.

Which of the following in Incorrect?

(1) Sign and magnitude of $\Delta_r G^o$ of a reaction can predict spontaneity of the reaction.

(2) Sign and magnitude of $\Delta_r G^o$ of a reaction can make prediction of the useful work that could be extracted from it.

(3) It is possible to estimate K and $\Delta_r G^o$ from the measurements of $\Delta_r H^o$ and $\Delta_r S^o$ at any given temperature.

(4) It is possible to calculate the rate of a reaction at any given temperature directly using free energy change ($\Delta_r G^o$) data.

**Options :**

76878137941. 1

76878137942. 2

76878137943. 3

76878137944. 4

**Question Number : 62 Question Id : 7687819739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the rate constant of a reaction is $2.3\times10^{-5}$ mol $L^{-1}s^{-1}$, what will be the order of the reaction?

(1) Zero order

(2) First order

(3) Second order

(4) Third order

**Options :**

76878137945. 1

76878137946. 2

76878137947. 3

76878137948. 4

**Question Number : 62 Question Id : 7687819739 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the rate constant of a reaction is $2.3\times10^{-5}$ mol $L^{-1}s^{-1}$, what will be the order of the reaction?

(1) Zero order

(2) First order

(3) Second order

(4) Third order

**Options :**

76878137945. 1

76878137946. 2

76878137947. 3

76878137948. 4

**Question Number : 63 Question Id : 7687819740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is correct about solubility of gases in water?

A. Solubility of a gas in water is directly proportional to partial pressure of gas present above the water surface.

B. Partial pressure of a gas in vapour phase (p) is proportional to mole fraction (x) of the gas in the solution.

C. Different gases have different Henry's constant ($K_H$) at same temperature.

D. Higher the value of $K_H$ at a given pressure, higher is the solubility of gas in water.

E. Henry's constant value is a function of nature of gas and does not change with temperature.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A, C, D and E only

(3) A, B, C and D only

(4) A, B, C and E only

**Options :**

76878137949. 1

76878137950. 2

76878137951. 3

76878137952. 4

**Question Number : 63 Question Id : 7687819740 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is correct about solubility of gases in water?

A. Solubility of a gas in water is directly proportional to partial pressure of gas present above the water surface.

B. Partial pressure of a gas in vapour phase (p) is proportional to mole fraction (x) of the gas in the solution.

C. Different gases have different Henry's constant ($K_H$) at same temperature.

D. Higher the value of $K_H$ at a given pressure, higher is the solubility of gas in water.

E. Henry's constant value is a function of nature of gas and does not change with temperature.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A, C, D and E only

(3) A, B, C and D only

(4) A, B, C and E only

**Options :**

76878137949. 1

76878137950. 2

76878137951. 3

76878137952. 4

**Question Number : 64 Question Id : 7687819741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Based on $_{P}$E-pH relationship for inorganic nitrogen species in natural water, which of the following species will be predominant only under alkaline conditions (pH= 8-14) that are intermediate in oxygen content i.e., small positive $_{P}$E values in the range of 0-4?

(1) $NO_3^-$

(2) $NO_2^-$

(3) $NH_4^+$

(4) $N_2$

**Options :**

76878137953. 1

76878137954. 2

76878137955. 3

76878137956. 4

**Question Number : 64 Question Id : 7687819741 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Based on $_{P}$E-pH relationship for inorganic nitrogen species in natural water, which of the following species will be predominant only under alkaline conditions (pH= 8-14) that are intermediate in oxygen content i.e., small positive $_{P}$E values in the range of 0-4?

(1) $NO_3^-$

(2) $NO_2^-$

(3) $NH_4^+$

(4) $N_2$

**Options :**

76878137953. 1

76878137954. 2

76878137955. 3

76878137956. 4

**Question Number : 65 Question Id : 7687819742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is true about photochemical smog formation in the ambient atmosphere?

(1) Ozone, formaldehyde, and acrolein are components of photochemical smog.

(2) Higher $\frac{NO}{NO_2}$ ratios will favour tropospheric ozone formation.

(3) $NO_2$, VOCs, $SO_2$, and $H_2O_{(v)}$ are essential ingredients of photochemical smog.

(4) Photochemical smog protects human and ecosystem from harmful UV-B radiations.

**Options :**

76878137957. 1

76878137958. 2

76878137959. 3

76878137960. 4

**Question Number : 65 Question Id : 7687819742 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is true about photochemical smog formation in the ambient atmosphere?

(1) Ozone, formaldehyde, and acrolein are components of photochemical smog.

(2) Higher $\frac{NO}{NO_2}$ ratios will favour tropospheric ozone formation.

(3) $NO_2$, VOCs, $SO_2$, and $H_2O_{(v)}$ are essential ingredients of photochemical smog.

(4) Photochemical smog protects human and ecosystem from harmful UV-B radiations.

**Options :**

76878137957. 1

76878137958. 2

76878137959. 3

76878137960. 4

**Question Number : 66 Question Id : 7687819743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement.

(1) Dissolved molecular oxygen ($O_2$) is most important oxidizing agent in natural waters.

(2) Upon reaction, each of the oxygen atom in $O_2$ is reduced from zero oxidation state to -2 oxidation state, in $H_2O$ in acidic aqueous solution.

(3) Upon reaction, each of the oxygen atom in $O_2$ is reduced from zero oxidation state to -2 oxidation state, in $OH^-$ in basic aqueous solution.

(4) Dissolved molecular oxygen in natural waters is consumed only in oxidation of organic matter.

**Options :**

76878137961. 1

76878137962. 2

76878137963. 3

76878137964. 4

**Question Number : 66 Question Id : 7687819743 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement.

(1) Dissolved molecular oxygen ($O_2$) is most important oxidizing agent in natural waters.

(2) Upon reaction, each of the oxygen atom in $O_2$ is reduced from zero oxidation state to -2 oxidation state, in $H_2O$ in acidic aqueous solution.

(3) Upon reaction, each of the oxygen atom in $O_2$ is reduced from zero oxidation state to -2 oxidation state, in $OH^-$ in basic aqueous solution.

(4) Dissolved molecular oxygen in natural waters is consumed only in oxidation of organic matter.

**Options :**

76878137961. 1

76878137962. 2

76878137963. 3

76878137964. 4

**Question Number : 67 Question Id : 7687819744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement about metals and metal toxicity.

(1) Methyl mercury is more dangerous and harmful than the vapour form of elemental mercury.

(2) Formation of dimethyl mercury takes place especially under anaerobic conditions in muddy (organic rich sediments) waters.

(3) Methyl mercury undergoes bioaccumulation and biomagnification in food chain.

(4) Cinnabar (HgS) salt, an ore of mercury containing $Hg^{2+}$, is easily soluble in water.

**Options :**

76878137965. 1

76878137966. 2

76878137967. 3

76878137968. 4

**Question Number : 67 Question Id : 7687819744 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement about metals and metal toxicity.

(1) Methyl mercury is more dangerous and harmful than the vapour form of elemental mercury.

(2) Formation of dimethyl mercury takes place especially under anaerobic conditions in muddy (organic rich sediments) waters.

(3) Methyl mercury undergoes bioaccumulation and biomagnification in food chain.

(4) Cinnabar (HgS) salt, an ore of mercury containing $Hg^{2+}$, is easily soluble in water.

**Options :**

76878137965. 1

76878137966. 2

76878137967. 3

76878137968. 4

**Question Number : 68 Question Id : 7687819745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which one of the following bacteria obtain energy from the oxidation of inorganic substances ?

(1) Chemohetrotrophs

(2) Chemoautotrophs

(3) Photohetrotrophs

(4) Photoautotrophs

**Options :**

76878137969. 1

76878137970. 2

76878137971. 3

76878137972. 4

**Question Number : 68 Question Id : 7687819745 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which one of the following bacteria obtain energy from the oxidation of inorganic substances ?

(1) Chemohetrotrophs

(2) Chemoautotrophs

(3) Photohetrotrophs

(4) Photoautotrophs

**Options :**

76878137969. 1

76878137970. 2

76878137971. 3

76878137972. 4

**Question Number : 69 Question Id : 7687819746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are part of global nitrogen biogeochemical cycle?

A. Nitrification

B. Ammonification

C. Dissimilatory nitrate reduction

D. Denitrification

E. Assimilatory nitrate reduction

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) A, B, C, D and E

(3) A, B, D and E only

(4) A, B, C and D only

**Options :**

76878137973. 1

76878137974. 2

76878137975. 3

76878137976. 4

**Question Number : 69 Question Id : 7687819746 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are part of global nitrogen biogeochemical cycle?

A. Nitrification

B. Ammonification

C. Dissimilatory nitrate reduction

D. Denitrification

E. Assimilatory nitrate reduction

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) A, B, C, D and E

(3) A, B, D and E only

(4) A, B, C and D only

**Options :**

76878137973. 1

76878137974. 2

76878137975. 3

76878137976. 4

**Question Number : 70 Question Id : 7687819747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

20 ml of an aqueous solution of 0.10 M butyric acid is shaken with 10 ml of ether. After the layers are separated, it is determined by titration that 0.5 milli mole butyric acid remains in aqueous layer.

What is the distribution ratio of butyric acid concentration in ether and aqueous layer?

(1) 2

(2) 4

(3) 6

(4) 8

**Options :**

76878137977. 1

76878137978. 2

76878137979. 3

76878137980. 4

**Question Number : 70 Question Id : 7687819747 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

20 ml of an aqueous solution of 0.10 M butyric acid is shaken with 10 ml of ether. After the layers are separated, it is determined by titration that 0.5 milli mole butyric acid remains in aqueous layer.

What is the distribution ratio of butyric acid concentration in ether and aqueous layer?

(1) 2

(2) 4

(3) 6

(4) 8

**Options :**

76878137977. 1

76878137978. 2

76878137979. 3

76878137980. 4

**Question Number : 71 Question Id : 7687819748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The ability of an analytical instrument/method to differentiate between small changes in pollutant concentration in the sample is best referred to as _____ of the instrument/method.

(1) reliability

(2) sensitivity

(3) accuracy

(4) stability

**Options :**

76878137981. 1

76878137982. 2

76878137983. 3

76878137984. 4

**Question Number : 71 Question Id : 7687819748 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The ability of an analytical instrument/method to differentiate between small changes in pollutant concentration in the sample is best referred to as _____ of the instrument/method.

(1) reliability

(2) sensitivity

(3) accuracy

(4) stability

**Options :**

76878137981. 1

76878137982. 2

76878137983. 3

76878137984. 4

**Question Number : 72 Question Id : 7687819749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which one of the following is an example of brood parasitism?

(1) *Cuscuta seeds* germination in the soil and climbing to host plant for nutrition through haustoria.

(2) Endoparasites living inside the host body at different sites for feeding.

(3) Cuckoo laying eggs in the nest of crow, and getting them cared and protected by crow.

(4) Animals stealing nectar without aiding in pollination.

**Options :**

76878137985. 1

76878137986. 2

76878137987. 3

76878137988. 4

**Question Number : 72 Question Id : 7687819749 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which one of the following is an example of brood parasitism?

(1) *Cuscuta seeds* germination in the soil and climbing to host plant for nutrition through haustoria.

(2) Endoparasites living inside the host body at different sites for feeding.

(3) Cuckoo laying eggs in the nest of crow, and getting them cared and protected by crow.

(4) Animals stealing nectar without aiding in pollination.

**Options :**

76878137985. 1

76878137986. 2

76878137987. 3

76878137988. 4

**Question Number : 73 Question Id : 7687819750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the initial population size of a plant species is 100 and after one year, population size of same plant species becomes 300, then what will be the average rate of change of population per year per individual?

(1) 0.66

(2) 1

(3) 2

(4) 3

**Options :**

76878137989. 1

76878137990. 2

76878137991. 3

76878137992. 4

**Question Number : 73 Question Id : 7687819750 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

If the initial population size of a plant species is 100 and after one year, population size of same plant species becomes 300, then what will be the average rate of change of population per year per individual?

(1) 0.66

(2) 1

(3) 2

(4) 3

**Options :**

76878137989. 1

76878137990. 2

76878137991. 3

76878137992. 4

**Question Number : 74 Question Id : 7687819751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Pair of Term) | List II (Meaning) |
|---|---|
| A. Stenophagic - euryphagic | I. Refers to narrow and wide tolerance of water |
| B. Stenohaline - euryhaline | II. Refers to narrow and wide tolerance of habitat selection |
| C. Stenoecious - euryecious | III. Refers to narrow and wide tolerance of salinity |
| D. Stenohydric - euryhydric | IV. Refers to narrow and wide tolerance of food |

Choose the **correct** answer from the options given below:

(1) A-IV, B-II, C-III, D-I

(2) A-II, B-I, C-IV, D-III

(3) A-II, B-III, C-IV, D-I

(4) A-IV, B-III, C-II, D-I

**Options :**

76878137993. 1

76878137994. 2

76878137995. 3

76878137996. 4

**Question Number : 74 Question Id : 7687819751 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Pair of Term)** | **List II (Meaning)** |
|---|---|
| A. Stenophagic - euryphagic | I. Refers to narrow and wide tolerance of water |
| B. Stenohaline - euryhaline | II. Refers to narrow and wide tolerance of habitat selection |
| C. Stenoecious - euryecious | III. Refers to narrow and wide tolerance of salinity |
| D. Stenohydric - euryhydric | IV. Refers to narrow and wide tolerance of food |

Choose the **correct** answer from the options given below:

(1) A-IV, B-II, C-III, D-I

(2) A-II, B-I, C-IV, D-III

(3) A-II, B-III, C-IV, D-I

(4) A-IV, B-III, C-II, D-I

**Options :**

76878137993. 1

76878137994. 2

76878137995. 3

76878137996. 4

**Question Number : 75 Question Id : 7687819752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Vincristine and Vinblastine –the alkaloids used for the treatment of Hodgkinson's disease and lymphocytic leukaemia were initially derived from which plant species?

(1) *Amaranthus viridis*

(2) *Catharanthus roseus*

(3) *Viola odorata*

(4) *Xanthium strumarium*

**Options :**

76878137997. 1

76878137998. 2

76878137999. 3

76878138000. 4

**Question Number : 75 Question Id : 7687819752 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Vincristine and Vinblastine –the alkaloids used for the treatment of Hodgkinson's disease and lymphocytic leukaemia were initially derived from which plant species?

(1) *Amaranthus viridis*

(2) *Catharanthus roseus*

(3) *Viola odorata*

(4) *Xanthium strumarium*

**Options :**

76878137997. 1

76878137998. 2

76878137999. 3

76878138000. 4

**Question Number : 76 Question Id : 7687819753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are correct?

A. The first stable product of photosynthesis in C-4 plants is phosphoglyceric acid.

B. Carboxylating enzyme in C-4 plants is PEP carboxylase in mesophyll cells and RuBP carboxylase in bundle sheath cells.

C. Photorespiration is high in C-3 plants as compared to C-4 plants.

D. Stomata generally remain closed in day time and open in night time in CAM plants.

E. Carbon dioxide acceptor in C-3 plants is phosphoenol pyruvate carboxylase in night, and is RuBP in day time.

Choose the **correct** answer from the options given below:

(1) A, C and E only

(2) B, C and D only

(3) B, D and E only

(4) A, C, D and E only

**Options :**

76878138001. 1

76878138002. 2

76878138003. 3

76878138004. 4

**Question Number : 76 Question Id : 7687819753 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are correct?

A. The first stable product of photosynthesis in C-4 plants is phosphoglyceric acid.

B. Carboxylating enzyme in C-4 plants is PEP carboxylase in mesophyll cells and RuBP carboxylase in bundle sheath cells.

C. Photorespiration is high in C-3 plants as compared to C-4 plants.

D. Stomata generally remain closed in day time and open in night time in CAM plants.

E. Carbon dioxide acceptor in C-3 plants is phosphoenol pyruvate carboxylase in night, and is RuBP in day time.

Choose the **correct** answer from the options given below:

(1) A, C and E only

(2) B, C and D only

(3) B, D and E only

(4) A, C, D and E only

**Options :**

76878138001. 1

76878138002. 2

76878138003. 3

76878138004. 4

**Question Number : 77 Question Id : 7687819754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following species in general trend of succession on a rock starting from crustose-lichens stage to shrub stage.

A. Parmelia

B. Polytrichum

C. Rhizocarpon

D. Festuca

E. Phytocarpus

Choose the **correct** answer from the options given below:

(1) E, D, B, A, C

(2) C, B, A, E, D

(3) C, A, B, D, E

(4) B, A, C, D, E

**Options :**

76878138005. 1

76878138006. 2

76878138007. 3

76878138008. 4

**Question Number : 77 Question Id : 7687819754 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following species in general trend of succession on a rock starting from crustose-lichens stage to shrub stage.

A. Parmelia

B. Polytrichum

C. Rhizocarpon

D. Festuca

E. Phytocarpus

Choose the **correct** answer from the options given below:

(1) E, D, B, A, C

(2) C, B, A, E, D

(3) C, A, B, D, E

(4) B, A, C, D, E

**Options :**

76878138005. 1

76878138006. 2

76878138007. 3

76878138008. 4

**Question Number : 78 Question Id : 7687819755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The species facing competition evolve mechanisms that promote their co-existence by choosing different times for feeding or different foraging patterns. This is a suitable example of _____.

(1) Amensalism

(2) Commensalism

(3) Resource partitioning

(4) Competitive exclusion

**Options :**

76878138009. 1

76878138010. 2

76878138011. 3

76878138012. 4

**Question Number : 78 Question Id : 7687819755 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The species facing competition evolve mechanisms that promote their co-existence by choosing different times for feeding or different foraging patterns. This is a suitable example of _____.

(1) Amensalism

(2) Commensalism

(3) Resource partitioning

(4) Competitive exclusion

**Options :**

76878138009. 1

76878138010. 2

76878138011. 3

76878138012. 4

**Question Number : 79 Question Id : 7687819756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I: Class | List II: Explanation |
|---|---|
| A. Waterborne | I. Microorganism with life cycles associated with insects that live or breed in water |
| B. Water-washed | II. Organisms that originate in feces and are transmitted through contact because of inadequate sanitation or hygiene |
| C. Water-related | III. Organisms that originate in water or spend part of their life cycle in aquatic animals and come in direct contact with humans in water or by inhalation |
| D. Water-based | IV. Pathogens that originate in fecal materials and are transmitted by ingestion |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-II, B-IV, C-III, D-I

(3) A-IV, B-II, C-I, D-III

(4) A-I, B-III, C-IV, D-II

**Options :**

76878138013. 1

76878138014. 2

76878138015. 3

76878138016. 4

**Question Number : 79 Question Id : 7687819756 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I: Class** | **List II: Explanation** |
|---|---|
| A. Waterborne | I. Microorganism with life cycles associated with insects that live or breed in water |
| B. Water-washed | II. Organisms that originate in feces and are transmitted through contact because of inadequate sanitation or hygiene |
| C. Water-related | III. Organisms that originate in water or spend part of their life cycle in aquatic animals and come in direct contact with humans in water or by inhalation |
| D. Water-based | IV. Pathogens that originate in fecal materials and are transmitted by ingestion |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-II, B-IV, C-III, D-I

(3) A-IV, B-II, C-I, D-III

(4) A-I, B-III, C-IV, D-II

**Options :**

76878138013. 1

76878138014. 2

76878138015. 3

76878138016. 4

**Question Number : 80 Question Id : 7687819757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement in the context of geostrophic wind.

(1) The geostrophic balance does not hold near the Earth's surface.

(2) Geostrophic wind blows along the lines of constant pressure.

(3) The balance between the pressure gradient force and the Coriolis force results in a geostrophic wind.

(4) In the Northern hemisphere, the low pressure lies to the right of the geostrophic wind vector.

**Options :**

76878138017. 1

76878138018. 2

76878138019. 3

76878138020. 4

**Question Number : 80 Question Id : 7687819757 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement in the context of geostrophic wind.

(1) The geostrophic balance does not hold near the Earth's surface.

(2) Geostrophic wind blows along the lines of constant pressure.

(3) The balance between the pressure gradient force and the Coriolis force results in a geostrophic wind.

(4) In the Northern hemisphere, the low pressure lies to the right of the geostrophic wind vector.

**Options :**

76878138017. 1

76878138018. 2

76878138019. 3

76878138020. 4

**Question Number : 81 Question Id : 7687819758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following igneous rocks in increasing order of their mafic content.

A. Basalt

B. Rhyolite

C. Andesite

D. Peridotite

E. Dacite

Choose the **correct** answer from the options given below:

(1) B, C, E, D, A

(2) A, D, E, C, B

(3) D, A, C, E, B

(4) B, E, C, A, D

**Options :**

76878138021. 1

76878138022. 2

76878138023. 3

76878138024. 4

**Question Number : 81 Question Id : 7687819758 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following igneous rocks in increasing order of their mafic content.

A. Basalt

B. Rhyolite

C. Andesite

D. Peridotite

E. Dacite

Choose the **correct** answer from the options given below:

(1) B, C, E, D, A

(2) A, D, E, C, B

(3) D, A, C, E, B

(4) B, E, C, A, D

**Options :**

76878138021. 1

76878138022. 2

76878138023. 3

76878138024. 4

**Question Number : 82 Question Id : 7687819759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

A confined aquifer is 30 m thick and 5 km wide. Two observation wells A and B, are located 1.2 km apart in the direction of flow. The head in well A and B are 99 m and 89 m, respectively. If the hydraulic conductivity is 1.2 m/day, what is the daily discharge of water through the aquifer?

(1) $1.5 \times 10^2$ $m^3$/day

(2) $1.5 \times 10^3$ $m^3$/day

(3) $1.5 \times 10^4$ $m^3$/day

(4) $1.5 \times 10^5$ $m^3$/day

**Options :**

76878138025. 1

76878138026. 2

76878138027. 3

76878138028. 4

**Question Number : 82 Question Id : 7687819759 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

A confined aquifer is 30 m thick and 5 km wide. Two observation wells A and B, are located 1.2 km apart in the direction of flow. The head in well A and B are 99 m and 89 m, respectively. If the hydraulic conductivity is 1.2 m/day, what is the daily discharge of water through the aquifer?

(1) $1.5 \times 10^2$ $m^3$/day

(2) $1.5 \times 10^3$ $m^3$/day

(3) $1.5 \times 10^4$ $m^3$/day

(4) $1.5 \times 10^5$ $m^3$/day

**Options :**

76878138025. 1

76878138026. 2

76878138027. 3

76878138028. 4

**Question Number : 83 Question Id : 7687819760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Silicate Structure)** | **List II (Example)** |
|---|---|
| A. Sorosilicate | I. Tourmaline |
| B. Phyllosilicate | II. Talc |
| C. Cyclosilicate | III. Enstatite |
| D. Inosilicate | IV. Epidote |

Choose the correct answer from the options given below:

(1) A-II, B-III, C-IV, D-I

(2) A-III, B-I, C-II, D-IV

(3) A-IV, B-II, C-I, D-III

(4) A-I, B-IV, C-III, D-II

**Options :**

76878138029. 1

76878138030. 2

76878138031. 3

76878138032. 4

**Question Number : 83 Question Id : 7687819760 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Silicate Structure)** | **List II (Example)** |
|---|---|
| A. Sorosilicate | I. Tourmaline |
| B. Phyllosilicate | II. Talc |
| C. Cyclosilicate | III. Enstatite |
| D. Inosilicate | IV. Epidote |

Choose the correct answer from the options given below:

(1) A-II, B-III, C-IV, D-I

(2) A-III, B-I, C-II, D-IV

(3) A-IV, B-II, C-I, D-III

(4) A-I, B-IV, C-III, D-II

**Options :**

76878138029. 1

76878138030. 2

76878138031. 3

76878138032. 4

**Question Number : 84 Question Id : 7687819761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Identify the correct effects/consequences of El Nino.

A. Every few years, the tropical Pacific Ocean off the coasts of Peru and Equador occasionally becomes much warmer.

B. Walker circulations become reversed.

C. Heavy rains occur in western Pacific.

D. Intense trade winds drive warm surface waters of the equatorial Pacific in westward direction.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A, B, C and D

(3) B, C and D only

(4) A and B only

**Options :**

76878138033. 1

76878138034. 2

76878138035. 3

76878138036. 4

**Question Number : 84 Question Id : 7687819761 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Identify the correct effects/consequences of El Nino.

A. Every few years, the tropical Pacific Ocean off the coasts of Peru and Equador occasionally becomes much warmer.

B. Walker circulations become reversed.

C. Heavy rains occur in western Pacific.

D. Intense trade winds drive warm surface waters of the equatorial Pacific in westward direction.

Choose the **most appropriate** answer from the options given below:

(1) A, B and C only

(2) A, B, C and D

(3) B, C and D only

(4) A and B only

**Options :**

76878138033. 1

76878138034. 2

76878138035. 3

76878138036. 4

**Question Number : 85 Question Id : 7687819762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Term/Process)** | **List II (Meaning/Related to)** |
|---|---|
| A. Creep | I. Slow movement of water saturated surface sediments |
| B. Solifluction | II. Extreme slow downslope movement of soil and rock |
| C. Rockfall | III. Movement of unconsolidated material occurs along a curved surface of rupture |
| D. Slump | IV. Extreme rapid movement of rocks of any size fall through the air from steep cliffs |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-I, D-II

(2) A-I, B-II, C-IV, D-III

(3) A-II, B-I, C-IV, D-III

(4) A-IV, B-III, C-I, D-II

**Options :**

76878138037. 1

76878138038. 2

76878138039. 3

76878138040. 4

**Question Number : 85 Question Id : 7687819762 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Term/Process)** | **List II (Meaning/Related to)** |
|---|---|
| A. Creep | I. Slow movement of water saturated surface sediments |
| B. Solifluction | II. Extreme slow downslope movement of soil and rock |
| C. Rockfall | III. Movement of unconsolidated material occurs along a curved surface of rupture |
| D. Slump | IV. Extreme rapid movement of rocks of any size fall through the air from steep cliffs |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-I, D-II

(2) A-I, B-II, C-IV, D-III

(3) A-II, B-I, C-IV, D-III

(4) A-IV, B-III, C-I, D-II

**Options :**

76878138037. 1

76878138038. 2

76878138039. 3

76878138040. 4

**Question Number : 86 Question Id : 7687819763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Chemical Characteristics)** | **List II (Economic Ore Mineral)** |
|---|---|
| A. Carbonate | I. Beryl |
| B. Silicate | II. Cuprite |
| C. Sulphate | III. Azurite |
| D. Oxide | IV. Goslarite |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-II, B-I, C-IV, D-III

(3) A-IV, B-III, C-I, D-II

(4) A-III, B-I, C-IV, D-II

**Options :**

76878138041. 1

76878138042. 2

76878138043. 3

76878138044. 4

**Question Number : 86 Question Id : 7687819763 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Chemical Characteristics)** | **List II (Economic Ore Mineral)** |
|---|---|
| A. Carbonate | I. Beryl |
| B. Silicate | II. Cuprite |
| C. Sulphate | III. Azurite |
| D. Oxide | IV. Goslarite |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-II, B-I, C-IV, D-III

(3) A-IV, B-III, C-I, D-II

(4) A-III, B-I, C-IV, D-II

**Options :**

76878138041. 1

76878138042. 2

76878138043. 3

76878138044. 4

**Question Number : 87 Question Id : 7687819764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Drainage Pattern)** | | **List II (Characteristics)** |
|---|---|---|
| A. Centripetal Pattern | I. | Formed over a mature and dissected dome mountain characterized by a series of alternate bands of hard and soft rock beds |
| B. Trellised Pattern | II. | Formed in volcanic cones, batholiths, mesas and buttes |
| C. Centrifugal Pattern | III. | Formed by a series of streams which after emerging from surrounding uplands converge into a central low land |
| D. Annular Pattern | IV. | Formed in the regions of cuesta topography where hard beds become escarpments and soft beds are eroded to become valleys |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-III, D-I

(2) A-III, B-IV, C-II, D-I

(3) A-II, B-I, C-III, D-IV

(4) A-III, B-I, C-II, D-IV

**Options :**

76878138045. 1

76878138046. 2

76878138047. 3

76878138048. 4

**Question Number : 87 Question Id : 7687819764 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Drainage Pattern)** | **List II (Characteristics)** |
|---|---|
| A. Centripetal Pattern | I. Formed over a mature and dissected dome mountain characterized by a series of alternate bands of hard and soft rock beds |
| B. Trellised Pattern | II. Formed in volcanic cones, batholiths, mesas and buttes |
| C. Centrifugal Pattern | III. Formed by a series of streams which after emerging from surrounding uplands converge into a central low land |
| D. Annular Pattern | IV. Formed in the regions of cuesta topography where hard beds become escarpments and soft beds are eroded to become valleys |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-III, D-I

(2) A-III, B-IV, C-II, D-I

(3) A-II, B-I, C-III, D-IV

(4) A-III, B-I, C-II, D-IV

**Options :**

76878138045. 1

76878138046. 2

76878138047. 3

76878138048. 4

**Question Number : 88 Question Id : 7687819765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are not clay minerals?

A. Nacrite

B. Jadeite

C. Montmorillonite

D. Glauconite

E. Hedenbergite

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) B and E only

(3) B, D and E only

(4) A, C and D only

**Options :**

76878138049. 1

76878138050. 2

76878138051. 3

76878138052. 4

**Question Number : 88 Question Id : 7687819765 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are not clay minerals?

A. Nacrite

B. Jadeite

C. Montmorillonite

D. Glauconite

E. Hedenbergite

Choose the **most appropriate** answer from the options given below:

(1) A, B and D only

(2) B and E only

(3) B, D and E only

(4) A, C and D only

**Options :**

76878138049. 1

76878138050. 2

76878138051. 3

76878138052. 4

**Question Number : 89 Question Id : 7687819766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following minerals in the increasing order of their rate of weathering

(from least to most weatherable).

A. Pyroxene

B. Albite

C. Hematite

D. Calcite

E. Quartz

Choose the **correct** answer from the options given below:

(1) E, B, A, C, D

(2) D, A, B, E, C

(3) E, B, C, A, D

(4) C, E, B, A, D

**Options :**

76878138053. 1

76878138054. 2

76878138055. 3

76878138056. 4

**Question Number : 89 Question Id : 7687819766 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following minerals in the increasing order of their rate of weathering

(from least to most weatherable).

A. Pyroxene

B. Albite

C. Hematite

D. Calcite

E. Quartz

Choose the **correct** answer from the options given below:

(1) E, B, A, C, D

(2) D, A, B, E, C

(3) E, B, C, A, D

(4) C, E, B, A, D

**Options :**

76878138053. 1

76878138054. 2

76878138055. 3

76878138056. 4

**Question Number : 90 Question Id : 7687819767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following horizons of a soil profile starting from bottom to top.

A. Oa

B. Oe

C. EB

D. BC

E. BE

Choose the **correct** answer from the options given below:

(1) D, C, E, B, A

(2) D, E, C, B, A

(3) D, E, C, A, B

(4) E, C, D, A, B

**Options :**

76878138057. 1

76878138058. 2

76878138059. 3

76878138060. 4

**Question Number : 90 Question Id : 7687819767 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following horizons of a soil profile starting from bottom to top.

A. Oa

B. Oe

C. EB

D. BC

E. BE

Choose the **correct** answer from the options given below:

(1) D, C, E, B, A

(2) D, E, C, B, A

(3) D, E, C, A, B

(4) E, C, D, A, B

**Options :**

76878138057. 1

76878138058. 2

76878138059. 3

76878138060. 4

**Question Number : 91 Question Id : 7687819768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assuming that the optimum operating voltage of a solar cell is 0.45 V and the current during full solar insolation is 250 $A/m^2$, the electrical power output from a solar cell with an illuminated area of 40 $cm^2$, will be approximately _____.

(1) 0.45 W

(2) 4.50 W

(3) 0.90 W

(4) 45.00 W

**Options :**

76878138061. 1

76878138062. 2

76878138063. 3

76878138064. 4

**Question Number : 91 Question Id : 7687819768 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assuming that the optimum operating voltage of a solar cell is 0.45 V and the current during full solar insolation is 250 $A/m^2$, the electrical power output from a solar cell with an illuminated area of 40 $cm^2$, will be approximately _____.

(1) 0.45 W

(2) 4.50 W

(3) 0.90 W

(4) 45.00 W

**Options :**

76878138061. 1

76878138062. 2

76878138063. 3

76878138064. 4

**Question Number : 92 Question Id : 7687819769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

In case of fusion reactions involving Deuterium and Tritium nuclei, if the number density of the fusing nuclei is $10^{18}$ $cm^{-3}$, what should be the minimum confinement time for energy break even?

(1) 0.1 milli second

(2) 0.5 milli second

(3) 1.0 milli second

(4) 2.0 milli second

**Options :**

76878138065. 1

76878138066. 2

76878138067. 3

76878138068. 4

**Question Number : 92 Question Id : 7687819769 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

In case of fusion reactions involving Deuterium and Tritium nuclei, if the number density of the fusing nuclei is $10^{18}$ $cm^{-3}$, what should be the minimum confinement time for energy break even?

(1) 0.1 milli second

(2) 0.5 milli second

(3) 1.0 milli second

(4) 2.0 milli second

**Options :**

76878138065. 1

76878138066. 2

76878138067. 3

76878138068. 4

**Question Number : 93 Question Id : 7687819770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements about biofuels.

A. Yeast-driven fermentation, principally of glucose is used to produce bioethanol.

B. Ethanol is also referred as grain alcohol.

C. Pure ethanol has low vapour pressure compared to pure gasoline at same temperature.

D. Dilute solution of ethanol in water produced by fermentation mixed with gasoline burn more efficiently than mixture of pure ethanol and pure gasoline.

E. Compared to first-generation biofuels such as ethanol; the second-generation biofuels are less sustainable.

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) A, B and C only

(4) A, C, D and E only

**Options :**

76878138069. 1

76878138070. 2

76878138071. 3

76878138072. 4

**Question Number : 93 Question Id : 7687819770 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements about biofuels.

A. Yeast-driven fermentation, principally of glucose is used to produce bioethanol.

B. Ethanol is also referred as grain alcohol.

C. Pure ethanol has low vapour pressure compared to pure gasoline at same temperature.

D. Dilute solution of ethanol in water produced by fermentation mixed with gasoline burn more efficiently than mixture of pure ethanol and pure gasoline.

E. Compared to first-generation biofuels such as ethanol; the second-generation biofuels are less sustainable.

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) A, B and C only

(4) A, C, D and E only

**Options :**

76878138069. 1

76878138070. 2

76878138071. 3

76878138072. 4

**Question Number : 94 Question Id : 7687819771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

A wind turbine is operating with 40% efficiency in an area having average wind speed of 5.0 m/sec. If the diameter of the turbine is 14.0 m and density of air is 1.29 kg/$m^3$, the power produced by the wind turbine will be approximately _____.

(1) 4.0 kW

(2) 5.0 kW

(3) 8.0 kW

(4) 10.0 kW

**Options :**

76878138073. 1

76878138074. 2

76878138075. 3

76878138076. 4

**Question Number : 94 Question Id : 7687819771 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

A wind turbine is operating with 40% efficiency in an area having average wind speed of 5.0 m/sec. If the diameter of the turbine is 14.0 m and density of air is 1.29 kg/$m^3$, the power produced by the wind turbine will be approximately _____.

(1) 4.0 kW

(2) 5.0 kW

(3) 8.0 kW

(4) 10.0 kW

**Options :**

76878138073. 1

76878138074. 2

76878138075. 3

76878138076. 4

**Question Number : 95 Question Id : 7687819772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the common structural traps of oil where it accumulates to form an oil pool.

A. Sandstone lenses

B. Salt domes

C. Faults

D. Buried coral reefs

E. Anticlinal folds

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and E only

(2) C, D and E only

(3) B, C and E only

(4) A, C and E only

**Options :**

76878138077. 1

76878138078. 2

76878138079. 3

76878138080. 4

**Question Number : 95 Question Id : 7687819772 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the common structural traps of oil where it accumulates to form an oil pool.

A. Sandstone lenses

B. Salt domes

C. Faults

D. Buried coral reefs

E. Anticlinal folds

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and E only

(2) C, D and E only

(3) B, C and E only

(4) A, C and E only

**Options :**

76878138077. 1

76878138078. 2

76878138079. 3

76878138080. 4

**Question Number : 96 Question Id : 7687819773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which among the following minerals are radioactive minerals?

A. Allanite

B. Monazite

C. Sillimanite

D. Xenotime

E. Autunite

Choose the **correct** answer from the options given below:

(1) B, C and D only

(2) A, C, D and E only

(3) A, B and E only

(4) A, C and D only

**Options :**

76878138081. 1

76878138082. 2

76878138083. 3

76878138084. 4

**Question Number : 96 Question Id : 7687819773 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which among the following minerals are radioactive minerals?

A. Allanite

B. Monazite

C. Sillimanite

D. Xenotime

E. Autunite

Choose the **correct** answer from the options given below:

(1) B, C and D only

(2) A, C, D and E only

(3) A, B and E only

(4) A, C and D only

**Options :**

76878138081. 1

76878138082. 2

76878138083. 3

76878138084. 4

**Question Number : 97 Question Id : 7687819774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assuming Higher Heating Value and 100% combustion, arrange the following fuels according to their energy content (MJ/L) in an increasing order.

A. Hydrogen

B. Biodiesel

C. Liquefied Natural Gas

D. Methanol

Choose the **correct** answer from the options given below:

(1) A, C, D, B

(2) C, D, B, A

(3) D, C, B, A

(4) A, D, C, B

**Options :**

76878138085. 1

76878138086. 2

76878138087. 3

76878138088. 4

**Question Number : 97 Question Id : 7687819774 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Assuming Higher Heating Value and 100% combustion, arrange the following fuels according to their energy content (MJ/L) in an increasing order.

A. Hydrogen

B. Biodiesel

C. Liquefied Natural Gas

D. Methanol

Choose the **correct** answer from the options given below:

(1) A, C, D, B

(2) C, D, B, A

(3) D, C, B, A

(4) A, D, C, B

**Options :**

76878138085. 1

76878138086. 2

76878138087. 3

76878138088. 4

**Question Number : 98 Question Id : 7687819775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following in decreasing order of their average carbon content.

A. Cannel coal

B. Peat

C. Anthracite

D. Sub-bituminous

E. Brown coal

Choose the **correct** answer from the options given below:

(1) C, D, E, A, B

(2) C, A, D, E, B

(3) A, C, D, E, B

(4) B, E, D, A, C

**Options :**

76878138089. 1

76878138090. 2

76878138091. 3

76878138092. 4

**Question Number : 98 Question Id : 7687819775 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following in decreasing order of their average carbon content.

A. Cannel coal

B. Peat

C. Anthracite

D. Sub-bituminous

E. Brown coal

Choose the **correct** answer from the options given below:

(1) C, D, E, A, B

(2) C, A, D, E, B

(3) A, C, D, E, B

(4) B, E, D, A, C

**Options :**

76878138089. 1

76878138090. 2

76878138091. 3

76878138092. 4

**Question Number : 99 Question Id : 7687819776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement about Dichloro Diphenyl Trichloroethane (DDT).

(1) It has low vapour pressure and thus slow rate of evaporation.

(2) It has low reactivity with respect to light, chemicals and microbes in the environment.

(3) It has very low solubility in water compared to organic media.

(4) DDT gets metabolized by elimination of one hydrogen and one chlorine from benzene rings to form Dichloro Diphenyl Dichloroethene (DDE).

**Options :**

76878138093. 1

76878138094. 2

76878138095. 3

76878138096. 4

**Question Number : 99 Question Id : 7687819776 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement about Dichloro Diphenyl Trichloroethane (DDT).

(1) It has low vapour pressure and thus slow rate of evaporation.

(2) It has low reactivity with respect to light, chemicals and microbes in the environment.

(3) It has very low solubility in water compared to organic media.

(4) DDT gets metabolized by elimination of one hydrogen and one chlorine from benzene rings to form Dichloro Diphenyl Dichloroethene (DDE).

**Options :**

76878138093. 1

76878138094. 2

76878138095. 3

76878138096. 4

**Question Number : 100 Question Id : 7687819777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Cyclones are used for particle collection from ambient atmosphere. The ratio of the induced force ($F_c$) in the cyclone to the gravitational force ($F_g$) will change by_____ folds if rotational speed of cyclone is increased from 2m/sec to 4m/sec.

(1) two

(2) four

(3) Eight

(4) sixteen

**Options :**

76878138097. 1

76878138098. 2

76878138099. 3

76878138100. 4

**Question Number : 100 Question Id : 7687819777 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Cyclones are used for particle collection from ambient atmosphere. The ratio of the induced force ($F_c$) in the cyclone to the gravitational force ($F_g$) will change by_____ folds if rotational speed of cyclone is increased from 2m/sec to 4m/sec.

(1) two

(2) four

(3) Eight

(4) sixteen

**Options :**

76878138097. 1

76878138098. 2

76878138099. 3

76878138100. 4

**Question Number : 101 Question Id : 7687819778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Pollutant concentration is usually expressed in volumetric units such as ppm or ppb. If there are $3.0 \times 10^{18}$ molecules of $SO_2$ are present in $2.5 \times 10^{16}$ billion molecules of air, what would be the concentration of $SO_2$ in air in ppm? (Molecular weight of $SO_2$ is 64 and it follows ideal gas law)

(1) 0.12 ppm

(2) 1.2 ppm

(3) 120 ppm

(4) 1200 ppm

**Options :**

76878138101. 1

76878138102. 2

76878138103. 3

76878138104. 4

**Question Number : 101 Question Id : 7687819778 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Pollutant concentration is usually expressed in volumetric units such as ppm or ppb. If there are $3.0 \times 10^{18}$ molecules of $SO_2$ are present in $2.5 \times 10^{16}$ billion molecules of air, what would be the concentration of $SO_2$ in air in ppm? (Molecular weight of $SO_2$ is 64 and it follows ideal gas law)

(1) 0.12 ppm

(2) 1.2 ppm

(3) 120 ppm

(4) 1200 ppm

**Options :**

76878138101. 1

76878138102. 2

76878138103. 3

76878138104. 4

**Question Number : 102 Question Id : 7687819779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about formation and impact of acid rain.

(1) Nitric oxide is not especially soluble in water and thus NO, itself, do not make rainwater particularly acidic.

(2) Neutralization of acid rain by limestone produces carbon dioxide.

(3) Areas having granite or quartz bedrock, compared to carbonates, are more affected by acid rain.

(4) At high altitudes, fog and mists are less acidic than precipitation, probably due to more water availability for dilution.

**Options :**

76878138105. 1

76878138106. 2

76878138107. 3

76878138108. 4

**Question Number : 102 Question Id : 7687819779 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about formation and impact of acid rain.

(1) Nitric oxide is not especially soluble in water and thus NO, itself, do not make rainwater particularly acidic.

(2) Neutralization of acid rain by limestone produces carbon dioxide.

(3) Areas having granite or quartz bedrock, compared to carbonates, are more affected by acid rain.

(4) At high altitudes, fog and mists are less acidic than precipitation, probably due to more water availability for dilution.

**Options :**

76878138105. 1

76878138106. 2

76878138107. 3

76878138108. 4

**Question Number : 103 Question Id : 7687819780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Emissions from Smoke Stack) | List II (Shape of Plume) |
|---|---|
| A. Pollutants emitted in neutrally stable atmosphere | I. Fanning |
| B. Pollutants emitted in stable atmosphere, vertical dispersion restricted | II. Looping |
| C. Pollutants emitted from smoke stack below thermal inversion height | III. Coning |
| D. Pollutants emitted in unstable atmosphere | IV. Fumigation |

Choose the **correct** answer from the options given below:

(1) A-I, B-III, C-II, D-IV

(2) A-III, B-I, C-IV, D-II

(3) A-III, B-IV, C-I, D-II

(4) A-II, B-III, C-IV, D-I

**Options :**

76878138109. 1

76878138110. 2

76878138111. 3

76878138112. 4

**Question Number : 103 Question Id : 7687819780 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Emissions from Smoke Stack) | List II (Shape of Plume) |
|---|---|
| A. Pollutants emitted in neutrally stable atmosphere | I. Fanning |
| B. Pollutants emitted in stable atmosphere, vertical dispersion restricted | II. Looping |
| C. Pollutants emitted from smoke stack below thermal inversion height | III. Coning |
| D. Pollutants emitted in unstable atmosphere | IV. Fumigation |

Choose the **correct** answer from the options given below:

(1) A-I, B-III, C-II, D-IV

(2) A-III, B-I, C-IV, D-II

(3) A-III, B-IV, C-I, D-II

(4) A-II, B-III, C-IV, D-I

**Options :**

76878138109. 1

76878138110. 2

76878138111. 3

76878138112. 4

**Question Number : 104 Question Id : 7687819781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about Noise pollution.

(1) Sensitivity of the human ear to sound depends on the sound frequency and its intensity.

(2) Sound intensity is inversely proportional to the distance from the source in a free field.

(3) If sound pressure at a single source is $P_0$, sound pressure felt at distance r from the source under ideal condition of homogenous medium will be equal to $P_0/r$.

(4) Speed of sound in air is directly proportional to square root of air temperature.

**Options :**

76878138113. 1

76878138114. 2

76878138115. 3

76878138116. 4

**Question Number : 104 Question Id : 7687819781 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about Noise pollution.

(1) Sensitivity of the human ear to sound depends on the sound frequency and its intensity.

(2) Sound intensity is inversely proportional to the distance from the source in a free field.

(3) If sound pressure at a single source is $P_0$, sound pressure felt at distance r from the source under ideal condition of homogenous medium will be equal to $P_0/r$.

(4) Speed of sound in air is directly proportional to square root of air temperature.

**Options :**

76878138113. 1

76878138114. 2

76878138115. 3

76878138116. 4

**Question Number : 105 Question Id : 7687819782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements about disinfection and softening of water.

A. The number of microorganisms destroyed in unit time is proportional to the number of microorganism remaining under ideal conditions –Chick's law.

B. Common disinfecting chemicals are $Cl_2$, NaOCl, and $Ca(OCl)_2$.

C. When chlorine is added to water, mixture of HOCl and HCl is formed.

D. During chlorination, ammonia reacts with HOCl and forms chloramines.

E. Chlorine, exists in water in combination with organic nitrogen compounds, is referred to as combined non-available chlorine.

Choose the **most appropriate** answer from the options given below:

(1) A, B and E only

(2) A, B and C only

(3) A, B, C and D only

(4) A, B, D and E only

**Options :**

76878138117. 1

76878138118. 2

76878138119. 3

76878138120. 4

**Question Number : 105 Question Id : 7687819782 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements about disinfection and softening of water.

A. The number of microorganisms destroyed in unit time is proportional to the number of microorganism remaining under ideal conditions –Chick's law.

B. Common disinfecting chemicals are $Cl_2$, NaOCl, and $Ca(OCl)_2$.

C. When chlorine is added to water, mixture of HOCl and HCl is formed.

D. During chlorination, ammonia reacts with HOCl and forms chloramines.

E. Chlorine, exists in water in combination with organic nitrogen compounds, is referred to as combined non-available chlorine.

Choose the **most appropriate** answer from the options given below:

(1) A, B and E only

(2) A, B and C only

(3) A, B, C and D only

(4) A, B, D and E only

**Options :**

76878138117. 1

76878138118. 2

76878138119. 3

76878138120. 4

**Question Number : 106 Question Id : 7687819783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The biochemical oxygen demand (BOD) of waste water sample is estimated to be 200 mg/L. What volume of undiluted sample of waste water should be added to 300 mL BOD bottle to estimate BOD and what will be the sample size (%)? Assume 5 mg/L BOD can be consumed in BOD bottle.

(1) 75 mL and 0.25%

(2) 7.5 mL and 0.025%

(3) 7.5 mL and 2.5%

(4) 75 mL and 2.5%

**Options :**

76878138121. 1

76878138122. 2

76878138123. 3

76878138124. 4

**Question Number : 106 Question Id : 7687819783 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The biochemical oxygen demand (BOD) of waste water sample is estimated to be 200 mg/L. What volume of undiluted sample of waste water should be added to 300 mL BOD bottle to estimate BOD and what will be the sample size (%)? Assume 5 mg/L BOD can be consumed in BOD bottle.

(1) 75 mL and 0.25%

(2) 7.5 mL and 0.025%

(3) 7.5 mL and 2.5%

(4) 75 mL and 2.5%

**Options :**

76878138121. 1

76878138122. 2

76878138123. 3

76878138124. 4

**Question Number : 107 Question Id : 7687819784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Kal carbonate has a vial containing 2.0 $\mu C_i$/L of $^{45}Ca$. Half-life of $^{45}Ca$ is 165 days. The decay content $\lambda$ for disintegration of $^{45}Ca$ will be approximately _____.

(1) $4.2 \times 10^{-1}$ day$^{-1}$

(2) $4.2 \times 10^{-2}$ day$^{-1}$

(3) $4.2 \times 10^{-3}$ day$^{-1}$

(4) $4.2 \times 10^{-4}$ day$^{-1}$

**Options :**

76878138125. 1

76878138126. 2

76878138127. 3

76878138128. 4

**Question Number : 107 Question Id : 7687819784 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Kal carbonate has a vial containing 2.0 $\mu C_i/L$ of $^{45}Ca$. Half-life of $^{45}Ca$ is 165 days. The decay content $\lambda$ for disintegration of $^{45}Ca$ will be approximately _____.

(1) $4.2 \times 10^{-1}\ day^{-1}$

(2) $4.2 \times 10^{-2}\ day^{-1}$

(3) $4.2 \times 10^{-3}\ day^{-1}$

(4) $4.2 \times 10^{-4}\ day^{-1}$

**Options :**

76878138125. 1

76878138126. 2

76878138127. 3

76878138128. 4

**Question Number : 108 Question Id : 7687819785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement.

(1) Bulk density is used as a measure of soil structure.

(2) Cubic arrangements of uniform spherical grains provide more porosity compared to rhombohedral arrangements of packing of similar grains.

(3) Basic principle of anion exchange in soil is similar to those of cation exchange.

(4) Cation exchange capacity depends on concentration of cations in soil solution and it is independent of adsorption affinity of cations for the exchange site.

**Options :**

76878138129. 1

76878138130. 2

76878138131. 3

76878138132. 4

**Question Number : 108 Question Id : 7687819785 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement.

(1) Bulk density is used as a measure of soil structure.

(2) Cubic arrangements of uniform spherical grains provide more porosity compared to rhombohedral arrangements of packing of similar grains.

(3) Basic principle of anion exchange in soil is similar to those of cation exchange.

(4) Cation exchange capacity depends on concentration of cations in soil solution and it is independent of adsorption affinity of cations for the exchange site.

**Options :**

76878138129. 1

76878138130. 2

76878138131. 3

76878138132. 4

**Question Number : 109 Question Id : 7687819786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements related to soil chemistry.

A. $Mn^{2+}$ is far less soluble than $Mn^{4+}$ in soil solution.

B. $AlOH^{2+}$ and $Al(OH)_2^{+}$ exist in soil solution only when pH of soil is around 5 or less.

C. Application of $Ca(OH)_2$ helps in reducing $Al^{3+}$ toxicity.

D. Microbial degradation of elemental S causes soil acidity.

E. Microbial degradation of ammonia based fertilizers helps in neutralization of soil acidity.

Choose the **most appropriate** answer from the options given below:

(1) A, D and E only

(2) B, C and D only

(3) C, D and E only

(4) A, B, C and D only

**Options :**

76878138133. 1

76878138134. 2

76878138135. 3

76878138136. 4

**Question Number : 109 Question Id : 7687819786 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statements related to soil chemistry.

A. $Mn^{2+}$ is far less soluble than $Mn^{4+}$ in soil solution.

B. $AlOH^{2+}$ and $Al(OH)_2^{+}$ exist in soil solution only when pH of soil is around 5 or less.

C. Application of $Ca(OH)_2$ helps in reducing $Al^{3+}$ toxicity.

D. Microbial degradation of elemental S causes soil acidity.

E. Microbial degradation of ammonia based fertilizers helps in neutralization of soil acidity.

Choose the **most appropriate** answer from the options given below:

(1) A, D and E only

(2) B, C and D only

(3) C, D and E only

(4) A, B, C and D only

**Options :**

76878138133. 1

76878138134. 2

76878138135. 3

76878138136. 4

**Question Number : 110 Question Id : 7687819787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement.

(1) Pyrolysis is used to make charcoal and coke.

(2) Pyrolysis of waste is primarily an exothermic reaction.

(3) Residue of incomplete organic pyrolysis helps to improve soil texture and nutrient status.

(4) Pyrolysis of organic material does not directly produce synthetic biofuel.

**Options :**

76878138137. 1

76878138138. 2

76878138139. 3

76878138140. 4

**Question Number : 110 Question Id : 7687819787 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement.

(1) Pyrolysis is used to make charcoal and coke.

(2) Pyrolysis of waste is primarily an exothermic reaction.

(3) Residue of incomplete organic pyrolysis helps to improve soil texture and nutrient status.

(4) Pyrolysis of organic material does not directly produce synthetic biofuel.

**Options :**

76878138137. 1

76878138138. 2

76878138139. 3

76878138140. 4

**Question Number : 111 Question Id : 7687819788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Chemical detoxification is a treatment technology, either employed as treatment procedure or used to reduce hazard of a particular waste prior to transport, incineration or burial. Which of the following is INCORRECT in this context?

(1) Ozone and chlorine are frequently used oxidisers for chemical detoxification process

(2) Neutralization process helps in reducing hazard of the waste.

(3) Metals from plating rinse waters can be removed by precipitation process by applying solubility product principle.

(4) Oxidation of Cr(III) to Cr(VI) is employed to reduce toxicity of chromium rich waste.

**Options :**

76878138141. 1

76878138142. 2

76878138143. 3

76878138144. 4

**Question Number : 111 Question Id : 7687819788 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Chemical detoxification is a treatment technology, either employed as treatment procedure or used to reduce hazard of a particular waste prior to transport, incineration or burial. Which of the following is INCORRECT in this context?

(1) Ozone and chlorine are frequently used oxidisers for chemical detoxification process

(2) Neutralization process helps in reducing hazard of the waste.

(3) Metals from plating rinse waters can be removed by precipitation process by applying solubility product principle.

(4) Oxidation of Cr(III) to Cr(VI) is employed to reduce toxicity of chromium rich waste.

**Options :**

76878138141. 1

76878138142. 2

76878138143. 3

76878138144. 4

**Question Number : 112 Question Id : 7687819789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Landfill liners are constructed using clay layers to restrict leachates. Time after which leachates pass through the liners is called as breakthrough time (t) which is calculated using _____.

(T = Thickness of clay layer (m), $\eta$ = Clay liner porosity, K = Hydraulic conductivity (m/year), H = Depth of leachate above liner (m))

(1) $t = \frac{H+T}{\eta}$

(2) $t = \frac{T^2\eta}{K(H+T)}$

(3) $t = \frac{\eta}{K(H+T)}$

(4) $t = \frac{T^2\eta}{KH}$

**Options :**

76878138145. 1

76878138146. 2

76878138147. 3

76878138148. 4

**Question Number : 112 Question Id : 7687819789 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Landfill liners are constructed using clay layers to restrict leachates. Time after which leachates pass through the liners is called as breakthrough time (t) which is calculated using _____.

(T = Thickness of clay layer (m), $\eta$ = Clay liner porosity, K = Hydraulic conductivity (m/year), H = Depth of leachate above liner (m))

(1) $t = \frac{H+T}{\eta}$

(2) $t = \frac{T^2\eta}{K(H+T)}$

(3) $t = \frac{\eta}{K(H+T)}$

(4) $t = \frac{T^2\eta}{KH}$

**Options :**

76878138145. 1

76878138146. 2

76878138147. 3

76878138148. 4

**Question Number : 113 Question Id : 7687819790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is quickest and most economical waste collection method in urban areas across the world ?

(1) Backyard pickup method

(2) Set-out collection method

(3) Curbside or alley pickup method

(4) Set-back collection method

**Options :**

76878138149. 1

76878138150. 2

76878138151. 3

76878138152. 4

**Question Number : 113 Question Id : 7687819790 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is quickest and most economical waste collection method in urban areas across the world ?

(1) Backyard pickup method

(2) Set-out collection method

(3) Curbside or alley pickup method

(4) Set-back collection method

**Options :**

76878138149. 1

76878138150. 2

76878138151. 3

76878138152. 4

**Question Number : 114 Question Id : 7687819791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about plastics.

(1) All polymers are plastics and vice-versa.

(2) Any plastic less than 5 millimeter in size is referred to as microplastics.

(3) Incineration process can be used as plastic waste disposal, though it is energy intensive.

(4) In general, intrinsic polymers are relatively easy to biodegrade as compared to extrinsic polymers.

**Options :**

76878138153. 1

76878138154. 2

76878138155. 3

76878138156. 4

**Question Number : 114 Question Id : 7687819791 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the INCORRECT statement about plastics.

(1) All polymers are plastics and vice-versa.

(2) Any plastic less than 5 millimeter in size is referred to as microplastics.

(3) Incineration process can be used as plastic waste disposal, though it is energy intensive.

(4) In general, intrinsic polymers are relatively easy to biodegrade as compared to extrinsic polymers.

**Options :**

76878138153. 1

76878138154. 2

76878138155. 3

76878138156. 4

**Question Number : 115 Question Id : 7687819792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following wastes are NOT hazardous solid waste as per Resource Conservation and Recovery Act (RCRA)?

A. Arsenic treated wood

B. Agricultural waste returned to the soil as fertilizer

C. Fly ash, Scrubber sludge

D. Petroleum-contaminated media and debris

E. Used chlorofluorocarbon refrigerants

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C, D and E

(3) A, C and E only

(4) B, C and E only

**Options :**

76878138157. 1

76878138158. 2

76878138159. 3

76878138160. 4

**Question Number : 115 Question Id : 7687819792 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following wastes are NOT hazardous solid waste as per Resource Conservation and Recovery Act (RCRA)?

A. Arsenic treated wood

B. Agricultural waste returned to the soil as fertilizer

C. Fly ash, Scrubber sludge

D. Petroleum-contaminated media and debris

E. Used chlorofluorocarbon refrigerants

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C, D and E

(3) A, C and E only

(4) B, C and E only

**Options :**

76878138157. 1

76878138158. 2

76878138159. 3

76878138160. 4

**Question Number : 116 Question Id : 7687819793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Terms associate with landfill)** | **List II (Definition)** |
|---|---|
| A. Lift | I. is formed by the waste and the daily cover placed in a landfill during one operation period. |
| B. Bench | II. The waste is dumped by collection and transfer vehicles onto the working _____. |
| C. Cell | III. refers to placement of a layer of waste or the completion of the horizontal active area of the landfill. |
| D. Face | IV. is used where height of landfill exceeds 15-20 m and are used to maintain slope stability of a landfill. |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-IV, B-III, C-II, D-I

(3) A-III, B-IV, C-I, D-II

(4) A-IV, B-II, C-III, D-I

**Options :**

76878138161. 1

76878138162. 2

76878138163. 3

76878138164. 4

**Question Number : 116 Question Id : 7687819793 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I (Terms associate with landfill)** | **List II (Definition)** |
|---|---|
| A. Lift | I. is formed by the waste and the daily cover placed in a landfill during one operation period. |
| B. Bench | II. The waste is dumped by collection and transfer vehicles onto the working _____. |
| C. Cell | III. refers to placement of a layer of waste or the completion of the horizontal active area of the landfill. |
| D. Face | IV. is used where height of landfill exceeds 15-20 m and are used to maintain slope stability of a landfill. |

Choose the **correct** answer from the options given below:

(1) A-II, B-IV, C-I, D-III

(2) A-IV, B-III, C-II, D-I

(3) A-III, B-IV, C-I, D-II

(4) A-IV, B-II, C-III, D-I

**Options :**

76878138161. 1

76878138162. 2

76878138163. 3

76878138164. 4

**Question Number : 117 Question Id : 7687819794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following major stages of waste degradation in landfills from last to initial

A. Hydrolysis and fermentation

B. Aerobic degradation/Aerobic phase

C. Acetogenesis

D. Unsteady methanogenesis

E. Steady methanogenesis

Choose the **correct** answer from the options given below:

(1) B, A, C, D, E

(2) D, E, C, A, B

(3) E, D, C, A, B

(4) E, D, A, C, B

**Options :**

76878138165. 1

76878138166. 2

76878138167. 3

76878138168. 4

**Question Number : 117 Question Id : 7687819794 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following major stages of waste degradation in landfills from last to initial

A. Hydrolysis and fermentation

B. Aerobic degradation/Aerobic phase

C. Acetogenesis

D. Unsteady methanogenesis

E. Steady methanogenesis

Choose the **correct** answer from the options given below:

(1) B, A, C, D, E

(2) D, E, C, A, B

(3) E, D, C, A, B

(4) E, D, A, C, B

**Options :**

76878138165. 1

76878138166. 2

76878138167. 3

76878138168. 4

**Question Number : 118 Question Id : 7687819795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following wastes in increasing order of their net heating values (MJ/kg).

A. Garbage

B. Wood (oak)

C. Sewage gas (density = 1.05 $kg/m^3$)

D. Methane (density = 0.68 $kg/m^3$)

E. Municipal solid waste (MSW)

Choose the **correct** answer from the options given below:

(1) A, B, E, C, D

(2) A, E, B, C, D

(3) A, E, C, B, D

(4) D, C, B, E, A

**Options :**

76878138169. 1

76878138170. 2

76878138171. 3

76878138172. 4

**Question Number : 118 Question Id : 7687819795 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following wastes in increasing order of their net heating values (MJ/kg).

A. Garbage

B. Wood (oak)

C. Sewage gas (density = 1.05 $kg/m^3$)

D. Methane (density = 0.68 $kg/m^3$)

E. Municipal solid waste (MSW)

Choose the **correct** answer from the options given below:

(1) A, B, E, C, D

(2) A, E, B, C, D

(3) A, E, C, B, D

(4) D, C, B, E, A

**Options :**

76878138169. 1

76878138170. 2

76878138171. 3

76878138172. 4

**Question Number : 119 Question Id : 7687819796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I**<br>**(Term used in EIA)** | **List II**<br>**(Meaning)** |
|---|---|
| A. Scoping | I. Auditing and monitoring |
| B. Environmental management system | II. Identification of potential for significant environmental impact of set of alternatives |
| C. Public participation | III. Identification of what is important and not important for analysis |
| D. Impact analysis | IV. Questionnaire based opinion survey |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-III, B-I, C-IV, D-II

(3) A-II, B-I, C-IV, D-III

(4) A-I, B-III, C-II, D-IV

**Options :**

76878138173. 1

76878138174. 2

76878138175. 3

76878138176. 4

**Question Number : 119 Question Id : 7687819796 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I**<br>**(Term used in EIA)** | **List II**<br>**(Meaning)** |
|---|---|
| A. Scoping | I. Auditing and monitoring |
| B. Environmental management system | II. Identification of potential for significant environmental impact of set of alternatives |
| C. Public participation | III. Identification of what is important and not important for analysis |
| D. Impact analysis | IV. Questionnaire based opinion survey |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-III, B-I, C-IV, D-II

(3) A-II, B-I, C-IV, D-III

(4) A-I, B-III, C-II, D-IV

**Options :**

76878138173. 1

76878138174. 2

76878138175. 3

76878138176. 4

**Question Number : 120 Question Id : 7687819797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I** | **List II** |
|---|---|
| A. Battele Environmental Evaluation system | I. There are 100 types of Impacts and 88 environmental characteristic, where the environmental impact is anticipated by marking a diagonal line showing the magnitude and importance of the impact. |
| B. Sorensen's Network Method | II. Data on a fixed unit of environmental factors are scaled in an interval and thereafter normalized over maximum and minimum values to determine its weight. |
| C. Scaling and weighing method | III. Obtaining baseline data on 78 environmental factors and converting the data into Environmental quality (EQ) scale values. |
| D. Leopold's Matrix method | IV. Presents potential impacts pathways as casual chains into primary, secondary and tertiary impacts. |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-II, B-III, C-I, D-IV

(3) A-IV, B-I, C-III, D-II

(4) [illegible]

(4) A-I, B-II, C-IV, D-III

**Options :**

76878138177. 1

76878138178. 2

76878138179. 3

76878138180. 4

**Question Number : 120 Question Id : 7687819797 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I** | **List II** |
|---|---|
| A. Battele Environmental Evaluation system | I. There are 100 types of Impacts and 88 environmental characteristic, where the environmental impact is anticipated by marking a diagonal line showing the magnitude and importance of the impact. |
| B. Sorensen's Network Method | II. Data on a fixed unit of environmental factors are scaled in an interval and thereafter normalized over maximum and minimum values to determine its weight. |
| C. Scaling and weighing method | III. Obtaining baseline data on 78 environmental factors and converting the data into Environmental quality (EQ) scale values. |
| D. Leopold's Matrix method | IV. Presents potential impacts pathways as casual chains into primary, secondary and tertiary impacts. |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-II, B-III, C-I, D-IV

(3) A-IV, B-I, C-III, D-II

(4) [illegible]

(4) A-I, B-II, C-IV, D-III

**Options :**

76878138177. 1

76878138178. 2

76878138179. 3

76878138180. 4

**Question Number : 121 Question Id : 7687819798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following conventions/conferences in a chronological order starting from old to recent as per their years of occurrence.

A. The Millennium Summit (Millennium Declaration) at New York

B. United Nations Conference on Sustainable Development (UNCSD) at Rio

C. United Nations Conference on Human Settlements

D. United Nations Conference on Environment and Development (UNCED), also known as Earth Summit, at Rio

E. Stockholm Convention on Persistent Organic Pollutants

Choose the **correct** answer from the options given below:

(1) A, D, B, C, E

(2) D, A, B, E, C

(3) D, C, A, E, B

(4) D, A, B, C, E

**Options :**

76878138181. 1

76878138182. 2

76878138183. 3
76878138184. 4

**Question Number : 121 Question Id : 7687819798 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following conventions/conferences in a chronological order starting from old to recent as per their years of occurrence.

A. The Millennium Summit (Millennium Declaration) at New York

B. United Nations Conference on Sustainable Development (UNCSD) at Rio

C. United Nations Conference on Human Settlements

D. United Nations Conference on Environment and Development (UNCED), also known as Earth Summit, at Rio

E. Stockholm Convention on Persistent Organic Pollutants

Choose the **correct** answer from the options given below:

(1) A, D, B, C, E

(2) D, A, B, E, C

(3) D, C, A, E, B

(4) D, A, B, C, E

**Options :**

76878138181. 1
76878138182. 2
76878138183. 3
76878138184. 4

**Question Number : 122 Question Id : 7687819799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is not a part of risk assessment?

(1) Dose-response Assessment

(2) Risk Evaluation and management

(3) Exposure Assessment

(4) Hazard Identification

**Options :**

76878138185. 1

76878138186. 2

76878138187. 3

76878138188. 4

**Question Number : 122 Question Id : 7687819799 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is not a part of risk assessment?

(1) Dose-response Assessment

(2) Risk Evaluation and management

(3) Exposure Assessment

(4) Hazard Identification

**Options :**

76878138185. 1

76878138186. 2

76878138187. 3

76878138188. 4

**Question Number : 123 Question Id : 7687819800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Environmental Protection Act was enacted in the year 1986 in India under provision of article_____ of the Constitution of India.

(1) 48

(2) 51(A) g

(3) 253

(4) 153

**Options :**

76878138189. 1

76878138190. 2

76878138191. 3

76878138192. 4

**Question Number : 123 Question Id : 7687819800 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Environmental Protection Act was enacted in the year 1986 in India under provision of article_____ of the Constitution of India.

(1) 48

(2) 51(A) g

(3) 253

(4) 153

**Options :**

76878138189. 1

76878138190. 2

76878138191. 3

76878138192. 4

**Question Number : 124 Question Id : 7687819801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following project category does not require to submit EIA report as per EIA 2006 notification and its subsequent amendments in India?

(1) Category A

(2) Category B1

(3) Category B2

(4) Category C

**Options :**

76878138193. 1

76878138194. 2

76878138195. 3

76878138196. 4

**Question Number : 124 Question Id : 7687819801 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following project category does not require to submit EIA report as per EIA 2006 notification and its subsequent amendments in India?

(1) Category A

(2) Category B1

(3) Category B2

(4) Category C

**Options :**

76878138193. 1

76878138194. 2

76878138195. 3

76878138196. 4

**Question Number : 125 Question Id : 7687819802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I**<br>**Principle number of the Rio declaration** | **List II**<br>**Linked to** |
|---|---|
| A. Principle 10 | I. The "Polluter Pays Principle" |
| B. Principle 15 | II. Need for impact assessment |
| C. Principle 16 | III. Importance of involving the public in planning and decision making |
| D. Principle 17 | IV. Concept of the "Precautionary Principle" |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-III, B-IV, C-I, D-II

(3) A-II, B-III, C-I, D-IV

(4) A-I, B-IV, C-II, D-III

**Options :**

76878138197. 1

76878138198. 2

76878138199. 3

76878138200. 4

**Question Number : 125 Question Id : 7687819802 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| **List I**<br>**Principle number of the Rio declaration** | **List II**<br>**Linked to** |
|---|---|
| A. Principle 10 | I. The "Polluter Pays Principle" |
| B. Principle 15 | II. Need for impact assessment |
| C. Principle 16 | III. Importance of involving the public in planning and decision making |
| D. Principle 17 | IV. Concept of the "Precautionary Principle" |

Choose the **correct** answer from the options given below:

(1) A-III, B-IV, C-II, D-I

(2) A-III, B-IV, C-I, D-II

(3) A-II, B-III, C-I, D-IV

(4) A-I, B-IV, C-II, D-III

**Options :**

76878138197. 1

76878138198. 2

76878138199. 3

76878138200. 4

**Question Number : 126 Question Id : 7687819803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I: EIA related case | List II: Legal/Environmental Principle |
|---|---|
| A. Goa Foundation case | I. Development vs Displacement and public hearing gaps |
| B. Lafarge Umiam Mining | II. Environmental clearance and pollution control failure |
| C. Narmada Bachao Andolan | III. Forest clearance and rights of tribal communities |
| D. Sterlite Copper Thoothukudi | IV. Mining ban due to unsustainable extraction principles |

Choose the **correct** answer from the options given below:

(1) A-II, B-III, C-I, D-IV

(2) A-IV, B-III, C-I, D-II

(3) A-IV, B-I, C-III, D-II

(4) A-II, B-I, C-III, D-IV

**Options :**

76878138201. 1

76878138202. 2

76878138203. 3

76878138204. 4

**Question Number : 126 Question Id : 7687819803 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I: EIA related case | List II: Legal/Environmental Principle |
|---|---|
| A. Goa Foundation case | I. Development vs Displacement and public hearing gaps |
| B. Lafarge Umiam Mining | II. Environmental clearance and pollution control failure |
| C. Narmada Bachao Andolan | III. Forest clearance and rights of tribal communities |
| D. Sterlite Copper Thoothukudi | IV. Mining ban due to unsustainable extraction principles |

Choose the **correct** answer from the options given below:

(1) A-II, B-III, C-I, D-IV

(2) A-IV, B-III, C-I, D-II

(3) A-IV, B-I, C-III, D-II

(4) A-II, B-I, C-III, D-IV

**Options :**

76878138201. 1

76878138202. 2

76878138203. 3

76878138204. 4

**Question Number : 127 Question Id : 7687819804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Lotka Volterra Equations (LVEs) expresses mathematical relationship between prey and predators. Which of the following statements are TRUE with respect to different parts of LVEs and parameters utilized for relationship?

A. LVEs are pair of first order liner differential equations.

B. The parameters used for expressing mathematical relationship in LVEs are of positive real nature.

C. Predation rate is NOT proportional to rate at which predator and prey meet.

D. Prey have access to unlimited food supply and their reproduction rate is exponentially distributed.

E. The rate of change of prey's population is given by substracting prey's growth rate from the rate at which it is preyed upon.

Choose the **most appropriate** answer from the options given below:

(1) A and D only

(2) C and E only

(3) A and C only

(4) B and D only

**Options :**

76878138205. 1

76878138206. 2

76878138207. 3

76878138208. 4

**Question Number : 127 Question Id : 7687819804 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Lotka Volterra Equations (LVEs) expresses mathematical relationship between prey and predators. Which of the following statements are TRUE with respect to different parts of LVEs and parameters utilized for relationship?

A. LVEs are pair of first order liner differential equations.

B. The parameters used for expressing mathematical relationship in LVEs are of positive real nature.

C. Predation rate is NOT proportional to rate at which predator and prey meet.

D. Prey have access to unlimited food supply and their reproduction rate is exponentially distributed.

E. The rate of change of prey's population is given by substracting prey's growth rate from the rate at which it is preyed upon.

Choose the **most appropriate** answer from the options given below:

(1) A and D only

(2) C and E only

(3) A and C only

(4) B and D only

**Options :**

76878138205. 1

76878138206. 2

76878138207. 3

76878138208. 4

**Question Number : 128 Question Id : 7687819805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are TRUE with the respect to relationship across given statistical distributions.

A. The degrees of freedom for testing significant difference between two independent means in groups of 50 cases each is 96.

B. In Fischer's 't', the degrees of freedom is different from the degrees of freedom of Chi-Square variate.

C. Fischer's 't' is the ratio of standard normal deviate to the square root of an independent Chi-Square variate multiplied by its degree of freedom.

D. For large degrees of freedom, t-distribution tends to follow standard normal distribution.

E. In obtaining $\chi^2$ value for N observations, "coefficient of mean square contingency" is always less than UNITY.

Choose the **most appropriate** answer from the options given below:

(1) A and B only

(2) D and E only

(3) C and E only

(4) B and D only

**Options :**

76878138209. 1

76878138210. 2

76878138211. 3

76878138212. 4

**Question Number : 128 Question Id : 7687819805 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following statements are TRUE with the respect to relationship across given statistical distributions.

A. The degrees of freedom for testing significant difference between two independent means in groups of 50 cases each is 96.

B. In Fischer's 't', the degrees of freedom is different from the degrees of freedom of Chi-Square variate.

C. Fischer's 't' is the ratio of standard normal deviate to the square root of an independent Chi-Square variate multiplied by its degree of freedom.

D. For large degrees of freedom, t-distribution tends to follow standard normal distribution.

E. In obtaining $\chi^2$ value for N observations, "coefficient of mean square contingency" is always less than UNITY.

Choose the **most appropriate** answer from the options given below:

(1) A and B only

(2) D and E only

(3) C and E only

(4) B and D only

**Options :**

76878138209. 1

76878138210. 2

76878138211. 3

76878138212. 4

**Question Number : 129 Question Id : 7687819806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Following are the summary statistics estimated in a certain situation from data. Arrange the quantitative values of these summary statistics in ascending order of their values

A. $39^{th}$ percentile

B. $3^{rd}$ Quintile

C. $2^{nd}$ Decile

D. $3^{rd}$ Quartile

E. Median

Choose the **correct** answer from the options given below:

(1) B, C, D, A, E

(2) B, D, A, E, C

(3) C, A, E, B, D

(4) E, D, A, B, C

**Options :**

76878138213. 1

76878138214. 2

76878138215. 3

76878138216. 4

**Question Number : 129 Question Id : 7687819806 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Following are the summary statistics estimated in a certain situation from data. Arrange the quantitative values of these summary statistics in ascending order of their values

A. $39^{th}$ percentile

B. $3^{rd}$ Quintile

C. $2^{nd}$ Decile

D. $3^{rd}$ Quartile

E. Median

Choose the **correct** answer from the options given below:

(1) B, C, D, A, E

(2) B, D, A, E, C

(3) C, A, E, B, D

(4) E, D, A, B, C

**Options :**

76878138213. 1

76878138214. 2

76878138215. 3

76878138216. 4

**Question Number : 130 Question Id : 7687819807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Z-distribution) | List II (Characteristics) |
|---|---|
| A. Mean | I. Observed value (x) > mean |
| B. Standard Deviation | II. Observed value (x) < mean |
| C. Positive Z-value | III. 0 |
| D. Negative Z-value | IV. 1 |

Choose the **correct** answer from the options given below:

(1) A-IV, B-I, C-III, D-II

(2) A-I, B-III, C-II, D-IV

(3) A-IV, B-III, C-II, D-I

(4) A-III, B-IV, C-I, D-II

**Options :**

76878138217. 1

76878138218. 2

76878138219. 3

76878138220. 4

**Question Number : 130 Question Id : 7687819807 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Z-distribution) | List II (Characteristics) |
|---|---|
| A. Mean | I. Observed value (x) > mean |
| B. Standard Deviation | II. Observed value (x) < mean |
| C. Positive Z-value | III. 0 |
| D. Negative Z-value | IV. 1 |

Choose the **correct** answer from the options given below:

(1) A-IV, B-I, C-III, D-II

(2) A-I, B-III, C-II, D-IV

(3) A-IV, B-III, C-II, D-I

(4) A-III, B-IV, C-I, D-II

**Options :**

76878138217. 1

76878138218. 2

76878138219. 3

76878138220. 4

**Question Number : 131 Question Id : 7687819808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Data Example) | List II (Data Attributes) |
|---|---|
| A. Amount of rainfall | I. Alpha Numeric |
| B. Status of mortality in an earthquake event | II. Continuous |
| C. Speech given by an environmental expert | III. Discrete |
| D. Number of health workers in a disaster management team | IV. Binomial |

Choose the **correct** answer from the options given below:

(1) A-III, B-II, C-I, D-IV

(2) A-II, B-IV, C-I, D-III

(3) A-IV, B-III, C-II, D-I

(4) A-IV, B-II, C-I, D-III

**Options :**

76878138221. 1

76878138222. 2

76878138223. 3

76878138224. 4

**Question Number : 131 Question Id : 7687819808 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Match **List I** with **List II**

| List I (Data Example) | List II (Data Attributes) |
|---|---|
| A. Amount of rainfall | I. Alpha Numeric |
| B. Status of mortality in an earthquake event | II. Continuous |
| C. Speech given by an environmental expert | III. Discrete |
| D. Number of health workers in a disaster management team | IV. Binomial |

Choose the **correct** answer from the options given below:

(1) A-III, B-II, C-I, D-IV

(2) A-II, B-IV, C-I, D-III

(3) A-IV, B-III, C-II, D-I

(4) A-IV, B-II, C-I, D-III

**Options :**

76878138221. 1

76878138222. 2

76878138223. 3

76878138224. 4

**Question Number : 132 Question Id : 7687819809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement about $O_3$ chemistry in stratosphere.

A. Third molecule such as $N_2$ or $H_2O$ carry away the heat generated during ozone formation.

B. Conversion of inactive to active chlorine occurs at the surface of particles formed by a solution of water.

C. Process of denitrification in lower stratosphere enhances/helps in ozone destruction.

D. $OH/H_2O$ is a catalytic cycle for ozone destruction.

E. $[O_3]_{ss}/[O_2]_{ss}$ ratio is directly proportional to air density through third body molecules [M], not involved in ozone formation/destruction process.

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) A, B and C only

(4) A, C and D only

**Options :**

76878138225. 1

76878138226. 2

76878138227. 3

76878138228. 4

**Question Number : 132 Question Id : 7687819809 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement about $O_3$ chemistry in stratosphere.

A. Third molecule such as $N_2$ or $H_2O$ carry away the heat generated during ozone formation.

B. Conversion of inactive to active chlorine occurs at the surface of particles formed by a solution of water.

C. Process of denitrification in lower stratosphere enhances/helps in ozone destruction.

D. $OH/H_2O$ is a catalytic cycle for ozone destruction.

E. $[O_3]_{ss}/[O_2]_{ss}$ ratio is directly proportional to air density through third body molecules [M], not involved in ozone formation/destruction process.

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) A, B and C only

(4) A, C and D only

**Options :**

76878138225. 1

76878138226. 2

76878138227. 3

76878138228. 4

**Question Number : 133 Question Id : 7687819810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are geoengineering methods related to solar radiation management to mitigate global warming?

A. Ocean Iron Fertilization

B. Space mirrors

C. Cloud seeding

D. Injection of scattering aerosols in the stratosphere

E. Capturing of atmospheric $CO_2$ and its storage

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) B, C and D only

(4) C and D only

**Options :**

76878138229. 1

76878138230. 2

76878138231. 3

76878138232. 4

**Question Number : 133 Question Id : 7687819810 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are geoengineering methods related to solar radiation management to mitigate global warming?

A. Ocean Iron Fertilization

B. Space mirrors

C. Cloud seeding

D. Injection of scattering aerosols in the stratosphere

E. Capturing of atmospheric $CO_2$ and its storage

Choose the **most appropriate** answer from the options given below:

(1) A, B, C and D only

(2) A, B, C and E only

(3) B, C and D only

(4) C and D only

**Options :**

76878138229. 1

76878138230. 2

76878138231. 3

76878138232. 4

**Question Number : 134 Question Id : 7687819811 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following wildlife conservation projects in India from old to new as per their launch year.

A. Project Great Indian Bustard

B. Project Tiger

C. Project Hangul

D. Project Snow Leopard

E. Project Elephant

Choose the **correct** answer from the options given below:

(1) A, D, E, B, C

(2) D, A, E, B, C

(3) B, C, E, A, D

(4) C, B, E, D, A

**Options :**

76878138233. 1

76878138234. 2

76878138235. 3

76878138236. 4

**Question Number : 134 Question Id : 7687819811 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Arrange the following wildlife conservation projects in India from old to new as per their launch year.

A. Project Great Indian Bustard

B. Project Tiger

C. Project Hangul

D. Project Snow Leopard

E. Project Elephant

Choose the **correct** answer from the options given below:

(1) A, D, E, B, C

(2) D, A, E, B, C

(3) B, C, E, A, D

(4) C, B, E, D, A

**Options :**

76878138233. 1

76878138234. 2

76878138235. 3

76878138236. 4

**Question Number : 135 Question Id : 7687819812 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Greenhouse gases in troposphere cause rise in global average surface temperature. Arrange the following gases in decreasing order of extra warming they have contributed (in percent) to the total anthropogenic effect.

A. $CO_2$

B. $N_2O$

C. $O_3$

D. $CH_4$

E. CFCs

Choose the **correct** answer from the options given below:

(1) A, D, E, C, B

(2) A, D, C, E, B

(3) A, D, B, E, C

(4) A, C, D, E, B

**Options :**

76878138237. 1

76878138238. 2

76878138239. 3

76878138240. 4

**Question Number : 135 Question Id : 7687819812 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Greenhouse gases in troposphere cause rise in global average surface temperature. Arrange the following gases in decreasing order of extra warming they have contributed (in percent) to the total anthropogenic effect.

A. $CO_2$

B. $N_2O$

C. $O_3$

D. $CH_4$

E. CFCs

Choose the **correct** answer from the options given below:

(1) A, D, E, C, B

(2) A, D, C, E, B

(3) A, D, B, E, C

(4) A, C, D, E, B

**Options :**

76878138237. 1

76878138238. 2

76878138239. 3

76878138240. 4

**Question Number : 136 Question Id : 7687819813 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are part of National Action Plan of Climate Change in India?

A. National Water Mission

B. National Solar Mission

C. National Mission for Enhanced Energy Efficiency

D. National Mission on Sustaining the Himalayan Ecosystem

E. National Mission on Green Hydrogen

Choose the **correct** answer from the options given below:

(1) B, C and E only

(2) A, B, C and D only

(3) A, B, C and E only

(4) B, C, D and E only

**Options :**

76878138241. 1

76878138242. 2

76878138243. 3

76878138244. 4

**Question Number : 136 Question Id : 7687819813 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following are part of National Action Plan of Climate Change in India?

A. National Water Mission

B. National Solar Mission

C. National Mission for Enhanced Energy Efficiency

D. National Mission on Sustaining the Himalayan Ecosystem

E. National Mission on Green Hydrogen

Choose the **correct** answer from the options given below:

(1) B, C and E only

(2) A, B, C and D only

(3) A, B, C and E only

(4) B, C, D and E only

**Options :**

76878138241. 1

76878138242. 2

76878138243. 3

76878138244. 4

**Question Number : 137 Question Id : 7687819814 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement about various national/international movements.

A. Comprehensive Environmental Response Compensation and Liability Act (CERCLA) helped in initiating the Love Canal movement.

B. Sailent Valley movement started in the state of Kerla.

C. Apiko movement, similar to Chipko, started in Karnataka in the year 1973.

D. Gandhamardan movement was about protecting biodiversity against Bauxite mining.

E. Gandhamardan movement was led by Shri Panduranga Hegde.

Choose the **correct** answer from the options given below:

(1) A, C and D only

(2) B and E only

(3) B and D only

(4) A, B, D and E only

**Options :**

76878138245. 1

76878138246. 2

76878138247. 3

76878138248. 4

**Question Number : 137 Question Id : 7687819814 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement about various national/international movements.

A. Comprehensive Environmental Response Compensation and Liability Act (CERCLA) helped in initiating the Love Canal movement.

B. Sailent Valley movement started in the state of Kerla.

C. Apiko movement, similar to Chipko, started in Karnataka in the year 1973.

D. Gandhamardan movement was about protecting biodiversity against Bauxite mining.

E. Gandhamardan movement was led by Shri Panduranga Hegde.

Choose the **correct** answer from the options given below:

(1) A, C and D only

(2) B and E only

(3) B and D only

(4) A, B, D and E only

**Options :**

76878138245. 1

76878138246. 2

76878138247. 3

76878138248. 4

**Question Number : 138 Question Id : 7687819815 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following radioactive isotopes was not released as a primary fission product in environment during Fukushima Daiichi nuclear disaster 2011?

(1) $^{131}I$

(2) $^{134}Cs$

(3) $^{137}Cs$

(4) $^{214}Pb$

**Options :**

76878138249. 1

76878138250. 2

76878138251. 3

76878138252. 4

**Question Number : 138 Question Id : 7687819815 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following radioactive isotopes was not released as a primary fission product in environment during Fukushima Daiichi nuclear disaster 2011?

(1) $^{131}I$

(2) $^{134}Cs$

(3) $^{137}Cs$

(4) $^{214}Pb$

**Options :**

76878138249. 1

76878138250. 2

76878138251. 3

76878138252. 4

**Question Number : 139 Question Id : 7687819816 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Addition of beneficial microorganisms into groundwater to increase the rate and extent of biodegradation is referred to as_____.

(1) Biomagnification

(2) Bioaugmentation

(3) Bioventing

(4) Biostimulation

**Options :**

76878138253. 1

76878138254. 2

76878138255. 3

76878138256. 4

**Question Number : 139 Question Id : 7687819816 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Addition of beneficial microorganisms into groundwater to increase the rate and extent of biodegradation is referred to as_____.

(1) Biomagnification

(2) Bioaugmentation

(3) Bioventing

(4) Biostimulation

**Options :**

76878138253. 1

76878138254. 2

76878138255. 3

76878138256. 4

**Question Number : 140 Question Id : 7687819817 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement about desertification.

(1) Desertification is caused by converting semi-arid land to dryland crop production, for example dust bowl in United States.

(2) Desertification takes place within dryland region in a mosaic pattern rather than at the margins.

(3) Salinization of land through irrigation, and destruction of riparian ecosystems through diversion of river water for human use, can cause desertification.

(4) Drylands during desertification keeps carbon stored in soils of semi-arid and sub-humid regions intact, and thus do not contribute to greenhouse effect.

**Options :**

76878138257. 1

76878138258. 2

76878138259. 3

76878138260. 4

**Question Number : 140 Question Id : 7687819817 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the Incorrect statement about desertification.

(1) Desertification is caused by converting semi-arid land to dryland crop production, for example dust bowl in United States.

(2) Desertification takes place within dryland region in a mosaic pattern rather than at the margins.

(3) Salinization of land through irrigation, and destruction of riparian ecosystems through diversion of river water for human use, can cause desertification.

(4) Drylands during desertification keeps carbon stored in soils of semi-arid and sub-humid regions intact, and thus do not contribute to greenhouse effect.

**Options :**

76878138257. 1

76878138258. 2

76878138259. 3

76878138260. 4

| | |
|---|---|
| **Sub-Section Number :** | 2 |
| **Sub-Section Id :** | 768781381 |
| **Question Shuffling Allowed :** | No |
| **Is Section Default? :** | No |

**Question Id : 7687819818 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (141 to 145)**

**Read the following passage and answer the questions :**

Lentic systems e.g., lakes and reservoirs are closed ecosystems. Lakes generally have smaller volume and watershed area than reservoirs, and both have commonalities as well as differences in terms of watershed, maximum depth, mean depth and water residence time. Materials within lentic systems can be either autochthonous (originated within the system) or allochthonous (coming from somewhere else in watershed), and both plays important role in maintaining trophic state. Since density of water is temperature dependent, differential heating of water leads to differential vertical layering in lakes viz. epilimnion (uppermost), metalimnion (middle) and hypolimnion (bottom). Thermocline refers the area of steepest temperature gradient. Whereas, metalimnion is large region surrounding the thermocline where temperature gradient is steeper as compared to other two layers. Interaction between the epilimnion and hypolimnion often results in the formation of autochthonous feedback mechanisms. In almost every case, anoxia within hypolimnion mirrors epilimentic production so that increases in trophic state result in increased hypolimnion anoxia. The prolonged anoxia within hypolimnion results in reducing conditions that unbound the nutrients from sediments, and once again make it available for bio-uptake. However, due to usual thermal stratification, relatively limited nutrients are available for uptake by phytoplankton until the lentic body destratifies or "turn over". Algal "blooms" or sudden increases in biomass are common during this time. Algal "blooms" mean more organic material is available for recycling, adding to hypolimnion anoxia, and more availability of nutrients, thus establishing positive feedback loop.

**Sub questions**

**Question Number : 141 Question Id : 7687819819 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement.

(1) In general, epilimnion layer is denser than hypolimnion in lakes.

(2) Nutrients released from sediments within hypolimnion are referred as allochthonous.

(3) Metalimnion is a large region having higher rate of change of temperature in lakes.

(4) Thermocline and metalimnion are two separate middle layers in lakes.

**Options :**

76878138261. 1

76878138262. 2

76878138263. 3

76878138264. 4

**Question Number : 142 Question Id : 7687819820 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Agricultural runoff into an unstratified lake can _____.

(1) decrease epilimentic production

(2) increase hypolimnion anoxia

(3) negatively impact autochthonous nutrients recycling

(4) promote oxidizing conditions in hypolimnion

**Options :**

76878138265. 1

76878138266. 2

76878138267. 3

76878138268. 4

**Question Number : 143 Question Id : 7687819821 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is NOT correct?

(1) Lakes have relatively smaller watershed area than reservoirs.

(2) Reservoirs can accommodate large quantity of water as compared to lakes.

(3) Residence time of water is same in both reservoirs and lakes.

(4) Lakes and reservoirs can share some common attributes of water quality.

**Options :**

76878138269. 1

76878138270. 2

76878138271. 3

76878138272. 4

**Question Number : 144 Question Id : 7687819822 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement.

(1) Differential heating of water causes thermal stratification in lakes.

(2) Epilimnion contains high dissolved oxygen compared to hypolimnion.

(3) Density of water plays an important role in lake turn over.

(4) Lake turn over is not good for maintaining the health of lakes.

**Options :**

76878138273. 1

76878138274. 2

76878138275. 3

76878138276. 4

**Question Number : 145 Question Id : 7687819823 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Nutrients bound to materials within the lake sediments present in _____ become unbound under _____ conditions and again become available for biological uptake in lakes.

(1) epilimnion, anoxic

(2) hypolimnion, oxic

(3) hypolimnion, anoxic

(4) trophogenic area, reducing

**Options :**

76878138277. 1

76878138278. 2

76878138279. 3

76878138280. 4

**Question Id : 7687819818 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (141 to 145)**

**Read the following passage and answer the questions :**

Lentic systems e.g., lakes and reservoirs are closed ecosystems. Lakes generally have smaller volume and watershed area than reservoirs, and both have commonalities as well as differences in terms of watershed, maximum depth, mean depth and water residence time. Materials within lentic systems can be either autochthonous (originated within the system) or allochthonous (coming from somewhere else in watershed), and both plays important role in maintaining trophic state. Since density of water is temperature dependent, differential heating of water leads to differential vertical layering in lakes viz. epilimnion (uppermost), metalimnion (middle) and hypolimnion (bottom). Thermocline refers the area of steepest temperature gradient. Whereas, metalimnion is large region surrounding the thermocline where temperature gradient is steeper as compared to other two layers. Interaction between the epilimnion and hypolimnion often results in the formation of autochthonous feedback mechanisms. In almost every case, anoxia within hypolimnion mirrors epilimentic production so that increases in trophic state result in increased hypolimnion anoxia. The prolonged anoxia within hypolimnion results in reducing conditions that unbound the nutrients from sediments, and once again make it available for bio-uptake. However, due to usual thermal stratification, relatively limited nutrients are available for uptake by phytoplankton until the lentic body destratifies or "turn over". Algal "blooms" or sudden increases in biomass are common during this time. Algal "blooms" mean more organic material is available for recycling, adding to hypolimnion anoxia, and more availability of nutrients, thus establishing positive feedback loop.

**Sub questions**

**Question Number : 141 Question Id : 7687819819 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the correct statement.

(1) In general, epilimnion layer is denser than hypolimnion in lakes.

(2) Nutrients released from sediments within hypolimnion are referred as allochthonous.

(3) Metalimnion is a large region having higher rate of change of temperature in lakes.

(4) Thermocline and metalimnion are two separate middle layers in lakes.

**Options :**

76878138261. 1

76878138262. 2

76878138263. 3

76878138264. 4

**Question Number : 142 Question Id : 7687819820 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Agricultural runoff into an unstratified lake can _____.

(1) decrease epilimentic production

(2) increase hypolimnion anoxia

(3) negatively impact autochthonous nutrients recycling

(4) promote oxidizing conditions in hypolimnion

**Options :**

76878138265. 1

76878138266. 2

76878138267. 3

76878138268. 4

**Question Number : 143 Question Id : 7687819821 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which of the following is NOT correct?

(1) Lakes have relatively smaller watershed area than reservoirs.

(2) Reservoirs can accommodate large quantity of water as compared to lakes.

(3) Residence time of water is same in both reservoirs and lakes.

(4) Lakes and reservoirs can share some common attributes of water quality.

**Options :**

76878138269. 1

76878138270. 2

76878138271. 3

76878138272. 4

**Question Number : 144 Question Id : 7687819822 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Choose the incorrect statement.

(1) Differential heating of water causes thermal stratification in lakes.

(2) Epilimnion contains high dissolved oxygen compared to hypolimnion.

(3) Density of water plays an important role in lake turn over.

(4) Lake turn over is not good for maintaining the health of lakes.

**Options :**

76878138273. 1

76878138274. 2

76878138275. 3

76878138276. 4

**Question Number : 145 Question Id : 7687819823 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Nutrients bound to materials within the lake sediments present in _____ become unbound under _____ conditions and again become available for biological uptake in lakes.

(1) epilimnion, anoxic

(2) hypolimnion, oxic

(3) hypolimnion, anoxic

(4) trophogenic area, reducing

**Options :**

76878138277. 1

76878138278. 2

76878138279. 3

76878138280. 4

| | |
|---|---|
| **Sub-Section Number :** | 3 |
| **Sub-Section Id :** | 768781382 |
| **Question Shuffling Allowed :** | No |
| **Is Section Default? :** | No |

**Question Id : 7687819824 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (146 to 150)**

**Read the following passage and answer the questions :**

In an epidemiological survey, it was aimed to find out association between exposure to sunlight (measured in hours) and the deficiency of Vitamin-D. The survey was conducted in a rural community of Central India using a multistage sampling procedure. In the first stage, state was selected; in the second stage, district was selected; and in third stage, village was selected. The total number of respondents expected to be surveyed was 500, however, only 350 respondents could be surveyed, and their blood sample were also taken after their consent. The mean (SD) of Vitamin-D was estimated as 50.0 (12.5) units. The distribution of Vitamin-D levels was found to be normally distributed across three levels (total dataset: male = 125, female = 225).

**Sub questions**

**Question Number : 146 Question Id : 7687819825 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What was the response rate in the epidemiological survey?

(1) 60%

(2) 70%

(3) 80%

(4) 90%

**Options :**

76878138281. 1

76878138282. 2

76878138283. 3

76878138284. 4

**Question Number : 147 Question Id : 7687819826 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which statistical test should be applied to test for the significant difference Mean value levels of Vitamin-D across gender?

(1) Chi-Square test

(2) Z test

(3) Median test

(4) One way ANOVA

**Options :**

76878138285. 1

76878138286. 2

76878138287. 3

76878138288. 4

**Question Number : 148 Question Id : 7687819827 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which plot is appropriate to visualize relationship between exposure to sunlight (measured in hours) and Vitamin-D levels?

(1) Pie-chart

(2) Box plot

(3) Lorenz curve

(4) Scatter plot

**Options :**

76878138289. 1

76878138290. 2

76878138291. 3

76878138292. 4

**Question Number : 149 Question Id : 7687819828 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The levels of Vitamin-D can be best modelled as a linear function of exposure to sunlight and gender by using which of the following regression approach?

(1) Logistic regression

(2) Poisson regression

(3) Simple liner regression

(4) Multiple liner regression

**Options :**

76878138293. 1

76878138294. 2

76878138295. 3

76878138296. 4

**Question Number : 150 Question Id : 7687819829 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

In assigning sampling weights to the selected individuals, how many probabilities (probability of selecting units) is required in the multistage sampling procedure?

(1) One

(2) Two

(3) Three

(4) Four

**Options :**

76878138297. 1

76878138298. 2

76878138299. 3

76878138300. 4

**Question Id : 7687819824 Question Type : COMPREHENSION Sub Question Shuffling Allowed : Yes Group Comprehension Questions : No Question Pattern Type : NonMatrix**

**Question Numbers : (146 to 150)**

**Read the following passage and answer the questions :**

In an epidemiological survey, it was aimed to find out association between exposure to sunlight (measured in hours) and the deficiency of Vitamin-D. The survey was conducted in a rural community of Central India using a multistage sampling procedure. In the first stage, state was selected; in the second stage, district was selected; and in third stage, village was selected. The total number of respondents expected to be surveyed was 500, however, only 350 respondents could be surveyed, and their blood sample were also taken after their consent. The mean (SD) of Vitamin-D was estimated as 50.0 (12.5) units. The distribution of Vitamin-D levels was found to be normally distributed across three levels (total dataset: male = 125, female = 225).

**Sub questions**

**Question Number : 146 Question Id : 7687819825 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

What was the response rate in the epidemiological survey?

(1) 60%

(2) 70%

(3) 80%

(4) 90%

**Options :**

76878138281. 1

76878138282. 2

76878138283. 3

76878138284. 4

**Question Number : 147 Question Id : 7687819826 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which statistical test should be applied to test for the significant difference Mean value levels of Vitamin-D across gender?

(1) Chi-Square test

(2) Z test

(3) Median test

(4) One way ANOVA

**Options :**

76878138285. 1

76878138286. 2

76878138287. 3

76878138288. 4

**Question Number : 148 Question Id : 7687819827 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

Which plot is appropriate to visualize relationship between exposure to sunlight (measured in hours) and Vitamin-D levels?

(1) Pie-chart

(2) Box plot

(3) Lorenz curve

(4) Scatter plot

**Options :**

76878138289. 1

76878138290. 2

76878138291. 3

76878138292. 4

**Question Number : 149 Question Id : 7687819828 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

The levels of Vitamin-D can be best modelled as a linear function of exposure to sunlight and gender by using which of the following regression approach?

(1) Logistic regression

(2) Poisson regression

(3) Simple liner regression

(4) Multiple liner regression

**Options :**

76878138293. 1

76878138294. 2

76878138295. 3

76878138296. 4

**Question Number : 150 Question Id : 7687819829 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical**

In assigning sampling weights to the selected individuals, how many probabilities (probability of selecting units) is required in the multistage sampling procedure?

(1) One

(2) Two

(3) Three

(4) Four

**Options :**

76878138297. 1

76878138298. 2

76878138299. 3

76878138300. 4