

This document covers Test Slot Analysis, Important Topics and Actual Questions (with solutions) of the Infosys 2021 Pass-Outs System Engineer Online Test that was conducted on 28th Sep, 2020. For 2021 pass-outs who are participating in the Infosys Recruitment on 30th Sep and 1st Oct, 2020, this Ready Reckoner will be of great help.

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TEST PATTERN & ANALYSIS

This was the test pattern which appeared for the 2021 pass-outs, who took up the test on 28th Sep, 2020.

| Section | Section Name | # Qs | Duration(minutes) | Marks per Q |
|-------------|------------------------|------|-------------------|-------------|
| Section I | Reasoning Ability Test | 15 | 25 | 1 |
| Section II | Technical Ability Test | 10 | 35 | 1 |
| Section III | Verbal Ability Test | 20 | 20 | 1 |
| Section IV | Pseudocode Test | 5 | 10 | 2 |
| Section V | Numerical Puzzle Test | 4 | 10 | 2 or 3 |

Here are key take-aways that were observed by test-takers who took up the test on 28th Sep, 2020.

1. No inter sectional or intra sectional navigation.
2. Every question was mandatory.
3. You cannot go back and change the answer for a Question.
4. The entire test was web-proctored.
5. No negative marking.
6. Q types – Multiple Choice Question (MCQ), Fill in the blank and Multiple Answer Question (MAQ).
7. Most questions carried 1 mark unless specified otherwise (Pseudocode – 2 marks/ Q, Puzzles – 2 or 3 marks/ Q)

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8. For MAQ – full marks only if all correct and no incorrect options marked. Partial marks if some correct and no incorrect options marked.
9. A large no. of questions did repeat between test-takers in the same slot (order changed). There were newer questions too.
10. There is expected to be sectional cut-off, for sure. And it is expected to be relative depending on test-takers' performance across slots and colleges. Thus, it is advisable for students to do as well as possible and answer as many questions right as possible.
11. Most test-takers found Pseudocoding and Puzzles to be challenging. That was primarily because they got stuck in 1 or 2 questions that were hard.
12. Students are advised not to get stuck in any 1 question for too long.

IMPORTANT TOPICS

Reasoning Ability:

1. Data Sufficiency (5 Qs)
2. Data Interpretation (5 Qs)
3. Deductive Reasoning (5 Qs) –
 - a. Logical Deduction
 - b. Syllogisms

Technical Ability Test (Mathematical and Logical):

5 questions in this section were from:

1. Coding and Decoding
2. Number Series
3. Permutation, Combination and Probability
4. Ratios and Proportions

5 questions were from Data Arrangements (Seating or Circular or Distributed Arrangement)

While the following topics did not have many questions amongst test-takers, it's advisable to prepare on them as well.

1. Cryptarithmic
2. Time and Work
3. Time Speed and Distance
4. Profit and Loss
5. Averages
6. Algebra

Verbal Ability:

1. Critical Reasoning (3 Questions)
2. English Corrective Usage (4 Questions) – This had Sentence Completion questions on Vocabulary, Phrasal Verbs, Parallelism, Tenses etc.
3. English Error Correction (4 Questions) – Most questions were based on Tenses
4. English Error Identification (4 Questions) – This covered most of the common error types like Parallelism, Modifiers, Pronoun Agreement, Prepositions, Tenses etc.
5. Reading Comprehension (Most test-takers had 1 passage of 5 questions)

Pseudocoding:

1. Programming Logic
2. Object Oriented Programming
3. Pseudocode based puzzles
4. Time Complexity/ Data Structures

Numerical Puzzles:

1. Number-based grid puzzles
2. Generic Number puzzles
3. Even aptitude questions from Profit and Loss, Blood Relations played a part here

INFOSYS QUESTIONS AND ANSWERS FROM 28th SEP, 2020

SECTION I: REASONING ABILITY

Q1. Direction: Consider the below question followed by two statements

A sum invested at R percent per annum Simple interest. Find R.

- I. The sum tripled itself in 16 years.
- II. The sum yielded an interest of Rs. 750 in the first 6 years.

- A. The question cannot be answered with the help of information provided
- B. The question can be answered with the help of either of the statements
- C. The question can be answered with the help of both the statements together
- D. The question can be answered with the help of any one statement but not both

Answer: Option D

Explanation:

Statement I:

$$\text{Amount} = P + S.I = P + \frac{PNR}{100}$$

Sum triples itself in 16 years

$$3P = P(1 + (16 * R / 100))$$

$$R = 12.5\%$$

It is possible to find the answer with the help of statement 1.

Statement II:

$$S.I = \frac{PNR}{100}$$

$$750 = \frac{P * 6 * R}{100}$$

Since we have two unknowns, it will not be possible to find the answer.

Q2. Consider the below question followed by two statements

What is the value of Y?

- I. $Y^2 - 25 = 0$
- II. $Y < 6$

- A. The question can be answered with the help of any one statement but not both
- B. The question cannot be answered with the help of information provided

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- C. The question can be answered with the help of both the statements together
D. The question can be answered with the help of either of the statements

Answer: Option B

Explanation:

Statement I:

$$Y^2 - 25 = 0$$

$$Y = \pm 5$$

Y can be +5 or -5, It is not possible to find the exact value.

Statement 2:

$$Y < 6$$

It can be any value from $-\infty$ to 5. It is not possible to find the correct value.

Combining Statement I and II:

$$Y = \pm 5 \text{ and } Y < 6$$

Both +5 or -5 are less than 6, it is not possible to conclude the value of Y as either of these values.

Q3. Direction: Each question contains six statements followed by four sets of combinations of three. Choose the set in which third statement can be logically derived from the first two statements.

- A. All fruits are flowers.
- B. All fruits are not edible.
- C. All flowers are not fruits.
- D. All flowers are poisonous.
- E. Some poisonous are fruits.
- F. All flowers are edible.

Options:

- A. ABF
- B. BDE
- C. ACF
- D. ADE

Answer: Option D

Explanation:

Option A:

- A. All fruits are flowers.*
- B. All fruits are not edible.*

Solving this should provide the conclusion as "Some flowers are not edible"

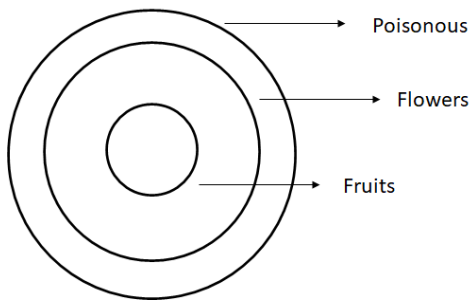
But it is given that F is the conclusion, which cannot be correct.

Option D:

- A. All fruits are flowers.*

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D. All flowers are poisonous.



Answer can be "All fruits are poisonous" . If all fruits are poisonous, some fruits are also poisonous.

Some A's are B's can also be written as Some B's are A's

"Some fruits are poisonous" can also be written as "Some poisonous are fruits" which is the E statement. Our conclusion should be ADE

Q4. Direction: Consider the below question followed by two statements.

The circumference of circle Y is twice the circumference of circle X. What is the area of circle X?

I. The area of circle Y is 100π

II. The circumference of circle Y is 20π

- A. The question cannot be answered with the help of information provided
- B. The question can be answered with the help of any one student but not both
- C. The question can be answered with the help of both the statements together
- D. The question can be answered with the help of either of the statements

Answer: Option D

Explanation:

It is given that circumference of circle Y is twice the circumference of circle X

Statement I:

Area of circle Y is given as 100π

It is possible to find the radius of circle Y and then find the circumference of Y.

If it is possible to get circumference of circle Y, then Circumference of Circle X is twice the answer. So, it is possible to find the answer of the question with Statement I alone.

Statement 2:

Circumference of circle Y is given, so Circumference of circle X is just twice the answer.

It is possible to find the answer with either of the statements.

Q5. Direction: Consider the below question followed by two statements

What is the cost of each pen?

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I. 4 pens and 5 pencils together cost Rs24

II. If the cost of each pen is reduced by 50 percent then 16 pens and 10 pencils will together cost Rs. 50

- A. The question can be answered with the help of either of the statements
- B. The question cannot be answered with the help of information provided
- C. The question can be answered with the help of both the statements together
- D. The question can be answered with the help of any one statement but not both

Answer: Option C

Explanation:

Statement I:

With the given information, we can form an equation

Let P be price of one pen & Pe be price of one pencil

$$4P + 5Pe = 24$$

Without having 2 equations, it is not possible to find the answer.

Statement II:

Let P be price of one pen & Pe be price of one pencil

If the pen was sold at 100% price, we would have been able to purchase only 8 pens

$$8P + 10Pe = 50$$

Again, solving without two equations is not possible

By combining both the statements we will be able to get 2 equations and it is possible to solve it and find the cost of each pen.

Q6. Direction: In each of the question below, there are two/three statements followed by two conclusions numbered I and II. You have to take the two/three statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusions logically follows from the given statements disregarding commonly known facts.

Directions for selection:

- A. If conclusion I follows
- B. If conclusion II follows
- C. If I does not follow
- D. If II does not follow

Statements:

All bowlers are sprinters

All fielders are sprinters

Conclusions:

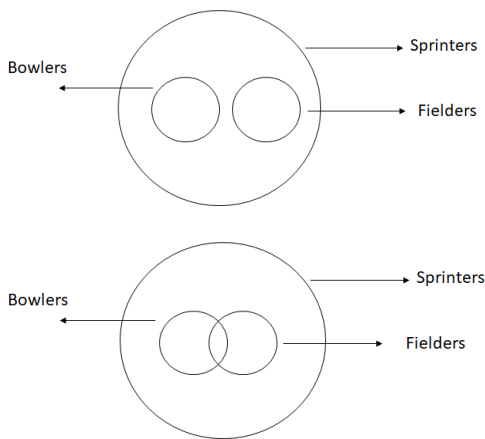
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- I. All fielders are bowlers
- II. Some sprinters are not fielders

- ☐ A
- ☐ B
- ☐ C
- ☐ D

Answer: Option B and C

Explanation:

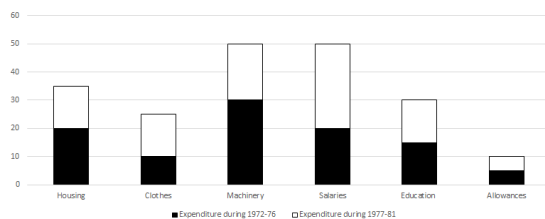


Only conclusion which satisfies both the statement is conclusion II.

- ☐ A
- ☒ B
- ☒ C
- ☐ D

Q7. Direction: Questions are based on the data given below.

Which of the following items accounts for the maximum expenditure during the years 1977 to 1981?



- A. Clothing
- B. Salaries
- C. Allowance
- D. Housing

Answer: Option B

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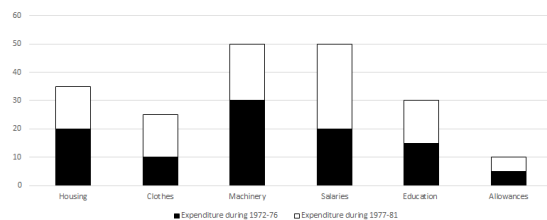
Explanation:

| Item | 1977 - 81 |
|------------|-----------|
| Clothes | 25 |
| Salaries | 30 |
| Allowances | 5 |
| Housing | 15 |

Item with maximum expenditure during 1977-81 = Salaries

Q8. Direction: Questions are based on the data given below.

The amount of expenditure on Education is approximately what fraction of the expenditure on Machinery during the years 1977-1981?



- A. 3:4
- B. 3:2
- C. 2:1
- D. 2:3

Answer: Option A

Explanation:

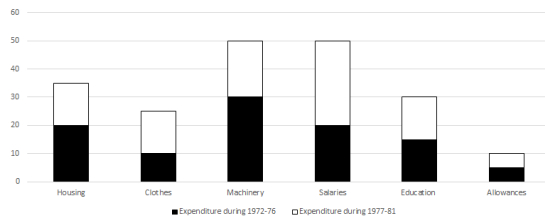
| Item | 1977 - 81 |
|-----------|-----------|
| Education | 15 |
| Machinery | 20 |

Education: Machinery = 15:20 = 3:4

Q9. Direction: Questions are based on the data given below.

If the total expenditure on housing is Rs. 1125 crores during 1977 to 1981, the total expenditure on machinery during the same period is?

Note: The answer should be a numeric value in the format 9999



Answer: 1500

Explanation:

Housing on 1977-81 = 15 = 1125 crores

15 parts = 1125

1 part = 1125/15 = 75

Machinery during 1977-81 = 20

*If 1 part = 75, 20 parts of Machinery = 75*20 = 1500 crores*

Q10. Direction: In each of the question below, there are two/three statements followed by two conclusions numbered I and II. You have to take the two/three statements to be true even if they seem to be at variance with commonly known facts and then decide which of the given conclusion logically follows from the given statements disregarding commonly known facts.

(Choose multiple answers)

Directions for selection:

- A. If conclusion I follows
- B. If conclusion II follows
- C. If I does not follow
- D. If II does not follow

Statements:

No sheet is a paper
All papers are books

Conclusions:

- I. Some papers are books
- II. Some papers are not sheets

- ☐ B
- ☐ D
- ☐ A
- ☐ C

Answer: Option A and Option C (i.e. B and A)

Explanation:

If we observe the conclusions carefully, we can understand that the conclusions are statements written in different forms.

Conclusion I:

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Statement I is “No sheet is a paper”, if no sheet is a paper, then some sheets are also not papers, which can be written as “Some papers are not sheets”

Conclusion I follows the given statement.

Conclusion II:

Statement II is “All papers are books”, if all the papers are books, “some papers are also books”

Conclusion II also follows the statement.

Answer:

- ☒ B
☐ D
☒ A
☐ C

SECTION II: TECHNICAL ABILITY TEST (MATHEMATICAL & LOGICAL REASONING)

Q1. In a certain code language, “SONG” is coded as 110. What is “MOVIE” coded as?

- A. 128
 B. 252
 C. 360
 D. 126

Answer: Option A

Explanation:

Add the position values of all the letters given in the word SONG

$$SONG = S+O+N+G = 19+15+14+7 = 55$$

Multiply the obtained answer with 2

$$SONG = 55 \times 2 = 110$$

$$MOVIE = M+O+V+I+E = 13+15+22+9+5 = 64$$

$$MOVIE = 64 \times 2 = 128$$

Q2. Six boys A, B, C, D, E, F are sitting in a row, not necessarily in the given order. There is only one magazine that gets circulated from the first to the sixth person, the first person being at the extreme left. One can hand over the magazine only to a person who is sitting next to him. The following are some of the points known about the group.

- i. B cannot take the paper from C.
- ii. C sits first in the row.
- iii. D cannot take the paper from C.
- iv. A cannot handover the paper to anybody.
- v. D does not pass paper to A.

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vi. F cannot pass paper to D.

If D is sitting at 3rd position, then E is sitting at position _____

Answer: 2

Explanation:

As per the question, D should be in the third position

 D

Direct clues: ii & iv

If A cannot handover the paper to anybody, it means A sits last in the row

 C D A

From i, B cannot take paper from C, we can assume B cannot be in the second place

From vi, F cannot pass paper to D, we can assume F cannot be in the second place

Possible arrangements are:

 C E D F B A

 C E D B F A

So, E will occupy the second position if D sits on the third place.

Q3. Directions: Six boys A, B, C, D, E, F are sitting in a row, not necessarily in the given order. There is only one magazine that gets circulated from the first to the sixth person, the first person being at the extreme left. One can hand over the magazine only to a person who is sitting next to him. The following are some of the points known about the group.

- i. B cannot take the paper from C.
- ii. C sits first in the row.
- iii. D cannot take the paper from C.
- iv. A cannot handover the paper to anybody.
- v. D does not pass paper to A.
- vi. F cannot pass paper to D.

From whom does D take the magazine?

Answer: E

Explanation:

 D

Direct clues: ii & iv

If A cannot handover the paper to anybody, it means A sits last in the row

C _ D _ _ A

From i, B cannot take paper from C, we can assume B cannot be in the second place

From vi, F cannot pass paper to D, we can assume F cannot be in the second place

Possible arrangements are:

C E D F B A

C E D B F A

So, E will occupy the second position and D takes the magazine from E

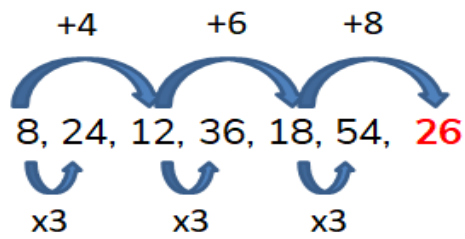
Q4. Find the next number in the series?

8, 24, 12, 36, 18, 54, _____

Note: The answer should be a numeric value in the format 99

Answer: 26

Explanation:



Q5. In how many ways can 5 men and 5 women be seated around a circular table having 10 seats such that no man is seated next to another man and no woman is seated next to another woman?

A. $(4!)^2$

B. $9!$

C. $(5!)^2$

D. $4!(5)$

Answer: Option D

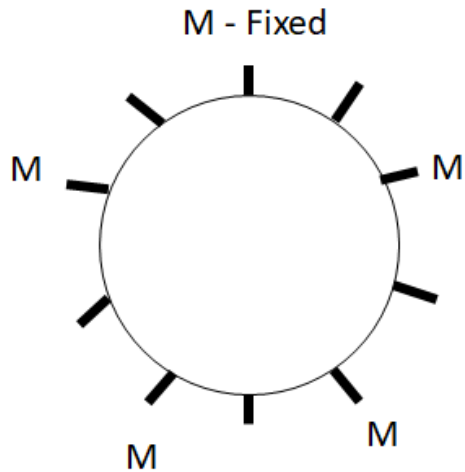
Explanation:

Let

M - Men

W - Women

In circular arrangement, we should fix a reference. Let's fix one Men/Women as a reference



Number of Men arrangement = $(5-1)!$

Number of Women arrangement = $5!$

Total number of ways = $4!(5!)$

Q6. Find the ratio of milk to water in a mixture that gives 15 percent profit when sold at the cost price of pure milk?

- A. 3:2
- B. 20:3
- C. 23:20
- D. 20:23

Answer: Option B

Explanation: Let CP of 1 litre milk be Rs. 1

CP of water = Rs. 0

SP of mixture should be 1, If sold at the cost of pure milk

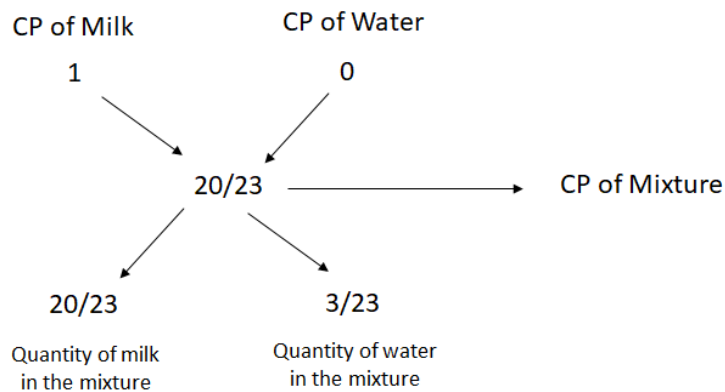
To gain 15%, S.P of mixture should be

$$S.P = 1.15 \text{ CP}$$

$$CP \text{ of mixture} = 1/1.15$$

or

$$CP \text{ of 1 litre of mixture can also be written as } = (100/115) * 1 = 20/23$$



20:3 is the mixture of milk and water.

Q7. There are 2 groups A and B in a class. A consists of six boys and five girls whereas B consists of five boys and six girls. They plan a social activity team of five boys and five girls such that five persons are selected from each of the two groups with atleast two boys and two girls from each group. In how many ways can this be done?

- A. 67600
- B. 40000
- C. 22500
- D. 62500

Answer: Option D

Explanation:

The possible ways of writing 5 boys and 5 girls are as follows:

| Boys | | Girls | | | |
|--------------|--------------|--------------|--------------|------------------------------------|----|
| A(6) | B(5) | A(5) | B(6) | | |
| 2 | 3 | 2 | 3 | → 6C2 * 5C3 * 5C2 * 6C3 | |
| 2 | 3 | 3 | 2 | → 6C2 * 5C3 * 5C3 * 6C2 | or |
| 3 | 2 | 2 | 3 | → 6C3 * 5C2 * 5C2 * 6C3 | or |
| 3 | 2 | 3 | 2 | → 6C3 * 5C2 * 5C3 * 6C2 | or |

Cancelling the first and last possibility as the condition is choosing exactly 5 members from each group

Total number of ways = 22500 + 40000 = 62500

Q8. Directions: Six boys A, B, C, D, E, F are sitting in a row, not necessarily in the given order. There is only one magazine that gets circulated from the first to the sixth person, the first person being at the

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extreme left. One can hand over the magazine only to a person who is sitting next to him. The following are some of the points known about the group.

- i. B cannot take the paper from C.
- ii. C sits first in the row.
- iii. D cannot take the paper from C.
- iv. A cannot handover the paper to anybody.
- v. D does not pass paper to A.
- vi. F cannot pass paper to D.

If F sits in the 4th position, then who sits on the 3rd position?

- A. D
- B. B
- C. E
- D. D or B

Answer: Option A

Explanation:

Direct clues: ii, iv & v

If A cannot handover the paper to anybody, it means A sits last in the row

C _ D _ _ A

From i, B cannot take paper from C, we can assume B cannot be in the second place

From vi, F cannot pass paper to D, we can assume F cannot be in the second place

Possible arrangements are:

C E D F B A

C E D B F A

In this question, it is given that F sits on the 4th place.

If F sits on the 4th place, D will sit on the 3rd place.

Q9. Directions: Six boys A, B, C, D, E, F are sitting in a row, not necessarily in the given order. There is only one magazine that gets circulated from the first to the sixth person, the first person being at the extreme left. One can hand over the magazine only to a person who is sitting next to him. The following are some of the points known about the group.

- i. B cannot take the paper from C.
- ii. C sits first in the row.
- iii. D cannot take the paper from C.
- iv. A cannot handover the paper to anybody.
- v. D does not pass paper to A.
- vi. F cannot pass paper to D.

If B sits at the fourth position, then who sits on the third position?

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- A. D or F
- B. E
- C. F
- D. D

Answer: Option D

Explanation:

Direct clues: ii, iv & v

If A cannot handover the paper to anybody, it means A sits last in the row

C _ D _ _ A

From i, B cannot take paper from C, we can assume B cannot be in the second place

From vi, F cannot pass paper to D, we can assume F cannot be in the second place

Possible arrangements are:

C E D F B A

C E D B F A

In this question, it is given that B sits on the 4th place, so let us consider the 2nd possibility

C E D B F A

If B sits on the 4th place, D will sit on the 3rd place.

Q10. Directions: Six boys A, B, C, D, E, F are sitting in a row, not necessarily in the given order. There is only one magazine that gets circulated from the first to the sixth person, the first person being at the extreme left. One can hand over the magazine only to a person who is sitting next to him. The following are some of the points known about the group.

- i. B cannot take the paper from C.
- ii. C sits first in the row.
- iii. D cannot take the paper from C.
- iv. A cannot handover the paper to anybody.
- v. D does not pass paper to A.
- vi. F cannot pass paper to D.

If E sits at the 3rd position, then who sits on the 2nd position?

- A. F
- B. F or D
- C. B
- D. D

Answer: Option A

Explanation:

It is given in the question that E sits on the third place

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-- E --

Direct clues: ii & iv

If A cannot handover the paper to anybody, it means A sits last in the row

C _ E _ _ A

B cannot pass to C.

C E E D B A

If E sits on the third position, F sits on the second position.

SECTION III: VERBAL ABILITY

Q1. Directions: Fill in the blank with the correct option that fits in grammatically and logically.

His vision is so multifaceted and so rich in meanings that to try to _____ it in a few sentences would be presumptuous.

- A. Embellish
- B. Encapsulate
- C. Envisage
- D. Integrate

Answer: Option B

Explanation: Here is the meaning of the answer options.

Embellish: Make something attractive

Encapsulate: Express in a precise/ concise manner

Envisage: Foresee or Predict

Integrate: Combine

*The clue in the sentence is the last part, i.e. "it in **a few sentences** would be presumptuous".*

Presumptuous: Arrogant

Hence the answer is option B.

Q2. Directions: Fill in the blank with the correct option that fits in grammatically and logically.

Since Priya has no time she has to _____ on her way.

- A. Grab a bite
- B. Take a bite
- C. Take bites
- D. Grab bites

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Answer: Option A

Explanation: The clue words in the sentence are “no time”. Thus, we need a phrase that means eating something in a hurry. ‘Grab a bite’ fits that bill perfectly.

Q3. Directions: Identify the correct sentence.

1. If the company's productivity do not improve, lay-offs and retrenchment can be expected soon.
 2. If the company's productivity is not improving, lay-offs and retrenchment can be expected soon.
 3. If the company's productivity does not improve, lay-offs and retrenchment can be expected soon.
 4. If the company's productivity should not improve, lay-offs and retrenchment can be expected soon.
- A. 1
B. 2
C. 4
D. 3

Answer: Option D

Explanation: Let's understand this sentence by sentence.

1. If the company's productivity do not improve, lay-offs and retrenchment can be expected soon.

As per Subject Verb Agreement, a singular subject takes a singular verb and a plural subject takes a plural verb. In this sentence, ‘Productivity’ is a singular subject. Thus the verb has to be ‘does not’, which is also singular. Instead, a plural verb ‘do not’ is used here. Hence, this is wrong.

2. If the company's productivity is not improving, lay-offs and retrenchment can be expected soon.

One of the golden rules in English grammar is that the tense of a sentence must be consistent unless there are two events happening in different timelines. In this sentence (which does not have a case of two events happening in different timelines), both present continuous tense (“...is not improving...” and future (“can be expected”) are used. That is wrong!

4. If the company's productivity should not improve, lay-offs and retrenchment can be expected soon.

In this case, ‘should not’ indicates compulsion while ‘can be’ indicates capability. They are contradictory and cannot go together in the sentence. Thus, this is wrong.

Q4. Directions: Identify the correct sentence.

1. The City Rehabilitation Center trains the mentally challenged to take care on their own.
 2. The City Rehabilitation Center trains the mentally challenged to take care of their own selves.
 3. The City Rehabilitation Center trains the mentally challenged to take care of himself.
 4. The City Rehabilitation Center trains the mentally challenged to take care of themselves.
- A. 4
B. 2

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- C. 3
- D. 1

Answer: Option A

Explanation: Here, the 'mentally challenged' refers to people who are mentally challenged (plural subject). Thus a plural pronoun has to be used. That is 'themselves'. Hence sentence #4 or option A is the only one which follows this.

While sentence #2 uses what seems like a plural pronoun (their own selves), this is an awkward and incorrect usage in the English language.

Q5. Directions: Identify the correct sentence.

1. The doctor seriously advised the patient and told him that he should be sleeping enough, that he should be drinking a lot of fluids, and do some exercises.
2. The doctor seriously advised the patient and told him that he should sleep enough, that he should be drinking a lot of fluids, and doing some exercises.
3. The doctor seriously advised the patient and told him that he should sleep enough, that he should take a lot of fluids, and do some exercises.
4. The doctor seriously advised the patient and told him that he should sleep enough, take a lot of fluids, and do some exercises.

- A. 3
- B. 2
- C. 1
- D. 4

Answer: Option D

Explanation: This is a classic case of Parallelism. What this means is that if a sentence has got multiple items, all of the items must be consistent or in the same form.

Here, the items refer to the three things the doctor advised the patient to do:

- *Sleep Enough*
- *Take a lot of fluids*
- *Do some exercises*

In this question, sentence #4 is the only sentence which has all of the items in the same form (Simple Present Tense). Let's take a look at some of the other options too.

1. *The doctor seriously advised the patient and told him that he should be sleeping enough, that he should be drinking a lot of fluids, and do some exercises.*

Here, the items are 'that he should be sleeping', 'that he should be drinking a lot of fluids' and 'do some exercises'. As you can see, all 3 items must have 'that' or only the first item must.

There's a similar problem with sentence #3.

Sentence #2 has one item in Simple Present Tense while the others are in continuous tense. Thus, they are not parallel.

Q6. Directions: For each question in this section, select the best of the answer choices given.

Most of the family-owned businesses face a sobering reality. Almost 90% of family-run businesses do not survive as single entities beyond the third generation world wide. Ambition, greed and inspiration of the new generation lead to family feuds, resulting in disintegration.

Which of the following statements weakens the argument?

- A. The risk to the business comes from within the family generally when it migrates to the second or third generation.
- B. As in the case of Tata sons, where Ratan Tata is the chairman of the holding company while all other businesses are run by professional managers. It is possible to hold the family together.
- C. Issues run smooth in the family and the business prospers till the patriarch is alive and is running the business.
- D. If the ladies of the house are living together and the seed of discontentment is sown, the family environment gets spoilt.

Answer: Option B

Explanation: A weakening statement is intended to prove the conclusion to be false.

Here, the conclusion is that family-run businesses do not survive and there is disintegration. We need a statement that proves this to be wrong. Or a statement that says that family-run businesses can indeed succeed without disintegration.

The answer option that best does this is option B. All of the answer options in fact talk about how family run businesses can fail.

Q7. Directions: Fill in the blank with the correct option that fits in grammatically and logically.

At a given point in time, academic achievements may appear rather _____, not long afterwards, however they may take on greater practical importance.

- A. Enticing
- B. Enlightening
- C. Esoteric
- D. Exotic

Answer: Option C

Explanation: The clue in the question is "...however, they make take on greater practical importance."

Thus, we need an answer option that is opposite of having practical importance or opposite of a word which means common use.

Enticing: Attractive

Esoteric: Likely to be understood or used only by specific people or in specific circumstances (in other words, not practical)

Exotic: Foreign

*Thus, the word which best fits the meaning we want is **Esoteric**.*

Q8. Directions: Identify the correct sentence

1. Helen Keller's nurse taught her to read, write, and use a typewriter.

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2. Helen Keller's nurse taught her to read, write, and typing.
 3. Helen Keller's nurse taught her reading, writing, and to use a typewriter.
 4. Helen Keller's nurse taught her to read, to write, and using a typewriter.
- A. 1
 - B. 2
 - C. 4
 - D. 3

Answer: Option A

Explanation: This question can be solved using parallelism.

The items in the sentence (the 3 things that Helen Keller's nurse taught her to do) must be consistent in form and tense.

In Sentence #2, 'typing' is in continuous tense, while the other two are in simple present tense.

In Sentence #3, "to use a typewriter" is not in continuous tense, while the other two are.

In Sentence #4, only "using a typewriter" is in continuous tense, while the other are in 'to+verb' form.

Q9. Directions: For each question in this section, select the best of the answer choices given.

Almost 80% of people surveyed say that money can't buy love. Many others say that money has been the major reason for most of our problems, our anger, hostility and envy. Why then do most of us strive to make money if it won't make us happier? Therefore, the government's focus on increasing the per capita national income may be regarded as a futile effort.

Which of the following weakens the argument?

- A. With the development of the system of many, the limit to acquisition disappeared
- B. Many religions instruct us that attachment to material possessions makes us unhappy.
- C. There is definitely more to happiness than just a good mood.
- D. A larger section of the society accumulates money up to a certain amount to provide a safeguard against lean times thereby relieving the government.

Answer: Option D

Explanation: A weakening statement is intended to prove the conclusion to be false.

Here, the conclusion is that the government's focus on increasing per capita national income is futile (useless). We need a statement as our answer option that proves that the government's effort is not futile. In other words, a statement that proves that money is not useless.

That is best done by option D.

Q10. In a London hospital, the trial of a new drug almost killed six men. The six men who were all young and healthy just months ago now suffer from serious medical problems. Ironically, the drug companies involved in the trial have refused to cover their medical expenses or provide any compensation.

It can be inferred from the passage that

- A. The six men received a one-time payment of under \$20,000 each.

[Jump to Quick-Links](#)

- B. Life threatening drugs can cause fatigue.
- C. The drug-testing system seems better devised to bring drugs to the market than to ensure human safety
- D. Drug - testing on human beings must be banned.

Answer: Option D

Explanation:

Option A is the opposite of what the paragraph says.

Option B talks about fatigue, while the passage does not talk anything about fatigue. It, in fact, talks about almost killing men.

Option C is not the answer since there is no comparison done about taking the drugs to market vs. human safety.

Q11 to 13. Directions: In each of the following sentences, some part of the sentence or the entire sentence is underlined. Beneath each sentence you will find four ways of phrasing the underlined part is a test of correctness and effectiveness of expression. In choosing answers, follow the requirements of standard written English, that is, pay attention to grammar, choice of words, and sentence construction. Choose the answer that expresses most effectively what is presented in the original sentence, this answer should be clear and exact, without awkwardness, ambiguity or redundancy.

Q11. He complied with the requirement that all graduate students in education can write a thesis.

- A. all graduate students in education should write a thesis.
- B. all the graduate students in education must write a thesis.
- C. all graduate students in education write a thesis.
- D. all graduate students in education have to write a thesis.

Answer: Option C

Explanation:

The grammatical usage of subjunctive will help you answer this question. It is used to refer to demands, wishes, suggestions or imaginative scenarios.

Here are e.g. sentences of subjunctive forms.

- I demand that she **have** a chance.
- I propose that she **make** Biriyani.

As you can see, the work form after 'that' has to be in the native form (without any auxiliary verb).

This sentence is an e.g. of a demand that he complied with. Thus, the correct usage of subjunctive form here is option C.

Q12. If the cerebellum of a pigeon had destroyed, the bird would not be able to fly.

- A. were destroyed, the bird would not be able to fly.
- B. would be destroyed, the bird could not be able to fly.
- C. was destroyed, the bird would not be able to fly.
- D. is destroyed, the bird cannot able to fly.

Answer: Option A

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Explanation: This is yet another example of subjunctive – in the case of an imaginary scenario. Whenever you use imaginary scenarios, the correct usage is 'if' + subject + 'were'.

E.g.s:

- *If I were the Prime Minister of India...*
- *If I were God for one day....*
- *If I were the President of America....*

Thus, the answer is option A.

Q13. He has hoped that he could graduate this semester, but he couldn't finish his thesis on time.

- A. hoped that he can graduate this semester, but he didn't
- B. had hoped that he would graduate this semester, but he couldn't
- C. had hoped that he graduate this semester, but he couldn't
- D. had hoped that he will graduate this semester, but he couldn't

Answer: Option B

*Explanation: In this sentence, there are two actions in the past – **hoped** and **couldn't finish**. The action which got over first is **hoped**.*

When you have two past actions and one of them got over before the other, the first action must be in Past Perfect Tense (had + verb). This is followed in options B, C and D. Thus, option A is eliminated.

Option C is missing an auxiliary verb before 'graduate'.

Option D is incorrect since it uses future tense along with past perfect (will graduate).

Q14 to Q17. Read the following passage and answer the questions given below.

Every channel was showing the same pictures: one of the towers belonging to the World Trade Center in flames, the next plane approaching, a new fire and the collapse of both buildings: the disaster of 11th September 2001. No one will ever forget where they were, what they were doing and who they were with when the terrorist attack occurred.

It is always very hard to accept that a tragedy can, in some way, have positive results. As we gazed in horror at what looked more like a scene from a science fiction movie – the two towers crumbling and carrying thousands of people with them as they fell – we had two immediate responses: first, a sense of impotence and terror in the face of what was happening; second, a sense that the world would never be the same again.

It was with these feelings in my heart that I switched off the TV and headed for the bookstore where the book-signing was, in theory, to take place. I was convinced that no one would be there, since the next few hours were bound to be taken up with more news and more details and with the search for reasons why it had happened. I walked the deserted streets of Munich. Even though it was still only four o'clock in the afternoon, people had congregated in any bars that had radios and televisions turned on, trying to persuade themselves that it was all some kind of dream from which, sooner or

later, they would wake up, saying to their friends that the human race does tend to suffer from this kind of recurring nightmare.

To my surprise, when I got to the bookshop, hundreds of readers were waiting for me. They weren't talking to each other, they were silent – it was a silence that came from the depths of their souls, a silence empty of meanings. Gradually, I understood why they were there: at such times, it is good to be with other people, because no one knows what might happen next. Gradually, we all came to realise that it wasn't a nightmare, but something real and palpable, which, from then on, would become part of the history of our civilisation.

That is what I would like to write about at the end of this year of upheavals. The world will never be the same, it's true, but, a year on from that afternoon, is there still a sense that all those people died in vain? Or can something other than death, dust and twisted steel be found beneath the rubble of the World Trade Center?

I believe that the life of every human being is, at some point, touched by tragedy: it could be the destruction of a city, the death of a child, a baseless accusation, an illness that appears without warning and brings with it permanent disability. Life is a constant risk, and anyone who forgets this will be unprepared for the challenges that fate may have in store for us. Whenever we come face to face with that inevitable suffering, we are forced to try and make some sense of what is happening. However good we are, however well we try to live our lives, tragedies happen. We can blame others, we can find some justification or imagine how different our lives would have been without them, but none of that matters: the tragedy has happened, and that's that. From then on, what we have to do is to look again at our lives, overcome our fear and begin a process of reconstruction.

Q14. Which of the following statements is the author most unlikely to agree with?

- A. The streets of Munich were desolate as early as 4 o' Clock
- B. Anyone who forgets that life is at constant risk will be unprepared to meet the challenges that fate poses
- C. A human being encounters a tragedy at some point or the other in his life.
- D. It is unrealistic to expect people to begin the process of reconstruction and get on with their lives in the face of adversities

Answer: Option D

Explanation: Option D is the what the author would be unlikely to agree with, since he talks throughout the passage about the need for bouncing back from adversities. All of the other options are lines that are given in the passage.

Q15. Which of the following may be a reasonable inference from the passage?

- A. Such terrorist activities are inevitable in the modern world
- B. Even in the face of the worst tragedies, we should never despair but show resilience to get on with life.
- C. The disaster of Sep 11, 2001 created a sensation amongst the public
- D. The author is a Swiss in nationality.

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Answer: Option B

Explanation: The overall theme of the passage is option B. You can especially see these in the last lines of the passage “We can blame others, we can find some justification or imagine how different our lives would have been without them, but none of that matters: the tragedy has happened, and that’s that. From then on, what we have to do is to look again at our lives, overcome our fear and begin a process of reconstruction.”

Q16. It can be inferred about the attitude of the author that he is _____.

- A. Indignant
- B. Skeptical
- C. Optimistic
- D. Pessimistic

Answer: Option C

Explanation:

Indignant: Showing anger

Skeptical: Doubtful

The author in fact displays optimism throughout the passage – starting from how the people turned up to his book signing in throngs – since they wanted to be together and move on. He also talks continuously about moving on from disaster. Thus, if anything, he is optimistic.

SECTION IV: PSEUDOCODING TEST

Q1. Predict the output of the following pseudo code if the value of the number is 6:

```
Read number

K=2

i=2

while i<=number

    k=k*i

    i=i+1

end while

write k
```

- A. 1440.0
- B. 1700.0
- C. 1560.0
- D. 1340.0

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Answer: Option A

Explanation:

First iteration: num=6, k=2, i=2

while condition true

*k=k*i= 2*2 = 4*

i=2+1 = 3

second iteration: num=6, k=4, i=3

while condition true

*k=k*i= 4*3 = 12*

i=3+1 = 4

Third iteration: num=6, k=12, i=4

while condition true

*k=k*i= 12*4 = 48*

i=4+1 = 5

Fourth iteration: num=6, k=48, i=5

while condition true

*k=k*i= 48*5 = 240*

i=5+1 = 6

Fifth iteration: num=6, k=240, i=6

while condition true

*k=k*i= 240*6 = 1440*

i=6+1 = 7

Sixth iteration: num=6, k=1440, i=7

while condition false

*Printing k value which is **1440***

Q2. Predict the output of the following pseudo code if the value of the n is 35

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Read n

i= 0

While $n \% 10 \neq 0$

n=n+3

i++

end while

n=n+i

write n

- A. 50.0
- B. 55.0
- C. 53.0
- D. 45.0

Answer: Option C

Explanation:

1st iteration: n=35, i=0,

$35 \% 10 \neq 0$ True

$n = n + 3 = 35 + 3 = 38$

$i = i + 1 = 1$

$n = n + i = 38 + 1 = 39$

2nd iteration: n=39, i=1,

$39 \% 10 \neq 0$ True

$n = n + 3 = 39 + 3 = 42$

$i = i + 1 = 2$

$n = n + i = 42 + 2 = 44$

3rd iteration: n=44, i=3,

$44 \% 10 \neq 0$ True

$n = n + 3 = 44 + 3 = 47$

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$i = i++ = 3$

$n = n + i = 47 + 3 = 50$

4th iteration: $n = 50, i = 3,$

$50 \% 10 \neq 0$ False

$n = n + 3$ // will not be executed

$i = i++$ // will not be executed

$n = n + i = 50 + 3 = 53$

print n that is **53**

Q3. What will be the number of “*” printed by the given pseudocode when input is 25?

Write "Please enter the number"

Read input

Repeat while input > 0

If (star > 0 and star <= 10)

Write *

Else if (star > 10 and star <= 20)

Write **

Else if (star > 20 and star <= 30)

Write ***

Input—

End if

End while

- A. 55.0
- B. 35.0
- C. 25.0
- D. 45.0

Answer: Option D

Explanation:

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*1st if condition will be satisfied for 1 to 10 values of the input and print **10 stars***

*2nd if condition will be satisfied for 11 to 20 values of the input and print **20 stars***

*3rd if condition will be satisfied for 21 to 25 values of the input and print **15 stars**.*

Therefore the total stars printed is $10+20+15 = 45$ stars

Q4. You have a vehicle class, a car class, and a person class, you have to implement the functionalities of a bird, dog, cat, bus, auto and 2 specialized car classes for hybrid and electric vehicles.

Which of these options is the most efficient way to do so?

1. Make a new class for all the required methods and implement all methods separately.
2. Inherit the car class into the specialized car and then implement the extra methods.
3. Make a new class Big vehicles and then inherit properties from it to make the bus classes.
4. Inherit the person class to bird, dog, cat, and then override the methods that are not required.
5. Make new class animals and use this to make the dogs, cats and birds class.
6. Make a new three wheeled vehicle inherited from vehicle class for auto.
7. Inherit vehicle class for auto.

- A. 2,5,7
B. 2,5,6
C. 3,4,6
D. 1

Answer: Option A

Explanation: The process to be followed is; Inherit the car class into the specialized car and then implement the extra methods, Make new class animals and use this to make the dogs, cats and birds class, 1. Inherit vehicle class for auto.

Q5. Class A contains two methods, namely “me” and “see”. Class B inherits Class A and overrides the “see” method. Class C also inherits methods from Class A and overrides the “see” method. Class B and class C are both inherited by class D using the concept of multiple inheritances.

In the given scenario, identify the problem generated by the behaviour of the “see” method?

- A. Dexterity problem
B. Coherence Problem
C. Cohesion Problem
D. Diamond Problem

Answer: Option D

Explanation: Here the problem would be with the path for the methods to be inherited from the class A, there would be an ambiguity in the call of the methods see basically from which of the classes i.e. will it be from B or C. This is a famous problem in inheritance called the diamond problem as it looks like a diamond in a flow chart. This problem can be resolved using scope resolution operators or Super keyword.

SECTION V: PUZZLES

Q1. Consider following rules while substituting number in the given grid

1. The numbers substituted in each cell of a particular column must be unique and should add up to the number given in the topmost cell of the corresponding column.
2. The numbers substituted in each cell of a particular row must be unique and should add up to the number given in the first cell of the corresponding row.
3. The numbers to be used are from 1 to 9 only.

Determine the number that will be present in place of ?

| | 23 | 24 | 3 | |
|----|----|----|---|---|
| 25 | | | | ? |
| 15 | | | | |
| 17 | | | | |

- A. 7
- B. 3
- C. 1
- D. 9
- E. 5

Answer: Option A

Explanation:

The only possibility of getting the mentioned sum is:

| | 23 | 24 | 3 | |
|----|----|----|---|---|
| 25 | 9 | 8 | 1 | 7 |
| 15 | 6 | 7 | 2 | |
| 17 | 8 | 9 | | |

Q2: An item is sold at a certain price. The selling price (S.P) printed on this item is 40% more than its cost price (CP). Since the customer who purchased the product was a premium category customer, he got 10% discount on the S.P. If the shopkeeper gained a profit of ₹65 after the sale of this item, what is the S.P printed on the item?

- A. Rs. 300
- B. Rs. 315
- C. Rs. 350
- D. Rs. 250

Answer: Option C

Explanation:

$$S.P = CP + 40\% \text{ of } CP$$

$$S.P = 1.4 \text{ CP}$$

$$10\% \text{ discount is provided, } S.P = 1.4 \text{ CP} * 0.9 \text{ or}$$

$$\text{After discount, } SP = S.P - 10\% \text{ of } SP(\text{Discount}) = 1.4 \text{ CP} - 0.14CP$$

$$S.P = 1.26 \text{ CP}$$

Shopkeeper gained Rs. 65 = Profit

$$\text{Profit} = SP - CP$$

$$65 = 1.26 \text{ CP} - CP$$

$$65 = 0.26 \text{ CP}$$

$$CP = 250$$

$$\text{Initial } SP = CP + 40\% \text{ of } CP = 250 + 100 = 350$$

Q3. In a family tree, B is the daughter of C, F is son of B, A is mother of D, E is husband of B, J is mother of H and I, H is grandson of A and C, G is brother of F. Identify the statements which are true:

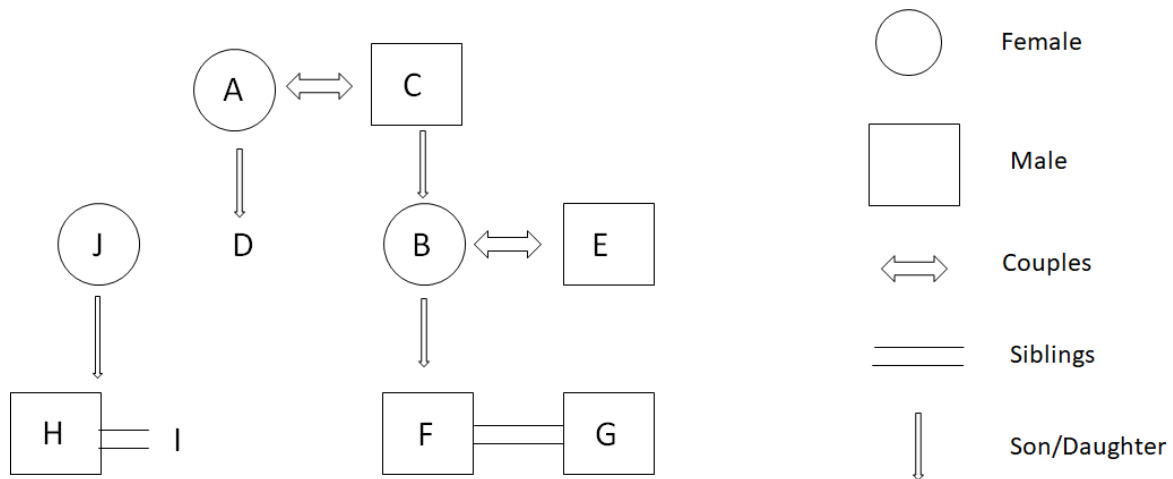
- A. B is sister of J
- B. C is father of G
- C. A is wife of C
- D. D is father of I

Answer: Option C

Explanation:

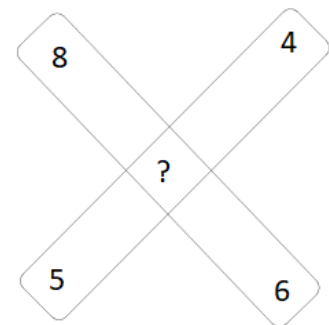
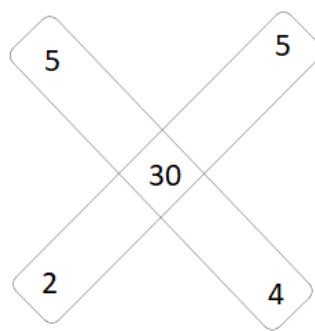
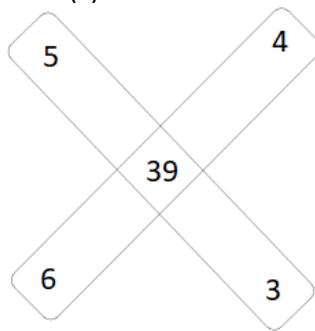
Family tree:

Given in the next page.



With the help of given data, the above family tree can be obtained. Without knowing J and D are siblings of A and C or couples, it is not possible to conclude D and J are couples.

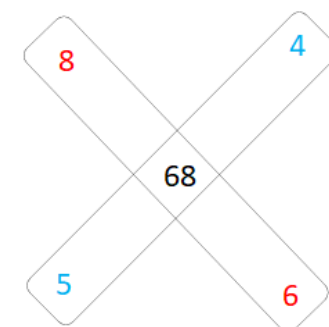
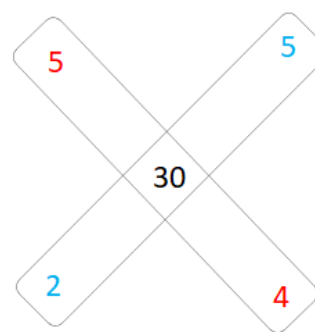
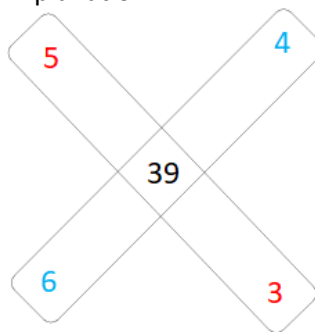
Q4. In the following question, select the number which can be placed at the sign of question mark(?)



- A. 76
- B. 45
- C. 67
- D. 68

Answer: Option D

Explanation:



If we add the product of numbers highlighted in red and blue, we will get the sum mentioned in the middle.

$$5*3 + 6*4 = 39$$

$$5*4 + 5*2 = 30$$

$$8*6 + 4*5 = 68$$

UPCOMING OPPORTUNITIES FOR 2021 PASS-OUTS

Post Infosys, here are upcoming campus/ NQT drives that you must prepare for, if you're a 2021 pass-out.

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