

(1-5)

Study carefully the table given below and answer the question asked here under. Number of students in different academic programs of a college are provided year-wise.

Year	Number of students admitted in different programs				
	B.A.	B.Sc.	B.B.A.	B.Com.	B.C.A
2021	150	25	50	45	75
2022	225	40	45	62	70
2023	450	65	30	90	73
2024	470	73	35	105	70
2025	500	80	36	132	74

1. In which year, the number of students have doubled with reference to the previous year in a particular program?

(A) 2022

(B) 2023

(C) 2024

(D) 2025

Correct Answer: (B) 2023

Explanation:

Compare the number of students in each program with the immediately preceding year. In B.A., the number of students increased from 225 in 2022 to 450 in 2023.

$$225 \times 2 = 450$$

Thus, the number of B.A. students exactly doubled in 2023 compared with 2022. Therefore, the correct answer is 2023.

2. In which year, the ratio of admitted students in B.A program to those in all the programs, is the lowest?

(A) 2021

(B) 2022

(C) 2023

(D) 2024

Correct Answer: (A) 2021

Explanation:

The required ratio is:

B.A. students / Total students in all programs

For 2021:

$$\text{Total} = 150 + 25 + 50 + 45 + 75 = 345$$

$$\text{Ratio} = 150 / 345 \approx 0.435$$

For 2022:

$$\text{Total} = 225 + 40 + 45 + 62 + 70 = 442$$

$$\text{Ratio} = 225 / 442 \approx 0.509$$

For 2023:

$$\text{Total} = 450 + 65 + 30 + 90 + 73 = 708$$

$$\text{Ratio} = 450 / 708 \approx 0.636$$

For 2024:

$$\text{Total} = 470 + 73 + 35 + 105 + 70 = 753$$

$$\text{Ratio} = 470 / 753 \approx 0.624$$

Among these, the lowest ratio is approximately 0.435 in 2021. Therefore, the correct answer is 2021.

3. Which program has the second highest percentage increase from 2021 to 2025 in the number of admitted students?

(A) B.A.

(B) B.Sc.

(C) B.B.A.

(D) B.Com.

Correct Answer: (B) B.Sc.

Explanation:

$$\text{Percentage increase} = [(2025 \text{ value} - 2021 \text{ value}) / 2021 \text{ value}] \times 100$$

B.A.:

$$[(500 - 150) / 150] \times 100 \approx 233.33\%$$

B.Sc.:

$$[(80 - 25) / 25] \times 100 = 220\%$$

B.B.A.:

$$[(36 - 50) / 50] \times 100 = -28\%$$

B.Com.:

$$[(132 - 45) / 45] \times 100 \approx 193.33\%$$

The highest percentage increase is in B.A. at approximately 233.33%, while the second highest is in B.Sc. at 220%. Therefore, B.Sc. is the correct answer.

4. In how many year(s) does the 50% of total number of admitted students in a year is less than the number of students admitted in B.A. program that year?

(A) 1

(B) 2

(C) 3

(D) 4

Correct Answer: (D) 4

Explanation:

We have to identify the years in which B.A. students are more than 50% of the total students admitted.

2021:

$$\text{Total} = 345; 50\% = 172.5$$

$$\text{B.A.} = 150$$

$$150 < 172.5 \rightarrow \text{Condition not satisfied.}$$

2022:

$$\text{Total} = 442; 50\% = 221$$

$$\text{B.A.} = 225$$

$$225 > 221 \rightarrow \text{Condition satisfied.}$$

2023:

$$\text{Total} = 708; 50\% = 354$$

B.A. = 450
 $450 > 354 \rightarrow$ Condition satisfied.

2024:
Total = 753; 50% = 376.5
B.A. = 470
 $470 > 376.5 \rightarrow$ Condition satisfied.

2025:
Total = 822; 50% = 411
B.A. = 500
 $500 > 411 \rightarrow$ Condition satisfied.

Hence, the condition is satisfied in 4 years: 2022, 2023, 2024 and 2025. Therefore, the correct answer is 4.

5. In which year, the ratio of admitted students to its previous year admitted students, is the highest?

(A) 2022

(B) 2023

(C) 2024

(D) 2025

Correct Answer: (B) 2023

Explanation:

First, calculate the total number of students admitted in all programs for each year:

$$2021 = 150 + 25 + 50 + 45 + 75 = 345$$

$$2022 = 225 + 40 + 45 + 62 + 70 = 442$$

$$2023 = 450 + 65 + 30 + 90 + 73 = 708$$

$$2024 = 470 + 73 + 35 + 105 + 70 = 753$$

$$2025 = 500 + 80 + 36 + 132 + 74 = 822$$

Now calculate the ratio of each year's total admissions to the previous year's total:

$$2022/2021 = 442 / 345 \approx 1.28$$

$$2023/2022 = 708 / 442 \approx 1.60$$

$$2024/2023 = 753 / 708 \approx 1.06$$

$$2025/2024 = 822 / 753 \approx 1.09$$

The highest ratio is approximately 1.60 for 2023 compared with 2022. Therefore, the correct answer is 2023.

6. Match the LIST-I with LIST-II

LIST-I (Scales of Measurement)	LIST-II (Characteristic)
(a) Nominal	(I) Place items from least to most or lowest to highest
(b) Ordinal	(II) Precisely how far apart the items are
(c) Ratio	(III) Denotes the categories only
(d) Interval	(IV) Enables researcher to determine the proportions easily

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

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

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

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

Correct Answer: (A) (a)-(III), (b)-(I), (c)-(IV), (d)-(II)

Explanation:

The four scales of measurement differ according to the mathematical properties they possess. A Nominal scale simply classifies data into categories without any order, so it matches (III). An Ordinal scale arranges items in a meaningful order from lowest to highest, so it matches (I). A Ratio scale has equal intervals and a true zero, which makes meaningful proportion or ratio comparisons possible; hence it matches (IV). An Interval scale has equal intervals, allowing us to determine precisely how far apart values are, so it matches (II). Therefore, the correct matching is (a)-(III), (b)-(I), (c)-(IV), (d)-(II).

7. Match the LIST-I with LIST-II

LIST-I	LIST-II
(a) Digit Keys	(I) Backspace, return, spacebar
(b) Special character Keys	(II) Numeric Keypad
(c) Non-printable Keys	(III) F1, F2, ..., F12

(d) Function Keys	(IV) +, @, &
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(A) (a)-(I), (b)-(II), (c)-(III), (d)-(IV)

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

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

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

Correct Answer: (D) (a)-(II), (b)-(IV), (c)-(I), (d)-(III)

Explanation:

Digit keys are the numerical keys represented by the Numeric Keypad, so (a) matches (II). Special character keys include symbols such as +, @ and &, so (b) matches (IV). Non-printable keys perform operations rather than directly producing ordinary printable characters; examples include Backspace, Return and Spacebar, so (c) matches (I). Function keys are the keys F1 through F12 that perform specific functions depending on the application, so (d) matches (III). Hence, the correct matching is (a)-(II), (b)-(IV), (c)-(I), (d)-(III).

8. Match the LIST-I with LIST-II

LIST-I (Number)	LIST-II (Code)
(a) 4	(I) 126
(b) 5	(II) 65
(c) 7	(III) 1332
(d) 11	(IV) 344

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

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

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

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

Correct Answer: (A) (a)-(II), (b)-(I), (c)-(IV), (d)-(III)

Explanation:

The coding pattern followed here is:

$$\text{Code} = n^3 + 1$$

For 4:

$$4^3 + 1 = 64 + 1 = 65 \rightarrow (\text{II})$$

For 5:

$$5^3 + 1 = 125 + 1 = 126 \rightarrow (\text{I})$$

For 7:

$$7^3 + 1 = 343 + 1 = 344 \rightarrow (\text{IV})$$

For 11:

$$11^3 + 1 = 1331 + 1 = 1332 \rightarrow (\text{III})$$

Therefore, the correct matching is (a)-(II), (b)-(I), (c)-(IV), (d)-(III).

9. Planned publicity that spreads spontaneously and rapidly 'by word of mouth' (but also by social network sites) throughout a potential media consumer market, refers to:

- (A) News
- (B) Viral Advertising
- (C) Communique
- (D) Rejoinder

Correct Answer: (B) Viral Advertising

Explanation:

Viral advertising is a marketing technique designed to encourage people to rapidly share promotional information with others. The message spreads from person to person through word of mouth, social networking sites, messaging platforms and other digital channels, resembling the rapid spread of a virus. News primarily provides information, a communique is an official announcement or statement, and a rejoinder is a reply or response to a previous statement. Therefore, the described form of planned publicity is Viral Advertising.

10. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A): Probability sampling is appropriate for quantitative research.

Reason (R): Probability sampling helps in reducing bias in the selection of samples.

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

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

(C) (A) is correct but (R) is not correct

(D) (A) is not correct but (R) is correct

Correct Answer: (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Explanation:

Probability sampling uses random selection, where units in the population have a known probability of being selected. It is particularly appropriate for quantitative research because it supports statistical inference and improves the representativeness of samples. Random selection also reduces the researcher's subjective influence in choosing participants and thereby helps reduce selection bias. Thus, both the Assertion and Reason are correct, and the Reason appropriately explains why probability sampling is suitable for quantitative research.

11. Which of the following behavioural ability is associated with affective domain of a learner?

(A) Evaluation

(B) Synthesis

(C) Characterization

(D) Skilled movements

Correct Answer: (C) Characterization

Explanation:

The affective domain deals with attitudes, values, interests, emotions and appreciation. Its levels include Receiving, Responding, Valuing, Organization and Characterization. Characterization is the highest level, where an individual's values become internalized and consistently influence behaviour. Evaluation and Synthesis belong to the cognitive domain in the traditional Bloom's taxonomy, while Skilled movements are associated with the psychomotor domain. Therefore, Characterization is associated with the affective domain.

12. Which of the following is/are TRUE:

(a) The categorical syllogism AAA-2 commits the fallacy of exclusive premises.

(b) The categorical syllogism EIO-3 commits the fallacy of four terms.

(c) The categorical syllogism AAA-1 commits no fallacy.

(d) The categorical syllogism EAA-1 commits no fallacy.

Choose the correct answer from the options given below:

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

Correct Answer: (C) (c) only

Explanation:

AAA-1 is the classical valid syllogistic form Barbara, so statement (c) is true. AAA-2 is invalid because of the fallacy of the undistributed middle, not the fallacy of exclusive premises; therefore, statement (a) is false. EIO-3 is a valid syllogistic form known as Ferison and does not involve four terms, making statement (b) false. EAA-1 is invalid because its affirmative conclusion distributes the minor term even though that term is not distributed in the minor premise, resulting in illicit minor. Hence, statement (d) is also false. Therefore, only statement (c) is true.

13. Which among the following is NOT a fundamental principle of National Education Policy, 2020?

- (A) Highest priority to foundational literacy and numeracy
- (B) Emphasis on conceptual understanding
- (C) Promoting translingualism and the power of language
- (D) Respect for diversity and local context

Correct Answer: (C) Promoting translingualism and the power of language

Explanation:

NEP 2020 identifies several fundamental principles, including giving the highest priority to foundational literacy and numeracy, emphasizing conceptual understanding rather than rote learning, and respecting diversity and local context in curriculum and pedagogy. It also recognizes multilingualism and the power of language in teaching and learning. However, “promoting translingualism and the power of language” is not stated as one of its fundamental principles in this form. Therefore, option (C) is the correct answer.

14. Which of the following Principles are true for a typical communication process?

- (a) Communication messages are both verbal and non-verbal.
- (b) The communication process does not involve mutual influence.
- (c) Communication messages can be intentional or unintentional.

(d) Communication is both complex and subtle.

Choose the correct answer from the options given below:

(A) (a), (b) & (c) Only

(B) (b), (c) & (d) Only

(C) (a), (c) & (d) Only

(D) (a), (b) & (d) Only

Correct Answer: (C) (a), (c) & (d) Only

Explanation:

Communication involves both verbal messages, such as spoken or written words, and non-verbal messages, such as gestures, facial expressions and body language; hence (a) is true. Messages may also be intentional or unintentional, making (c) true. Communication is a complex and subtle process because meaning is influenced by context, perception, relationships and other factors, so (d) is also true. Statement (b) is false because communication does involve mutual influence between participants. Therefore, statements (a), (c) and (d) are correct.

15. Which of the following is a scripting language?

(A) FORTRAN 95

(B) COBOL

(C) C++

(D) Visual Basic

Correct Answer: (D) Visual Basic

Explanation:

Among the given options, Visual Basic is the appropriate answer. Visual Basic is a high-level programming language developed by Microsoft and has been widely used for rapid application development and automation-oriented programming. Its related form, Visual Basic for Applications (VBA), is commonly used as a scripting and automation language within applications such as Microsoft Office. FORTRAN 95 is primarily used for scientific and numerical computing, COBOL is mainly associated with business data processing, and C++ is a general-purpose compiled programming language. Therefore, among the given choices, Visual Basic is the scripting language.

16. Arrange the following in descending order of installed capacity of total solar power as of August, 2025:

- (a) Gujarat
- (b) Rajasthan
- (c) Maharashtra
- (d) Tamil Nadu

(A) (a), (b), (c), (d)

(B) (a), (b), (d), (c)

(C) (b), (a), (d), (c)

(D) (b), (a), (c), (d)

Correct Answer: (D) (b), (a), (c), (d)

Explanation:

According to the state-wise installed solar power capacity data for the stated period, Rajasthan had the highest installed solar capacity among the given states, followed by Gujarat. Maharashtra occupied the next position, followed by Tamil Nadu. Thus, the descending order is:

Rajasthan > Gujarat > Maharashtra > Tamil Nadu

Hence, the correct sequence is (b), (a), (c), (d).

17. Arrange the following in decreasing order of processing power:

- (a) Mainframe Computer
- (b) Super computer
- (c) Mini computer
- (d) Micro Computer

(A) (b), (c), (a), (d)

(B) (b), (a), (c), (d)

(C) (a), (b), (c), (d)

(D) (a), (b), (d), (c)

Correct Answer: (B) (b), (a), (c), (d)

Explanation:

Computers can be classified according to their processing capability and size. Supercomputers possess the greatest processing power and are used for highly complex

scientific calculations and simulations. Mainframe computers come next and are designed to process large volumes of data and support many users simultaneously. Minicomputers have comparatively lower processing capacity, while microcomputers such as personal computers traditionally occupy the lowest level in this classification.

Therefore, the decreasing order is:

Super Computer > Mainframe Computer > Mini Computer > Micro Computer.

18. Which of the following are characteristics of sustainable development?

- (a) Intergenerational equity regarding natural resources.
 - (b) Equitable distribution of natural resources in the society.
 - (c) Economic development at the expense of environment.
 - (d) Reduction in society's use of non-renewable resources.
- (A) (a) and (d) only
- (B) (a) and (b) only
- (C) (a), (b) and (c) only
- (D) (a), (b) and (d) only

Correct Answer: (D) (a), (b) and (d) only

Explanation:

Sustainable development seeks to meet present needs without compromising the ability of future generations to meet their needs. Therefore, intergenerational equity regarding natural resources is an important characteristic. It also supports equitable distribution of resources within society and encourages reduced dependence on non-renewable resources. However, economic development at the expense of the environment contradicts the principle of sustainability because development should balance economic, social and environmental considerations. Hence, (a), (b) and (d) are correct.

19. Match the LIST-I with LIST-II

LIST-I (Mission LiFE objectives)	LIST-II (Action)
(a) Energy saved	(I) Use menstrual cups instead of sanitary napkins
(b) E-waste reduced	(II) Start biodiversity conservation at community level
(c) Healthy lifestyles adopted	(III) Use carpooling with friends and colleagues

(d) Single use plastic reduced	(IV) Prefer cloud storage over a pen drive/hard drive
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(A) (a)-(III), (b)-(IV), (c)-(I), (d)-(II)

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

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

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

Correct Answer: (C) (a)-(III), (b)-(IV), (c)-(II), (d)-(I)

Explanation:

Under Mission LiFE, “Use carpooling with friends and colleagues” is listed under energy-saving actions, so (a) matches (III). “Prefer cloud storage over a pen drive/hard drive” is an e-waste reduction action, so (b) matches (IV). “Start biodiversity conservation at community level” comes under adopting healthy lifestyles, so (c) matches (II). “Use menstrual cups instead of sanitary napkins” is included among actions for reducing single-use plastic, so (d) matches (I).

Therefore, the correct matching is (a)-(III), (b)-(IV), (c)-(II), (d)-(I).

20. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A): AAA-2 an invalid categorical syllogism.

Reason (R): AAA-2 commits the fallacy of exclusive premises.

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

(C) (A) is correct but (R) is not correct

(D) (A) is not correct but (R) is correct

Correct Answer: (C) (A) is correct but (R) is not correct

Explanation:

AAA-2 has the form:

All P are M.

All S are M.

Therefore, All S are P.

This is invalid because the middle term M is undistributed in both premises, resulting in the fallacy of the undistributed middle. Therefore, the Assertion that AAA-2 is invalid is correct.

However, the fallacy of exclusive premises occurs when both premises are negative. In AAA-2, both premises are affirmative. Hence, the Reason is incorrect. Therefore, (A) is correct but (R) is not correct.

21. Match the LIST-I with LIST-II

LIST-I (Syllogism)	LIST-II (Mood and figure)
(a) All M are P; Some M are S; $\therefore$ Some S are not P	(I) EOO-1
(b) No M are P; Some S are not M; $\therefore$ Some S are not P	(II) AAA-2
(c) All P are M; All S are M; $\therefore$ All S are P	(III) III-2
(d) Some P are M; Some S are M; $\therefore$ Some S are P	(IV) AII-3

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

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

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

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

Correct Answer: (D) (a)-(IV), (b)-(I), (c)-(II), (d)-(III)

Explanation:

The mood of a categorical syllogism is determined by whether its major premise, minor premise and conclusion are A, E, I or O propositions, while its figure depends on the position of the middle term.

Accordingly:

(a) corresponds to AII-3 $\rightarrow$ (IV)

(b) corresponds to EOO-1 $\rightarrow$ (I)

(c) corresponds to AAA-2 $\rightarrow$ (II)

(d) corresponds to III-2 $\rightarrow$ (III)

Thus, the correct matching is (a)-(IV), (b)-(I), (c)-(II), (d)-(III).

22. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A): In Indian logic, a material fallacy is called hetvābhāsa.

Reason (R): In a fallacious inference (anumana), the middle term appears to be a reason but is not a valid reason.

- (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)
- (C) (A) is correct but (R) is not correct
- (D) (A) is not correct but (R) is correct

Correct Answer: (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Explanation:

In Indian logic, Hetvābhāsa refers to a fallacious or apparent reason (hetu) that seems capable of establishing a conclusion but actually fails to do so. In a valid inference, the hetu or middle term must satisfy the necessary conditions for establishing the sādhyā or major term. When it only appears to be a valid reason but fails these conditions, a fallacy arises. Therefore, both the Assertion and Reason are correct, and the Reason correctly explains the Assertion.

23. Arrange the following p-values from lower level to higher level of significance:

- (a) 0.0001
 - (b) 0.01
 - (c) 0.05
 - (d) 0.001
 - (e) 0.5
- (A) (a), (b), (d), (c), (e)
 - (B) (a), (d), (b), (c), (e)
 - (C) (e), (c), (b), (d), (a)
 - (D) (e), (c), (d), (b), (a)

Correct Answer: (C) (e), (c), (b), (d), (a)

Explanation:

A smaller p-value indicates stronger evidence against the null hypothesis and therefore a higher level of statistical significance. Thus, to arrange the given p-values from lower significance to higher significance, we arrange them from the largest p-value to the smallest:

$$0.5 > 0.05 > 0.01 > 0.001 > 0.0001$$

Therefore, the required sequence is:

- (e), (c), (b), (d), (a).

24. Which of the following is a criteria air pollutant as well as a greenhouse gas?

(A) N_2O

(B) CO_2

(C) O_3

(D) NO_2

Correct Answer: (C) O_3

Explanation:

Ozone (O_3) can function both as an air pollutant and as a greenhouse gas depending on its location in the atmosphere. Ground-level or tropospheric ozone is an important air pollutant formed through photochemical reactions involving nitrogen oxides and volatile organic compounds. Ozone also absorbs infrared radiation and contributes to the greenhouse effect. Thus, among the given options, O_3 satisfies both characteristics and is the correct answer.

25. Match the LIST-I with LIST-II

LIST-I (Commission on Education)	LIST-II (Major Recommendation)
(a) The Education Commission	(I) Setting up of the University Grants Commission
(b) University Education Commission	(II) 12th Class should be attached to the university
(c) The Knowledge Commission	(III) Creation of Indian Educational Services
(d) Secondary Education Commission	(IV) Establishing an independent Regulatory Authority for Higher Education

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

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

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

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

Correct Answer: (A) (a)-(III), (b)-(I), (c)-(IV), (d)-(II)

Explanation:

The Education Commission (Kothari Commission, 1964–66) recommended the creation of an Indian Education Service, so (a) matches (III). The University Education Commission (Radhakrishnan Commission, 1948–49) recommended establishing a body that led to the setting up of the University Grants Commission, so (b) matches (I). The National Knowledge

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Commission recommended an Independent Regulatory Authority for Higher Education, so (c) matches (IV). The Secondary Education Commission (Mudaliar Commission, 1952–53) recommended restructuring secondary education, including the arrangement represented here by attaching the 12th class to the university, so (d) matches (II).

Hence, the correct matching is (a)-(III), (b)-(I), (c)-(IV), (d)-(II).

26. Which of the following is NOT correct about the Criterion-Referenced Testing?

- (A) It is also called Domain-Referenced Testing.
- (B) It is also called Objective-Referenced Testing.
- (C) Its principal uses are in mastery tests.
- (D) It is useful in testing the relative position of an individual in a group.

Correct Answer: (D) It is useful in testing the relative position of an individual in a group.

Explanation:

Criterion-Referenced Testing evaluates a learner's performance against a predetermined criterion, learning objective, or defined domain rather than comparing the learner with other individuals. Hence, it is also referred to as domain-referenced or objective-referenced testing and is commonly used for mastery testing. Determining an individual's relative position within a group is the function of Norm-Referenced Testing. Therefore, statement (D) is NOT correct about Criterion-Referenced Testing.

27. Arrange the following psychomotor domains of development from simple level to more complex one:

- (a) Perception
- (b) Set
- (c) Guided response
- (d) Mechanism
- (e) Complex overt response

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

Correct Answer: (A) (a), (b), (c), (d), (e)

Explanation:

In Simpson's psychomotor domain, learning progresses from simple sensory recognition to increasingly complex and skilled physical performance. Perception involves using sensory cues to guide activity. Set refers to readiness to act, while Guided Response involves performing a skill through imitation, trial and practice. Mechanism represents an intermediate stage where the learned response becomes habitual and more confident. Complex Overt Response involves skilful and accurate performance of complex motor acts.

Therefore, the correct order is:

Perception → Set → Guided Response → Mechanism → Complex Overt Response.

28. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A): ROM is a non-volatile memory.

Reason (R): ROM does not lose its contents when power is switched off.

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

(C) (A) is correct but (R) is not correct

(D) (A) is not correct but (R) is correct

Correct Answer: (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Explanation:

ROM (Read-Only Memory) is classified as non-volatile memory because the information stored in it is retained even when the computer's power supply is switched off. This is different from volatile memory such as RAM, which normally loses its stored data when power is removed. Therefore, both the Assertion and Reason are correct, and the Reason correctly explains why ROM is called non-volatile memory.

29. Which is NOT a valid file format for images?

(A) .bmp

(B) .tiff

(C) .jpg

(D) .wav

Correct Answer: (D) .wav

Explanation:

.bmp (Bitmap), .tiff (Tagged Image File Format), and .jpg (JPEG) are commonly used image file formats for storing digital pictures and graphics. In contrast, .wav stands for Waveform Audio File Format and is used for storing digital audio data. Since it is an audio format rather than an image format, .wav is the correct answer.

30. Survey research on a sample at a single point in time, pertains to which of the following research designs?

- (A) cross-sectional
- (B) experimental
- (C) longitudinal
- (D) case study

Correct Answer: (A) cross-sectional

Explanation:

A cross-sectional research design collects data from a population or sample at a single point in time or during a relatively short period. It provides a snapshot of the characteristics, opinions, behaviours, or conditions of the participants at that particular time. In contrast, longitudinal research collects data repeatedly over an extended period to examine changes. Therefore, a survey conducted on a sample at a single point in time follows a cross-sectional design.

31. Arrange the following levels of communication in the sequential order of complexity beginning with the most personal.

- (a) Intergroup
 - (b) Interpersonal
 - (c) Intragroup
 - (d) Intrapersonal
 - (e) Institutional
- (A) (b), (d), (a), (c), (e)
 - (B) (b), (a), (d), (c), (e)
 - (C) (d), (b), (e), (c), (a)
 - (D) (d), (b), (c), (a), (e)

Correct Answer: (D) (d), (b), (c), (a), (e)

Explanation:

Communication progresses from the most personal level to increasingly broader and more complex levels. Intrapersonal communication occurs within an individual and is therefore the

most personal. Interpersonal communication takes place between individuals. Intragroup communication occurs among members of the same group, while intergroup communication takes place between different groups. Institutional communication operates within or between larger organized structures and represents a more complex level.

Thus, the correct sequence is:

Intrapersonal → Interpersonal → Intragroup → Intergroup → Institutional.

32. The mental or psychological recasting of a message so that its meaning is in line with a person's beliefs and attitudes, is

(A) Selective Perception

(B) Assertion

(C) Lobbying

(D) Reflection

Correct Answer: (A) Selective Perception

Explanation:

Selective perception is the tendency of individuals to interpret or reshape information according to their existing beliefs, attitudes, expectations, experiences, and interests. As a result, the same message may be understood differently by different people because each person selectively interprets it through their own psychological framework. Therefore, the mental or psychological recasting of a message to make it consistent with one's beliefs and attitudes is called Selective Perception.

33. A train running at 54 km/hr takes 20 sec to cross a platform and 15 sec to pass a man walking in the same direction at a speed of 6 km/hr. Then the length of platform is

(A) 200 meters

(B) 100 meters

(C) 160 meters

(D) 140 meters

Correct Answer: (B) 100 meters

Explanation:

Speed of train = 54 km/hr = 15 m/s

Speed of man = 6 km/hr = 5/3 m/s

Since the train and the man are moving in the same direction:

$$\text{Relative speed} = 15 - 5/3 = 40/3 \text{ m/s}$$

The train takes 15 seconds to completely pass the man.

$$\text{Length of train} = \text{Relative speed} \times \text{Time}$$

$$\begin{aligned} &= 40/3 \times 15 \\ &= 200 \text{ metres} \end{aligned}$$

Now, while crossing the platform:

$$\begin{aligned} \text{Distance covered} &= \text{Speed of train} \times \text{Time} \\ &= 15 \times 20 \\ &= 300 \text{ metres} \end{aligned}$$

This distance equals:

$$\text{Length of train} + \text{Length of platform} = 300 \text{ metres}$$

Therefore,

$$\begin{aligned} \text{Length of platform} &= 300 - 200 \\ &= 100 \text{ metres} \end{aligned}$$

Hence, the correct answer is 100 meters.

34. Match the LIST-I with LIST-II

LIST-I	LIST-II
(a) Reliability	(I) Minimization of Personal Error
(b) Validity	(II) Minimization of Constant Error
(c) Objectivity	(III) Minimization of Variable Error
(d) Norms	(IV) Minimization of Interpretive Error

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

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

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

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

Correct Answer: (A) (a)-(III), (b)-(II), (c)-(I), (d)-(IV)

Explanation:

Reliability refers to the consistency of measurement and is improved by minimizing variable or random errors, so (a) matches (III). Validity concerns whether a test measures what it is intended to measure and requires minimizing systematic or constant errors, so (b) matches (II). Objectivity means that scores should not depend on the personal judgement of the scorer, thereby minimizing personal error, so (c) matches (I). Norms provide standards for interpreting an individual's score relative to a reference group, thereby minimizing interpretive error, so (d) matches (IV).

Therefore, the correct matching is (a)-(III), (b)-(II), (c)-(I), (d)-(IV).

35. Choose the correct statements from the following:

- (a) The capacity to think about our own thinking is Metacognition.
 - (b) Metacognition is instrumental in controlling our own cognitive and motivational processes.
 - (c) Teaching people how to learn stems from the idea of fostering a sense of agency and responsibility within learners.
 - (d) Metacognition anyhow does not help in teaching people how to learn.
 - (e) Metacognition knowledge and self-regulation are related components.
- (A) (a), (d) and (e) Only
- (B) (a), (c) and (d) Only
- (C) (b), (d) and (e) Only
- (D) (a), (b), (c) and (e) Only

Correct Answer: (D) (a), (b), (c) and (e) Only

Explanation:

Metacognition refers to awareness and understanding of one's own thinking and learning processes, so statement (a) is correct. It enables learners to monitor and regulate their cognitive and motivational processes, making (b) correct. Teaching learners how to learn promotes greater agency, independence, and responsibility for their own learning, so (c) is also correct. Metacognitive knowledge and self-regulation are closely related components of effective metacognition, making (e) correct.

Statement (d) is incorrect because metacognition plays an important role in helping learners understand, monitor, evaluate, and improve how they learn. Therefore, statements (a), (b), (c), and (e) are correct.

36. Liquid that passes through the landfill, and that has extracted dissolved and suspended matter from it is called _____.

- (A) activated sludge
- (B) leachate
- (C) ultrafiltration
- (D) refuse

Correct Answer: (B) leachate

Explanation:

Leachate is the contaminated liquid that forms when water passes through waste deposited in a landfill. As the water percolates through the waste, it dissolves or carries various soluble substances, suspended particles, organic matter and other contaminants. Activated sludge is associated with wastewater treatment, ultrafiltration is a membrane filtration process, and refuse refers to solid waste itself. Therefore, the liquid draining through a landfill and carrying dissolved and suspended materials is called leachate.

37. For the purpose of credit calculations under National Credit Framework (NCrF), overall, one Credit is equivalent to:

- (A) 30 notional learning hours
- (B) 40 notional learning hours
- (C) 45 notional learning hours
- (D) 60 notional learning hours

Correct Answer: (A) 30 notional learning hours

Explanation:

Under the National Credit Framework (NCrF), the total notional learning time is standardized for the calculation of credits. A learner is generally expected to complete 1,200 notional learning hours in a year for 40 credits.

Therefore:

$$1 \text{ Credit} = 1200 \div 40 = 30 \text{ notional learning hours.}$$

Notional learning hours can include different forms of learning depending on the programme and mode of education. Hence, one credit under NCrF is equivalent to 30 notional learning hours.

38. Match the LIST-I with LIST-II

LIST-I (Type of Noise in Communication)	LIST-II (Examples)
(a) Physiological	(I) Words not understood
(b) Physical	(II) Fatigue
(c) Psychological	(III) Prejudice
(d) Semantic	(IV) Bright Lights

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

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

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

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

Correct Answer: (B) (a)-(II), (b)-(IV), (c)-(III), (d)-(I)

Explanation:

Physiological noise arises from bodily conditions that interfere with communication; fatigue is an example, so (a) matches (II). Physical noise comes from environmental factors such as bright lights, so (b) matches (IV). Psychological noise results from mental attitudes or biases such as prejudice, so (c) matches (III). Semantic noise occurs when the meaning of words or symbols is unclear or not understood, so (d) matches (I).

Therefore, the correct matching is (a)-(II), (b)-(IV), (c)-(III), (d)-(I).

39. Arrange the following developments of education in the chronological order:

- (a) SWAYAM MOOCs
- (b) Open education
- (c) Distance Education
- (d) Correspondence Education
- (e) Credit Transfer through Academic Bank of Credit

(A) (c), (b), (d), (a), (e)

(B) (d), (c), (a), (b), (e)

(C) (b), (d), (c), (e), (a)

(D) (d), (c), (b), (a), (e)

Correct Answer: (D) (d), (c), (b), (a), (e)

Explanation:

The development of non-conventional modes of education progressed from earlier correspondence-based instruction to more flexible and technology-enabled systems. Correspondence Education developed first, followed by the broader concept of Distance Education. Open Education further expanded flexibility and accessibility in learning. This was followed by technology-based initiatives such as SWAYAM MOOCs. The Academic Bank of Credits is a more recent development under NEP 2020; UGC regulations for its establishment and operation were notified in 2021.

Thus, the chronological sequence is:

Correspondence Education → Distance Education → Open Education → SWAYAM MOOCs → Credit Transfer through Academic Bank of Credit.

40. Arrange the following fractions in descending order:

- (a) $\frac{2}{5}$
- (b) $\frac{3}{8}$
- (c) $\frac{5}{13}$
- (d) $\frac{6}{11}$
- (e) $\frac{4}{9}$

(A) (d), (e), (c), (a), (b)

(B) (d), (a), (e), (b), (c)

(C) (b), (a), (c), (d), (e)

(D) (d), (e), (a), (c), (b)

Correct Answer: (D) (d), (e), (a), (c), (b)

Explanation:

Convert the fractions into decimal values for easy comparison:

- (a) $\frac{2}{5} = 0.400$
- (b) $\frac{3}{8} = 0.375$
- (c) $\frac{5}{13} \approx 0.385$
- (d) $\frac{6}{11} \approx 0.545$
- (e) $\frac{4}{9} \approx 0.444$

Therefore, in descending order:

$$\frac{6}{11} > \frac{4}{9} > \frac{2}{5} > \frac{5}{13} > \frac{3}{8}$$

Hence, the correct sequence is (d), (e), (a), (c), (b).

41. Given below are two statements: one is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A): Leaders in higher education institutions set the tone for academic and research excellence.

Reason (R): Effective leadership is essential for the effective allocation and management of resources in higher education.

(A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

(B) Both (A) and (R) are correct but (R) is not the correct explanation of (A)

(C) (A) is correct but (R) is not correct

(D) (A) is not correct but (R) is correct

Correct Answer: (A) Both (A) and (R) are correct and (R) is the correct explanation of (A)

Explanation:

Leadership plays an important role in determining the academic and research environment of a higher education institution. Institutional leaders influence priorities, research support, infrastructure, faculty development and the overall academic culture. Effective allocation and management of financial, human and infrastructural resources are important mechanisms through which leaders promote academic and research excellence. Therefore, both the Assertion and Reason are correct, and the Reason provides an appropriate explanation of the Assertion.

42. Contraposition is not valid in the case of which categorical proposition?

(A) A

(B) O

(C) I

(D) E

Correct Answer: (C) I and (D) E

Explanation:

Contraposition is an immediate inference in which the subject and predicate are interchanged and both are replaced by their complements. In traditional categorical logic, contraposition is valid for A (Universal Affirmative) and O (Particular Negative) propositions.

It is not valid for:

I – Particular Affirmative

E – Universal Negative

Therefore, contraposition is not valid for both I and E categorical propositions. Hence, options (C) and (D) are correct.

43. Qualitative research can be construed as a research strategy that

(A) entails a deductive approach to the relationship between theory and research

(B) has incorporated the practices and norms of the natural scientific model

(C) embodies a view of social reality as a constantly shifting emergent property of individuals' creation

(D) embodies a view of social reality as an external objective reality

Correct Answer: (C) embodies a view of social reality as a constantly shifting emergent property of individuals' creation

Explanation:

Qualitative research generally views social reality as dynamic, contextual and constructed through people's interactions, experiences and interpretations. It commonly emphasizes an inductive relationship between theory and research rather than a strictly deductive approach. It also differs from the natural-science model that treats reality as entirely external and objective. Thus, qualitative research considers social reality to be an emergent and continuously changing product of individuals' interpretations and social interactions.

44. Identify the correct mathematical statements:

(a) The expression $(1/5 \times 6) + (1/6 \times 7) + (1/7 \times 8) + \dots + (1/24 \times 25)$ is equal to $4/25$.

(b) Of the three numbers, second is twice the first and is also thrice of the third. If the average of three numbers is 55, then largest number is 90.

(c) If $(a + b) : (b + c) : (c + a) = 6 : 7 : 8$ and $a + b + c = 14$, then value of c is 8.

(d) $(0.2 \times 0.2 + 0.02 \times 0.02 - 0.4 \times 0.02) / 0.18$ is equal to 0.09.

(A) (a), (b) and (d) only

(B) (b) and (c) only

(C) (b) and (d) only

(D) (a) and (b) only

Correct Answer: (D) (a) and (b) only

Explanation:

Statement (a):

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$$1/(5 \times 6) + 1/(6 \times 7) + \dots + 1/(24 \times 25)$$

Using $1/[n(n+1)] = 1/n - 1/(n+1)$, the terms cancel successively:

$$= 1/5 - 1/25 \\ = 4/25$$

Hence, (a) is correct.

For (b), let the first number be x . Then the second $= 2x$ and the third $= 2x/3$.

Since their average is 55:

$$x + 2x + 2x/3 = 165$$

$$11x/3 = 165$$

$$x = 45$$

Thus, the numbers are 45, 90 and 30. The largest is 90, so (b) is correct.

Statement (c) is incorrect. Since the three pair sums total $2(a+b+c)=28$ and their ratio is 6:7:8, we get $b+c = 28/3$. Therefore, c is not 8.

For (d):

$$(0.2 \times 0.2 + 0.02 \times 0.02 - 0.4 \times 0.02)/0.18$$

$$= (0.04 + 0.0004 - 0.008)/0.18$$

$$= 0.0324/0.18$$

$$= 0.18, \text{ not } 0.09.$$

Therefore, only statements (a) and (b) are correct.

45. Complete the following series:

4, 36, 252, 1260, ...

(A) 2520

(B) 3780

(C) 2780

(D) 3520

Correct Answer: (B) 3780

Explanation:

Observe the multiplication pattern:

$$4 \times 9 = 36$$

$$36 \times 7 = 252$$

$$252 \times 5 = 1260$$

The multipliers are consecutive decreasing odd numbers:

9, 7, 5, 3

Therefore, the next term is:

$$1260 \times 3 = 3780$$

Hence, the missing number in the series is 3780.

Comprehension: (46-50)

Read the passage given below and answer questions:

Conventional and outdated wisdom asserts that we each have 'learning styles' unique to ourselves. The implication is that if you don't learn using your preferred style you'll fail to acquire the knowledge desired. It also allows you an excuse not to work hard at learning something new. In Soft-Wired, however, Michael Merzenich shows that the plasticity of the brain extends to the way we learn. In other words, we can learn how to learn. Indeed, we should focus strongly on doing this.

As well as reading or attending lectures, look at cultivating different learning styles-or, more precisely, learning strategies. Micromastery enables you to experiment and use a vast array of different learning strategies. Since all are designed to succeed brilliantly (with a modicum of persistence) at the micromastery concerned, you have a perfect chance to increase your store of potential learning strategies. This in turn increases your ideational fluency - your ability to switch between idea sets that may be opposed or contradictory. If one strategy doesn't seem to work, no matter how wedded you are to it, you switch seamlessly to another. Ideational fluency is an attribute required of anyone working in a fast-changing, rapid-learning environment - the kind increasingly encountered today.

46. Another word for "seamlessly" can be:

(A) speedily

- (B) slowly
- (C) smoothly
- (D) gracefully

Correct Answer: (C) smoothly

Explanation:

In the passage, “seamlessly” is used in the statement that when one learning strategy does not work, a person can “switch seamlessly to another.” Here, seamlessly means making the change without difficulty, interruption, or disruption. The word “smoothly” conveys this meaning most accurately. “Speedily” refers mainly to speed, “slowly” is the opposite of quickly, and “gracefully” does not fit the context as precisely. Therefore, “smoothly” is the correct answer.

47. What becomes an excuse to not learn something new?

- (A) The plasticity of the brain
- (B) The rationale of ideational fluency
- (C) The presence of micro mastery
- (D) Each person has a unique learning style

Correct Answer: (D) Each person has a unique learning style

Explanation:

The passage criticizes the conventional belief that every person has a unique “learning style” and must learn through that preferred style. According to the author, this belief can provide an excuse for not working hard to learn something new when it does not match one's supposed preferred style. The passage instead emphasizes that the brain is plastic and that people can develop different ways of learning. Therefore, the belief that each person has a unique learning style becomes an excuse not to learn something new.

48. According to the passage micromastery refers to:

- (A) The ability to master both macro and micro skills
- (B) The ability to experiment and apply diverse learning strategies
- (C) The aptitude to learn better and achieve all goals
- (D) The ability to be a master of both process and product

Correct Answer: (B) The ability to experiment and apply diverse learning strategies

Explanation:

The passage states that “Micromastery enables you to experiment and use a vast array of different learning strategies.” Thus, micromastery provides an opportunity to try different approaches to learning and increase one's collection of effective learning strategies. It is not described as mastering macro and micro skills or mastering both process and product. Therefore, according to the passage, micromastery refers to the ability to experiment with and apply diverse learning strategies.

49. Ideational fluency in the passage is defined as:

- (A) The ability to switch between contradictory idea sets
- (B) Various kinds of learning strategies and ideas
- (C) Possessing the skill in one kind of learning strategy
- (D) The ability to avoid many kinds of idea sets

Correct Answer: (A) The ability to switch between contradictory idea sets

Explanation:

The passage explicitly describes ideational fluency as “your ability to switch between idea sets that may be opposed or contradictory.” It allows a learner to move from one strategy or set of ideas to another when the existing approach is ineffective. Thus, ideational fluency is not about depending on one strategy but about being cognitively flexible. Therefore, the ability to switch between contradictory idea sets is the correct answer.

50. Select the skill which would be the best one in a fast-changing rapid learning environment, according to the passage:

- (A) Ideational fluency
- (B) A unique learning style
- (C) Plasticity of the brain
- (D) Capacity of hard work

Correct Answer: (A) Ideational fluency

Explanation:

The passage specifically states that “Ideational fluency is an attribute required of anyone working in a fast-changing, rapid-learning environment.” Such environments demand the ability to shift between different ideas and learning strategies when circumstances change or when one approach fails. A person with ideational fluency can adapt quickly rather than remaining dependent on a single learning method. Therefore, according to the passage,

ideational fluency is the most appropriate skill for a fast-changing, rapid-learning environment.

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