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UGC NET MEMORY BASED QUESTION-PAPER 1

TOPICS ASKED IN UGC NET PAPER - 1 (7 JANUARY 2025 SHIFT- 2)

D.I. TABLE - EASY

ICT- WIMAX, HTML, SITE FULL FORM,

L.R.- CODING DECODING, FALLACY, NO. SERIES (1,5,14,30, 55)

MATHS- BOAT AND STREAM, AVERAGE, PROFIT LOSS

TEACHING- MOODLE, LMS, SWAYAM, THINKING HATS (WHITE, GREEN, YELLOW, RED BLACK, BLUE), THINKING BASED QUES

COMM.- GESTURES(KINESICS), PSYCHOLOGICAL BARRIERS

P.D.- POLLUTANTS, BIO DIVERSITY, PROTOCOLS, NAPCC, NEW QUES AS WELL

H.E.- UNIVERSITIES, NEP 2020

RESEARCH- PLAGRISIM, SAMPLING

MEMORY BASED QUES

Q1. A motor boat covers certain distance downstream in 5 h but takes 6 h to return upstream to the starting point. If the speed of the stream be 4 km/h, then what is the speed of the motor boat in still water?

- (a) 40 km/h
- (b) 42 km/h
- (c) 44 km/h
- (d) 46 km/h

Ans.(c)

Sol. Given:

Time taken downstream = 5 hours.

Time taken upstream = 6 hours.

Speed of the stream = 4 km/h.

Formula - Distance = Speed × Time

Speed of boat in still water = (Downstream speed + Upstream speed) / 2

Speed of water current = (Downstream speed - Upstream speed) / 2

Downstream speed = Speed of boat in still water + Speed of stream

Upstream speed = Speed of boat in still water - Speed of stream

Solution-

Let the speed of the boat in still water be x km/h

Downstream speed = x + 4 km/h

Upstream speed = x - 4 km/h

Distance covered downstream = Downstream speed × Time taken downstream

Distance covered upstream = Upstream speed × Time taken upstream

Since the distance covered in both directions is the same,

Distance = Speed × Time

$$(x + 4) \times 5 = (x - 4) \times 6$$

$$5x + 20 = 6x - 24$$

$$x = 44 \text{ km/h}$$

Q2. Match List I with List II

List I. (channels of SWAYAM Prabha)	List II. (subjects Covered)
A. Channels 03: PRABODH	I. Social Science-3, Management, Library science, Information Science and related subjects.
B. Channels 04: SAARASWAT	II. Social science-1, Social and Behavioural sciences
C. Channels 05: PRABANDHAN	III. Social science-4, Law, Legal studies, Human rights and related subjects.
D. Channel 06: VIDHIK	IV. Social science-2, Education, Psychology, Home science and related subjects.

Choose the correct answer from the options given below:

- (a) A-II, B-IV, C-I, D-III
- (b) A-IV, B-I, C-II, D-III
- (c) A-IV, B-II, C-III, D-I
- (d) A-III, B-II, C-IV, D-I

Ans.(a)

Sol. The correct matching is:

A-II: Channel 03: PRABODH covers Social science-1, Social and Behavioural sciences.

B-IV: Channel 04: SAARASWAT covers Social science-2, Education, Psychology, Home science and related subjects.

C-I: Channel 05: PRABANDHAN covers Social Science-3, Management, Library science, Information Science, and related subjects.

D-III: Channel 06: VIDHIK covers Social science-4, Law, Legal studies, Human rights, and related subjects.

Q3. Given below are two statements:

Statement I: Moodle is an example of a Learning Management System (LMS)

Statement II: Mentimeter is a tool used for creating online surveys.

In the light of the above statements, choose the correct answer from the options given below

- (a) Both statement I and statement II are true
- (b) Both statement I and statement II are false
- (c) Statement I is true but Statement II is false
- (d) Statement I is false but Statement II is true

Ans.(a)

Sol. The correct answer is (a) Both statement I and statement II are true.

Moodle is indeed an example of a Learning Management System (LMS), widely used for online education, course management, and collaboration.

Mentimeter, on the other hand, is a tool primarily utilized for creating interactive presentations and engaging online surveys. Both platforms serve distinct purposes in the realm of digital education and are recognized tools in their respective domains.

Q4. Kinesics, when used, will communicate a person's

- (A) Social status
- (B) Level of involvement
- (C) Emotional quotient
- (D) Political mobility
- (E) Language ambiguity

Choose the correct answer from the options given below:

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

Ans.(a)

Sol. Kinesics, which refers to body language and non-verbal communication, often communicates a person's **level of involvement (B)**, **emotional quotient (C)**, and sometimes even **social status (A)**. Body language, gestures, facial expressions, and posture all give insights into a person's level of engagement and emotional state. Social cues and gestures may also reflect one's standing or confidence, indirectly indicating social status.

Information Booster: 1. **Kinesics** is the study of body movements, facial expressions, and gestures.

2. It plays a critical role in non-verbal communication and can indicate involvement, attention, or engagement in a conversation.

3. Emotional states such as happiness, anger, or anxiety can be easily conveyed through kinesics.

4. Social status can sometimes be inferred from one's body language, posture, and gestures.

5. Kinesics does not directly communicate political mobility or language ambiguity.

Additional Knowledge:

Political mobility: This is not typically conveyed through kinesics, which focuses more on immediate social and emotional cues.

Language ambiguity: Kinesics does not directly address language ambiguity but can sometimes clarify intent when words are ambiguous.

Q5. Identify the correct sequence of barriers to effective communication.

- (A) Physical
- (B) Perceptual
- (C) Emotional
- (D) Cultural
- (E) Semantic

Choose the correct answer from the options given below:

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

Ans.(a)

Sol. The correct sequence of barriers to effective communication is:

(A) Physical: Barriers related to the environment, such as noise, distance, and physical obstructions.

(B) Perceptual: Barriers arising from how individuals perceive information differently due to their experiences, attitudes, and cognitive biases.

(C) Emotional: Barriers stemming from emotional states like anger, stress, or anxiety, which can distort understanding.

(D) Cultural: Barriers that arise from differences in cultural norms, values, and practices that can lead to misunderstandings.

(E) Semantic: Barriers caused by language issues, such as jargon, ambiguous words, or misinterpretation of meanings.

Information Booster: • **Physical barriers** include external factors like noise, faulty equipment, or large distances that hinder clear communication.

Perceptual barriers relate to differences in how people interpret messages, often based on individual biases or perspectives.

Emotional barriers involve the emotional state of the individuals, which can affect how messages are received and processed.

Cultural barriers occur when communicators come from different cultural backgrounds, leading to misunderstandings due to differences in language, values, and customs.

Semantic barriers arise when words or symbols are misinterpreted, often due to differences in language or use of jargon.

Q6. Which one of the following pollutants is responsible for acid rain formation?

- (a) CH₄ (Methane)
- (b) C₆H₆ (Benzene)
- (c) SO₂ (Sulphur dioxide)
- (d) CO (carbon monoxide)

Ans.(c)

Sol. Acid rain is primarily caused by the release of sulfur dioxide (SO₂) and nitrogen oxides (NO_x) into the atmosphere. When these gases react with water vapor, oxygen, and other chemicals in the atmosphere, they form sulfuric acid (H₂SO₄) and nitric acid (HNO₃), which then fall to the ground as acid rain.

Information booster: Methane (CH₄), benzene (C₆H₆), and carbon monoxide (CO) are not significant contributors to acid rain formation. Therefore, the correct answer is (c) SO₂ (Sulphur dioxide).

Q7. Given below are two statements:

Statement I: To qualify as a biodiversity hotspot, an area must have at least 15000 species of vascular plants.

Statement II: To qualify as a biodiversity hotspot, an area must have 50% or more of its original vegetation.

In the light of the above statements, choose the most appropriate answer from the options given below:

- (a) Both Statement I and Statement II are correct
- (b) Both Statement I and Statement II are incorrect
- (c) Statement I is correct but Statement II is incorrect
- (d) Statement I is incorrect but Statement II is correct

Ans.(b)

Sol.

1. Species Richness Criterion:

To qualify as a biodiversity hotspot, an area must have **at least 1,500 species of vascular plants as endemics** (species that are found nowhere else).

Statement I is incorrect because the threshold is 1,500, not 15,000.

2. Habitat Loss Criterion:

The area must have lost at least **70% of its original vegetation**, not retained 50% or more as stated.

Statement II is also incorrect.

Information Booster: · **Biodiversity hotspots** were first identified by Norman Myers in 1988. The concept highlights areas with exceptional levels of plant endemism and significant habitat loss.

There are **36 biodiversity hotspots globally**, including regions like the Amazon, Congo Basin, and Indo-Burma. India is home to **four biodiversity hotspots**: the Himalayas, Indo-Burma, Sundaland (Nicobar Islands), and the Western Ghats.

Q8. Identify the features associated with Kyoto Protocol.

- (A) Heavier burden on developed countries to cut down greenhouse gas emissions.
- (B) International emissions trading.
- (C) Nationally determined contributions.
- (D) Clean Development Mechanism.

Choose the correct answer from the options given below:

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

Ans.(c)

Sol.

1. **(A) Heavier burden on developed countries to cut down greenhouse gas emissions:**

True. The Kyoto Protocol places a heavier responsibility on developed countries (Annex I countries) to reduce emissions, recognizing their historical contribution to greenhouse gas levels.

2. **(B) International emissions trading:**

True. The Kyoto Protocol established a market-based mechanism allowing countries to trade emissions allowances. This system helps countries meet their targets cost-effectively.

3. **(D) Clean Development Mechanism (CDM):**

True. The CDM allows developed countries to invest in emission reduction projects in developing countries and earn certified emission reduction credits to meet their targets under the protocol.

Information Booster: · The **Kyoto Protocol** was adopted in **1997** and entered into force in **2005**. Its primary goal was to reduce greenhouse gas emissions globally, with legally binding targets for developed countries.

It introduced three market-based mechanisms:

1. **International Emissions Trading (IET)**

2. **Clean Development Mechanism (CDM)**

3. **Joint Implementation (JI)**

Additional Knowledge: (C) Nationally determined contributions (NDCs):

False. NDCs are a feature of the Paris Agreement, not the Kyoto Protocol. The Kyoto Protocol imposed binding targets for developed countries, unlike the voluntary commitments under the Paris Agreement.

Nationally Determined Contributions (NDCs):

Introduced by the Paris Agreement in 2015, NDCs represent voluntary commitments by countries to achieve their climate goals.

Kyoto Protocol vs. Paris Agreement:

The Kyoto Protocol focused on legally binding targets for developed countries.

The Paris Agreement emphasizes global participation, including developing countries, with non-binding commitments.

Q9. Which University in India was first to throw all University examinations open to girls?

- (a) Punjab University
- (b) Calcutta University
- (c) Savitribai Phule University
- (d) Bombay University

Ans.(b)

Sol. Calcutta University was one of the earliest institutions in India to take progressive steps toward gender equality in education. In 1871, it became the first university in India to open its examinations to female students. While the University of Bombay did take steps to admit women into higher education and exams in the later part of the 19th century, **Calcutta University** was notable for this early inclusion of women in university-level examinations.

Calcutta University's decision was significant because, at the time, education for women was not widely accepted or encouraged. This move helped pave the way for more women to enter the fields of higher education and participate in academic and professional spheres. Over time, this progressive stance influenced other universities in India to follow suit, expanding opportunities for women across the country.

Information Booster: · **Calcutta University** was founded in 1857, and it played a key role in India's educational reforms during the British era.

The inclusion of women in university exams in 1871 set a precedent for gender equality in education.

The decision was part of a broader social reform movement, with leaders like **Ishwar Chandra Vidyasagar** advocating for women's education.

Women were allowed to enroll in higher education programs and sit for exams, contributing to the increasing participation of women in India's intellectual life.

Bombay University and **Punjab University** (options a and d) also contributed significantly to women's education, but **Calcutta University** led the way in allowing women to take university exams.

Q10. In a State government university or Central University, recommendation of the Selection Committee for the recruitment of the faculty is approved by the

- (a) Academic Council
- (b) Executive Council
- (c) Finance Committee
- (d) Chancellor of University

Ans.(b)

Sol. The **Executive Council** in a university serves as the principal executive authority, responsible for the approval of recommendations made by the Selection Committee for faculty recruitment. While the Selection Committee evaluates and shortlists candidates, the Executive Council provides final approval to ensure alignment with institutional goals, statutory provisions, and governance norms.

Information Booster: 1. **Academic Council (a):** Responsible for academic decisions like curriculum design, examination policies, and research promotions, not faculty recruitment.

2. **Executive Council (b):** Handles administrative, financial, and staffing matters, including the final approval of faculty appointments.

3. **Finance Committee (c):** Manages budgetary allocations and financial oversight, with no role in recruitment approvals.

4. **Chancellor (d):** Acts as the titular head of the university, often approving statutory amendments but not directly involved in faculty selection.

