

UGC NET Paper 1 Jan 03, 2026 Shift 1 Memory Based Question Paper

Q1. The average of the number of girls studying in all six classes, A-F, is

Read the given passage and answer the following questions

The following table shows the percentage (%) distribution of students studying in six classes A-F of a school and shows the ratio of boys to girls among them. Number of students studying in all six classes together is 600.

Class-wise distribution of students

Class	%Students	Ratio Boys : Girls
A	20%	3:2
B	12%	3:1
C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

The following table shows the percentage (%) distribution of students studying in six classes A-F of a school and shows the ratio of boys to girls among them. Number of students studying in all six classes together is 600.

Class	%Students	Ratio Boys : Girls
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C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

(a) 41

(b) 42

(c) 43

(d) 44

Answer: A

Sol: Students in class A = $\frac{(20 \times 600)}{100} = 120$
Girls in Class A = $\frac{(120 \times 2)}{(3 + 2)} = 48$
Students in class B = $\frac{(12 \times 600)}{100} = 72$
Girls in Class B = $\frac{(72 \times 1)}{(3 + 1)} = 18$
Students in class C = $\frac{(16 \times 600)}{100} = 96$
Girls in class C = $\frac{(96 \times 3)}{(5 + 3)} = 36$
Students in class D = $\frac{(15 \times 600)}{100} = 90$
Girls in class D = $\frac{(90 \times 7)}{(8 + 7)} = 42$

$$\text{Students in class E} = \frac{(21 \times 600)}{100} = 126$$

$$\text{Girls in class E} = \frac{(126 \times 3)}{(4 + 3)} = 54$$

$$\text{Students in class F} = \frac{(16 \times 600)}{100} = 96$$

$$\text{Girls in class F} = \frac{(96 \times 1)}{(1 + 1)} = 48$$

$$\text{Total Girls} = 48 + 18 + 36 + 42 + 54 + 48 = 246$$

$$\text{Average of Girls in 6 classes} = \frac{246}{6} = 41$$

Correct answer is (a) **41**.

Q2. The difference between the number of boys and the number of girls in all the six classes A-F together, is

Read the given information.

The following table shows the percentage of students in each class A-F of a school and the ratio of boys to girls in each class. The difference between the number of boys and the number of girls in all six classes together is 60. Class-wise data is as follows:

Class	%Students	Ratio Boys : Girls
A	20%	3:2
B	12%	3:1
C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

(a) 102

(b) 114

(c) 106

(d) 108

Answer: D

Sol: Students in class A = $\frac{(20 \times 600)}{100} = 120$

$$\text{Difference in Class A} = \frac{(120 \times (3 - 2))}{(3 + 2)} = 24$$

$$\text{Students in class B} = \frac{(12 \times 600)}{100} = 72$$

$$\text{Difference in Class B} = \frac{(72 \times (3 - 1))}{(3 + 1)} = 36$$

$$\text{Students in class C} = \frac{(16 \times 600)}{100} = 96$$

$$\text{Difference in class C} = \frac{(96 \times (5 - 3))}{(5 + 3)} = 24$$

$$\text{Students in class D} = \frac{(15 \times 600)}{100} = 90$$

$$\text{Difference in class D} = \frac{(90 \times (8 - 7))}{(8 + 7)} = 6$$

$$\text{Students in class E} = \frac{(21 \times 600)}{100} = 126$$

$$\text{Difference in class E} = \frac{(126 \times (4 - 3))}{(4 + 3)} = 18$$

$$\text{Students in class F} = \frac{(16 \times 600)}{100} = 96$$

$$\text{Difference in class F} = \frac{(96 \times (1 - 1))}{(1 + 1)} = 0$$

$$\text{The difference between the number of boys and the number of girls in all the six classes A-F together} = 24 + 36 + 24 + 6 + 18 + 0 = 108$$

Q3. In the given pair of classes, which two classes have an equal number of boys in them?

Read the given passage and answer the following questions

The following table shows the percentage (%) distribution of students studying in six classes A-F of a school and shows the ratio of boys to girls among them. Number of students studying in all six classes together is 600.

Class-wise distribution of students

Class	%Students	Ratio Boys : Girls
A	20%	3:2
B	12%	3:1
C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

- (a) A and C
(b) C and F
(c) D and F
(d) E and F

Answer: C

Sol: Students in class A = $\frac{20 \times 600}{100} = 120$
Boys in class A = $\frac{120 \times 3}{3 + 2} = \frac{360}{5} = 72$
Students in class B = $\frac{12 \times 600}{100} = 72$
Boys in class B = $\frac{72 \times 3}{3 + 1} = \frac{216}{4} = 54$
Students in class C = $\frac{16 \times 600}{100} = 96$
Boys in class C = $\frac{96 \times 5}{5 + 3} = \frac{480}{8} = 60$
Students in class D = $\frac{15 \times 600}{100} = 90$
Boys in class D = $\frac{90 \times 8}{8 + 7} = \frac{720}{15} = 48$
Students in class E = $\frac{21 \times 600}{100} = 126$
Boys in class E = $\frac{126 \times 4}{4 + 3} = \frac{504}{7} = 72$
Students in class F = $\frac{16 \times 600}{100} = 96$
Boys in class F = $\frac{96 \times 1}{1 + 1} = \frac{96}{2} = 48$

Two pairs of classes have same number of boys, i.e, A & E and D & F.

Correct answer is (c).

Q4. If P and Q are the differences between the number of boys and girls in class A and class C, respectively, then the percentage of P with reference to Q is

Read the given passage and answer the following questions

The following table shows the percentage (%) distribution of students studying in six classes A-F of a school and shows the ratio of boys to girls among them. Number of students studying in all six classes together is 600.

Class-wise distribution of students

Class	%Students	Ratio Boys : Girls
A	20%	3:2
B	12%	3:1
C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

- (a) 80%
(b) 120%
(c) 100%
(d) 90%

Answer: C

Sol: Students in class A = $\frac{20 \times 600}{100} = 120$

Students in class C = $\frac{16 \times 600}{100} = 96$

Boys in class A = $\frac{120 \times 3}{3 + 2} = \frac{360}{5} = 72$

Boys in class C = $\frac{96 \times 5}{5 + 3} = \frac{480}{8} = 60$

Girls in class A = $\frac{120 \times 2}{3 + 2} = \frac{240}{5} = 48$

Girls in class C = $\frac{96 \times 3}{5 + 3} = \frac{288}{8} = 36$

$P = 72 - 60 = 12$

$Q = 48 - 36 = 12$

Percentage of P with reference to $Q = \frac{12}{12} \times 100 = 100\%$

Correct answer is (c)

Q5. Number of boys in class B is _____% more than the number of girls in class F.

Read the given passage and answer the following questions

The following table shows the percentage (%) distribution of students studying in six classes A-F of a school and shows the ratio of boys to girls among them. Number of students studying in all six classes together is 600.

Class-wise distribution of students

Class	%Students	Ratio Boys : Girls
A	20%	3:2
B	12%	3:1
C	16%	5:3
D	15%	8:7
E	21%	4:3
F	16%	1:1

- (a) 8.5%
 (b) 12.5%
 (c) 15%
 (d) 17.5%

Answer: B

Sol: Given total no of student = 600

$$\text{Students in class B} = \frac{12 \times 600}{100} = 72$$

$$\text{Boys in class B} = \frac{72 \times 3}{3 + 1} = \frac{216}{4} = 54$$

$$\text{Students in class F} = \frac{16 \times 600}{100} = 96$$

$$\text{Girls in class F} = \frac{96 \times 1}{1 + 1} = \frac{96}{2} = 48$$

$$\text{Difference} = 54 - 48 = 6$$

$$\text{Required percentage} = \frac{6}{48} \times 100 = 12.5\%$$

Number of boys in class B is 12.5% more than the number of girls in class F.

Correct answer is (b).

Q6. What is the correct sequence of various components of biogas in terms of their abundance?

- (A) Ammonia
 (B) Hydrogen
 (C) Methane
 (D) Carbon dioxide

Choose the correct sequence.

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

Answer: D

Sol:

Biogas is a renewable energy source primarily composed of methane (CH₄) and carbon dioxide (CO₂), with smaller amounts of other gases. The typical composition of biogas by volume is as follows:

1. Methane (CH₄): Methane is the most abundant component of biogas, typically comprising around 50-70% of the total volume. It is the primary energy source in biogas, giving it fuel value for use in heating, cooking, and electricity generation.

2. Carbon dioxide (CO_2): CO_2 is the second most abundant component, making up about 25-45% of biogas. While it does not contribute to the energy content, it is a natural by-product of the anaerobic digestion process and affects the overall composition of biogas.

3. Hydrogen sulfide (H_2S): Present in trace amounts (0.1-1%), hydrogen sulfide gives biogas its characteristic smell and is considered a contaminant due to its corrosive and toxic properties. H_2S must be removed or reduced during biogas processing to prevent damage to equipment.

4. Ammonia (NH_3): Ammonia is found in very small amounts, usually less than 1%. Its presence is often due to the nitrogen content in the feedstock used in biogas production.

Thus, the correct sequence of the components in terms of their abundance is Methane (CH_4) > Carbon dioxide (CO_2) > Hydrogen sulfide (H_2S) > Ammonia (NH_3).

Information Booster Biogas is produced by the anaerobic digestion of organic materials such as agricultural waste, manure, and municipal waste. The high methane content makes biogas a valuable renewable fuel as methane combustion releases energy. Carbon dioxide, while not contributing to the energy yield, is a natural by-product and is efficient and to minimize eq

Q7. The depletion

(a) NO_2 reacts

(b) CO_2 dissolves

(c) PM2.5 blocks

(d) Methane forms

Answer: A

Sol:

The depletion of the ozone layer occurs when nitrous oxide and other ozone-depleting substances, such as chlorofluorocarbons (CFCs), react with ozone molecules in the stratosphere. These reactions break down ozone molecules, reducing its ability to absorb harmful ultraviolet radiation. PM2.5, a type of air pollution, does not deplete the ozone layer. Methane, while a greenhouse gas, forms ground-level ozone but does not deplete the stratospheric ozone layer.

Information

The ozone layer is crucial for protecting life on Earth by absorbing most of the sun's harmful ultraviolet radiation, which can cause skin cancer, cataracts, and harm ecosystems.

Chlorofluorocarbons (CFCs) are synthetic compounds that were widely used in the atmosphere, but they break down and release chlorine atoms that catalyze the destruction of ozone.

Ozone depletion is most significant at the poles, particularly during the spring in the Southern Hemisphere, due to the presence of polar stratospheric clouds.

International agreements like the Montreal Protocol have led to a significant reduction in the use of ozone-depleting substances, helping the ozone layer to recover slowly.

Additional Knowledge:

CO_2 dissolves in rainwater

CO_2 causes ocean acidification, not ozone depletion.

PM2.5 blocks sunlight

PM2.5 affects tropospheric air quality and climate (aerosol effects), but not stratospheric ozone.

Methane forms ground-level ozone

Methane (CH_4) contributes to tropospheric ozone (smog), which is harmful to health but does not deplete the stratospheric ozone layer.

Q.8 Arrange the following fractions in decreasing order of their values.

1. $\frac{13}{18}$

2. $\frac{9}{11}$

3. $\frac{11}{13}$

4. $\frac{7}{8}$

Choose the correct answer from the options given below:

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

Answer: D

Sol:

Solution:

Values: $\frac{7}{8}$

$\frac{11}{13} \approx 0.846$

$\frac{9}{11} \approx 0.818$

$\frac{13}{18} \approx 0.722$

Order: D > C > B > A

Q9. Match List-I

List-I	List-II
A. A and B can complete a work in 6 days. A alone can do it in 9 days. Find B's time alone.	I. 40%
B. The average of 5 numbers is 66. Find their total sum.	II. 18 days
C. Price decreased from 120 to 80. Find % decrease.	III. 330
D. For a 30% increase in speed, find the original speed.	IV. 50 km/h

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

Answer: A

Sol:

Correct Option: (a)

Solution:

A: $\frac{1}{6} - \frac{1}{9} = \frac{1}{18} \rightarrow$ B takes 18 days $\rightarrow$ II

B: Sum = $66 \times 5 = 330 \rightarrow$ III

C: Decrease = $120 - 80 = 40 \rightarrow$ % decrease = $\frac{40}{120} \times 100 = 33.33\% \rightarrow$ I

D: Original speed solving equation gives $v = 50$ km/h $\rightarrow$ IV

Final mapping: A-II, B-III, C-I, D-IV

Q10. Amongst the following Green House Gases (GHGs). Whose Global Warming Potential (GWP) is considered as 1?

- (a) Chlorofluorocarbon (CFC)
- (b) Nitrous Oxide (N₂O)
- (c) Carbon dioxide (CO₂)
- (d) Methane (CH₄)

Answer:

C

Sol:

Global Warming Potential (GWP) is a measure of how much energy one ton of a greenhouse gas traps over a given period of time, relative to one ton of carbon dioxide (CO₂). By definition, CO₂ has a GWP of 1, as it is the reference gas against which other GHGs are compared.

Chlorofluorocarbon (CFC) has a GWP of 1000. Nitrous oxide (N₂O) has a GWP of 300. Methane (CH₄) has a GWP of 25.

Q11. Which

- (a) CO
- (b) NO
- (c) O₃
- (d) SO₂

Answer: C

Sol:

O₃ (Ozone) is a secondary pollutant. It is a secondary pollutant because it is not directly emitted from sources. It is formed in the atmosphere by the reaction of primary pollutants like carbon monoxide (CO), nitrogen monoxide (NO), and sulfur dioxide (SO₂) in the presence of sunlight. In contrast, pollutants like carbon monoxide (CO), nitrogen monoxide (NO), and sulfur dioxide (SO₂) are released directly from sources like vehicle exhausts and industrial processes. In contrast, pollutants like nitrogen monoxide (NO) and sulfur dioxide (SO₂) are released directly from sources like vehicle exhausts and industrial processes. In contrast, pollutants like carbon monoxide (CO) and sulfur dioxide (SO₂) are released directly from sources like vehicle exhausts and industrial processes.

Information:

1. Primary pollutants are directly emitted to the air from sources like vehicle exhausts, and natural processes like volcanic eruptions.
2. Secondary pollutants are formed in the atmosphere by the reaction of primary pollutants.
3. Ozone (O₃) is a secondary pollutant. It is formed in the atmosphere by the reaction of primary pollutants like carbon monoxide (CO), nitrogen monoxide (NO), and sulfur dioxide (SO₂) in the presence of sunlight, contributing to smog.

Additional Knowledge:

CO (carbon monoxide) is a primary pollutant emitted from vehicle exhaust and incomplete combustion processes.

NO (nitric oxide) and SO₂ (sulfur dioxide) are also primary pollutants produced by fossil fuel combustion, with significant impacts on air quality and human health.

Q12. Bipin offers a discount scheme that on buying 7 notebooks, get 3 for free. What will be the sale price (in Rs.) of a notebook with a marked price Rs. 185, if the equivalent percentage discount is applied?

- (a) 129.50
- (b) 130
- (c) 130.50

(d) 129

Answer: A

Sol: Given:

Buy 7, get 3 free

=> pay for 7 but receive 10 notebooks

Marked price = 185.

Formula Used:

selling price per notebook = $MP \times (1 - \text{discount})$.

Solution:

$$\text{Effective discount} = \frac{\text{free}}{\text{total}} = \frac{3}{10} = 30\%$$

Discount = 30%

Selling price per notebook = $185 \times 0.70 = 129.50$

So sale price = Rs. 129.50.

Q13. Which

A. National S

B. National I

C. National V

D. National r

E. National I

Choose the correct answer from the options given below.

(a) A, B and

(b) B, C and

(c) A, C and

(d) C, D and

Answer: C

Sol:

The core mission of the National Action Plan on Climate Change (NAPCC) is

1. National Solar Mission: Aims to promote the use of solar energy

2. National Water Conservation Directorate (NWCD) and management

3. National Mission on Sustainable Habitat (NMSH) and sustainable practices.

Q14. Which of the following has the highest Biological Oxygen Demand (BOD)?

(a) Drinking water

(b) Unpolluted surface water

(c) Polluted surface water

(d) Municipal sewage effluent

Answer: D

Sol:

Biological Oxygen Demand (BOD) refers to the amount of oxygen required by microorganisms to break down organic matter in water. It is a key indicator of water pollution. Higher BOD values indicate higher levels of organic pollutants, which can deplete oxygen levels in water bodies and harm aquatic life.

1. (d) Municipal sewage effluent:

Very High BOD (up to 100–400 mg/L): Municipal sewage contains high levels of organic waste, making it the source with the highest BOD among the options.

Information Booster:

1. BOD Levels and Pollution:

Less than 3 mg/L: Clean water.

3–5 mg/L: Moderately polluted water.

Above 5 mg/L: Heavily polluted water.

2. Sources of High BOD:

Domestic sewage.

Industrial waste.

Agricultural runoff.

3. Impact of High BOD:

Depletes oxygen in water.

Causes fish kill.

Additional K

1. (a) Drinking

Low BOD (less than 3 mg/L) is considered clean water, resulting

in very low pollution.

2. (b) Unpolluted

Moderate BOD (3–5 mg/L) indicates water that is somewhat polluted but are not

significantly polluted.

3. (c) Polluted

Higher BOD (above 5 mg/L) indicates water that contains higher oxygen

consumption.

Q15. Select the correct answer from the given options that mark (?) in the following series:

37, 40, 49, 76, ?

(a) 400

(b) 410

(c) 319

(d) 385

Answer:

A

Sol:

Given series

37, 40, 49, 76, 157, ?

Step 1: Find the pattern between consecutive terms.

$$40 - 37 = 3$$

$$49 - 40 = 9$$

$$76 - 49 = 27$$

$$157 - 76 = 81$$

The differences are: 3, 9, 27, 81

Step 2: Observe the pattern in the differences.

Each difference is a multiple of 3:

$$3=3 \times 1, 9=3 \times 2, 27=3 \times 9, 81=3 \times 27$$

So the next difference should be:

$$3 \times 81 = 243$$

Step 3: Add 243 to the last term.

$$157+243=400$$

Final Answer: (a) 400

Q16. Minimum wind speed required for generating electricity in a wind mill is?

- (a) 1 to 5 km/hour
- (b) 14 to 16 km/hour
- (c) 30 to 40 km/hour
- (d) Above 40 km/hour

Answer:

B

Sol:

The minimum wind speed required for generating electricity in a wind mill is approximately 14 to 16 km/hour. The kinetic energy of the wind is used to move the turbine of a wind mill.

Q17. If SYNTAX is coded as 8213713, then MOULD will be coded?

- (a) 2328320
- (b) 2358920
- (c) 4589201
- (d) 4283201

Answer:

A

Sol:

Given:

SYNTAX → 8213713

MOULD → 14461523

Find code for MOULD.

Logic:

Vowels: A=1, E=2, I=3, O=4, U=5

Consonants:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z

SYNTAX → 8213713

S → 19th → 27-19 = 8

Y → 25th → 27-25 = 2

N → 14th → 27-14 = 13

T → 20th → 27-20 = 7

A → vowel A = 1

X → 24th → 27-24 = 3

Join → 8213713

MOULD → 14461523

Thus, corrected

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5. The chairmanship of Dr. K. Kasturirangan ensured that the NEP 2020 was informed by his experience in science and technology, giving it a forward-looking, innovative edge.

Additional Knowledge:

- A. This year Government of India has spent six percent of GDP on Education: This statement is incorrect. The NEP 2020 advocates for the goal of allocating 6% of GDP towards education, but the actual expenditure has not yet reached this level.
- D. The NEP 2020 was chaired by an eminent educationist-Krishna Kumar: This statement is incorrect. The NEP 2020 was chaired by Dr. K. Kasturirangan, not Krishna Kumar.

Q19. Which of the following need to be inculcated for developing 21st-century skills of students by a teacher? A. Creativity B. Rote-learning C. Critical thinking D. Life-long learning E. Learning only for examination

Choose the correct answer.

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

Answer:

C

Sol:

The correct answer is (c) A, C, and D. Skills of creativity, critical thinking, and life-long learning are essential for developing 21st-century skills. Students need to think independently and come up with their own solutions, which are crucial for success in the 21st-century. In contrast, rote-learning and examinations are outdated methods of learning.

Q20. Which of the following is a key skill for a learner to develop in order to achieve their learning needs, set goals, and improve their progress?

- (a) Self-regulation
- (b) Fixed mindset
- (c) Motivation
- (d) Attribution

Answer:

A

Sol:

The correct term is "Self-regulation," which refers to a learner's ability to control their own learning process. This includes recognizing learning needs, setting specific learning goals, choosing appropriate strategies, and monitoring progress. Self-regulation is a key skill that promotes independent learning and improves academic success.

Information Booster:

Self-regulated learners are proactive in their learning process and have strategies for managing time, setting goals, and reflecting on progress.

It involves three key components: self-monitoring, self-reflection, and self-reinforcement.

Metacognition plays a key role in self-regulation as it involves awareness of one's learning processes.

Self-regulation fosters a sense of ownership and responsibility in learners.

It is associated with improved academic performance and the development of lifelong learning skills.

Teachers can support self-regulation by providing opportunities for goal-setting, feedback, and reflection.

Additional Knowledge:

Fixed mindset refers to the belief that abilities and intelligence are static, and it is the opposite of the growth mindset, which encourages effort and learning.

Motivation is the driving force behind a learner's engagement in tasks, but self-regulation specifically focuses on the learner's ability to manage their own learning process.

Attribution theory involves the way learners attribute causes to their successes or failures (e.g., effort, ability, or external factors), but it does not specifically address the learners' ability to self-regulate.

Q21. Match the following arguments with their primary type of reasoning (Deductive or Inductive):

Argument	Type
A. All men are mortal. Socrates is a man. Therefore, Socrates is mortal.	1. Deductive
B. Every swan I have seen is white. Therefore, all swans are white.	2. Inductive
C. If it is raining, the ground is wet. The ground is wet. Therefore, it is raining.	3. Abductive
D. The patient has a fever and a rash. Therefore, the patient has measles.	

Options:

(a) A-1, B-2,

(b) A-1, B-2,

(c) A-2, B-1,

(d) A-1, B-2,

Answer:

A

Sol:

Correct Opt

Introduction: Deductive, inductive, and abductive reasoning are fundamental to logic and critical thinking. Deductive reasoning moves from general principles to specific conclusions, while inductive reasoning moves from specific observations to general conclusions. Abductive reasoning is a hybrid of the two, often used in medical diagnoses and detective work.

Information: A-1: Deductive reasoning follows a logical structure where the conclusion necessarily follows from the premises. If the premises are true, the conclusion cannot be false. B-2: Inductive reasoning generalizes from specific observations to a universal conclusion (conjecture). The conclusion is probable, not certain (although it may be improved).

C-1: Deductive reasoning follows a logical structure where the conclusion necessarily follows from the premises. If the premises are true, the conclusion cannot be false. D-3: Abductive reasoning is often used in medical diagnoses and detective work. It is the reasoning typically used in medical diagnoses and detective work.

Therefore, the correct matching is A-1, B-2, C-1, and D-3. This is a deductive argument. If P, then Q. Q. is structured deductively, like a spilled water bucket.

D-3: Abductive reasoning is often used in medical diagnoses and detective work. It is the reasoning typically used in medical diagnoses and detective work.

Additional Knowledge: Abduction is often described as "having a best guess." It is predictive and creative but has the lowest logical certainty among the three. A good abductive argument offers the most plausible and simplest explanation for the available evidence.

Q22. The criterion of 'credibility' in qualitative research is equivalent to which of the following criteria in quantitative research?

(a) External validity

(b) Internal validity

(c) Objectivity

(d) Reliability

Answer:

B

Sol:

In qualitative research, credibility refers to the confidence in the truthfulness and authenticity of the findings. It ensures that the study accurately represents the participants' experiences and the phenomena being studied.

In quantitative research, the equivalent concept is internal validity, which determines whether the research findings accurately represent the causal relationship between variables. Both credibility and internal validity focus on the accuracy and trustworthiness of the study results.

Credibility (qualitative) ensures that the data and interpretation reflect reality as perceived by the participants.

Internal validity (quantitative) ensures that the study measures what it intends to and that the observed effects are due to the treatment.

Information

1. Qualitative

Credibility

Transferability

Dependability

Confirmability

2. Establishing

Triangulation

Member Check

Prolonged Engagement

3. Improving

Use of counterexamples

Randomization

Clear operational definitions

Additional Key

1. (a) External

External validity

It is more aligned

2. (c) Objectivity

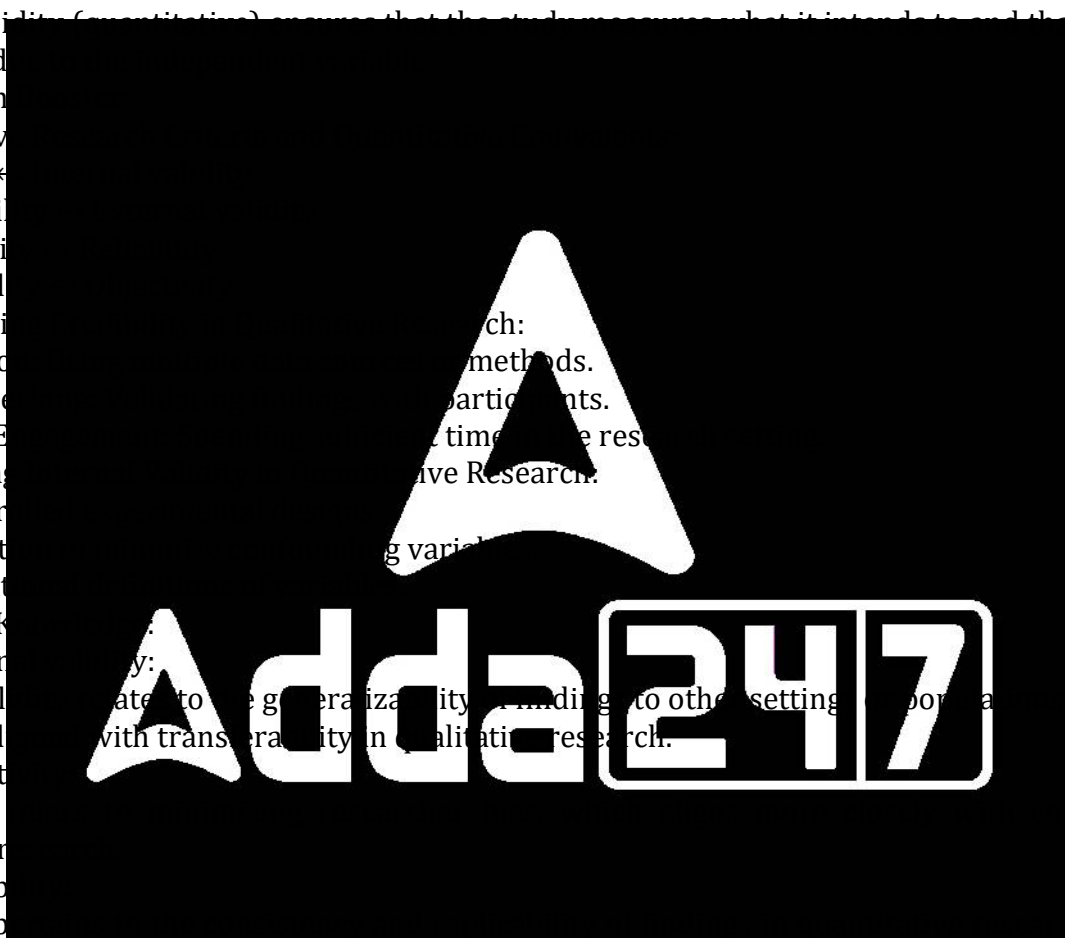
Objectivity

qualitative research

3. (d) Reliability

Reliability

to dependability in qualitative research.



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h, comparable

Q23. Match the following models of communication with their key characteristics:

List-I (Model)	List-II (Key Characteristic)
1. Shannon-Weaver Model	A. A transactional model focusing on the shared field of experience.
2. Schramm's Model	B. A linear model with components: Source, Encoder, Channel, Decoder, Receiver.
3. Berlo's SMCR Model	C. Highlights the importance of feedback and circularity of communication.

List-I (Model)	List-II (Key Characteristic)
4. Osgood-Schramm Model	D. Emphasizes the factors affecting the individual components: Source, Message, Channel, Receiver.

Codes:

- (a) 1-D, 2-C, 3-B, 4-A
- (b) 1-B, 2-A, 3-D, 4-C
- (c) 1-C, 2-B, 3-A, 4-D
- (d) 1-B, 2-C, 3-D, 4-A

Answer:

D

Sol:

Correct Option – (d)

Introduction: Communication is a complex process that involves the exchange of information between two or more individuals. It is a dynamic process that is influenced by various factors, including the sender, the message, the channel, and the receiver. The process of communication is often depicted as a linear model, where the message is sent from the sender to the receiver through a channel.

Information: The information is the content of the message that is being communicated. It is the data that is being sent from the sender to the receiver. The information is often represented by a signal, which is a physical representation of the message. The signal is sent through a channel, which is the medium through which the message is transmitted. The channel can be a physical medium, such as a wire or a radio, or a non-physical medium, such as a thought or a feeling.

1. Shannon-Weaver Model: This model was developed in the context of the study of communication in the field of engineering. It is a linear model that consists of five main components: the sender, the message, the channel, the receiver, and the feedback. The sender is the person or entity that initiates the communication. The message is the information that is being communicated. The channel is the medium through which the message is transmitted. The receiver is the person or entity that receives the message. The feedback is the response that is sent back from the receiver to the sender. This model is often used to describe the process of communication in a technical context.

2. Schramm's Model: This model was developed by Wilbur Schramm. It is a circular model that consists of four main components: the sender, the message, the receiver, and the feedback. The sender is the person or entity that initiates the communication. The message is the information that is being communicated. The receiver is the person or entity that receives the message. The feedback is the response that is sent back from the receiver to the sender. This model is often used to describe the process of communication in a social context.

3. Berlo's SMCR Model: This model was developed by David Berlo. It is a linear model that consists of four main components: the sender, the message, the channel, and the receiver. The sender is the person or entity that initiates the communication. The message is the information that is being communicated. The channel is the medium through which the message is transmitted. The receiver is the person or entity that receives the message. This model is often used to describe the process of communication in a technical context.

4. Osgood-Schramm Model: This model was developed by Charles Osgood and Wilbur Schramm. It is a circular model that consists of four main components: the sender, the message, the receiver, and the feedback. The sender is the person or entity that initiates the communication. The message is the information that is being communicated. The receiver is the person or entity that receives the message. The feedback is the response that is sent back from the receiver to the sender. This model is often used to describe the process of communication in a social context.

Q24. The mean and standard deviation of 75 observations are 45 and 10, respectively. If 2 is added to each observation, the new mean and standard deviation will be

- (a) 47, 12
- (b) 47, 14
- (c) 47, 10
- (d) 46, 12

Answer:

C

Sol:

Adding a constant value to each observation in a data set will shift the mean by the same constant value but will not change the standard deviation.

Here's the breakdown:

Original mean: 45

Value added: 2

New mean: Original mean + value added = $45 + 2 = 47$

The standard deviation represents the spread of the data around the mean. Adding a constant value to each data point simply shifts the entire dataset together, maintaining the same relative distances between the points. Therefore, the standard deviation remains the same.

Original standard deviation: 10

New standard deviation: Remains the same = 10

Therefore, the new mean will be 47 and the new standard deviation will be 10.

Q25. Which

(a) Nominal

(b) Ordinal

(c) Interval

(d) Ratio Scale

Answer:

B

Sol:

The Ordinal scale is used for ranking or ordering items based on the level of measurement. It is an ordinal scale because it ranks items but the differences between them are not necessarily uniform. Information is provided about the relative order but not the exact magnitude.

Common examples of ordinal data include: 1st, 2nd, 3rd, etc. Ordinal data can be used to compare items but not to calculate differences. It is widely used in social sciences to measure attitudes or preferences.

Additional Key Points:

Nominal scale is used for labeling variables without any quantitative value. It is purely categorical, such as gender, nationality, or colors, where no ranking is involved.

Interval scale provides information about the differences between values, but it does not have a true zero point. Examples include temperature in Celsius or Fahrenheit.

Ratio scale is the highest level of measurement and allows for meaningful comparisons of both magnitude and direction. Examples include height, weight, and income.

Q26. Match the following types of communication barriers with their examples:

List I (Barrier Type)	List II (Example)
A. Physical Barrier	1. A speaker using complex jargon in a speech
B. Semantic Barrier	2. A listener's emotional distress
C. Psychological Barrier	3. Loud construction noise outside a classroom
D. Organizational Barrier	4. A rigid chain of command in a company

Options:

(a) A-3, B-1, C-2, D-4

(b) A-1, B-2, C-3, D-4

(c) A-2, B-4, C-1, D-3

(d) A-4, B-3, C-2, D-1

Answer:

A

Sol:

Correct Option – (a)

Introduction: Communication barriers can be categorized into different types, each with specific characteristics and real-life examples. Matching-type questions test whether learners can correctly connect the theoretical barrier category with the practical example.

Information Booster:

A-3 (Physical): Construction noise outside = physical obstruction to hearing.

B-1 (Semantic): Use of jargon = word meanings not understood by all.

C-2 (Psychological): Emotional distress = preoccupied mind, prevents listening.

D-4 (Organizational): Rigid hierarchy = formal structure restricts free flow of messages.

Additional Knowledge: Such barriers often overlap. For instance, jargon (semantic) can also create psychological barriers.

Q27. Match

List-I (Variable Type)

A. Dummy

B. Latent V

C. Thematic

Choose the c

(a) A-2, B-1,

(b) A-2, B-3,

(c) A-1, B-2,

(d) A-3, B-1,

Answer:

B

Sol:

Introduction

Identifying the relationship between variable types and research paradigms is essential for selecting the correct methodology for a study. Each variable type serves a specific function within its respective framework, and understanding these functions is crucial for aligning research methods with the study's conceptual framework.

Based on sta

Information Booster:

The matching

List-I (Variable Type) List-II (Most Appropriate Paradigm)

A. Dummy Variable	2. Quantitative Research
B. Latent Variable	3. Mixed Methods Research
C. Thematic Variable	1. Qualitative Research

- **Dummy Variable (Quantitative):** These are numerical "stand-ins" used in regression analysis to represent categorical data. They typically take the value of 0 or 1 (e.g., 1 for "Treated Group" and 0 for "Control Group").

- **Thematic Variable (Qualitative):** These are not numerical but are instead patterns or "themes" identified within qualitative data (like interviews or focus groups). They represent the core concepts extracted through Thematic Analysis.

- **Latent Variable (Mixed Methods):** While often used in advanced quantitative modeling (like Structural Equation Modeling), latent variables represent "hidden" constructs (e.g., happiness, intelligence) that cannot be measured directly. Because they require both a conceptual definition (often derived

qualitatively) and numerical indicators (measured quantitatively), they are frequently the bridge in Mixed Methods studies.

Additional Knowledge:

To deepen your understanding of these variables, consider their specific technical applications:

- **The Dummy Variable Trap:** In quantitative research, if you have n categories, you must only use $n-1$ dummy variables to avoid perfect multicollinearity, where the variables provide redundant information that crashes the statistical model.
- **Reflexivity in Thematic Variables:** Unlike quantitative variables, thematic variables are subject to the researcher's perspective. In Qualitative Research, the researcher must practice "reflexivity," acknowledging how their own biases might influence the "themes" they identify.
- **Construct Validity:** Latent variables are often synonymous with "constructs." Ensuring that your observable measurements actually represent the hidden latent variable is a process known as establishing Construct Validity.
- **Triangulation:** Mixed methods research often uses Latent Variables to perform "triangulation"—comparing qualitative findings with quantitative data to see if they both point toward the same underlying "hidden" reality.

Q28. Which of the following is a fallacy? (a) Ad hominem (b) Appeal to authority (c) Hasty Generalization (d) Slippery Slope

- Answer:
B

Sol:

The logical fallacy of Appeal to Authority is a common one. It is the idea that because a person of authority says something, it must be true. This fallacy is often used in advertising, where a celebrity endorses a product. The argument is that because the celebrity is famous, the product must be good. This fallacy is also used in politics, where a politician's opinion is taken as the truth. The logical fallacy of Appeal to Authority is a common one. It is the idea that because a person of authority says something, it must be true. This fallacy is often used in advertising, where a celebrity endorses a product. The argument is that because the celebrity is famous, the product must be good. This fallacy is also used in politics, where a politician's opinion is taken as the truth.

Q29. Match the following:

List I (Statements)	List II (Conclusions)
A. No fishes are mammals	II. No mammals are fishes
B. All fishes are mammals	III. Some mammals are non-fishes
C. Some fishes are mammals	IV. Some mammals are fishes
D. Some mammals are not fishes	

Choose the correct answer from the options given below:

Match the Following

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

Answer:

C

Sol:

The correct match is (c) A-II, B-I, C-IV, D-III

No fishes are mammals is logically equivalent to II. No mammals are fishes.

Both statements indicate that there is no overlap between the categories of fishes and mammals.

All fishes are mammals is logically equivalent to I. No fishes are non-mammals.

If all fishes are mammals, it means there are no fishes that are not mammals.

Some fishes are mammals is logically equivalent to IV. Some mammals are fishes.

If some fishes are mammals, then it must be true that some mammals are also fishes.

Some mammals are not fishes is logically equivalent to III. Some mammals are non-fishes.

If some mammals are not fishes, it implies that some mammals belong to the non-fish category.

Q30. The process of converting qualitative observations into numerical data for analysis is called:

(a) Coding

(b) Normalization

(c) Categorization

(d) Scaling

Answer:

A

Sol:

Coding is the process of converting qualitative data (e.g., responses from an open-ended survey) into numerical data for statistical analysis. For example, "Agree", "Disagree", "Strongly agree", and "Strongly disagree" can be coded into numerical values (e.g., 1, 2, 3, 4) respectively.

Information

Coding is essential for quantitative research, as it allows for the analysis of large amounts of data.

Once coded,

Reliability in coding refers to the consistency of the coding process. To ensure consistency, researchers often use a coding manual or a coding scheme.

Additional Key Points:

Categorization is a part of the coding process where data are grouped into categories or themes.

Normalization refers to adjusting values measured on different scales to a common scale, often for comparison purposes.

Scaling (d) refers to adjusting the intensity or magnitude of a variable.

Scaling (d)

degree of a

Q31. Arrange the sub-types of Savyabhicara (The Irregular Middle) from the most inclusive to the most restricted:

1. Anupasamhari (Non-exclusive)

2. Sadharana (Common)

3. Asadharana (Uncommon)

(a) 2, 3, 1

(b) 1, 2, 3

(c) 3, 2, 1

(d) 2, 1, 3

Answer:

A

Sol:

Correct Option – (a)

Introduction: *Hetvabhasa* means "appearance of a reason." It occurs when the middle term (Hetu) is defective.

Information Booster:

Sadharana: The middle term is too wide (e.g., Sound is eternal because it is knowable—but "knowable" also includes non-eternal things).

Asadharana: The middle term is too narrow (e.g., Sound is eternal because it is audible—but "audible" only exists in sound, so it can't prove anything else).

Anupasamhara: The middle term is non-exclusive (everything is non-eternal because everything is knowable—nothing is left out to serve as an example).

Additional Knowledge: Recognition of *Hetvabhasa* is the Indian equivalent of identifying formal and informal fallacies in Western logic.

Q32. Match List I (Propositions) with List II (Distribution of terms (List II):

List I (Propositions)	List II (Distribution of terms)
A. All S is P	I. Only Subject is distributed.
B. No S is P	II. Only Predicate is distributed.
C. Some S is P	III. Neither is distributed.
D. Some S is not P	IV. Only Predicate is distributed.

Options:

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

Answer:

A

Sol:

Correct Option – (a)

Introduction:

"Distribution" refers to whether a proposition makes a statement about every member of a class. Understanding this is crucial for identifying formal fallacies in syllogisms.

Information:

A (All S is P):

E (No S is P):

I (Some S is P):

O (Some S is not P):

Distributes Neither. It only refers to at least one member of each class.

Distributes the Predicate only. It excludes some "S" from the entire class of "P".

Additional Knowledge

To remember this for the exam, use the mnemonic "ASEB INOP":

A distributes Subject.

E distributes Both.

I distributes None.

O distributes Predicate.

Q33. Match the type of Inference/Anumana (List I) with its characteristic (List II):

List I (Inference Type)	List II (Characteristic)
A. Purvavat	I. Inference based on common points of similarity.
B. Sheshavat	II. Inference of an unperceived effect from a perceived cause.
C. Samanyatodrishta	III. Inference of an unperceived cause from a perceived effect.

Options:

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

Answer:

A

Sol:

Correct Opti

Introduction

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Q34. The A-LEVEL 2020 is to increase the Gross Enrolment Ratio in higher education, including Vocational education, from 28.3% in 2016 to:

- (a) 50% by 2025
(b) 35% by 2025
(c) 40% by 2025
(d) 60% by 2025

Answer:

A

Sol:

The National Education Policy (NEP) 2020 sets a target to increase the Gross Enrolment Ratio (GER) in higher education, including vocational education, from 26.3% (2018) to 50% by 2035. This ambitious goal aims to make higher education accessible to a larger segment of the population and promote lifelong learning.

Q35. According to the NEP 2020, what is the targeted Gross Enrolment Ratio (GER) in higher education, including vocational education, to be achieved by 2035?

- (a) 35%
(b) 50%

- (c) 75%
(d) 100%

Answer:

B

Sol:

Correct Option – (b)

Introduction: This question focuses on a key quantitative target of NEP 2020, which reflects its ambition for massive expansion and inclusion in higher education.

Information Booster: NEP 2020 sets a clear and ambitious goal: The Gross Enrolment Ratio in higher education, including vocational education, shall be increased from 26.3% (2018) to 50% by 2035. This means the policy aims to bring at least half of the population in the 18-23 age group into the higher education ecosystem. This will be achieved through a massive expansion of institutional capacity, including large multidisciplinary universities and colleges and the integration of vocational streams.

Additional Information: This target signifies a transition from a low enrolment rate to a high one, signifying a massive expansion of institutional capacity that must be managed alongside the existing higher education system.

Q36. In a certain code, 'Arjun is walking' is written as 'NA', 'SI', 'AG'. 'Krishna is sleeping' is written as 'KA', 'TK', 'DI'. 'School is walking' is written as 'VI', 'SI', 'NIH'. What is the code for 'walking'?

- (a) TK
(b) NA
(c) AG
(d) SI

Answer:

C

Sol:

To determine the code for 'walking', we can compare the words and their corresponding codes:

- In the sentence 'Arjun is walking', 'walking' corresponds to 'AG'.
- In the sentence 'Krishna is sleeping', 'sleeping' corresponds to 'DI'.
- In the sentence 'School is walking', 'walking' corresponds to 'AG'.

Thus, 'AG' is the code for 'walking'.

Q37. Arrange the following computer network types in increasing order of their geographical coverage:

1. MAN (Metropolitan Area Network)
2. WAN (Wide Area Network)
3. PAN (Personal Area Network)
4. LAN (Local Area Network)

- (a) 3, 4, 1, 2
(b) 4, 3, 1, 2
(c) 3, 4, 2, 1

(d) 1, 4, 3, 2

Answer:

A

Sol:

Correct Option – (a)

Introduction: Networks are classified based on the physical distance they cover and the infrastructure required to maintain them.

Information Booster:

PAN: Coverage of a few meters (e.g., Bluetooth connecting a phone to headphones).

LAN: Coverage of a building or campus (e.g., office Wi-Fi).

MAN: Coverage of a city (e.g., Cable TV network).

WAN: Coverage of a country, continent, or the whole world (e.g., The Internet).

Additional Knowledge: A CAN (Campus Area Network) sits between LAN and MAN, typically connecting several buildings.

Q38. Which

A. A firewall

B. A botnet

C. Phishing

D. Encryption

privacy by e

Choose the c

(a) A, B and

(b) A, B and

(c) A and C

(d) C and D

Answer:

B

Sol:

Correct Opti

Introduction

In cybersecurity

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Information

Statement A: A firewall helps in monitoring and controlling incoming and outgoing network traffic.

A firewall works as a security barrier between internal and external networks. It filters traffic based on predefined rules and prevents unauthorised access.

Statement B: A botnet is a group of infected computers controlled by a hacker.

Cybercriminals use malware to infect multiple devices and control them remotely. These infected systems collectively form a botnet used for large-scale attacks.

Statement C: Phishing is a method used to enhance password strength.

Phishing is a *social engineering cyberattack* where attackers impersonate legitimate sources to steal passwords, bank details, or personal information. It has no role in improving password security.

Statement D: Encryption converts readable data into an unreadable format for security.

Encryption transforms plain text into ciphertext using an algorithm and a key. Only authorised users with the decryption key can access the original information.

Statement E: VPN reduces online privacy by exposing user data.

A VPN actually enhances privacy, encrypts internet traffic, and hides the user's IP address. It does *not* expose user data.

Therefore, the correct statements are:

A (Firewall) B (Botnet) D (Encryption)

Additional Information

A firewall is a security device/software used for traffic filtering.

Botnets are commonly used in DDoS attacks and mass spamming.

Phishing techniques include email phishing, spear phishing, and smishing.

Encryption can be symmetric or asymmetric.

Q39. Assertion A: systems of education which are place, time, and person - specific are said to be formal.

Reason R : distance education is not formal because they are created following specific procedures.

In light of the above, which of the following is/are correct? (Choose one or more below):

(a) Both A and R are true

(b) Both A and R are false

(c) A is true and R is false

(d) A is false and R is true

Answer:

C

Sol:

Assertion A: systems of education which are place, time, and person - specific are said to be formal. This is related to place, time, and in person education. It is formally created following specific procedures.

Reason R is: distance education is not formal because they are created following specific procedures. Distance education is not formal because they may have some procedure but it is not formal. It is not subject to the same level of regulation and formality as formal education. It is not subject to the same level of regulation and formality as formal education. It is not subject to the same level of regulation and formality as formal education.

Q40. How many bits are there in a single byte?

(a) 4

(b) 8

(c) 16

(d) 1024

Answer:

B

Sol:

Correct Option – (b)

Introduction: The bit and the byte are the most fundamental units of data in computing. All larger storage units are derived from these base units, and their relationship is absolute.

Information Booster:

Option (a) 4: A group of 4 bits is called a nibble. It is a half-byte but is not a standard unit for data measurement or addressing.

Option (b) 8: This is the correct answer. A byte is a unit of digital information that most commonly consists of eight bits. It is the standard unit for representing a character (like a letter or number) and is the fundamental addressable unit in many computer architectures.

Option (c) 16: A group of 16 bits is typically referred to as a word on 16-bit computer systems. It is two bytes.

Option (d) 1024: 1024 is the multiplier (2^{10}) used to convert from one binary-derived unit to the next (e.g., 1 Kilobyte = 1024 Bytes). It is not the number of bits in a byte.

Additional Knowledge: The byte was historically chosen as a convenient unit to represent a single character of text. The number of bits in a byte is now standardized by international agreement, though early computers sometimes used bytes with different numbers of bits.

Q41. Which of the following is a characteristic of Read-Only Memory (ROM)?

(a) It is volatile and loses its data when the power is turned off.

(b) It is used to store the BIOS firmware that boots up the computer.

(c) It has faster access time than Cache memory.

(d) It is used

Answer:

B

Sol:

Correct Opti

Introduction: Read-Only Memory (ROM) is a type of non-volatile memory that stores data permanently. It is used to store the BIOS firmware that boots up the computer. Understanding the distinct characteristics of ROM is essential for grasping how a computer stores and retrieves data.

Information: ROM is a type of memory that stores data permanently. It is used to store the BIOS firmware that boots up the computer. Information about the distinct characteristics of ROM is essential for grasping how a computer stores and retrieves data.

Option (a): Volatile memory, which loses its data when power is removed, is Random Access Memory (RAM), not ROM. ROM retains its data even when power is removed.

Option (b): It is used to store the BIOS firmware that boots up the computer. This is the correct answer. ROM is a type of non-volatile memory used to store firmware—software that is permanently stored to specific hardware. The BIOS (Basic Input/Output System) is a common example of firmware stored in ROM.

Option (c): Cache memory, which is faster than main memory, is used to store frequently accessed data. ROM is not cache memory. Extensible Firmware Interface (EFI) is a software interface between the operating system and the hardware. UEFI (Unified Extensible Firmware Interface) is a more modern version of EFI that is used when it is powered on.

Option (d): Random Access Memory (RAM) is the primary memory used by the CPU and the main RAM is used to access frequently used data. ROM is significant for storing data that is not frequently accessed. Option (d) is incorrect as it describes RAM, not ROM.

Option (e): The primary function of RAM (Random Access Memory) is to store data temporarily and provide quick access to it. ROM is used for permanently storing data and program instructions that the CPU is currently using.

Additional Knowledge: ROM is a type of non-volatile memory used to store firmware—software that is permanently stored to specific hardware. The BIOS (Basic Input/Output System) is a common example of firmware stored in ROM. Other types of ROM include EPROM (Erasable Programmable Read-Only Memory), EEPROM (Electrically Erasable Programmable Read-Only Memory), and Flash ROM.

Conclusion: The correct answer is (b) It is used to store the BIOS firmware that boots up the computer. This is the primary function of ROM. Other types of ROM include EPROM (Erasable Programmable Read-Only Memory), EEPROM (Electrically Erasable Programmable Read-Only Memory), and Flash ROM.

Q42. Consider the following statements regarding the Puranas:

A. Puranas refer to historical dynasties such as the Haryankas, Mauryas, Shungas, Kanvas, and Andhras (Satavahanas). The dynastic lists end with the Guptas (4th-6th centuries).

B. The Puranas have accounts of mountains, rivers, and places, useful for the study of historical geography.

C. They also reflect the emergence of religious cults based on devotion, especially towards the gods Vishnu and Shiva.

D. The Puranas had a very important function in the Brahmanical tradition as vehicles of Brahmanical social and religious values.

(a) A and B are correct

(b) A, B, and D are correct

(c) A, C, and D are correct

(d) All of the above are correct

Answer:

D

Sol:

The Puranas are a vital source of information in the study of ancient Indian history, culture, and religion. Statement A is correct because the Puranas refer to several historical dynasties, such as the Haryankas, Mauryas, Shungas, Kanvas, and Andhras (Satavahanas), and their dynastic lists are crucial for understanding the political history of ancient India. The dynastic lists in these texts end with the Gupta dynasty, which ruled from the 4th to the 6th century CE.

Statement B is also correct as the Puranas include detailed geographical descriptions that are valuable for understanding historical geography. These accounts of mountains, rivers, and cities help reconstruct the ancient world and provide insights into the physical environment in which these dynasties thrived.

Statement C is correct because the Puranas reflect the rise of devotional cults centered on Vishnu and Shiva, marking a significant shift in Hindu religious thought. These texts play a role in spreading the worship of these deities.

Statement D is correct as the Puranas are foundational texts for Brahmanical values and ethics. They played a major role in shaping the moral and social framework of ancient India.

Information Booster:
The Puranas are ancient Indian texts that provide a wealth of information on Hindu religious practices and beliefs. They describe the lives of deities, offer rituals and later periods of Hinduism (like the Bhakti movement), and discuss concepts like dharma (order), karma (action), and moksha (liberation).

The Gupta dynasty, which ruled from the 4th to the 6th century CE, is a period of great cultural and intellectual achievement in India. The Puranas became more prominent during this period, especially in the political, social, and religious spheres.

Q43. Which text is considered the foundational text for Indian classical performing arts?

- (a) Dandin
- (b) Vishakhadatta
- (c) Bhasa
- (d) Bharata

Answer:

D

Sol:

Introduction

The Natyashastra is an ancient Sanskrit text that serves as a comprehensive manual for performing arts, including drama, dance, and music.

Information Booster:

Attributed to Bharata, the Natyashastra is considered the foundational text for Indian classical performing arts. It details stagecraft, acting techniques, music theory, emotional expression (rasa), and dance movements, and it emphasizes the role of drama in promoting moral and spiritual upliftment.

Additional Information:

- Vishakhadatta → Author of *Mudrarakshasa* (political drama).
- Bhasa → Known for plays like *Swapnavasavadatta*.
- Dandin → Author of *Dashakumaracharita* (a prose romance).

Q44. Who introduced Liberal attitude regarding education and sports in Germany?

- (a) John Basedow
- (b) Niels Buck
- (c) Adolph John
- (d) Ronald Joseph

Answer:

A

Sol:

John Basedow (1723–1790) was a German educator and one of the pioneers of physical education. He is credited with introducing a liberal attitude regarding education and sports in Germany, particularly by promoting physical education as an essential part of the school curriculum. Basedow's emphasis on physical fitness and holistic education contributed to the development of modern physical education in Germany.

Why the other options are incorrect:

- (b) Niels Buck: Niels Buck is known for introducing liberal attitudes towards education and sports in Denmark, not Germany.
- (c) Adolph John: Adolph John is known for introducing liberal attitudes towards education and sports in Norway, not Germany.
- (d) Ronald Joseph: Ronald Joseph is known for introducing liberal attitudes towards education and sports in the United States, not Germany.

Q45. The “Spam” folder in an email client is used to store unwanted emails or emails that have been identified as potentially harmful. These emails may contain phishing attempts, malware, or unwanted advertising.

- (a) Emails that have been identified as potentially harmful
- (b) Storing unwanted emails or emails that have been identified as potentially harmful
- (c) Keeping unwanted emails or emails that have been identified as potentially harmful
- (d) Organizing unwanted emails or emails that have been identified as potentially harmful

Answer:

A

Sol:

The Spam folder in an email client is used to store unwanted emails or emails that have been identified as potentially harmful. These emails may contain phishing attempts, malware, or unwanted advertising.

Important Knowledge: Spam filters are used to automatically identify and filter out unwanted or malicious emails. They work by analyzing the content of the email, including the sender's address, the subject line, and the body text, and comparing it to a database of known spam patterns.

- 1. Spam filters are used to automatically identify and filter out unwanted or malicious emails.
- 2. Regularly updating the spam filter database is important to ensure it can identify new types of spam.

Knowledge Booster:

Spam emails often contain phishing attempts or malware that can compromise a user's security if opened. Most email clients like Gmail, Outlook, and Yahoo Mail provide built-in spam filters to protect users from unwanted content.

Legitimate emails can occasionally end up in the Spam folder, so it's important to review it periodically.