

UGC NET 2024



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UGC NET MEMORY BASED QUESTION-PAPER 1

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

LEVEL- MODERATE TO EASY

D.I.- INCOME AND EXPENDITURE BASED

MATHS- AGE RELATED, BOAT AND STREAM, DISTANCE DIRECTION (E-W)

L.R.- NUMBER SERIES, FALLACY(**STRAWMAN**), CODING, DECODING, BLOOD RELATION (4,27,16,125,36? 64, 729) , MOOD AND FIGURE

ICT- FORMULA BASED, BINARY NUMBER, MATCHING- MALWARE, WORMWARE, EXCEL , OPERATING SYSTEM

H.E.- CHRONOLOGY CHAIRPERSON

P.D.- GHG, LONDON SMOG COMPONENTS, STATE OF WATER PH VALUE

R.C.- EASY (AYURVEDA)

TEACHING- LESS QUES, LMS, LEARNER CENTRE METHODS, METACOGNITION

RESEARCH- PROBABILITY SAMPLING , HYPOTHESIS TESTING , CHI TEST , Z TEST

MEMORY BASED QUES

Q1. Shiv is 27 times as old as his granddaughter. However, three years later, he will be 14 times as old as his granddaughter. What is the present age of his granddaughter?

- (a) 7 years
- (b) 4 years
- (c) years
- (d) years

Ans.(d)

Sol. Let granddaughter's age be x

Then Shiv age will be $27x$

3years later:

Granddaughter's age= $x+3$

Shiv age will be= $27x+3$

$(27x+3)=14(x+3)$

$13x=42-3$

$x=3$

Q2. "More laws have been added on the books in past five years than even before, yet the number of crimes committed during the same period had significantly increased. Therefore, to bring the crime rate down, we must eliminate the laws". Which fallacy is committed in the above statement?

- (a) Red herring
- (b) Straw man
- (c) Slippery slope
- (d) False cause

Ans. (d)

Sol. The fallacy committed in the statement is False cause, also known as non causa pro causa. This fallacy occurs when it is assumed that because two events occur together, one must be the cause of the other without sufficient evidence to support such a causal connection. In the given statement, the increase in the number of laws is incorrectly linked as the cause of the rise in crime rates. The argument fails to consider other variables that could be influencing the crime rate, such as economic conditions, social changes, or enforcement practices. The assertion that eliminating laws would reduce the crime rate is a misinterpretation of the relationship between laws and crime, making it a classic example of the false cause fallacy.

Q3. Given below are two statements:

Statement I: Metacognition is the understanding about one's own use of language.

Statement II: Mnemonics is the knowledge about our own thinking processes

In the light of the above statements, choose the correct 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 incorrect

Ans. (b)

Sol. Statement I is incorrect. Metacognition is not specifically about the understanding of one's own use of language. Rather, it refers to the awareness and understanding of one's own thought processes. It involves thinking about one's own learning, understanding, and strategies for learning or solving problems.

Statement II is also incorrect. Mnemonics are not knowledge about our own thinking processes. Mnemonics are memory aids or techniques that help people remember information, often by associating complex information with simple words, phrases, or visual aids.

Hence, both statements are incorrect.

Q4. Which of the following are the examples of Learning Management System (LMS)?

- A. Kahoot
- B. Canvas
- C. Canva
- D. Moodle
- E. Padlet

Choose the most appropriate answer from the options given below:

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

Ans. (a)

Sol. Canvas and Moodle are both well-known Learning Management Systems (LMS) that provide platforms for delivering educational courses and training programs. They offer features like course management, content delivery, and assessment tools.

- **B. Canvas:** A robust LMS used by educational institutions to manage and deliver online courses.
- **D. Moodle:** An open-source LMS used widely for creating online courses and managing educational content.

Information Booster:

- **A. Kahoot:** An educational platform primarily used for creating and playing learning games and quizzes, not a full LMS.
- **C. Canva:** A graphic design tool used for creating visual content, not an LMS.
- **E. Padlet:** A digital board used for collaboration and sharing content, not an LMS.

So, the correct answer is (a) B and D only.

Q5. Who was the chairperson of the committee appointed in 1963 by the National Council for women education to look into the causes for the lack of public support for girl's education and to enlist public support?

- (a) Hansa Mehta
- (b) Durgabai Deshmukh
- (c) Margaret Cousins
- (d) Bhaktavatsalam

Ans.(d)

Sol. The chairperson of the committee appointed in 1963 by the **National Council for Women's Education** was **Bhaktavatsalam (K. Bhaktavatsalam)**. K. Bhaktavatsalam, a politician and reformer, played a crucial role in initiatives related to women's education during his time.

Information Booster

1. Impact of the 1963 Committee:

Highlighted the need for community involvement in promoting education for girls.
Advocated for government scholarships and incentives for girls' enrollment.

2. National Council for Women's Education:

Formed to address gender disparities and formulate policies for women's empowerment through education.

Q6. Identify the correct ascending order of the following numbers under A-D represented in different bases:

- (A) $(11101011)_2$ (Base-2 binary number)
- (B) $(564)_8$ (Base-8 Octal number)
- (C) $(614)_{10}$ (Base 10 decimal number)
- (D) $(489)_{16}$ (Base 16 hexadecimal number)

Choose the correct answer from the options given below:

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

Ans.(d)

Sol. Step 1: Convert all numbers to Base-10 (Decimal)

Convert A = $(11101011)_2$:

1. Expand the binary number using powers of 2: $(11101011)_2 = (1 \times 2^7) + (1 \times 2^6) + (1 \times 2^5) + (0 \times 2^4) + (1 \times 2^3) + (0 \times 2^2) + (1 \times 2^1) + (1 \times 2^0)$
2. Perform the calculations: $= 128 + 64 + 32 + 0 + 8 + 0 + 2 + 1 = 235$
3. The decimal value of A is 235.

Convert B = $(564)_8$:

1. Expand the octal number using powers of 8: $(564)_8 = (5 \times 8^2) + (6 \times 8^1) + (4 \times 8^0)$
2. Perform the calculations: $= (5 \times 64) + (6 \times 8) + (4 \times 1) = 320 + 48 + 4 = 372$
3. The decimal value of B is 372.

Convert C = $(614)_{10}$:

- C is already in Base-10, so no conversion is needed.
- The decimal value of C is 614.

Convert D = $(489)_{16}$:

1. Expand the hexadecimal number using powers of 16: $(489)_{16} = (4 \times 16^2) + (8 \times 16^1) + (9 \times 16^0)$
2. Perform the calculations: $= (4 \times 256) + (8 \times 16) + (9 \times 1) = 1024 + 128 + 9 = 1161$
3. The decimal value of D is 1161.

Step 2: Arrange the Decimal Values in Ascending Order

The converted decimal values are:

- A = 235
- B = 372
- C = 614
- D = 1161

Arrange these in ascending order:

235 (A), 372 (B), 614 (C), 1161 (D)

**Q7. In MS-EXCEL, a formula in cell D9 when copied to cell F12 will become:
Choose the correct answer from the options given below:**

- (a) = D1 + E3 = 5
- (b) = B\$2 + C\$4 + 5
- (c) = C\$1 + D\$3 + 5
- (d) = D\$1 + E\$3 + 5

Ans.(d)

Sol. In MS-Excel, when a formula is copied to another cell, the references in the formula change based on the relative or absolute reference type. The dollar sign \$ indicates an absolute reference, meaning the row or column will not change when the formula is copied to another cell. Here's the breakdown:

B\$1 is an absolute reference to row 1, so when the formula is copied to another cell, the column (B) changes, but the row (1) remains fixed.

C\$3 is an absolute reference to row 3, so when copied, the column (C) changes, but the row (3) stays fixed.

The constant 5 remains unchanged regardless of where the formula is copied.

When copying the formula from D9 to F12:

The B\$1 reference moves from column B to column D, so it becomes D\$1.

The C\$3 reference moves from column C to column E, so it becomes E\$3.

The constant 5 stays as is.

Thus, the new formula in cell F12 will be: =D\$1+E\$3+5

Information Booster:

1. **Absolute References:** In Excel, the dollar sign \$ is used to fix a reference to a specific row or column. For example, \$A\$1 fixes both the row and column, A\$1 fixes the row, and \$A1 fixes the column.

2. **Relative References:** If there is no dollar sign, the reference is relative. This means that both the row and column can change when the formula is copied to another cell.

3. **Mixed References:** We can use mixed references (e.g., A\$1 or \$A1) to lock either the row or the column while allowing the other part to adjust when copied.

Additional Knowledge:

Copying Formulas: When you copy a formula across multiple cells in Excel, understanding how references work (relative vs. absolute) can help you avoid errors and ensure that formulas work as intended.

Q8. A statistical test that permits assessment of possible significance of difference across mean of multiple group, is

- (a) Student's t-test
- (b) Analysis of variance
- (c) Paired t-test
- (d) Chi-square test

Ans. (b)

Sol. Analysis of variance (ANOVA) is a statistical test that permits assessment of possible significance of difference across mean of multiple group. It is used to determine whether there are statistically significant differences between the means of two or more groups. ANOVA is a versatile statistical tool that can be used to compare means across a variety of groups and factors.

Q9. In a certain coding language, the word 'GREAT' is coded as 'ETCCR', then the word 'FROWN' will be coded as:

- (a) D T M Y L
- (b) E T N W L
- (c) H T Q Y P
- (d) D S O X L

Ans.(a)

Sol. Each letter in the word **GREAT** is mapped to the corresponding letter in **ETCCR**:

- G → E
- R → T
- E → C
- A → C
- T → R

We now encode '**FROWN**' using the same pattern:

1. F (6th) → D (4th): -2
2. R (18th) → T (20th): +2
3. O (15th) → M (13th): -2
4. W (23st) → Y (25th): +2
5. N (14th) → L (12th): -2

Thus, the encoded word for '**FROWN**' is **DTMYL**

Q10. Which of the following Green House Gases (GHGs) was considered during the second compliance period of Kyoto protocol at Doha?

- (a) Sulphur Hexafluoride (SF₆)
- (b) Hydrofluoro Carbons (HFCs)
- (c) Nitrogen Trifluoride (NF₃)
- (d) Perfluorocarbons (PFCs)

Ans.(c)

Sol. Nitrogen Trifluoride (NF₃) was included as a greenhouse gas during the second compliance period of the Kyoto Protocol, which was agreed upon during the Doha Amendment in 2012. This period extended from 2013 to 2020, and NF₃ was newly added to the list of gases regulated under the Protocol due to its high global warming potential (GWP).

Information Booster:

Kyoto Protocol initially covered six major greenhouse gases: CO₂, CH₄ (Methane), N₂O (Nitrous oxide), HFCs, PFCs, and SF₆.

Doha Amendment (2012) marked the beginning of the second commitment period (2013–2020) and added NF₃ as a regulated gas due to its high GWP.

NF₃ (Nitrogen Trifluoride) is used in electronics manufacturing, particularly in the production of flat-panel displays and photovoltaic cells, making its emissions a growing concern.

Global Warming Potential (GWP): NF₃ has a GWP much higher than CO₂, which makes its regulation critical in mitigating climate change.

Additional Knowledge:

Sulphur Hexafluoride (SF₆): One of the original six gases regulated by the Kyoto Protocol, SF₆ is used as an insulating gas in electrical equipment and has one of the highest GWPs.

Hydrofluorocarbons (HFCs): These are also part of the original list and are primarily used as refrigerants, foam-blowing agents, and in air-conditioning systems.

Perfluorocarbons (PFCs): Also included in the original Kyoto list, PFCs are used in electronics manufacturing and aluminum production.

TOPICS ASKED IN Political Science (7 JANUARY 2025 SHIFT- 1)

EASY/ MODERATE PAPER

NO ASSERTION-REASON BASED QUESTIONS

NO NUMERICAL BASED PASSAGE

ONLY 2-3 QUESTIONS WERE FROM NUMERICALS

2-3 QUESTIONS FROM PYP

- 2-3 Questions on GST
- Passage on GST
- Match the column question theories of international trade and their propounders
- Accounting Principles
- Que. Prepaid Income is which type of account
- Numerical question on Payback Period
- Que. Which of the following is the U-shaped curve – AFC/AVC/AC/AMC
- Organisation Behaviour
- Tax avoidance/ Tax evasion
- Negotiable Instrument Acts
- Standard Deviation
- Cost of Debt
- Current Ration questions
- SEBI Regulations
- RBI Development role function
- PV Ratio
- Residential Status
- Symmetry – Positively Skewed/ Negatively Skewed
- Sequence of Bank from their establishment
- Match the column question on Contract act/sales act/companies act/negotiable instrument act
- Life insurance
- Probability Sampling-Non-Probability sampling
- Process Accounting
- Vouching
- Oligopoly
- Skimming Questions
- House Property