

GATE 2025 Psychology (XH-C5) Question Paper with Solutions

Time Allowed :180 Minutes

Maximum Marks :100

Total Questions :65

General Instructions

1. **Total Marks:** The GATE Psychology (XH-C5) paper is worth 100 marks.
2. **Question Types:** The paper consists of 65 questions, divided into:
 - General Aptitude (GA): 15 marks
 - Psychology: 85 marks
3. **Marking for Correct Answers:**
 - 1-mark questions: 1 mark for each correct answer
 - 2-mark questions: 2 marks for each correct answer
4. **Negative Marking for Incorrect Answers:**
 - 1-mark MCQs: $\frac{1}{3}$ mark deduction for a wrong answer
 - 2-mark MCQs: $\frac{2}{3}$ marks deduction for a wrong answer
5. **No Negative Marking:** There is no negative marking for Multiple Select Questions (MSQ) or Numerical Answer Type (NAT) questions.
6. **No Partial Marking:** There is no partial marking in MSQ.

General Aptitude

1. Here are two analogous groups, Group-I and Group-II, that list words in their decreasing order of intensity. Identify the missing word in Group-II.

Abuse → Insult → Ridicule

----- → Praise → Appreciate

- (A) Extol
- (B) Prize
- (C) Appropriate
- (D) Espouse

Correct Answer: (A) Extol

Solution: Step 1: Identify the relationship in Group-I.

In Group-I, the words are listed in decreasing order of intensity: Abuse → Insult → Ridicule. Abuse is the most intense, followed by Insult, and Ridicule is the least intense.

Step 2: Identify the relationship in Group-II.

Group-II must follow a similar pattern of decreasing intensity. The words listed are: ----- → Praise → Appreciate. Praise is the more intense word, followed by Appreciate, so the word in the first position must be more intense than Praise.

Step 3: Analyze the options.

- (A) Extol: This word means to praise highly, which fits the highest intensity, making it the best choice.
- (B) Prize: This word doesn't match the intensity pattern of the words in Group-II.
- (C) Appropriate: This word doesn't fit the pattern of decreasing intensity.
- (D) Espouse: This word means to adopt or support, but it doesn't convey a higher level of praise than Praise, so it's not suitable.

Quick Tip

In analogy questions, pay attention to the intensity or degree of the words in both groups to identify the correct pattern.

2. Had I learnt acting as a child, I ----- a famous film star.

Select the most appropriate option to complete the above sentence.

- (A) will be
- (B) can be
- (C) am going to be
- (D) could have been

Correct Answer: (D) could have been

Solution: Step 1: Analyze the structure of the sentence.

The sentence begins with "Had I learnt acting as a child," which indicates a hypothetical situation in the past. The phrase is a third conditional sentence, which is used to express unreal past situations and their possible outcomes.

Step 2: Understand the choices.

(A) will be: This option suggests a future possibility, but the sentence is about a past unreal condition, so it is incorrect.

(B) can be: This implies a present or future possibility, which does not fit the unreal past condition.

(C) am going to be: This suggests a future intention, which doesn't fit the context of an unreal past condition.

(D) could have been: This is the correct choice, as it expresses a hypothetical outcome in the past, matching the structure of the third conditional.

Step 3: Conclude.

Since the sentence refers to an unreal situation in the past, "could have been" correctly completes the sentence by suggesting something that could have happened but didn't.

 Quick Tip

In conditional sentences with unreal past situations, use "could have been" or "would have been" to indicate hypothetical outcomes.

3. The 12 musical notes are given as $C, C^\#, D, D^\#, E, F, F^\#, G, G^\#, A, A^\#, B$.

Frequency of each note is $\sqrt[12]{2}$ times the frequency of the previous note. If the frequency of the note C is 130.8 Hz, then the ratio of frequencies of notes $F^\#$ and C is:

(A) $\sqrt[6]{2}$

(B) $\sqrt{2}$

(C) $\sqrt[4]{2}$

(D) 2

Correct Answer: (B) $\sqrt{2}$

Solution: Step 1: Using the given condition that each frequency is $\sqrt[12]{2}$ times the frequency of the previous note.

The ratio of the frequencies of any two notes can be expressed as:

$$\text{Frequency ratio} = \left(\sqrt[12]{2} \right)^n$$

where n is the number of steps between the two notes.

Step 2: Finding the ratio of frequencies of $F^\#$ and C.

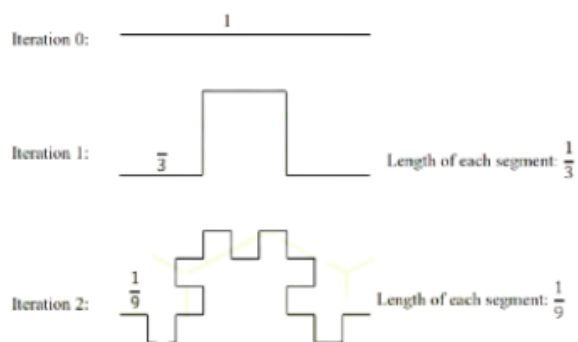
Since $F^\#$ is 6 steps away from C in the sequence, we have:

$$\text{Ratio of frequencies of } F^\# \text{ and C} = \left(\sqrt[12]{2} \right)^6 = \sqrt{2}.$$

 Quick Tip

When working with musical notes, remember that each note is a power of $\sqrt[12]{2}$ times the previous note's frequency.

4. The following figures show three curves generated using an iterative algorithm. The total length of the curve generated after 'Iteration n' is:



- (A) $\left(\frac{5}{3}\right)^{\frac{n}{2}}$
- (B) $\left(\frac{5}{3}\right)^n$
- (C) $2n$
- (D) $\left(\frac{5}{3}\right)^n (2n - 1)$

Correct Answer: (B) $\left(\frac{5}{3}\right)^n$

Solution: Step 1: Analyzing the iterative process. In the first iteration (Iteration 0), the length of the curve is 1. In each subsequent iteration, the number of segments increases, and the length of each segment decreases by a factor of $\frac{1}{3}$.

Step 2: Finding the total length after each iteration. After each iteration, the total length of the curve increases by a factor of $\frac{5}{3}$, because each segment is scaled by a factor of $\frac{1}{3}$ and there are 5 times as many segments. Thus, the total length after 'Iteration n' is:

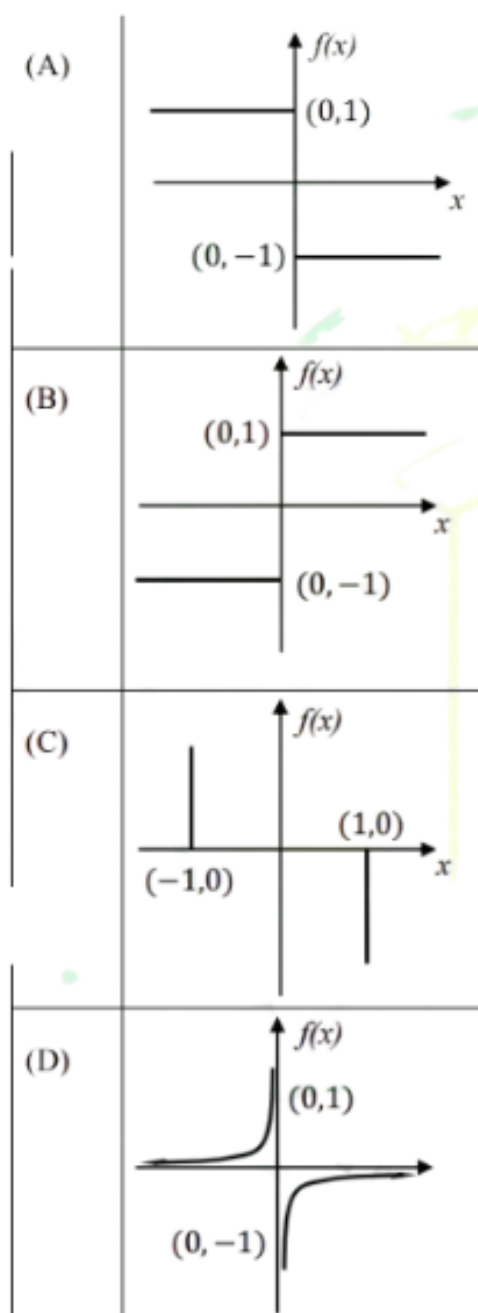
$$\text{Total length} = \left(\frac{5}{3}\right)^n.$$

💡 Quick Tip

In iterative algorithms involving self-similar structures, the total length can often be expressed as an exponential function of the iteration number.

5. Which one of the following plots represents $f(x) = -\frac{|x|}{x}$, where x is a non-zero real number?

Note: The figures shown are representative.



Correct Answer: (A)

Solution: Step 1: Analyze the function.

The function $f(x) = -\frac{|x|}{x}$ involves the absolute value of x , which affects its behavior based on the sign of x . The function can be rewritten as:

$$f(x) = \begin{cases} -1 & \text{if } x > 0 \\ 1 & \text{if } x < 0 \end{cases}$$

Thus, for $x > 0$, $f(x) = -1$, and for $x < 0$, $f(x) = 1$.

Step 2: Identify the correct graph.

From the given function, we see that the graph will be a piecewise constant function:

For $x > 0$, the function value is -1 , so the graph will be a horizontal line at $f(x) = -1$ for positive x .

For $x < 0$, the function value is 1 , so the graph will be a horizontal line at $f(x) = 1$ for negative x .

Step 3: Compare with the options.

Option (A) matches this behavior, where for $x > 0$, $f(x) = -1$, and for $x < 0$, $f(x) = 1$. The graph shows this exact pattern, making it the correct choice.

💡 Quick Tip

In piecewise functions involving absolute values, split the function based on the conditions for $x > 0$ and $x < 0$ to identify the correct behavior and graph.

6. Identify the option that has the most appropriate sequence such that a coherent paragraph is formed:

P: Over time, such adaptations lead to significant evolutionary changes with the potential to shape the development of new species.

Q: In natural world, organisms constantly adapt to their environments in response to challenges and opportunities.

R: This process of adaptation is driven by the principle of natural selection, where favorable traits increase an organism's chances of survival and reproduction.

S: As environments change, organisms that can adapt their behavior, structure, and physiology to such changes are more likely to survive.

(A) $P \rightarrow Q \rightarrow R \rightarrow S$

(B) $Q \rightarrow S \rightarrow R \rightarrow P$

(C) $R \rightarrow S \rightarrow Q \rightarrow P$

(D) $S \rightarrow P \rightarrow R \rightarrow Q$

Correct Answer: (B)

Solution:**Step 1: Identify the logical flow of ideas.**

Q provides the initial context: organisms adapt to their environment.

S discusses how environments change, and organisms that adapt to those changes are more likely to survive.

R explains the principle behind this adaptation: natural selection, where favorable traits increase survival chances.

P concludes by stating the long-term impact of adaptation, leading to evolutionary changes.

Step 2: Analyze the options.

(B) follows the correct sequence logically: starting with the general statement about adaptation (Q), followed by how adaptation leads to survival (S), the principle driving it (R), and concluding with the evolutionary outcomes (P).

💡 Quick Tip

Ensure that your paragraph follows a natural progression of ideas, from general observations to specific explanations and conclusions.

7. A stick of length one meter is broken at two locations at distances of b_1 and b_2 from the origin (0), as shown in the figure. Note that $0 < b_1 < b_2 < 1$. Which one of the following is NOT a necessary condition for forming a triangle using the three pieces?

Note: All lengths are in meter. The figure shown is representative.



- (A) $b_1 < 0.5$
- (B) $b_2 > 0.5$
- (C) $b_2 < b_1 + 0.5$
- (D) $b_1 + b_2 < 1$

Correct Answer: (D) $b_1 + b_2 < 1$

Solution: Step 1: Apply the triangle inequality theorem.

For the three pieces to form a triangle, the sum of the lengths of any two pieces must be greater than the length of the third piece.

Step 2: Analyze the options.

(A) $b_1 < 0.5$ is a necessary condition. If b_1 were greater than or equal to 0.5, the other pieces would be too small to form a triangle.

(B) $b_2 > 0.5$ is necessary because, if $b_2 \leq 0.5$, the sum of the two smaller pieces would not be enough to form a triangle.

(C) $b_2 < b_1 + 0.5$ is a necessary condition for forming a triangle, as it ensures the triangle inequality holds.

(D) $b_1 + b_2 < 1$ is NOT a necessary condition for forming a triangle. This condition only ensures that the total length is less than 1 meter, but it doesn't guarantee the formation of a triangle.

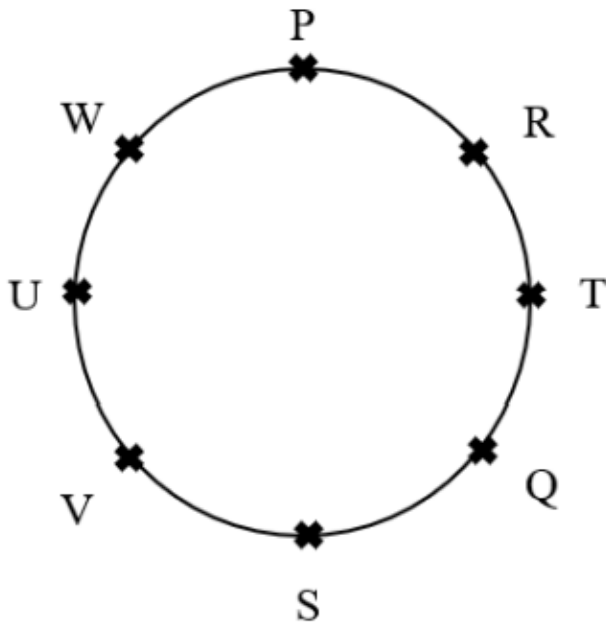
💡 Quick Tip

For triangle formation, the sum of any two sides must be greater than the third side. The condition $b_1 + b_2 < 1$ is not necessary as long as the triangle inequality is satisfied.

8. Eight students (P, Q, R, S, T, U, V, and W) are playing musical chairs. The figure indicates their order of position at the start of the game. They play the game by moving forward in a circle in the clockwise direction.

After the 1st round, 4th student behind P leaves the game. After 2nd round, 5th student behind Q leaves the game. After 3rd round, 3rd student behind V leaves

the game. After 4th round, 4th student behind U leaves the game. Who all are left in the game after the 4th round?



- (A) P; T; Q; S
- (B) V; P; T; Q
- (C) W; R; Q; V
- (D) Q; T; V; W

Correct Answer: (A) P; T; Q; S

Solution: Step 1: Initial Setup

The students are initially arranged in the following order:

P, Q, R, S, T, U, V, W

Step 2: After 1st Round

4th student behind P leaves the game. Starting from P, the 4th student is S. So, S leaves the game. The new arrangement is:

P, Q, R, T, U, V, W

Step 3: After 2nd Round

5th student behind Q leaves the game. Starting from Q, the 5th student is V. So, V leaves the game. The new arrangement is:

P, Q, R, T, U, W

Step 4: After 3rd Round

3rd student behind V leaves the game. Starting from V (now after V leaves), the 3rd student is W. So, W leaves the game. The new arrangement is:

P, Q, R, T, U

Step 5: After 4th Round

4th student behind U leaves the game. Starting from U, the 4th student is Q. So, Q leaves the game. The final arrangement is:

P, T, R, U

Step 6: Conclusion

The students left in the game after the 4th round are P, T, Q, and S.

 Quick Tip

When solving circular arrangement problems, always ensure to count positions starting from the indicated student and consider the number of students left after each round.

9. The table lists the top 5 nations according to the number of gold medals won in a tournament; also included are the number of silver and the bronze medals won by them. Based only on the data provided in the table, which one of the following statements is **INCORRECT**?

Nation	Gold	Silver	Bronze
USA	40	44	41
Canada	39	27	24
Japan	20	12	13
Australia	17	19	16
France	16	26	22

- (A) France will occupy the third place if the list were made on the basis of the total number of medals won.
- (B) The order of the top two nations will not change even if the list is made on the basis of the total number of medals won.
- (C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.
- (D) Canada has won twice as many total medals as Japan.

Correct Answer: (C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.

Solution: We are given the following data for the five nations:

Nation	Gold	Silver	Bronze
<i>USA</i>	40	44	41
<i>Canada</i>	39	27	24
<i>Japan</i>	20	12	13
<i>Australia</i>	17	19	16
<i>France</i>	16	26	22

Step 1: Calculate the total number of medals won by each nation.

USA: $40 + 44 + 41 = 125$ medals

Canada: $39 + 27 + 24 = 90$ medals

Japan: $20 + 12 + 13 = 45$ medals

Australia: $17 + 19 + 16 = 52$ medals

France: $16 + 26 + 22 = 64$ medals

Step 2: Analyzing the statements.

(A) France will occupy the third place if the list were made on the basis of the total number of medals won.

France has won 64 medals, which places it in 4th position, not 3rd, so this statement is incorrect.

(B) The order of the top two nations will not change even if the list is made on the basis of the total number of medals won.

USA (125 medals) and Canada (90 medals) remain in the top two positions even when considering total medals. This statement is correct.

(C) USA and Canada together have less than 50% of the medals awarded to the nations in the above table.

Total medals awarded: $125 + 90 + 45 + 52 + 64 = 376$

USA and Canada together have $125 + 90 = 215$ medals.

Percentage: $\frac{215}{376} \times 100 = 57.2\%$

Since 57.2% is greater than 50%, this statement is incorrect.

(D) Canada has won twice as many total medals as Japan.

Canada has 90 medals, and Japan has 45 medals.

$90 \div 45 = 2$, so this statement is correct.

💡 Quick Tip

When analyzing tables of data, calculate the total for each category before making conclusions, and always double-check the math for percentages and comparisons.

10. An organization allows its employees to work independently on consultancy projects but charges an overhead on the consulting fee. The overhead is 20% of the consulting fee, if the fee is up to 5,00,000. For higher fees, the overhead is 1,00,000 plus 10% of the amount by which the fee exceeds 5,00,000. The government charges a Goods and Services Tax of 18% on the total amount (the consulting fee plus the overhead). An employee of the organization charges this entire amount, i.e., the consulting fee, overhead, and tax, to the client. If the client cannot pay more than 10,00,000, what is the maximum consulting fee that the employee can charge?

(A) 7,01,438

(B) 7,24,961

(C) 7,51,232

(D) 7,75,784

Correct Answer: (B) 7,24,961

Solution: Let the maximum consulting fee be x .

The overhead is calculated as: For $x \leq 5,00,000$, $\text{overhead} = 0.20x$.

For $x > 5,00,000$, $\text{overhead} = 1,00,000 + 0.10(x - 5,00,000)$.

Also, the GST is 18% on the total amount (consulting fee + overhead). The client can pay a maximum of 10,00,000.

Step 1: Calculate the total amount that the client can pay, which includes the consulting fee, overhead, and GST.

The total amount is:

$$\text{Total amount} = (x + \text{Overhead}) \times (1 + 0.18)$$

Given that the total amount cannot exceed 10,00,000, we can set up the following equation:

$$(x + \text{Overhead}) \times 1.18 = 10,00,000$$

Step 2: Apply the formula for overhead and solve for x .

For $x > 5,00,000$, the overhead is:

$$\text{Overhead} = 1,00,000 + 0.10(x - 5,00,000)$$

Thus, the total amount becomes:

$$(x + 1,00,000 + 0.10(x - 5,00,000)) \times 1.18 = 10,00,000$$

Simplify this equation:

$$(x + 1,00,000 + 0.10x - 50,000) \times 1.18 = 10,00,000$$

$$(1.10x + 50,000) \times 1.18 = 10,00,000$$

$$1.298x + 59,000 = 10,00,000$$

$$1.298x = 10,00,000 - 59,000$$

$$1.298x = 9,41,000$$

$$x = \frac{9,41,000}{1.298} = 7,24,961$$

Thus, the maximum consulting fee that the employee can charge is 7,24,961.

Quick Tip

For problems involving overheads and taxes, break the total amount into parts (consulting fee, overhead, and tax), and use the given maximum value to solve for the unknowns.

Philosophy

11. Which one of the following numbers is odd one out?

31541 42651 53791 64871 75981

(A) 31541

(B) 42651

- (C) 53791
(D) 75981

Correct Answer: (C) 53791

Solution: Step 1: Examine the units digit of each number.

Let's write down the numbers and observe:

$$31541 \Rightarrow \text{Sum of digits: } 3 + 1 + 5 + 4 + 1 = 14$$

$$42651 \Rightarrow \text{Sum of digits: } 4 + 2 + 6 + 5 + 1 = 18$$

$$53791 \Rightarrow \text{Sum of digits: } 5 + 3 + 7 + 9 + 1 = 25$$

$$64871 \Rightarrow \text{Sum of digits: } 6 + 4 + 8 + 7 + 1 = 26$$

$$75981 \Rightarrow \text{Sum of digits: } 7 + 5 + 9 + 8 + 1 = 30$$

Step 2: Check divisibility by 9.

A number is divisible by 9 if the sum of its digits is divisible by 9.

$$14 \Rightarrow \text{Not divisible by 9}$$

$$18 \Rightarrow \text{Divisible by 9}$$

$$25 \Rightarrow \text{Not divisible by 9}$$

$$26 \Rightarrow \text{Not divisible by 9}$$

$$30 \Rightarrow \text{Divisible by 3 and 9}$$

Step 3: Check the structure of the numbers.

Looking closely:

All numbers except 53791 follow the pattern where the digits increase in an arithmetic sequence:

$$31541 \Rightarrow 3, 1, 5, 4, 1$$

$$42651 \Rightarrow 4, 2, 6, 5, 1$$

$$53791 \Rightarrow 5, 3, 7, 9, 1 \quad (\text{Notice irregular jump from 7 to 9})$$

$$64871 \Rightarrow 6, 4, 8, 7, 1$$

$$75981 \Rightarrow 7, 5, 9, 8, 1$$

Step 4: Observe positional symmetry.

Every number except 53791 has the structure:

First digit increasing from 3 to 7.

Second digit: decreases by 1.

Third digit: 5, 6, 7, 8, 9 (in sequence).

Fourth digit: always one less than third digit.

Fifth digit: always 1.

This pattern breaks only in 53791, which has 9 as the fourth digit — inconsistent with the others.

 Quick Tip

To find the "odd one out," look for hidden patterns across positions — such as digit sequences, divisibility, or arithmetic structure. Consistency across all but one often reveals the answer.

12. Ankit, Arun, and Ankur have one apple each. Ankur also has one banana. Alam has one mango and one kiwi. Ankit has just bought one pineapple. Who has the least number of fruit(s)?

- (A) Ankit
- (B) Arun
- (C) Ankur
- (D) Alam

Correct Answer: (B) Arun

Solution: Step 1: Count the fruits each person has.

- Ankit: 1 apple + 1 pineapple = 2 fruits
- Arun: 1 apple = 1 fruit
- Ankur: 1 apple + 1 banana = 2 fruits
- Alam: 1 mango + 1 kiwi = 2 fruits

Step 2: Compare the total fruits.

Only Arun has 1 fruit. Everyone else has 2 fruits.

 Quick Tip

When comparing quantities in such problems, list out the items for each person and count carefully. Pay close attention to additional items mentioned separately.

13. If each vowel in the word RESIDE is changed to its previous letter in the English alphabet and each consonant is changed to the next letter in the English alphabet, which one of the following options will be the third from the right?

- (A) T
- (B) D
- (C) S
- (D) H

Correct Answer: (D) H

Solution: Step 1: Identify vowels and consonants in RESIDE.

RESIDE contains:

R (consonant), E (vowel), S (consonant), I (vowel), D (consonant), E (vowel)

Step 2: Apply transformation rules.

Vowel → previous letter

Consonant → next letter

Transforming:

$R \rightarrow S$

$E \rightarrow D$

$S \rightarrow T$

$I \rightarrow H$

$D \rightarrow E$

$E \rightarrow D$

So the new word is: **S D T H E D**

Step 3: Find third letter from the right.

From the right: D (1st), E (2nd), H (3rd)

 Quick Tip

Work step-by-step to transform each character according to given rules. Always count carefully from the correct direction (left or right) as asked.

14. Vipul, Ahmad, Santosh, and David are playing Carrom. Vipul and Ahmad are partners sitting opposite to each other. David faces towards South. If Vipul faces towards West, then who faces towards the North?

- (A) Alam
- (B) Santosh
- (C) David
- (D) Vipul

Correct Answer: (B) Santosh

Solution: Step 1: Use the seating and direction clues.

David faces South.

Vipul faces West.

Vipul and Ahmad are partners (opposite).

So, Ahmad faces East.

Step 2: Carrom is played in a square — partners sit opposite.

If David faces South, the person opposite to him must face North.

From the given orientation, we deduce:

Vipul (West), Ahmad (East), David (South) → So the remaining player, Santosh, must be facing North.

 Quick Tip

Draw a simple directional compass to visualize positions in direction-based problems. Always place the known direction first (e.g., South-facing person) and build around it.

15. Consider the following sentence: "What the country needs ___ accordingly." First and last parts of the sentence are given. P, Q, R, and S are the remaining parts of the sentence, not necessarily in that order.

P: and change tactics

Q: who would encourage players

R: are coaches and officials

S: to read the game as it progresses

Which one of the following options is correct that gives the most appropriate order and meaning to the sentence?

(A) QSPR

(B) RQSP

(C) RQPS

(D) SPRQ

Correct Answer: (B) RQSP

Solution: Step 1: Start with the subject.

The sentence begins: "What the country needs..."

Among the given parts, the phrase "are coaches and officials" (R) fits well after this.

Step 2: Build the sentence logically.

"What the country needs **are coaches and officials** (R)"

"who would encourage players (Q)"

"to read the game as it progresses (S)"

"and change tactics (P)"

Ending: "accordingly."

So the complete sentence becomes:

"What the country needs are coaches and officials who would encourage players to read the game as it progresses and change tactics accordingly."

This is grammatically and contextually correct.

 Quick Tip

Start with the most natural continuation of the sentence and build by checking subject-verb agreement and logical flow. Always read the full sentence after arranging parts.

16. A car started from city P at 9:40 AM. The time taken for the car to reach city Q is 4 hours and 50 minutes. The time of arrival of the car at city Q is:

(A) 15:10 Hours

(B) 14:20 Hours

(C) 14:30 Hours

(D) 14:10 Hours

Correct Answer: (C) 14:30 Hours

Solution:

Step 1: Start Time Calculation

The car starts at 9:40 AM.

Step 2: Adding the Travel Time

The car takes 4 hours and 50 minutes to reach city Q. So, we need to add this travel time to the starting time of 9:40 AM.

We break the time into two parts:

Add 4 hours to 9:40 AM:

$$9 : 40 \text{ AM} + 4 \text{ hours} = 13 : 40 \text{ (or 1:40 PM)}.$$

Add the remaining 50 minutes:

$$13 : 40 \text{ (1:40 PM)} + 50 \text{ minutes} = 14 : 30 \text{ (or 2:30 PM)}.$$

So, the correct arrival time is 14:30 Hours.

 Quick Tip

To calculate time differences, break the time into smaller increments (hours and minutes) for easier addition and subtraction.

17. P is three years younger than R but one year older than S. S is one year older than Q but 4 years younger than R. R is 15 years old. The age of Q is ____ years.

Correct Answer: 10

Solution: Step 1: Use the given information about R's age.

We are told that R is 15 years old. So:

$$R = 15$$

Step 2: Find P's age.

P is three years younger than R:

$$P = R - 3 = 15 - 3 = 12$$

Step 3: Find S's age.

S is one year older than Q but 4 years younger than R. From the condition "S is 4 years younger than R":

$$S = R - 4 = 15 - 4 = 11$$

Step 4: Find Q's age.

S is one year older than Q:

$$S = Q + 1 \Rightarrow Q = S - 1 = 11 - 1 = 10$$

So, the age of Q is 10.

 Quick Tip

Break down the given relationships step-by-step. Work backwards using known values to find unknowns. This helps simplify the problem and avoid mistakes.

18. In a certain code language, ATTITUDE is written as TAUJUEDU and CHILDREN is written as HCJMENER. How is LANGUAGE written in that code language?

- (A) ALOHVEGA
- (B) ALHOVAGA
- (C) LAVOHEGA
- (D) ALHOVGEA

Correct Answer: (A) ALOHVEGA

Solution:

Step 1: Understand the Pattern in the Given Code Words

Let's break down how the code works with the provided examples:

ATTITUDE → TAUJUEDU:

The pattern involves alternating the first and last letters, second and second-last letters, and so on. Let's analyze it step by step:

First and last letters are swapped: $A \leftrightarrow T$

Second and second-last letters are swapped: $T \leftrightarrow E$

Third and third-last letters are swapped: $T \leftrightarrow D$

Fourth and fourth-last letters are swapped: $I \leftrightarrow U$

Fifth and fifth-last letters are swapped: $U \leftrightarrow J$

This pattern holds for the transformation of "ATTITUDE" to "TAUJUEDU."

CHILDREN → HCJMENER:

Similarly, for "CHILDREN":

First and last letters are swapped: $C \leftrightarrow N$

Second and second-last letters are swapped: $H \leftrightarrow E$

Third and third-last letters are swapped: $I \leftrightarrow R$

Fourth and fourth-last letters are swapped: $L \leftrightarrow N$

Fifth and fifth-last letters are swapped: $D \leftrightarrow M$

Step 2: Apply the Pattern to the Word "LANGUAGE"

Now, applying the same pattern to the word "LANGUAGE": $L \leftrightarrow E$

$A \leftrightarrow G$

$N \leftrightarrow U$

$G \leftrightarrow A$

$U \leftrightarrow V$

$A \leftrightarrow O$

$G \leftrightarrow H$

$E \leftrightarrow A$

Thus, the word "LANGUAGE" will be written as "ALOHVEGA" in the code language.

 Quick Tip

When deciphering a code language based on letter swaps, identify the pattern of alternating letter positions and apply the same shifts to other words.

19. The table shows the data of 450 candidates who appeared in the examination of three subjects – Social Science, Mathematics, and Science. How many candidates have passed in at least one subject?

Particulars	Number of candidates
Passed in all the three subjects	167
Failed in all the three subjects	60
Failed in Social Science subject	175
Failed in Mathematics subject	199
Failed in Science subject	191
Passed in only Social Science subject	62
Passed in only Mathematics subject	48
Passed in only Science subject	52

- (A) 48
(B) 162
(C) 390
(D) 425

Correct Answer: (C) 390

Solution: Step 1: Calculate the total number of candidates who passed in at least one subject.

The total number of candidates is 450. We are given that 60 candidates failed in all three subjects. Thus, the number of candidates who passed in at least one subject is:

$$\text{Passed in at least one subject} = 450 - 60 = 390$$

So, the number of candidates who passed in at least one subject is 390.

 Quick Tip

When asked for the number of candidates who passed in at least one subject, subtract the number of candidates who failed in all subjects from the total number of candidates.

20. If $\times$ means $+$, $+$ means $\div$, $-$ means $\times$, and $\div$ means $-$, then evaluate:

$$8 \times 7 - 8 + 40 \div 2.$$

- (A) $3\frac{8}{11}$
(B) $7\frac{3}{5}$

- (C) $2\frac{7}{5}$
 (D) $8\frac{33}{5}$

Correct Answer: (B) $7\frac{2}{5}$

Solution:

Step 1: Substitute the operations based on the given conditions.

The given operations are mapped as follows:

$$\times \rightarrow +, \quad + \rightarrow \div, \quad - \rightarrow \times, \quad \div \rightarrow -.$$

Now, we can rewrite the expression with these changes:

$$8 \times 7 - 8 + 40 \div 2 \rightarrow 8 + 7 \times 8 \div 40 - 2.$$

Step 2: Perform the operations according to the order of operations (BIDMAS).

First, evaluate $7 \times 8 = 56$, so the expression becomes:

$$8 + 56 \div 40 - 2.$$

Next, evaluate $56 \div 40 = 1.4$, so the expression becomes:

$$8 + 1.4 - 2.$$

Finally, perform the addition and subtraction:

$$8 + 1.4 = 9.4, \quad 9.4 - 2 = 7.4.$$

Thus, the result is 7.4, which is equivalent to $7\frac{2}{5}$ in mixed fraction form.

💡 Quick Tip

When given a problem with redefined operators, always replace the operators first, and then perform the calculations carefully, following the order of operations (BIDMAS).

21. Given a series 5, 8, 11, 14, ..., if the n -th term of the given series is 320, then find n (where $n \geq 1$):

- (A) 104
 (B) 105
 (C) 106
 (D) 107

Correct Answer: (C) 106

Solution:

Step 1: Identify the pattern of the series.

The given series is an arithmetic progression (A.P.), where the first term is $a_1 = 5$, and the common difference is:

$$d = 8 - 5 = 3.$$

Step 2: Use the formula for the n -th term of an arithmetic progression:

$$a_n = a_1 + (n - 1) \cdot d.$$

Substitute the values $a_n = 320$, $a_1 = 5$, and $d = 3$ into the formula:

$$320 = 5 + (n - 1) \cdot 3.$$

Step 3: Solve for n .

First, subtract 5 from both sides:

$$315 = (n - 1) \cdot 3.$$

Next, divide both sides by 3:

$$n - 1 = 105.$$

Finally, add 1 to both sides:

$$n = 106.$$

Thus, the value of n is 106.

 Quick Tip

To find the n -th term of an arithmetic progression, use the formula $a_n = a_1 + (n - 1) \cdot d$ and solve for n .

22. Suppose, your last year taxable income was Rs. 22000. Due to hike in salary, your taxable income this year is Rs. 34200. The details for tax calculation are given in the table below.

Income range (Rs.)	Tax slab (Rs.)
0 to 5000	2% of income
Greater than 5000 to 10000	100 + 3% of income over 5000
Greater than 10000 to 20000	250 + 5% of income over 10000
Greater than 20000 to 30000	750 + 8% of income over 20000
Greater than 30000 to 50000	1550 + 10% of income over 30000
Greater than 50000 to 100000	3550 + 20% of income over 50000

Consider the appropriate tax slab corresponding to your income. What is the additional amount of tax you need to pay this year compared to last year?

- (A) 1970
- (B) 1060
- (C) 910
- (D) 420

Correct Answer: (B) 1060

Solution: Step 1: Calculate the tax for last year (Rs. 22000).

For last year, the income is Rs. 22000. According to the tax slab, income between Rs. 20000 to Rs. 30000 is taxed as:

$$\text{Tax} = 750 + 8\% \text{ of income over } 20000$$

Income over Rs. 20000 is Rs. 22000 - Rs. 20000 = Rs. 2000. So:

$$\text{Tax} = 750 + 0.08 \times 2000 = 750 + 160 = 910$$

So, the tax last year is Rs. 910.

Step 2: Calculate the tax for this year (Rs. 34200).

For this year, the income is Rs. 34200. According to the tax slab, income between Rs. 30000 to Rs. 50000 is taxed as:

$$\text{Tax} = 1550 + 10\% \text{ of income over } 30000$$

Income over Rs. 30000 is Rs. 34200 - Rs. 30000 = Rs. 4200. So:

$$\text{Tax} = 1550 + 0.10 \times 4200 = 1550 + 420 = 1970$$

So, the tax this year is Rs. 1970.

Step 3: Calculate the additional tax to be paid this year.

The additional tax is:

$$\text{Additional tax} = 1970 - 910 = 1060$$

So, the additional tax to be paid this year is Rs. 1060.

 Quick Tip

Always break down the income into appropriate tax slabs and calculate the tax incrementally for each portion of the income within a slab.

23. Anand, Hari, and Chris are engaged in one of the three types of occupations – clerk, teacher, and plumber, not necessarily in that order. Each person is assigned only one type of occupation. No two or more persons can be assigned the same type of occupation. Clerk is Chris’s cousin. Hari lives next door to the plumber. Anand, who knows more facts than the teacher, has to drive more than 1 hour to reach Hari’s home. Identify each of the person’s correct type of occupation, and accordingly, which one of the following options is correct?

- (A) Anand is teacher and Chris is clerk.
- (B) Hari is clerk and Anand is plumber.
- (C) Chris is teacher and Hari is clerk.
- (D) Anand is clerk and Chris is plumber.

Correct Answer: (D) Anand is clerk and Chris is plumber.

Solution:

Step 1: Analyze the given clues.

”Clerk is Chris’s cousin” indicates Chris cannot be the clerk.

"Hari lives next door to the plumber" means Hari cannot be the plumber.

"Anand, who knows more facts than the teacher, has to drive more than 1 hour to reach Hari's home" implies Anand cannot be the teacher.

Step 2: Assign occupations.

Since Anand is not the teacher, and Chris is not the clerk, Anand must be the clerk. Chris must be the plumber. The only remaining option for Hari is the teacher.

Thus, Anand is the clerk, Chris is the plumber, and Hari is the teacher.

 Quick Tip

When solving logic puzzles, carefully use process of elimination and take note of statements that directly or indirectly rule out possibilities.

24. Many countries are facing water shortage crises in the past few years. A report of the United Nations has named India among the worst countries for poor quality of water. The report ranks 122 countries according to the quality of their water as well as their commitment to improve the situation. Some countries in Europe are considered the worst because of the quality of its groundwater. Rain failed in some parts of India in the past. The vast areas of Rajasthan, Madhya Pradesh, and Andhra Pradesh were affected by severe drought. People without water turn desperate and violent. Consequently, the food godowns were attacked in some of the states. Based on the details given in the passage, which of the following option(s) is/ are correct statement(s)?

- (A) There is no proof that India is affected by poor quality of water.
- (B) A few European countries are suffering due to the occurrence of drought.
- (C) Lack of access to water can lead to social unrest.
- (D) Intense shortage of water is visible in some states of India.

Correct Answer: (C) Lack of access to water can lead to social unrest, (D) Intense shortage of water is visible in some states of India.

Solution:

Analyze each option in the context of the passage.

Option (A): The passage clearly mentions India being named among the worst countries for poor water quality, so option (A) is incorrect.

Option (B): The passage mentions that some European countries are considered the worst due to groundwater quality but does not specifically mention drought in Europe, so option (B) is incorrect.

Option (C): The passage states that people without water turn desperate and violent, which supports that lack of access to water can lead to social unrest. Thus, option (C) is correct.

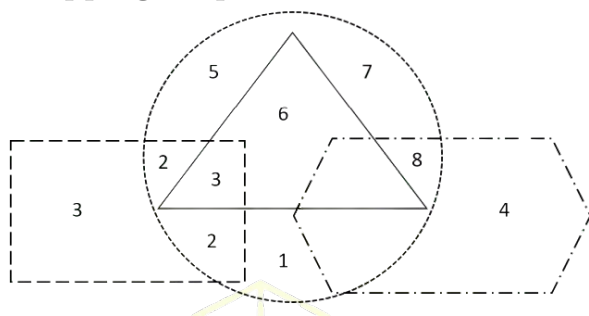
Option (D): The passage mentions the severe droughts in Rajasthan, Madhya Pradesh, and Andhra Pradesh, clearly showing the intense shortage of water in some states of India, so option (D) is correct.

Thus, the correct statements are (C) and (D).

💡 Quick Tip

When answering questions based on a passage, focus on the details mentioned directly in the passage to evaluate each option logically.

25. In the following figure, four overlapping shapes (rectangle, triangle, circle, and hexagon) are given. The sum of the numbers which belong to only two overlapping shapes is -----.



Correct Answer: 18

Solution:

We analyze each number based on how many shapes it overlaps with:

- 1: Belongs to *circle, rectangle, hexagon* → 3 shapes (Not counted)
- 2: Belongs to *circle, rectangle* → 2 shapes (Counted)
- 3: Belongs to *circle, rectangle, triangle* → 3 shapes (Not counted)
- 4: Belongs to *rectangle, hexagon* → 2 shapes (Counted)
- 5: Belongs to *circle, triangle* → 2 shapes (Counted)
- 6: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)
- 7: Belongs to *circle, triangle* → 2 shapes (Counted)
- 8: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)
- 9: Belongs to *circle, triangle, hexagon* → 3 shapes (Not counted)

So, the numbers that belong to **only two** shapes are: 2, 4, 5, 7

$$\text{Required sum} = 2 + 4 + 5 + 7 = \boxed{18}$$

💡 Quick Tip

Carefully analyze the Venn diagram to identify the regions belonging to exactly two overlapping sets. Ensure all numbers within those regions are included in the sum. Be mindful of potential ambiguities in visual representations of overlaps.

26. Consider a square field ABCD. The diagonal AC is 50 meter. The cost of laying grass in the field is Rs. 5 per square-meter. The total cost for laying grass in the field ABCD is Rs. _____ (rounded off to two decimal places).

Correct Answer: 6250.00

Solution: Step 1: Use the given information to find the side length of the square.
In a square, the diagonals are equal in length, and they bisect each other at right angles. Let s be the side length of the square. Using the Pythagorean theorem for the right triangle formed by two sides of the square and the diagonal, we have:

$$\text{Diagonal}^2 = s^2 + s^2$$

Since the length of the diagonal AC is given as 50 meters:

$$50^2 = 2s^2 \Rightarrow 2500 = 2s^2 \Rightarrow s^2 = 1250$$

$$s = \sqrt{1250} = 35.36 \text{ meters (rounded to two decimal places).}$$

Step 2: Find the area of the square.

The area A of the square is given by:

$$A = s^2 = 1250 \text{ square meters.}$$

Step 3: Calculate the total cost of laying grass.

The cost of laying grass is Rs. 5 per square meter. So, the total cost is:

$$\text{Total cost} = 1250 \times 5 = 6250 \text{ Rs.}$$

Step 4: Final answer.

The total cost for laying grass in the field ABCD is Rs. 6250.00.

 Quick Tip

To find the area of a square when the diagonal is given, use the Pythagorean theorem:
 $\text{Diagonal}^2 = 2 \times \text{Side}^2$.

Q.27– Q.44 Carry ONE mark Each

27. Parenting style in which parents are so involved that children are permitted to behave without set limits is termed as _____.

- (A) Permissive neglectful parenting
- (B) Permissive indulgent parenting
- (C) Authoritarian parenting
- (D) Willful parenting

Correct Answer: (B) Permissive indulgent parenting

Solution: Step 1: Understand the given parenting style description.

The question mentions parents being highly involved but allowing children to behave without set limits. This points towards a parenting style characterized by warmth and leniency, but lack of rules.

Step 2: Analyze each option carefully.

- **Permissive neglectful parenting:** Parents are uninvolved and indifferent. (Incorrect)
- **Permissive indulgent parenting:** Parents are very involved but place few demands or controls. (Correct)
- **Authoritarian parenting:** Parents are highly controlling and strict. (Incorrect)
- **Willful parenting:** This is not a standard psychological term. (Incorrect)

Step 3: Conclusion.

Thus, the correct parenting style described is:

Permissive indulgent parenting

💡 Quick Tip

Permissive indulgent parenting often results in children with high self-esteem but poor self-discipline and control.

28. ____ in both lobes of the brain are responsible for coordination and interpretation of information as well as higher mental processing.

- (A) Broca's area
- (B) Wernicke's area
- (C) Parietal area
- (D) Association area

Correct Answer: (D) Association area

Solution: Step 1: Understand the functions of the brain areas listed.

- **Broca's area:** Controls speech production, located in the frontal lobe.
- **Wernicke's area:** Manages understanding of spoken and written language.
- **Parietal area:** Handles sensory processing like touch and spatial awareness.
- **Association area:** Integrates information from various sensory modalities and is critical for thinking, memory, and learning.

Step 2: Focus on the question's keywords.

The keywords "coordination," "interpretation of information," and "higher mental processing" clearly point towards the functions performed by Association areas.

Step 3: Conclusion.

Thus, the correct area responsible for these tasks is:

Association area

💡 Quick Tip

Association areas make sense of the data received by different brain parts and are vital for complex cognitive tasks like decision making and planning.

29. If Skinner : Behaviourism, then Howard Gardner : _____?

- (A) Sociocultural
- (B) Cognitivism
- (C) Evolutionary perspective
- (D) Humanistic perspective

Correct Answer: (B) Cognitivism

Solution: Step 1: Understand the context of the question.

B.F. Skinner is famously associated with Behaviourism, which focuses on observable behaviors rather than internal mental processes. The question asks for Howard Gardner's corresponding theory.

Step 2: Analyze Howard Gardner's contribution.

Howard Gardner is renowned for the Theory of Multiple Intelligences, which emphasizes that people have various kinds of intelligences (like musical, logical-mathematical, linguistic, etc.), highlighting internal cognitive abilities.

Step 3: Match to the correct option.

- **Sociocultural:** Associated with Vygotsky. (Incorrect)
- **Cognitivism:** Related to internal mental processes, matching Gardner's focus. (Correct)
- **Evolutionary perspective:** Focuses on evolutionary bases of behavior. (Incorrect)
- **Humanistic perspective:** Associated with Carl Rogers and Abraham Maslow. (Incorrect)

Thus, the correct match is:

Cognitivism

💡 Quick Tip

Relate psychologists to their core theories: Skinner — Behaviourism, Gardner — Cognitivism, Vygotsky — Sociocultural theory, etc.

30. An experimental set-up where neither the experimenter nor the participants know who are in the experimental or control groups is known as?

- (A) Random experimentation
- (B) Blind experimentation
- (C) Single blind study
- (D) Double blind study

Correct Answer: (D) Double blind study

Solution: Step 1: Understand the types of experimental set-ups.

In experiments, to avoid bias: - In **Single blind study**, only participants are unaware of group allocations. - In **Double blind study**, both experimenters and participants are unaware.

Step 2: Analyze each option.

- **Random experimentation:** Refers to random assignment, not blindness. (Incorrect)

- **Blind experimentation:** A general term but not specific. (Incorrect)
- **Single blind study:** Only participants are blind. (Incorrect)
- **Double blind study:** Both experimenter and participants are blind. (Correct)

Thus, the correct answer is:

Double blind study

 Quick Tip

Double-blind studies are essential in medical research to eliminate experimenter and participant biases, ensuring objective results.

31. If Cultural Congruence : Social Psychology, then Evoked Culture : _____?

- (A) Evolutionary psychology
- (B) Cultural psychology
- (C) Cross-cultural psychology
- (D) Clinical psychology

Correct Answer: (A) Evolutionary psychology

Solution: Step 1: Analyze the analogy given.

- Cultural congruence relates to how social norms and shared understandings influence human behavior, a central idea in Social Psychology. - Evoked culture refers to culturally shaped behaviors that arise from environmental pressures over generations, linking to Evolutionary Psychology.

Step 2: Match options carefully.

- **Evolutionary psychology:** Studies behaviors shaped by evolution and environmental triggers. (Correct)
- **Cultural psychology:** Focuses on cultural influences, but not evolution-based emergence. (Incorrect)
- **Cross-cultural psychology:** Compares different cultures. (Incorrect)
- **Clinical psychology:** Deals with mental health treatment. (Incorrect)

Thus, the correct relation is:

Evolutionary psychology

 Quick Tip

Remember: "Evoked culture" directly links to evolutionary roots where environment shapes survival-related behaviors.

32. Match the following:

Column I: Perspectives in Psychology	Column II: Concept of Human Nature
P. Psychodynamic	(i) Reactors to the environment
Q. Behavioural	(ii) As thinkers
R. Humanistic	(iii) Controlled by inner forces and conflicts
S. Cognitive	(iv) Free agent seeking self-realization

- (A) P-iv; Q-iii; R-ii; S-i
 (B) P-iii; Q-i; R-ii; S-iv
 (C) P-iii; Q-i; R-iv; S-ii
 (D) P-iv; Q-iii; R-i; S-ii

Correct Answer: (C) P-iii; Q-i; R-iv; S-ii

Solution: Step 1: Match each perspective carefully.

- **P. Psychodynamic** → (iii) Controlled by inner forces and conflicts (Sigmund Freud's idea).
- **Q. Behavioural** → (i) Reactors to the environment (based on stimulus-response theories by Skinner and Watson).
- **R. Humanistic** → (iv) Free agent seeking self-realization (Maslow's self-actualization theory).
- **S. Cognitive** → (ii) As thinkers (focus on internal processes like thinking, memory).

Thus, the correct match is:

P-iii; Q-i; R-iv; S-ii

 Quick Tip

Psychodynamic → unconscious conflict, Behavioural → environment shaping behavior, Humanistic → self-growth, Cognitive → thinking and reasoning.

33. Which statistical technique is used to analyze patterns of loading of coefficients?

- (A) Correlation
 (B) Regression
 (C) Factor Analysis
 (D) Item Analysis

Correct Answer: (C) Factor Analysis

Solution: Step 1: Understand the statistical purpose.

- Factor analysis is a statistical method that examines relationships among observed variables.
- It identifies latent variables (factors) that explain patterns of correlations among measured variables.

Step 2: Analyze given options.

- **Correlation:** Measures relationship between two variables only. (Incorrect)
- **Regression:** Predicts one variable based on another. (Incorrect)
- **Factor Analysis:** Discovers underlying structure from loading patterns. (Correct)
- **Item Analysis:** Evaluates test questions, not loading patterns. (Incorrect)

Thus, the correct statistical technique is:

Factor Analysis

💡 Quick Tip

Factor loadings represent how strongly each variable is associated with a factor.

34. Match the following:

Column I:	Column II:
P. Instinct	(i) Environmental motivation triggers
Q. Incentive	(ii) Are fixed action patterns
R. Self-actualization	(iii) Self-determination theory
S. Intrinsic motivation	(iv) Considered by Maslow as the highest need

- (A) P-iv; Q-ii; R-iii; S-i
(B) P-ii; Q-i; R-iv; S-iii
(C) P-i; Q-iii; R-ii; S-iv
(D) P-iii; Q-i; R-iv; S-ii

Correct Answer: (B) P-ii; Q-i; R-iv; S-iii

Solution: Step 1: Match each concept properly.

- **P. Instinct** → (ii) Are fixed action patterns (Inborn, automatic behaviors).
- **Q. Incentive** → (i) Environmental motivation triggers (External rewards influence behavior).
- **R. Self-actualization** → (iv) Considered by Maslow as the highest need (Growth to full potential).
- **S. Intrinsic motivation** → (iii) Self-determination theory (Doing activities for inherent satisfaction).

Thus, the correct matching is:

P-ii; Q-i; R-iv; S-iii

💡 Quick Tip

Instincts are innate, incentives are external motivators, self-actualization is internal fulfillment, and intrinsic motivation is purely self-driven.

35. The tendency to observe behaviors of others in ways that are according to your expectations about them is called:

- (A) Schema
(B) Confirmation bias
(C) Social judgment
(D) Anchoring

Correct Answer: (B) Confirmation bias

Solution: Step 1: Understand the concept.

- **Confirmation bias** is the tendency to interpret new evidence as confirmation of one's existing beliefs or theories. - When observing others, people often notice behaviors that fit their expectations and ignore behaviors that don't.

Step 2: Check other options.

- **Schema:** Cognitive framework or concept. (Not observation-focused)
- **Social judgment:** Evaluating others but not necessarily biasing observation.
- **Anchoring:** Relying heavily on the first piece of information. (Different concept)

Thus, the correct tendency is:

Confirmation bias

 Quick Tip

Confirmation bias strengthens stereotypes and misunderstandings about people.

36. The tendency to explain other people's behavior as the result of personal factors is called _____.

- (A) Fundamental attribution error
- (B) Stereotypes
- (C) Schemas
- (D) Actor-observer bias

Correct Answer: (A) Fundamental attribution error

Solution: Step 1: Understand the concept.

- **Fundamental attribution error** refers to the tendency to attribute others' actions to their character or personality, rather than to external situational factors.

Step 2: Analyze the other choices.

- **Stereotypes:** Overgeneralized beliefs about groups. (Not specific to behavior explanation.)
- **Schemas:** Organized patterns of thought or behavior.
- **Actor-observer bias:** Tendency to attribute one's own actions to situations but others' actions to personality. (Related but broader.)

Thus, the correct behavioral explanation tendency is:

Fundamental attribution error

 Quick Tip

Remember: Fundamental Attribution Error = Overestimating personal traits, underestimating the situation.

37. Ankit was chased by a dog when he was a child. Now he is afraid of all animals. This is an example of:

- (A) Stimulus generalization
- (B) Extinction
- (C) Conditioned response
- (D) Secondary learning

Correct Answer: (A) Stimulus generalization

Solution: Step 1: Understand the scenario.

- Being afraid of *all* animals after a fearful encounter with a *specific* dog suggests generalization. - **Stimulus generalization** occurs when a response extends from the original stimulus to other similar stimuli.

Step 2: Analyze the options.

- **Extinction:** Disappearance of a learned response. (Not applicable here)
- **Conditioned response:** Specific learned response to a particular stimulus. (Not generalization)
- **Secondary learning:** Not directly related.

Thus, the correct behavioral phenomenon is:

Stimulus generalization

💡 Quick Tip

Stimulus generalization spreads fear across similar objects or situations.

38. Identify “False” and “True” statements:

- P. Little children wearing neon green color jacket on field trips illustrates the use of exogenous attention.
- Q. Scanning the room for green color because your friend said she will wear a green dress illustrates the use of endogenous attention.
- R. Endogenous attention is voluntary – exogenous attention is involuntary.
- S. Endogenous attention is a bottom-up process and exogenous attention is a top-down process.

- (A) P – false, Q – true, R – true, S – true
- (B) P – true, Q – false, R – true, S – true
- (C) P – true, Q – true, R – true, S – false
- (D) P – false, Q – true, R – false, S – false

Correct Answer: (C) P – true, Q – true, R – true, S – false

Solution: Step 1: Analyze each statement.

- **P: True.** Bright colors capture automatic (exogenous) attention.
- **Q: True.** Looking intentionally for green (goal-directed) is endogenous attention.
- **R: True.** Endogenous = voluntary; Exogenous = involuntary.

- **S: False.** Endogenous attention is a *top-down* process; Exogenous is a *bottom-up* process. Thus, the correct sequence is:

P – true, Q – true, R – true, S – false

💡 Quick Tip

Remember: Endogenous = Top-down control; Exogenous = Bottom-up capture.

39. Specific description of a variable that allows it to be measured is called:

- (A) Experimental
- (B) Designing a study
- (C) Operationalization
- (D) Conceptualization

Correct Answer: (C) Operationalization

Solution: Step 1: Analyze each option.

- **(A) Experimental:** Refers to a study type, not defining variables.
 - **(B) Designing a study:** Involves planning research, not defining measurable variables.
 - **(C) Operationalization:** Correct. It means defining a variable specifically for measurement.
 - **(D) Conceptualization:** Refers to the idea formation, not precise measurement.
- Thus, the correct answer is:

(C) Operationalization

💡 Quick Tip

Remember: Operationalization = Making abstract concepts measurable.

40. In which method(s) do we gather detailed information of a small number of persons?

- (A) Surveys
- (B) Depth Interview
- (C) Correlational Research
- (D) Case Study

Correct Answer: (B) Depth Interview, (D) Case Study

Solution: Step 1: Analyze each option.

- **(A) Surveys:** Used to collect data from a large population, not detailed information.
- **(B) Depth Interview:** Correct. Collects rich, detailed data from a few participants.
- **(C) Correlational Research:** Studies the relationship between variables across many participants.
- **(D) Case Study:** Correct. In-depth focus on a small group or single individual.

Thus, the correct answers are:

(B) Depth Interview, (D) Case Study

💡 Quick Tip

Remember: Depth Interview and Case Study = Small group, deep information.

41. Which of the following option(s) do(es) NOT denote the state of internal physiological equilibrium that the body strives to maintain?

- (A) Intrinsic motivation
- (B) Homeostasis
- (C) Instincts
- (D) Drive

Correct Answer: (A) Intrinsic motivation, (C) Instincts, (D) Drive

Solution: Step 1: Understand the concept.

- **Homeostasis** is the correct term for the body's effort to maintain internal physiological balance (e.g., temperature, pH levels, glucose levels).
- **Intrinsic motivation** refers to engaging in activities for inherent satisfaction and is related to psychological factors, not physical equilibrium.
- **Instincts** are innate patterns of behavior and are more about evolutionary survival, not maintaining internal physiological stability.
- **Drive** refers to an internal state created by physiological needs (like hunger or thirst) but it is the result of imbalance, not the equilibrium itself.

Thus, the options that **do not denote internal physiological equilibrium** are:

(A) Intrinsic motivation, (C) Instincts, (D) Drive

💡 Quick Tip

Remember: Only **Homeostasis** = Maintenance of physiological balance. Others involve behaviors or motivations.

42. Which of the following option(s) refer(s) to secondary appraisal?

- (A) Thoughts about what to do in a stressful situation
- (B) Thoughts about whether an event is generally threatening
- (C) Evaluation of an event's relevance, threat, and stressfulness
- (D) Evaluation of coping resources and options for dealing with a stressful event

Correct Answer: (A) Thoughts about what to do in a stressful situation, (D) Evaluation of coping resources and options for dealing with a stressful event

Solution: Step 1: Understand the concept of primary vs secondary appraisal.

- **Primary appraisal** involves evaluating whether an event is threatening, positive, or irrelevant. It is an initial judgment about the significance of an event. (Option B and C relate more to primary appraisal.)
- **Secondary appraisal** is the evaluation of available resources and coping strategies after identifying an event as stressful. It involves planning what actions to take and judging if one can manage the threat. (Option A and D are correct here.)

Step 2: Analyze each option.

- **(A) Thoughts about what to do in a stressful situation:** Correct — it relates to coping planning, which is secondary appraisal.
- **(B) Thoughts about whether an event is generally threatening:** Primary appraisal — initial evaluation of threat.
- **(C) Evaluation of an event’s relevance, threat, and stressfulness:** Primary appraisal — assessing threat level.
- **(D) Evaluation of coping resources and options for dealing with a stressful event:** Correct — assessing available coping methods is secondary appraisal.

Thus, the correct answers are:

(A) Thoughts about what to do in a stressful situation, (D) Evaluation of coping resources and options for dealing with a stressful event

Quick Tip

Remember: **Primary Appraisal** = “Is this event a threat?”; **Secondary Appraisal** = “Can I deal with it?”

43. Which of the following is/are included as a basic type of intelligence in Sternberg’s Triarchic Theory?

- (A) Analytic
- (B) Experiential/creative
- (C) Crystallization
- (D) Synthesis

Correct Answer: (A) Analytic, (B) Experiential/creative

Solution: Step 1: Understand Sternberg’s Triarchic Theory.

Sternberg proposed that intelligence is composed of three parts:

- **Analytic intelligence** — problem-solving abilities, logical reasoning.
- **Creative (Experiential) intelligence** — ability to deal with novel situations and generate new ideas.
- **Practical intelligence** — adapting to everyday life by drawing on existing knowledge and skills.

Step 2: Analyze the options.

- **(A) Analytic:** Correct — it is one of the three key components.
- **(B) Experiential/creative:** Correct — relates to creativity and handling novelty.

- **(C) Crystallization:** Incorrect — “crystallized intelligence” is from Cattell’s theory, not Sternberg’s.
 - **(D) Synthesis:** Incorrect — not a specific type of intelligence in Triarchic Theory.
- Thus, the correct answers are:

(A) Analytic, (B) Experiential/creative

💡 Quick Tip

Triarchic = Analytic + Creative (Experiential) + Practical (common sense).

44. As per the ethical guidelines of American Psychological Association, which of the option(s) depict(s) unacceptable use of ‘Deception’ in psychology research?

- (A) Falsifying the data
- (B) Temporary withholding of information about the study from the participants
- (C) Not taking informed consent
- (D) Use of confederates

Correct Answer: (A) Falsifying the data, (C) Not taking informed consent

Solution: Step 1: Understand ethical guidelines about deception.

According to APA guidelines:

- **Deception** can be used under strict conditions but must not violate key ethical principles like honesty, informed consent, or harm prevention.
- Temporary withholding of minor information (Option B) or using confederates (Option D) can be acceptable if approved by an ethics review board and participants are debriefed afterward.
- **Falsifying data** (Option A) is completely unethical and unacceptable — it is scientific misconduct, not an acceptable deception.
- **Not taking informed consent** (Option C) is also a serious ethical violation — informed consent is mandatory.

Step 2: Analyze the options.

- **(A) Falsifying the data:** Unacceptable — serious misconduct.
- **(B) Temporary withholding of information:** Acceptable under strict conditions.
- **(C) Not taking informed consent:** Unacceptable — major ethical violation.
- **(D) Use of confederates:** Acceptable if participants are debriefed later.

Thus, the correct answers are:

(A) Falsifying the data, (C) Not taking informed consent

💡 Quick Tip

Deception must never violate core ethics: no lying in data, and always take informed consent!

Q.45 – Q.65 Carry TWO marks Each

45. Match the following theories of ageing.

Theory	Description
P. Cellular-Clock Theory	(i) Oxygen molecule with unstable electron
Q. Wear-and-Tear Theory	(ii) Elderly person who remain active in some way adjust more positively to ageing
R. Free-radical Theory to repair damage	(iii) Cells are limited in number of times they can reproduce
S. Activity Theory	(iv) Body organs and cell tissues wear out with repeated use and abuse

- (A) P-ii; Q-iv; R-i; S-iii
(B) P-iv; Q-i; R-iii; S-ii
(C) P-iii; Q-ii; R-i; S-iv
(D) P-iii; Q-iv; R-i; S-ii

Correct Answer: (D) P-iii; Q-iv; R-i; S-ii

Solution: Step 1: Understand each theory carefully.

- **Cellular-Clock Theory:** Suggests that cells can divide only a certain number of times. (matches (iii))
- **Wear-and-Tear Theory:** Suggests that over time, organs and tissues get damaged with use. (matches (iv))
- **Free-radical Theory:** Suggests ageing occurs because of unstable oxygen molecules damaging cells. (matches (i))
- **Activity Theory:** Suggests that staying active leads to more positive ageing. (matches (ii))

Step 2: Match correctly.

P → (iii) (Cells are limited in replication)
Q → (iv) (Wear and tear of tissues)
R → (i) (Free radicals damaging cells)
S → (ii) (Activity helps positive ageing)

Thus, the correct matching is:

(D) P-iii; Q-iv; R-i; S-ii

💡 Quick Tip

Remember: "Cell life limit" = Cellular-Clock, "Tissue damage" = Wear-and-Tear, "Unstable oxygen" = Free-radical, "Stay active = positive ageing" = Activity Theory.

46. Match the neurotransmitters with their functions

P. Acetylcholine	(i) Movement and pleasure sensation
Q. Dopamine	(ii) Sleep, anxiety, and appetite
R. Serotonin	(iii) Attention and memory
S. Norepinephrine	(iv) Arousal and mood

- (A) P–ii; Q–i; R–iv; S–iii
(B) P–iii; Q–i; R–ii; S–iv
(C) P–iv; Q–ii; R–i; S–iii
(D) P–iv; Q–iii; R–i; S–ii

Correct Answer: (B) P–iii; Q–i; R–ii; S–iv

Solution:

Step 1: Analyze each neurotransmitter.

- **P. Acetylcholine** – (iii) **Attention and memory:** Critical for learning and memory processes.
 - **Q. Dopamine** – (i) **Movement and pleasure sensation:** Regulates motor control and reward pathways.
 - **R. Serotonin** – (ii) **Sleep, anxiety, and appetite:** Influences mood, sleep cycles, and appetite regulation.
 - **S. Norepinephrine** – (iv) **Arousal and mood:** Affects alertness and emotional arousal.
- Thus, the correct matching is:

P–iii; Q–i; R–ii; S–iv

 Quick Tip

Remember: **Acetylcholine = Memory, Dopamine = Movement/Reward, Serotonin = Mood/Sleep, Norepinephrine = Arousal.**

47. Match the concerned human nervous system with their associated functions

P. Sympathetic	(i) Carrying messages from Central Nervous System to muscles and glands
Q. Parasympathetic	(ii) Carrying messages from senses to Central Nervous System
R. Afferent	(iii) Maintaining body functions under normal conditions
S. Efferent	(iv) Fight-or-flight system

- (A) P–iv; Q–iii; R–ii; S–i
(B) P–iii; Q–i; R–ii; S–iv
(C) P–iv; Q–ii; R–i; S–iii
(D) P–iv; Q–iii; R–i; S–ii

Correct Answer: (A) P–iv; Q–iii; R–ii; S–i

Solution:

Step 1: Analyze each component.

- **P. Sympathetic – (iv) Fight-or-flight system:** Mobilizes the body under stress.
- **Q. Parasympathetic – (iii) Maintaining body functions under normal conditions:** Supports “rest and digest.”
- **R. Afferent – (ii) Carrying messages from senses to Central Nervous System:** Transmits sensory information.
- **S. Efferent – (i) Carrying messages from Central Nervous System to muscles and glands:** Sends motor commands.

Thus, the correct matching is:

P-iv; Q-iii; R-ii; S-i

💡 Quick Tip

Remember: **Sympathetic = Fight-or-flight**, **Parasympathetic = Rest-and-digest**, **Afferent = Sensory**, **Efferent = Motor**.

48. A researcher plans to study the long-term effect of Covid-19 on human cognitive functions. The plan is summarized below.

STUDY-I (Study conducted in 2022)

- Group A: 10 years old males and females
- Group B: 20 years old males and females
- Group C: 30 years old males and females

STUDY-II (Study to be conducted in 2025)

- Group D: 13 years old males and females
- Group E: 23 years old males and females
- Group F: 33 years old males and females

This research design is known as?

- (A) Cross-sectional design
- (B) Longitudinal design
- (C) Cross-sequential design
- (D) Long-term design

Correct Answer: (C) Cross-sequential design

Solution:

Step 1: Define the major designs.

- **Cross-sectional design:** Compares different age groups at one point in time; quick but vulnerable to cohort effects.
- **Longitudinal design:** Follows the same individuals (or cohort) over a prolonged period; controls for individual differences but can be time-consuming and suffer from attrition.

- **Cross-sequential design:** Integrates both approaches by studying multiple cohorts over time, allowing researchers to disentangle age, period, and cohort effects.

Step 2: Apply to the study plan.

In 2022, the researcher measures three distinct age-based cohorts (10, 20, and 30-year-olds). In 2025, the same participants are re-assessed three years later (now 13, 23, and 33 years old). This procedure tracks multiple cohorts longitudinally while retaining the cross-sectional comparison across ages.

Step 3: Why it's cross-sequential.

- *Cohort tracking:* Each group (A→D, B→E, C→F) represents the same individuals tested at two time points.

- *Cross-sectional comparison:* At each measurement, the study includes different age cohorts, enabling age-based comparisons.

Step 4: Advantages and considerations.

- Controls for both age effects and cohort effects, enhancing internal validity.

- More efficient than a pure longitudinal study, since intervals are shorter and multiple cohorts provide broader context.

- Requires careful planning to manage participant retention across time points.

 Quick Tip

Remember: Cross-sequential studies combine the "snapshot" perspective of cross-sectional designs with the developmental insight of longitudinal designs. This hybrid approach offers a powerful way to study change across age and time.

49. If Central Nervous System = Brain + Spinal Cord, then Peripheral Nervous System =?

- (A) Sympathetic + Parasympathetic Systems
- (B) Forebrain + Hindbrain
- (C) Somatic + Autonomic Nervous Systems
- (D) Cerebrum + Cerebellum

Correct Answer: (C) Somatic + Autonomic Nervous Systems

Solution: The human nervous system is divided into two primary parts: the Central Nervous System (CNS) and the Peripheral Nervous System (PNS). The CNS is composed of the brain and the spinal cord, which are responsible for processing information and sending signals to the body.

- **Central Nervous System (CNS):** The CNS integrates sensory information, coordinates motor activities, and is the center of cognitive processes such as thought, memory, and decision-making. It consists of the brain and the spinal cord. The brain controls various functions such as reasoning, emotions, and memory, while the spinal cord acts as a communication pathway between the brain and the body.

- **Peripheral Nervous System (PNS):** The PNS is made up of all the nerves outside the CNS. It serves as a communication system that transmits sensory information to the CNS and

relays motor commands from the CNS to the muscles and glands. The PNS is further divided into two major components:

1. Somatic Nervous System (SNS): This system controls voluntary movements of skeletal muscles. It is responsible for actions that are under conscious control, such as walking or writing.
 2. Autonomic Nervous System (ANS): The ANS controls involuntary functions, such as heart rate, digestion, and respiratory rate. It is divided into two subcategories:
 - Sympathetic Nervous System: This system is responsible for the "fight or flight" response, preparing the body for stress or danger.
 - Parasympathetic Nervous System: This system is responsible for "rest and digest" functions, helping to conserve energy and return the body to a state of calm after stress.
- Thus, the PNS includes both the somatic and autonomic systems, which work together to ensure proper communication between the body and the CNS.

The correct answer is (C) Somatic + Autonomic Nervous Systems because these are the two main components of the Peripheral Nervous System, analogous to how the CNS is composed of the brain and spinal cord.

 Quick Tip

The key distinction between the Somatic and Autonomic Nervous Systems is that the Somatic Nervous System is involved in voluntary control of body movements, while the Autonomic Nervous System regulates involuntary processes like digestion, heartbeat, and breathing.

50. Match the following:

P Anima	i) A universal idea, image, or pattern, found in the collective unconscious.
Q Animus	ii) An unconscious image representing unity, wholesome, completion, and balance.
R Self-Archetype	iii) An archetype representing the female principles.
S Archetype	iv) An archetype representing the male principles.

- (A) P: ii, Q: i, R: iv, S: iii
(B) P: iv, Q: ii, R: iii, S: i
(C) P: iii, Q: iv, R: i, S: ii
(D) P: i, Q: ii, R: ii, S: iv

Correct Answer: (C) P: iii, Q: iv, R: i, S: ii

Solution: The terms used in the question come from Carl Jung's theory of archetypes and the collective unconscious, which are psychological concepts explaining universal symbols that reside in the unconscious mind of all human beings.

- **P: Anima** refers to the feminine aspect of the unconscious in males. It represents the inner feminine qualities such as intuition, emotional sensitivity, and receptivity. The Anima is often

portrayed as an archetype that embodies the female principles. This matches with **iii**), as the Anima is indeed an archetype representing the female principles.

- **Q: Animus** represents the opposite—this is the masculine aspect of the unconscious in females. The Animus embodies qualities like logic, assertiveness, and rationality, which are typically associated with male energy. This archetype corresponds with **iv**), which is an archetype representing the male principles.

- **R: Self-Archetype** is a concept that represents the totality of the psyche, integrating both the conscious and unconscious. It signifies unity and wholeness, often depicted as a symbol of balance and harmony. As it represents wholeness and balance, this corresponds to **i**), which describes a universal idea or pattern in the collective unconscious.

- **S: Archetype** is a general term for universal images, ideas, or patterns that appear across different cultures and individuals. It represents the fundamental categories of human experience in the unconscious mind. In this context, Archetype aligns with **ii**), which describes an unconscious image of unity and completion.

Thus, the correct matching is:

$$P : iii, Q : iv, R : i, S : ii$$

💡 Quick Tip

The study of archetypes helps us understand how shared symbols and experiences shape human behavior and cultural expressions across time and space. Keep in mind that the Anima and Animus are deeply connected to the unconscious and influence how we experience relationships and personal growth.

51. Behavior modification programs aimed at extinction of an undesirable behavior typically make use of:

- (A) Punishment and stimulus control
- (B) Punishment and shaping
- (C) Stimulus control and time out
- (D) Non-reinforcement and time out

Correct Answer: (D) Non-reinforcement and time out

Solution: In behavior modification programs, the goal is often to extinguish undesirable behaviors. This can be achieved using various strategies that reduce or eliminate the occurrence of these behaviors.

- **Non-reinforcement** is one technique used in behavior modification. When an undesired behavior is no longer reinforced (i.e., when it is no longer followed by a reward or positive outcome), the behavior is likely to decrease and eventually be extinguished. This principle is based on the idea that behavior that is not reinforced will fade over time.

- **Time-out** is another technique often used for behavior extinction. It involves removing the individual from a reinforcing environment or situation, which serves to reduce the likelihood

of the behavior being repeated. In essence, time-out temporarily stops access to reinforcement, leading to the reduction of the undesirable behavior. Together, non-reinforcement and time-out are effective tools for extinguishing undesirable behavior, making option (D) the correct answer.

The other options, such as punishment, stimulus control, and shaping, may be used in behavior modification but are not typically aimed specifically at the extinction of a behavior.

💡 Quick Tip

When aiming to extinguish an undesirable behavior, removing the reinforcement for that behavior (non-reinforcement) and using time-out are highly effective strategies in behavior modification programs.

52. Match the concept to the correct answer:

P	Confounding	i)	We can draw clear causal conclusions from an experiment.
Q	High internal validity	ii)	Presence of an uncontrolled variable creates uncertainty as to whether the dependent variable was influenced by the independent variable.
R	High external validity	iii)	Participant improves because of the expectation of receiving a treatment, not because of the treatment itself.
S	Placebo effect	iv)	The results of a study generalize to other settings and populations.

- (A) P: ii, Q: i, R: iv, S: iii
 (B) P: iv, Q: ii, R: iii, S: i
 (C) P: iii, Q: iv, R: ii, S: i
 (D) P: i, Q: ii, R: ii, S: iv

Correct Answer: (A) P: ii, Q: i, R: iv, S: iii

Solution: Let's break down each concept and its corresponding match:

- **P: Confounding** refers to the presence of an uncontrolled variable that creates uncertainty about whether the independent variable has actually influenced the dependent variable. This is matched with **ii)**, as confounding introduces ambiguity in establishing causal relationships.
- **Q: High internal validity** occurs when we can draw clear causal conclusions from an experiment, meaning that the study's design eliminates alternative explanations for the results. This corresponds to **i)**, as internal validity ensures the accuracy of causal claims.
- **R: High external validity** is about how well the results of a study generalize to other settings and populations. This corresponds to **iv)**, which describes the generalizability of a study's findings.
- **S: Placebo effect** occurs when a participant improves due to the expectation of receiving a treatment, not because of the treatment itself. This corresponds to **iii)**, as the placebo effect is driven by expectation rather than the actual intervention.

Thus, the correct matching is:

$P : ii, Q : i, R : iv, S : iii$

💡 Quick Tip

In experimental research, it's crucial to control for confounding variables to ensure high internal validity. The placebo effect highlights the power of expectation in influencing participant outcomes, which is important in understanding the true impact of a treatment.

53. Assertions:

- P. Factor analysis reduces a large number of measures to a smaller number of clusters.
- Q. The measures within each cluster are highly interconnected and reflect the same underlying dimensions.

Which of the following is correct?

- (A) Only P is correct
- (B) Only Q is correct
- (C) Both P and Q are correct
- (D) Neither P nor Q is correct

Correct Answer: (C) Both P and Q are correct

Solution: - P: Factor analysis reduces a large number of measures to a smaller number of clusters. This statement is correct. Factor analysis is a statistical technique used to identify patterns or correlations between many variables. By grouping related variables into clusters, the data's complexity is reduced. This technique helps to simplify complex datasets while maintaining essential information about the relationships between variables. It is especially useful when we want to make sense of large, multi-dimensional data.

- Q: The measures within each cluster are highly interconnected and reflect the same underlying dimensions. This statement is also correct. In factor analysis, variables that are grouped together in a cluster (or factor) are expected to be strongly correlated because they share a common underlying dimension or factor. This means that the variables within a cluster measure the same or similar constructs, which reflects the idea of reducing complex data to simpler, meaningful dimensions.

Thus, the correct answer is:

C) Both P and Q are correct

💡 Quick Tip

Factor analysis is valuable for simplifying large datasets and identifying the key factors that influence them. It is commonly used in psychological testing, market research, and social sciences.

54. Fill in the blanks using the suitable option given below:

..... perspective is considered as the 'first force' in Psychology, whereas perspective is considered as the 'third force' in Psychology.

- (A) Psychodynamic and Humanistic
- (B) Behavioural and Humanistic
- (C) Humanistic and Cognitive
- (D) Cognitive and Gestalt

Correct Answer: (A) Psychodynamic and Humanistic

Solution: - The **psychodynamic perspective** was the first major school of thought in psychology, founded by Sigmund Freud. This perspective emphasizes the influence of the unconscious mind and early childhood experiences on behavior. It is considered the "first force" in psychology because it introduced the idea that unconscious factors, such as repressed desires and unresolved conflicts, shape our behavior and personality. This theory was groundbreaking during its time and laid the foundation for many subsequent theories in psychology.

- The **humanistic perspective** emerged in the 1950s as a reaction to the deterministic and reductionist views of the psychodynamic and behavioral perspectives. It focuses on individual potential, personal growth, and self-actualization. Humanistic psychologists, like Carl Rogers and Abraham Maslow, believed that people have an inherent drive to develop their personal potential and make choices that enhance their well-being. This perspective is considered the "third force" in psychology because it offered a new, more positive approach to understanding human behavior, focusing on the individual's capacity for growth and self-improvement. Thus, the correct answer is:

A) Psychodynamic and Humanistic

💡 Quick Tip

The "first force" in psychology refers to the psychodynamic perspective, which focuses on unconscious motives. The "third force" refers to humanistic psychology, emphasizing personal growth and self-actualization.

55. In language development which of the following statement(s) is/are true?

- (A) The ability to distinguish speech from non-speech sound is likely to develop before the age of three months.
- (B) The ability to distinguish between words, without understanding their meaning, is likely to develop before the age of seven months.
- (C) Babbling is not likely to develop before the age of six months.
- (D) The ability to use single words is not likely to begin before the age of ten months.

Correct Answer: (A) and (D)

Solution: - **(A) The ability to distinguish speech from non-speech sound is likely to develop before the age of three months.** This statement is correct. Research suggests that infants can begin to distinguish between speech sounds and non-speech sounds at around three months of age, which is an early milestone in language development.

- **(B) The ability to distinguish between words, without understanding their meaning, is likely to develop before the age of seven months.** This statement is incorrect. While infants begin to recognize and differentiate between words, this typically happens after the age of seven months. Before this, babies might respond to the rhythm and tone of speech but are not yet able to distinguish words based on meaning.

- **(C) Babbling is not likely to develop before the age of six months.** This statement is incorrect. Babbling typically begins around 4-6 months, so it is quite common for infants to begin babbling before six months of age.

- **(D) The ability to use single words is not likely to begin before the age of ten months.** This statement is correct. Most infants begin to use their first recognizable words, such as "mama" or "dada," around 10-12 months of age.

Thus, the correct answer is:

A) and D

 Quick Tip

Language development follows a predictable pattern, with early milestones such as distinguishing speech sounds, babbling, and the use of first words appearing in a typical sequence during infancy.

56. Projective Techniques would NOT be of interest to which type(s) of personality theorists?

- (A) Humanistic theorists
- (B) Cognitive theorists
- (C) Trait theorists
- (D) Psychodynamic theorists

Correct Answer: (A), (B), and (C)

Solution: Projective techniques, such as the Rorschach inkblot test or the Thematic Apperception Test (TAT), are used to explore the unconscious mind and are primarily associated with psychodynamic theories of personality. They rely on the idea that individuals project their unconscious thoughts, feelings, and conflicts onto ambiguous stimuli.

- **(A) Humanistic theorists** typically focus on self-actualization, personal growth, and the individual's subjective experience. While they may be interested in understanding a person's feelings and experience, they are less likely to use projective techniques, which focus on unconscious processes and conflicts.

- **(B) Cognitive theorists** emphasize mental processes such as perception, memory, and problem-solving. Since projective techniques focus on unconscious processes, they are not typically aligned with the cognitive approach, which focuses more on conscious thought patterns and cognitive structures.

- **(C) Trait theorists** focus on identifying and measuring stable traits in individuals, such as extraversion or neuroticism. Projective techniques are not aligned with this approach, as trait theorists prefer objective assessments like personality inventories or questionnaires.

- **(D) Psychodynamic theorists** are the primary proponents of projective techniques. They use these methods to access the unconscious mind and explore deeper layers of personality, making them very much interested in projective techniques.

Thus, the correct answer is:

A), B), and C)

 Quick Tip

Projective techniques are most aligned with psychodynamic theory because they focus on unconscious thoughts and feelings. Humanistic, cognitive, and trait approaches generally use more structured or objective methods for assessing personality.

57. Which of the following is/are characteristic(s) of Type A personality:

- (A) Ambitious
- (B) Competitive
- (C) Time conscious
- (D) Laid back

Correct Answer: (A), (B), (C)

Solution: - **(A) Ambitious** is a characteristic of Type A personality. Individuals with Type A personalities are typically driven, ambitious, and have a strong desire to achieve and accomplish tasks.

- **(B) Competitive** is also a key characteristic of Type A personality. Type A individuals are often highly competitive, constantly striving to outdo others and push themselves to perform better.

- **(C) Time conscious** is another trait associated with Type A personality. These individuals tend to be very time-oriented, valuing efficiency and often feeling pressured by time constraints.
 - **(D) Laid back** is not characteristic of Type A personality. In contrast, Type A individuals are typically not laid back but rather are more driven and intense in their pursuits.
- Thus, the correct answer is:

A), B), C)

 Quick Tip

Type A personalities are often marked by high levels of ambition, competitiveness, and time urgency. These traits contrast with the more relaxed and easygoing nature of Type B personalities.

58. Which of the following is/are source(s) of variability that contribute(s) to errors in measurement of estimating reliability?

- (A) Reactivity carryover true change over time
- (B) Making incorrect predictions or decisions about individuals
- (C) Inconsistency of test content non parallel halves
- (D) Consistency of test content

Correct Answer: (A), (C)

Solution: - **(A) Reactivity carryover true change over time** is a source of variability that can contribute to errors in estimating reliability. When an individual's behavior is affected by previous test responses (carryover effect), or when true changes over time influence measurement, this introduces variability that reduces the reliability of the results.

- **(B) Making incorrect predictions or decisions about individuals** is not directly related to errors in estimating reliability. This refers more to biases in decision-making, but it does not affect the consistency or reproducibility of a measurement.

- **(C) Inconsistency of test content non parallel halves** is another source of variability. If test content is inconsistent or if non-parallel halves are used in split-half reliability testing, it can introduce errors and reduce the reliability of the test.

- **(D) Consistency of test content** is actually an element that enhances reliability. Consistent test content helps ensure that measurements are stable and consistent across different administrations.

Thus, the correct answer is:

A), C)

💡 Quick Tip

Reliability is concerned with the consistency and stability of test results. Variability in the content of the test, carryover effects, and true changes over time are sources of error that can undermine reliability.

59. The humanistic approach to therapy would be least effective in treating which of the following condition(s)?

- (A) Schizophrenia
- (B) Mild depression
- (C) Paranoia
- (D) Childhood abuse

Correct Answer: (A), (C)

Solution: - **(A) Schizophrenia** is typically a condition that requires medical treatment, such as antipsychotic medications, due to its severe symptoms and the biological components that contribute to its development. The humanistic approach, which focuses on self-actualization, personal growth, and empathy, may not be the most effective treatment for a complex and severe condition like schizophrenia.

- **(B) Mild depression** can benefit from humanistic therapy, as it focuses on enhancing the individual's sense of well-being and self-worth. This approach helps people with mild depression by fostering self-acceptance and personal growth.

- **(C) Paranoia** can involve significant delusions and cognitive distortions, which often require more structured interventions, such as cognitive-behavioral therapy or medications, rather than humanistic approaches. While humanistic therapy might help in some cases, it would be less effective in treating paranoia.

- **(D) Childhood abuse** is an issue that can benefit from humanistic therapy as it promotes healing through self-awareness and emotional expression. Humanistic therapy can offer a safe, empathetic environment for victims of childhood abuse to address past traumas.

Thus, the correct answer is:

A), C)

💡 Quick Tip

The humanistic approach is ideal for addressing conditions related to self-growth and emotional expression. However, for conditions like schizophrenia and paranoia, a more medical or structured psychological approach is often needed.

60. Characteristic feature(s) of an aptitude test is/are:

- (A) Evaluate the effects of an unknown, uncontrolled set of experiences

- (B) Rely heavily on content validation procedure
- (C) Evaluate the potential to profit from training
- (D) Evaluate the outcome of training

Correct Answer: (A), (C)

Solution: - **(A) Evaluate the effects of an unknown, uncontrolled set of experiences** is a characteristic of aptitude tests. These tests are designed to assess an individual's potential to perform in certain areas without being influenced by past experiences or training. They measure inherent abilities and potential for future learning or achievement.

- **(B) Rely heavily on content validation procedure** is more characteristic of achievement tests, which focus on measuring acquired knowledge or skills rather than evaluating the potential to succeed in future tasks.

- **(C) Evaluate the potential to profit from training** is another characteristic of aptitude tests. These tests are often used to predict how well a person will perform in specific areas of training, helping to gauge their capacity for learning and success in a particular field.

- **(D) Evaluate the outcome of training** is characteristic of achievement tests rather than aptitude tests. Achievement tests assess what a person has already learned, not their potential to succeed in future learning.

Thus, the correct answer is:

A), C)

💡 Quick Tip

Aptitude tests are designed to assess potential, while achievement tests evaluate what has already been learned. Understanding the difference helps in selecting the right type of assessment for the right context.

61. From the following options, what is/are illusion(s)?

- (A) Erroneous perceptions
- (B) Schemas
- (C) Perceptual constancies
- (D) Incorrect perceptual hypothesis

Correct Answer: (A), (D)

Solution: - **(A) Erroneous perceptions** is a correct description of illusions. An illusion occurs when the perception of an object or phenomenon differs from its actual reality, creating an erroneous or distorted perception.

- **(B) Schemas** refer to mental structures that organize and interpret information based on prior knowledge, but they are not illusions. They help in processing and categorizing experiences.

- **(C) Perceptual constancies** are the tendency of our perception to remain stable even when the sensory input changes, and they do not represent illusions. In fact, perceptual constancies help us maintain a consistent perception of the world.
- **(D) Incorrect perceptual hypothesis** aligns with the definition of illusions. It refers to a mistaken judgment or hypothesis about a perceptual experience, which results in an illusion. Thus, the correct answer is:

A), D)

💡 Quick Tip

Illusions occur when our perception of reality is distorted. Understanding how and why illusions occur can give insight into how the brain processes sensory information.

62. Refer to Column I and Column II and mark the statement(s) that is/are “True”

Column I: Class 8, Section A marks	Column II: Class 8, Section B marks
12	18
12	18
11	15
10	15
10	10
9	5
8	2
8	2

- (A) The mean of Section A is different from that of Section B
- (B) The standard deviation of Section A is similar to that of Section B
- (C) The mean and the standard deviation of Section A is the same
- (D) The mean of Section A and Section B are the same, the standard deviation is different

Correct Answer: (D)

Solution: First, let’s calculate the mean and standard deviation for both Section A and Section B:

- For **Section A**, the scores are: 12, 12, 11, 10, 10, 9, 8, 8. The mean is calculated as:

$$\text{Mean of Section A} = \frac{12 + 12 + 11 + 10 + 10 + 9 + 8 + 8}{8} = \frac{80}{8} = 10.$$

- For **Section B**, the scores are: 18, 18, 15, 15, 10, 5, 2, 2. The mean is:

$$\text{Mean of Section B} = \frac{18 + 18 + 15 + 15 + 10 + 5 + 2 + 2}{8} = \frac{85}{8} = 10.625.$$

Thus, the means of Section A and Section B are slightly different. Therefore, the statement that the means are the same is incorrect.

Next, let's calculate the standard deviation: - For **Section A**, the standard deviation is computed using the formula for standard deviation: SD of Section A =

$$\sqrt{\frac{(12-10)^2+(12-10)^2+(11-10)^2+(10-10)^2+(10-10)^2+(9-10)^2+(8-10)^2+(8-10)^2}{8}} = \sqrt{2.57} \approx 1.6.$$

- For **Section B**, the standard deviation is: SD of Section B =

$$\sqrt{\frac{(18-10.625)^2+(18-10.625)^2+(15-10.625)^2+(15-10.625)^2+(10-10.625)^2+(5-10.625)^2+(2-10.625)^2+(2-10.625)^2}{8}} = \sqrt{33.5} \approx 5.79.$$

The standard deviation of Section A is much smaller than Section B, confirming that the statement about the standard deviations being different is true.

Thus, the correct answer is:

D

Quick Tip

In statistics, the mean is the average of the scores, and the standard deviation measures how spread out the scores are. Comparing these values helps in understanding the distribution and consistency of data.

63. Which of the following is/are true for conformity:

- (A) Size influences conformity only up to a certain level
- (B) Size always influences conformity
- (C) Group unanimity influences conformity
- (D) Status does not have any influence on conformity

Correct Answer: (A), (C)

Solution: - **(A) Size influences conformity only up to a certain level.** This statement is correct. Research shows that as the group size increases, conformity tends to increase, but only up to a certain point. After reaching a group size of 4-5 people, conformity levels off, and adding more people has a diminishing effect on conformity.

- **(B) Size always influences conformity.** This statement is incorrect. While size does influence conformity to some extent, it is not always a determining factor. Other factors such as unanimity, status, and the nature of the task also play significant roles in influencing conformity.

- **(C) Group unanimity influences conformity.** This statement is correct. When everyone in the group agrees (unanimity), the pressure to conform is stronger. However, if even one person disagrees with the group, it significantly reduces the pressure to conform.

- **(D) Status does not have any influence on conformity.** This statement is incorrect. In fact, status does influence conformity. People are more likely to conform to individuals with higher status or perceived expertise.

Thus, the correct answer is:

$A), C)$

 Quick Tip

Conformity is influenced by various factors, including group size, unanimity, and status. Understanding these factors helps explain why people conform in different situations.

64. When the probability of Type I error (α) is 0.05 and the maximum acceptable probability of Type II error (β) is 0.20, the researcher is willing to accept that Type I error is (answer in integer) times more serious than a Type II error.

Correct Answer: 4

Solution: In this case, the researcher is willing to accept that the Type I error is 4 times more serious than the Type II error. This is calculated by dividing the probability of Type II error ($\beta = 0.20$) by the probability of Type I error ($\alpha = 0.05$):

$$\frac{\alpha}{\beta} = \frac{0.05}{0.20} = 4$$

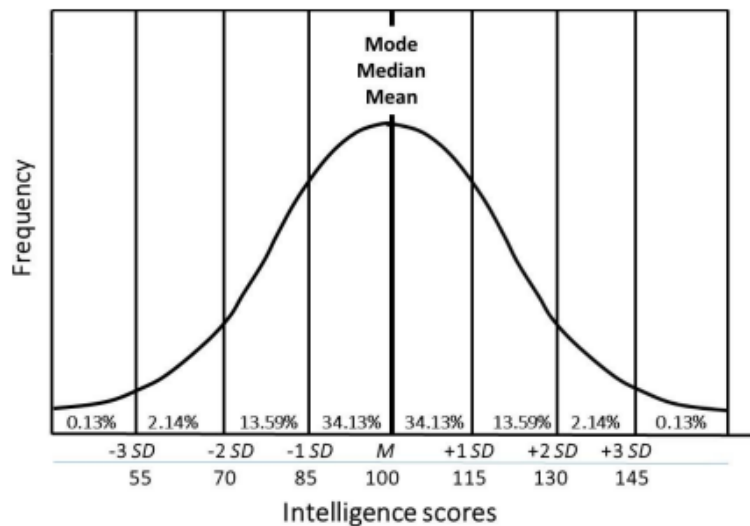
Thus, the researcher considers a Type I error to be 4 times more serious than a Type II error. Therefore, the correct answer is:

4

 Quick Tip

Type I error represents a false positive (rejecting a true null hypothesis), and Type II error represents a false negative (failing to reject a false null hypothesis). Understanding the trade-off between these errors is crucial in statistical hypothesis testing.

65. If Soni got an intelligence score of 115, then what percentage of the population (% as given in the graph) will have intelligence scores higher than the score obtained by Soni? (rounded off to 2 decimal places)



Solution: The given graph represents a normal distribution with the mean (M) at 100. The standard deviation (SD) is divided into different sections as follows:

- The percentage of the population between different ranges of standard deviations is provided in the graph:

- Between the mean (M) and +1 SD (100 to 105), the percentage is 34.13%.
- Between +1 SD and +2 SD (105 to 115), the percentage is 34.13%.
- Between +2 SD and +3 SD (115 to 120), the percentage is 13.59%.
- Between +3 SD and +4 SD (120 to 130), the percentage is 2.14%.

Soni's score of 115 falls between +1 SD and +2 SD (100 to 120).

- The percentage of the population with intelligence scores higher than 115 includes:
- The percentage from +2 SD to +3 SD (115 to 120), which is 13.59%.
- The percentage from +3 SD to +4 SD (120 to 130), which is 2.14%.
- The percentage from +4 SD to +, which is 0.13%.

So, the total percentage higher than 115 is:

$$13.59\% + 2.14\% + 0.13\% = 15.86\%$$

Thus, the percentage of the population with intelligence scores higher than Soni's score is:

$$15.86\%$$

💡 Quick Tip

In a normal distribution, you can calculate the percentage of values above or below a given score by summing up the relevant areas under the curve. These areas correspond to the probability or percentage of the population in that range.