

Infosys Mock Test 01

Test Summary

- No. of Sections: 7 No.
- of Questions: 60
- Total Duration: 120 min

Section 1 - Reasoning Ability

Section Summary

- No. of Questions: 15
- Duration: 25 min

Additional Instructions:

None

- Q1. In the question below are given two or three statements followed by two conclusions numbered I and II. You have to take the given statements to be true even if they seem to be at variance from commonly known facts and then decide which of the given conclusions logically follows from the statements, disregarding commonly known facts. Give answer.

Statements:

No apple is a plum.
All plums are oranges.
All oranges are mangoes.

Conclusions:

I. All plums are mangoes.
II. At least some mangoes are oranges.

Neither I nor II follows

Only I follows

Either I or II follows

Both I and II follow

Only II follows

- Q2. Each of the questions below has a few statements, followed by four conclusions numbered I, II, III and IV. You have to consider every given statements as true, even if it does not conform to the well-known facts. Read the conclusions and then decide which of the conclusions can be logically derived.

Statements: Some toys are pens. Some pens are papers. Some papers are black

Conclusions:
I. Some toys are black.
II. No pen is black.
III. No toy is black.
IV. Some pens are black.

none of these

Either II or IV

Either I or III and either II or IV

All of these

Q3. If in certain language KINDLE is coded as ELDNIK, then how is EXOTIC coded in that code ?

EXOTLC

CXOTIE

COXITE

CITOXE

Q4. In a certain code language if the word MIRAGE is coded as ZRJBNJ, then how is the word INTRUDE coded in that language ?

RBPHNJI

RDPIPAJ

RBNJPHJ

RBJLPHJ

Q5. **Direction: What will come in place of the question mark (?) in the following number series?**

4, 6, 9, 13.5, 20.25, 30.375, ?

Q6. Direction: What will come in place of the question mark (?) in the following number series?
225, 231, 249, 287, 353, (?)

Q7. How much does a watch lose per day, if its hands coincide every 64 minutes?

$32\frac{8}{11}$ min

$36\frac{5}{11}$ min

90 min

96 min

Q8. When time changes from 6:35 A.M. to 6:39 A.M. in a clock having a circular scale of twelve hours. By how many degrees the angle formed by the minute and hour hand changes?

11

13

22

26

Q9. The question below consists of a question and two statements numbered I and II given below it. You have to decide whether the data provided in the statements are sufficient to answer the questions. Read both the statements and give an answer.

If A and B are positive integers and B is a multiple of A, is $A = 2$?

(A) $A \neq 1$

(B) $B + 2$ is a multiple of A.

if statement (A) alone is sufficient to solve the question, but statement (B) alone is not.

if statement (B) alone is sufficient to solve the question, but statement (A) alone is not.

if neither statement (A) nor statement (B) is individually sufficient to solve the question, but a combination of both is sufficient to solve the question

if both the statements taken together are not sufficient and more information is required to solve the question.

Q10. The question given below contains a question and two statements numbered I and II. You have to decide whether the data given in the statements are sufficient for answering the questions.

How old is the teacher?

I. The average age of ten students and their teacher is 25 yrs.

II. The teacher's age is 10 yrs more than the oldest student's age.

If statement I alone is sufficient but statement II alone is not sufficient

If statement II alone is sufficient but statement I alone is not sufficient

If both statement I and II together are sufficient but neither of the statements alone is sufficient.

If statement I and II together are not sufficient

Q11. In the question below relationship between different elements is shown in the statements. The statements are followed by two conclusions.

Statement: $X > P \geq W < Z \leq T < S, P \geq V$

Conclusions:

I. $P > T$

II. $X > V$

if only conclusion 2 is true

if only conclusion 1 is true

if either conclusion 1 or conclusion 2 is true

if neither conclusion 1 nor conclusion 2 is true

if both conclusion 1 and conclusion 2 are true

Q12. In the question below relationship between different elements is shown in the statements. The statements are followed by two conclusions.

Statement: X=Y<W =Z ≥U;Z<P;Z<T

Conclusions:

- I. W > P
- II. T > U

if only conclusion 1 is true

if only conclusion 2 is true

if either conclusion 1 or conclusion 2 is true

if neither conclusion 1 nor conclusion 2 is true

if both conclusion 1 and conclusion 2 are true

Common Content:

Six friends Kripa, Mehta, Hema, Misha, Alia and Usha sit around the triangular table facing the center. Usha sits at one of the corner. Three persons sit between Usha and Mehta whereas Mehta sits second to the right of Misha. Kripa sits second to the left of Hema, who is an immediate neighbour of Usha. Alia sits second to the left of Kripa, who is not an immediate neighbour of Misha.

Q13. Who among the following sits at the corner of the table?

Alia

Mehta

Hema

Kripa

Q14. How many persons sit between Usha and Kripa when counted from the right of Usha?

1

3

Cannot be determined

Q15. Which of the following statement is true?

Kripa sits at one corner of the table

Usha sits adjacent to Alia

Alia and Hema are immediate neighbours.

Mehta sits second to the right of Misha.

Section 2 - Mathematical Ability

Section Summary

- No. of Questions: 10
- Duration: 35 min

Additional Instructions:

None

Q1. Nethra while reading a book, notices that three pages in between the book are blank without any texts. The first and second page's numbers are 50% and 75% lesser than the third page number. By how much percent is the second page number to be increased so as to make it equal to the first number?

50

100

45

25

Q2. In a college election between two candidates, one candidate got 25% of the total valid votes. 30% of the votes were invalid. If the total votes were 7600, what is the number of valid votes the other candidate got?

2576

2314

5184

3990

- Q3. How many arrangements can be made out of the letters of the word COMMITTEE, taken all at a time, such that the four vowels do not come together?

216

45360

1260

43200

- Q4. A family consists of a grandfather, 5 sons and daughter and 8 grandchildren. They are to be seated in a row for dinner. The grandchildren wish to occupy the 4 seats at each end and the grandfather refuses to have a grandchild on either side of him. The number of ways in which the family can be made to sit is:

$8! \times 240$

$8! \times 360$

$8! \times 480$

$8! \times 600$

- Q5. Rohit has got an urn containing a few marbles as a birthday gift from his friend. The Urn had 4 white, 5 red and 6 blue balls. The next day Rohit opens the gift and draws three marbles at random. What is the probability that all the 3 marbles are red in color?

1/22

3/22

2/91

2/77

- Q6. The combined age of husband and wife on their 20th wedding anniversary was twice what it was at the time of the wedding. If the husband is 3 years older than his wife. How old was he at the time of his marriage?

29 years

38.5 years

21.5 years

32 years

None of these

- Q7. Anju, Manju, and Sanju together can reap a field in 6 days. If Anju can do it alone in 10 days and Manju in 24 days. In how many days will Sanju alone be able to reap the field?

40 days

36 days

35 days

32 days

- Q8. Mr. Modi can copy 40 pages in 10 minutes, and Mr. Xerox and Mr. Modi both working together can copy 250 pages in 25 minutes. In how many minutes Mr. Xerox can copy 36 pages?

5 minutes

6 minutes

3 minutes

12 minutes

- Q9. Visvesh makes a profit of 22% on selling article A and makes a loss of 8% on selling article B, which overall gives him no profit/loss at the end. If he bought both the articles for a total amount of Rs. 600, then find the SP of article B?

Rs.404.80

Rs.440

Rs.536.80

Rs.160

- Q10. A shopkeeper marked up an article 66.66% above its cost price and sold it at a discount of Rs. 200 on its marked price and received a profit of Rs. 200. If the selling price of the article is Rs. 850, then what should be the discount (in %) provided by the shopkeeper on its marked price?

15%

17%

19%

21%

Section 3 - Verbal Ability

Section Summary

- No. of Questions: 20
- Duration: 20 min

Additional Instructions:

None

Q1. **Fill in the blank with suitable options given below :**

Due to a phenomenon called subsidence, the metropolis's landscape is _____ and parts of the city are now dropping a foot and a half each year.

compressed

compacting

widening

expanding

Q2. **Fill in the appropriate adverb in the blank**

The gypsies do not live _____ at a particular place

willingly

permanently

voluntarily

none of the above

Q3. Choose the appropriate options to complete the sentences.

Children nowadays prefer doing _____ homework with a background of music either pop or melody to do _____ in a quiet room.

theirs / them

his / its

them / it's

they / them

their / it

Q4. In each of the following sentences, a part of the sentence or the whole sentence is underlined. Beneath each sentence, five different ways of phrasing the underlined part are indicated. Choose the best alternative from among the five.

The child psychologist suggests that the formation of social groups of young children, like the adults who raised them, is based on common interests and hobbies.

the adults who raised them

that of the adults who raised them

that among the adults who raised them

they that raised the adults

the formation of social groups of the adults who raised them

Q5. Pick out the best alternative for the underlined part of the sentence.

More of the funs and excitement in the life comes from the use of your senses.

More of the funs and excitement in the life comes

More of the funs and excitement in the life come

Many of the funs and excitement in the life comes

Much of the fun and excitement in the life comes

Q6. Spot the error in the given sentence which is divided into parts. If there is no error mark 'e' as the answer

(a) No one/ (b) practice honesty / (c) these days / (d) especially the youth. / (e) No error.

a

b

c

d

e

Q7.

In the following question, more than one part of the sentence may have errors. Find out which part(s) of the sentence has/have error(s) and select the appropriate option.

It is estimated that (A) / more than a million FTX (B)/ users are locked in of (C)/ their crypto wallets and (D)/ should not access their funds (E).

Only A and D

Only A, B, and D

Only E

Only C and E

Q8. Choose the appropriate word that answers the description.

One who walks on ropes

Funambulist

Upholsterer

Acrobat

Gymnast

Q9. Pick out the word most similar in meaning.

Abeyance

Temporary suspension

Abstinence

Hatred

Memory

Q10. Identify the one which is opposite in meaning (antonym) to the question word and mark.

crestfallen

abashed

cheerful

broken

treble

Q11.

In the following question, statements 1 and 6 are respectively the first and the last sentences of a paragraph, and statements A, B, C, and D come in between them. Rearrange A, B, C, and D in such a way that they make a coherent paragraph together with statements 1 and 6. Select the correct order from the given choices and mark its number as your answer.

1. Recently we have heard much about the deplorable condition of sports in our country.
- A. Hence they fail to put up their best and therefore their achievements do not come up to international standards.
- B. In India, the state's encouragement to sports is meager.
- C. Sportsmen in most other countries do not face such difficulties.
- D. Sportsmen are not given proper consideration and they remain insecure in matters of employment.
6. It is high time that the nation's attention be drawn to the troubles of sportsmen.

BDCA

ADBC

BDAC

DBAC

Q12.

A number of sentences are given below which, when properly sequenced, form a coherent paragraph. Each sentence is labeled with a letter. Choose the most logical order of sentences from among the four given choices to construct a coherent paragraph.

- A. No money actually percolates down to the grassroots, where it is actually needed.
- B. It is no coincidence that the Maoists have emerged as a significant force precisely during the period that Nepal has been struggling with a farcical democracy.
- C. Nepal is a country blessed with breathtaking beauty and cursed with corrupt, short-sighted politicians.
- D. It is all intercepted midway and skimmed by venal elements.
- E. The arrival of multiparty democracy, for empowering the common people, has only made their plight worse.

BECAD

CEADB

ECADB

ACEDB

Q13.

Choose the best option representing the most logical and coherent sequence of the six sentences labeled (A), (B), (C), (D), (E) and (F) to construct a meaningful paragraph.

- A. By middle age most of us carry in our heads a tremendous catalogue of things we have no intention of trying again, because we tried them once and failed.
- B. There is no learning without some difficulty and fumbling. If you want to keep learning you must keep on risking failure-all your life.
- C. It assures the progressive narrowing of the personality and prevents exploration and experimentation.
- D. Learning is a risky business, and we do not like failure.
- E. One of the reasons mature people are apt to learn less than younger people is that they are willing to risk less.
- F. We pay a heavy price for our fear of failure. It is a powerful obstacle to growth.

EDAFCB

DAFECB

ABCDEF

CFADEB

Common Content:

Read the following passage carefully and answer the respective questions given below.

True, it is the function of the army to maintain law and order in abnormal times. But in normal times there is another force that compels citizens to obey the laws and to act with due regard to the rights of others. The force also protects the lives and the properties of law-abiding men. Laws are made to secure the personal safety of their subjects and to prevent murder and crimes of violence. They are made to secure the property of the citizens against theft and damage to protect the rights of communities and castes to carry out their customs and ceremonies, so long as they do not conflict with the rights of others. Now the good citizen, of his own free will obeys these laws and takes care that everything he does is done with due regard to the rights and well-being of others. But the bad citizen is only restrained from breaking these laws by fear of the consequences of his actions. The necessary steps to compel the bad citizen to act as a good citizen are taken by this force. The supreme control of law and order in a State is in the hands of a Minister who is responsible to the State Assembly and acts through the Inspector General of Police.

Q14. A suitable title for the passage would be

The function of the army

laws and the people's rights

The fear of the law and citizen's security

The functions of the police

Q15. According to the writer, which one of the following is not the responsibility of the police?

To protect the privileges of all citizens.

To check violent activities of citizens.

To ensure peace among citizens by safe guarding individual rights

To maintain peace during extraordinary circumstances.

Q16. Which of the following is not implied in the passage?

Law protects those who respect it

Law ensures people's religious and social rights absolutely and unconditionally

A Criminal is deterred from committing crimes only for fear of the law

The forces of law help to transform irresponsible citizens into responsible ones

Q17. The expression 'customs and ceremonies' means

fairs and festivals.

habits and traditions

usual practices and religious rites

superstitions and formalities

Common Content:

Indian cities offer new _____ 1 _____ for development across various urban sectors, but most of these cities _____ 2 _____ from urban flooding during monsoon. This eventually leads to loss of life and property and _____ 3 _____ the economic activities and natural eco- system. Even the most planned Indian cities suffer from this problem. For instance, when Chandigarh, which is _____ 4 _____ known as the first planned city of independent India, receives high rainfall, _____ 5 _____ find it difficult to reach their destinations.

Q18. Choose the right word for the blank numbered (4)

angrily

perfectly

famously

proudly

Q19. Choose the right word for the blank numbered (1)

adversity

opportunities

threat

dedication

Q20. Choose the right word for the blank numbered (5)

transporters

commuters

canard

guise

Section 4 - Pseudocode

Section Summary

- No. of Questions: 5
- Duration: 10 min

Additional Instructions:

None

Q1. What will be the output of the following pseudocode?

Note:- ^ is the bitwise exclusive OR operator that compares each bit of its first operand to the corresponding bits of its second operand. If one bit is 0 and the other bit is 1, the corresponding result bit is set to 1. Otherwise , the corresponding result bit is set to 0.

```

1 Integer j, m
2 Set m=2
3 Integer a[4] = { 2,1,1,2}
4 m=m^a[2]
5 if (a[1]>1)
6   m=m^1
7 Else
8   m=m^2
9 End if
10 Print m
    |
```

8

-1

1

12

Q2. What will be the output of the following pseudocode?

```

1 Integer j, m, a[]
2 Set a[]={2,3,5,7,1}
3 m=a[0]
4 For (each j from 0 to 4)5
  if (m<a[j])
6    m=a[j]
7  End if
8 End for
9 Print m
    |
```

2

3

5

7

Q3. What will be the output of the following pseudocode?

```

1 Integer a[],k,t,m
2 Set a[]={25,20,30,18,17}
3 Set t=0
4 for (each k from 0 to 4)5
  t=t+a[k]
6  if(t mod 2 EQUALS 1)
7    Print True
8  else
```

```
9     Print False
10    end if
11 end for
12 m=t/5
13 Print m |
```

true
true
true
true
false
22

false
true
true
true
false
20

true
false
true
true
false
15

true
false
true
true
false
20

Q4. What will be the output of the following pseudocode?

[Note:- If(x) gets executed if value inside if(), i.e., x is not zero.]

```
1 Integer j, m
2 Set m=0
3 Integer a[4] = { 3,0,2,1}
4 for (each j from 0 to 3)5
    if (a[j])
6        m=a[j]
7    End if
8    if (j)
9        m=a[j]+1
10   End if
11 End for
12 Print m |
```

2

5

1

8

Q5. What will be the output of the following pseudocode?

```
1 Integer l,k,m, a[5]
2 Set l=5
```

```

3 Set a[5] = { 3,4,6,16,7}
4 for (each k from 0 to 4)5
    if(l<a[k])
        l=a[k]
    end if 8
    m=l+a[k]
    end for
10 print m

```

17

14

23

None of the mentioned options

Section 5 - Numerical Puzzle Solving

Section Summary

- No. of Questions: 4
- Duration: 10 min

Additional Instructions:

None

Q1. Given is the set of four numbers that relate to each other in a certain way.

Determine the missing number in the third set.

[Assume the third set also works in the same way as the first set]

2	7	4	3	2	?
5	4	8	6	5	8

9

7

6

8

Q2. Given is the set of nine numbers that relate to each other in a certain way.

Determine the missing number in the second set.

[Assume the second set also works in the same way as the first set]

8	2	1	5	?	1
10	6	0	1	4	2
2	6	6	1	2	6

0

1

2

4

Q3. Find the missing number in the grid given alongside.

3	7	28
4	20	100
?	11	121

12

7

10

8

Q4. Given is the set of nine numbers that relate to each other in a certain way. determine the missing number in the second set.
Assume that the second set also works in the same way as the first set.

18	41	21
34	150	40
16	35	19

24	?	21
46	184	46
22	47	25

48

46

45

47

Section 6 - English Grammer

Section Summary

- No. of Questions: 5
- Duration: 10 min

Additional Instructions:

None

Q1. Fill in the appropriate verb for the blank:

Each of the employees _____ given a task to complete.

is

were

are

have been

Q2. Fill in the appropriate verb for the blank:

The news _____ quite shocking to everyone.

is

are

has

were

Q3. Fill in the appropriate verb for the blank:

The number of participants _____ increasing every year.

is

was

are

be

Q4. Fill in the blank with appropriate Tenses:

They _____ to bed when the doorbell rang.

have gone

will already go

have already gone

had already gone

Q5. He _____ gone to the doctor when he started feeling ill. Now it's going to take longer for him to recover.

should have

might have

would have

none of these

Section 7 - English Writing

Section Summary

- No. of Questions: 1
- Duration: 10 min

Additional Instructions:

None

Q1. **Essay Writing**

Write an essay on the below topic :

Difference between personal and professional life and their work values

Directions

Write a 300- 400 word essay with appropriate grammar and sentence structure

Keywords

Answer Key & Solution

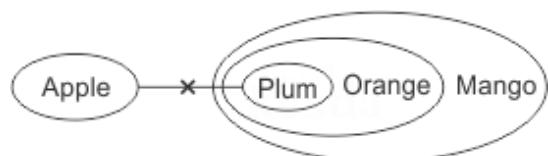
Section 1 - Reasoning Ability

Q1

Both I and II follow

Solution

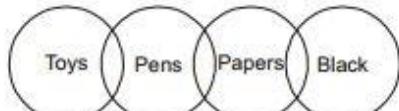
Venn Diagram Method:



Q2

Either I or III and either II or IV

Solution



**Here special case can be applied for conclusion I and III also for conclusion II and conclusion IV.
Hence, either I or III and II or IV follow.**

Q3

CITOXE

Solution

KINDLE is coded as ELDNIK.

The alphabets have been arranged in the reverse order.

i.e. Place of K is taken by E which is the last letter.

In similar way,

I is replaced by L N

is replaced by DD

is replaced by NL is

replaced by I E is

replaced by K

Hence, following the same pattern we the coding for EXOTIC as CITOXE.

The correct answer is (4) CITOXE

Q4

RBNJPHJ

Solution

Word : M I R A G E Pattern: *2 *2 *2 *2 *2 *

Code : Z R J B N J Similarly, the code for INTRUDE is RBNJPHJ.

Q5

45.5625

Solution

Q6

455

Solution

Q7

$$32 \frac{8}{11} \text{ min}$$

Solution

55 min. spaces are covered in 60 min.

min. spaces are covered in

$$=(60/55) \text{ min.}$$

$$=65 \frac{5}{11} \text{ min.}$$

$$\text{Loss in } 64 \text{ min.} = 65 \frac{5}{11} - 64 = 16 \frac{1}{11} \text{ min. Loss in}$$

$$24 \text{ hrs.} = (16/11) \times (1/64) \times 24 \times 60 \text{ min.}$$

$$= 32 \frac{8}{11} \text{ min.}$$

Alternatively:

55 min. spaces are covered in 60 min.

$$60 \text{ min. spaces are covered in } \frac{60}{55} \times 60 \text{ min.} = 65 \frac{5}{11} \text{ min. Loss in } 64$$

$$\text{min.} = 65 \frac{5}{11} - 64 = 16 \frac{1}{11} \text{ min.}$$

$$\text{Loss in } 24 \text{ hrs.} = \frac{16}{11} \times \frac{1}{64} \times 24 \times 60 \text{ min.} = 32 \frac{8}{11} \text{ min.}$$

Q8

22

Solution

Angle covered by the hour hand in 12 hours = 360 degIn 1 hr

$$= 360/12 = 30 \text{ deg}$$

$$\text{and in 1 minute} = 30/60 = 1/2 \text{ deg}$$

Similarly, angle covered by minute hand in 1 hr = 360 degIn 1

$$\text{minute} = 360/60 = 6 \text{ deg}$$

Every minute, the angle between the two hands changes by $6 - 1/2 = 11/2 \text{ deg}$

From 6.35 AM to 6.39 AM, i.e., in 4 minutes the angle between the two hands will change by

$$= 4 \times 11/2 = 22 \text{ deg}$$

Q9

if neither statement (A) nor statement (B) is individually sufficient to solve the question, but a combination of both is sufficient to solve the question

Solution

Since B is a multiple of A, there is an integer n such that $B = nA$. Statement (A)

is clearly not sufficient.

For example, $B = 4$, $A = 2$ and $B = 9$, $A = 3$ both satisfy the information given in the question.

From statement (B) it follows that $B + 2 = mA$ for some integer . Since $B = nA$, $nA + 2 = mA$ or $2 = (m - n)A$. Since A is positive, it follows that $A =$

1 or 2. Note that two values for A are determined and not a unique value.

Thus, statement (B) is not sufficient and the answer must be 3 or 4. From (A)

and (B) together it can be concluded that $A = 2$.

Q10

If statement I and II together are not sufficient

Solution

From I, total age of 11 people = $25 \times 11 = 275$ From II,

teacher's age = oldest student's age + 10

We cannot come to know the age of the teacher using the above data.

Q11

if only conclusion 2 is true

Solution

$X > P \geq W < Z \leq T < S$ No relationship can be established between P and T. Hence conclusion I is not true. $X > P \geq V > V$. Hence

conclusion II is true.

Q12

if only conclusion 2 is true

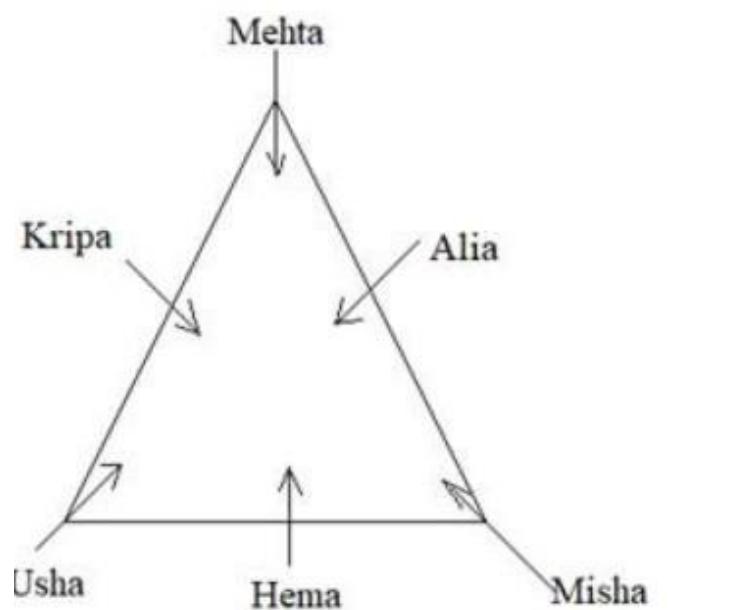
Solution

Combining the inequalities; $X = Y < W = Z \geq U$ $X = Y < W = Z < P$ $X = Y < W = Z < T$

$W < P$ and $T > Z \geq U$, thus, $T > U$. II is true.

Q13. Mehta

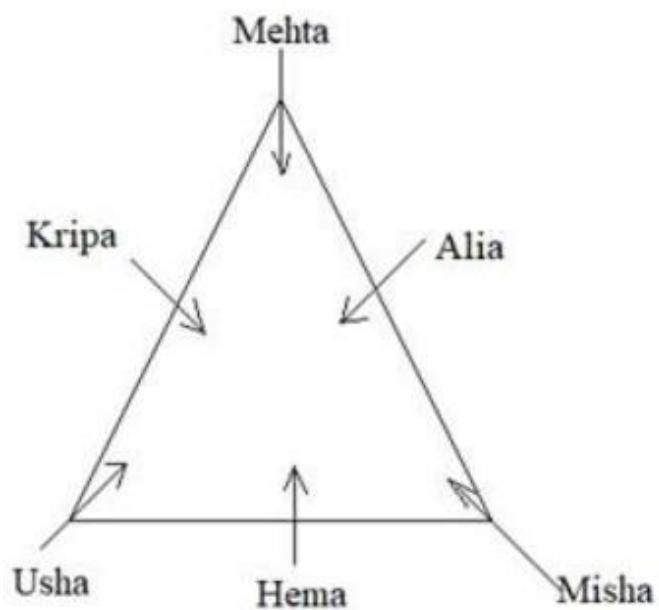
Solution



only Mehta sits at the corner of the table

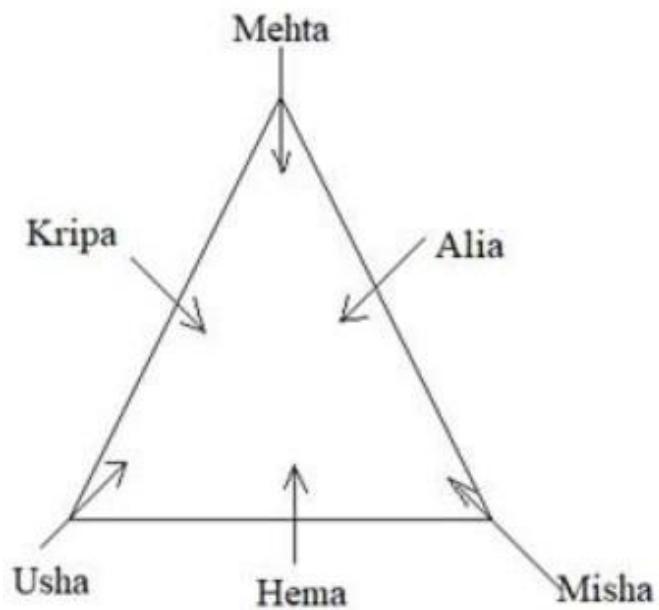
Q14. 4

Solution



Q15. Mehta sits second to the right of Misha.

Solution



Section 2 - Mathematical Ability

Q1

100

Solution

Let the third page number = $x \Rightarrow$

The first page number = $x - 50\% \text{ of } x = x/2$

\Rightarrow The second page number = $x - 75\% \text{ of } x = x/4$

\Rightarrow The percent by which the second-page number has to be enhanced to make it equal to the first-page number is

$$= [(x/2 - x/4) / (x/4)] \times 100 = 100\%$$

(It can also be seen that $x/4$ is just half of $x/2$ so it has to be multiplied twice to become the second number which is 100%)

Q2

3990

Solution

Total number of votes = 7600

30% votes were invalid.

Therefore, 70% votes were valid.

i.e., total valid votes = $7600 \times 70/100$

1st candidate got 25% of the total valid votes. Hence 2nd

candidate got 75% of the total valid votes. Therefore, valid

votes that the 2nd candidate got

$$= 7600 \times 70/100 \times 75/100$$

$$= 3990$$

Q3

43200

Solution

There are total 9 letters in the word COMMITTEE in which there are 2M's, 2T's, 2E's. The

number of ways in which 9 letters can be arranged = $9!/(2! \times 2! \times 2!)$

$$= 45360$$

There are 4 vowels O,I,E,E in the given word. If the four vowels always come together, taking them as one letter we have to arrange $5 + 1 = 6$ letters

which include 2Ms and 2Ts and this be done in $6!/(2! \times 2!)$

$$= 180 \text{ ways.}$$

In which of 180 ways, the 4 vowels O,I,E,E remaining together can be arranged in $4!/2!$

$$= 12 \text{ ways.}$$

The number of ways in which the four vowels always come together = $180 \times 12 = 2160$.

Hence, the required number of ways in which the four vowels do not come together = $45360 - 2160 = 43200$

Q4

$$8! \times 480$$

Solution

Total no. of seats,

$$= 1 \text{ grandfather} + 5 \text{ sons and daughters} + 8 \text{ grandchildren}$$

$$= 14$$

The grandchildren can occupy the 4 seats on either side of the table in $4! = 24$ ways.

The grandfather can occupy a seat in $(5 - 1) = 4$ ways (4 gaps between 5 sons and daughter). And, the

remaining seats can be occupied in $5! = 120$ ways (5 seat for sons and daughter).

Hence total number of required ways,

$$= 8! \times 480$$

Q5

$$2/91$$

Solution

Let S be the sample space.

Then, $n(S) = \text{number of ways of drawing 3 balls out of 15}$

$$= {}^{15}C_3$$

$$= (15 \times 14 \times 13) / (3 \times 2 \times 1)$$

$$= 455$$

Let E = event of getting all the 3 red balls.

$$n(E) = {}^5C_3 = {}^5C_2 = (5 \times 4) / (2 \times 1) = 10$$

$$P(E) = n(E) / n(S) = 10 / 455 = 2/91$$

Q6

$$21.5 \text{ years}$$

Solution

Let the ages of husband and wife at the time of their 20th wedding anniversary be X years and Y years respectively and $X > Y$. Their combined age = $(X + Y)$ years.

The ages of both husband and wife at the time of wedding will be $(X - 20)$ years and $(Y - 20)$ years respectively. Their

combined age = $(X - 20) + (Y - 20)$

$$= (X + Y - 40) \text{ Years}$$

By first information, we have (X

$$+ Y) = 2(X + Y - 40)$$

$$X + Y = 2X + 2Y - 80$$

$$\text{Therefore, } X + Y = 80 \text{ ----- A}$$

and by second information, we have X -

$$Y = 3 \text{ ----- B}$$

Solving A and B, we get $X = 41.5$ years

Therefore, the age of husband at the time of their 20th wedding anniversary $X = 41.5$ years

Age at the time of marriage $= 41.5 \text{ years} - 20 \text{ years} = 21.5 \text{ years}$.

Q7

40 days

Solution

Anju+ Manju+ Sanju = 6 days

Anju = 10 days

Manju= 24 days

LCM= Total work= 120 units

Efficiency of Anju+ Manju+ Sanju= $120/6 = 20 \text{ units/day}$

Efficiency of Anju = $120/10 = 12 \text{ units/day}$

Efficiency of Manju= $120/24 = 5 \text{ units/day}$

Efficiency of Sanju= $20-12-5 = 3 \text{ units/day}$

Sanju can complete the work in $120/3 = 40 \text{ days}$

Q8

6 minutes

Solution

Efficiency (per minute) of Modi= 4 copies/min Efficiency

of Modi and Xerox together =10 Pages/min Efficiency of

Xerox alone= $10-4=6 \text{ Pages/min}$ Mr.Xerox needs 6 minutes

to copy 36 pages.

Q9

Rs.404.80

Solution

Let CP of article A = Rs. x

CP of article B = Rs. $(600 - x)$

SP of article A= Rs. $(122x / 100)$

SP of article B = Rs. $[92(600 - x)/100]$

$$\therefore \{122x/100\} + \{92(600 - x)/100\} = 600$$

$$\Rightarrow 122x - 92x = 60000 - 92 \times 600$$

$$\Rightarrow 30x = 4800$$

$$\Rightarrow x = 160$$

$$\therefore \text{CP of the article sold at a loss} = (600 - x) = \text{Rs } 440$$

Now, we can find the selling price of article B using the loss percentage:

$$\text{Loss\%} = 8\%$$

$$\text{Loss} = (8/100) * 440$$

$$\text{Selling Price of article B} = \text{Cost Price of article B} - \text{Loss}$$

$$\text{Selling Price of article B} = 440 - (8/100) * 440$$

$$\text{Selling Price of article B} = 440 - 35.2$$

$$\text{Selling Price of article B} = \text{Rs. } 404.80$$

Therefore, the selling price of article B is Rs. 404.80.

Q10

15%

Solution

Let CP of the article = ' $3x$ ' rupees

So, MP of the article = 166.66% of ' $3x$ ' = ' $5x$ '

So, SP of the article = $(5x - 200)$ rupees

$$200 = 3x + 200$$

$$x = 200$$

CP of the article = $3x$ = Rs. 600 MP

of the article = $5x$ = Rs. 1000

SP of the article = $5x - 200$ = Rs. 800

M.P of the article = Rs. 1000

SP of the article would have been = Rs. 850

So, a discount percent on its marked price should be

$$= [(1000 - 850)/1000] * 100 = 15\%$$

Section 3 - Verbal Ability

Q1

compacting

Solution

A verb would fill the blank because the auxiliary verb 'is' precedes the blank which is to be followed by the main verb.

Since the sentence is about subsidence (the gradual caving in or sinking of an area of land), 'widening' and 'expanding' are contextually unfit.

Also, the sentence is in present continuous tense as suggested by 'dropping', so compressed is eliminated.

Hence, the answer is compacting.

Q2

permanently

Solution

Gypsies are nomadic people. Thus they do not permanently live in a place

Q3

their / it

Solution

The first blank is about "children" doing homework and thus the appropriate pronoun would be "their" and the second blank is about the "homework" and thus the appropriate pronoun would be "it".

Q4

that of the adults who raised them

Solution

There is an ambiguity that arises without the use of an appropriate pronoun in this sentence.

Choice A compares the adults to the formation. In choice D it is not clear to what the 'they' refers. D also changes the meaning. Choice C

does not maintain parallel structure as it has 'among', which is not parallel to the earlier 'of' in the sentence.

Choice E is not as efficient as choice B. B, by using the word that, refers to the correct comparison: the formation of social groups by two different age groups. Choice B is the correct answer.

Q5

Much of the fun and excitement in the life comes

Solution

Fun and excitement are uncountable nouns. So, much should be used and not more.

Q6

b

Solution

No one takes a singular verb. Hence, the verb should be 'practices'.

Q7

Only C and E

Solution

Parts C and D have errors. In part C, 'also' is left out which makes the syntax of 'not only... but also' incomplete in the sentence. In part D, the determiner 'one of the' is contextually incorrect because 'gardens' is a plural noun, so the determiner has to be in plural form. 'Some of the' is the most appropriate determiner that can be used to denote the noun 'gardens' in the sentence.

The correct sentence is: The gardens at Sigiriya are not only the best-preserved water gardens in South Asia but also some of the oldest landscaped gardens in the world.

Q8

Funambulist

Solution

No Solution

Q9

Temporary suspension

Solution

Abeyance (Phrase) : If something is **in abeyance**, it is not operating or being used at the present time or for a period of time.

Q10

cheerful

Solution

'Crestfallen' means dejected. 'Abashed' is humiliated. 'Treble' means the pitch range of highest female voice. Hence, 'cheerful' is the right choice.

Q11

BDAC

Solution

The first statement talks of 'the deplorable condition of sports in our country'. The next line cannot be 'A' because 'hence' indicates a conclusion which should ideally come in the end. 'B' talks of 'state's encouragement'. This line could come after the opening line, followed by 'D'. 'A' gives a reason for 'D'. 'C' can follow 'A'. Hence, the correct sequence is **BDAC**.

The correct answer is Option (3)

Q12

CEADB

Solution

Statement 'C' proposes the discussion on 'Nepal's breathtaking beauty' along with its 'corrupt politicians'. The rest of the sentences explain how the people of Nepal are suffering from a 'farcical democracy' Choice (2)

Q13

EDAFCB

Solution

The correct sequence is **EDAFCB - Option (1)**

It starts by discussing why mature individuals tend to learn less, highlighting their inclination to take fewer risks. Then it progresses through discussing the nature of learning, the fear of failure, and its consequences on growth and exploration. The sequence EDAFCB presents a logical progression in addressing the theme of learning, failure, and its impact.

Q14. The functions of the police

Solution

"The functions of the police" is a suitable title since in the passage, it depicts the functions and duties of the force.

Q15. To maintain peace during extraordinary circumstances.

Solution

om the passage, it is clear that the function of the military is to maintain peace during extraordinary circumstances and it is not the function of the police.

Q16. Law ensures people's religious and social rights absolutely and unconditionally

Solution

All the other options are mentioned in the passage except the option (Law ensures people's religious and social rights absolutely and unconditionally).

Q17. usual practices and religious rites

Solution

Here in the passage, "customs and ceremonies" depicts the usual practices and religious rites of communities and castes.

Q18. famously

Solution

first planned city of India a positive comment and the word famous is the right option

Q19. opportunities

Solution

The first blank should clearly have a 'positive' word .

Also the first blank should have a noun.

Hence, Opportunities is the correct answer

Q20. commuters

Solution

No Solution

Section 4 - Pseudocode

Q1

1

Solution

Initially m=2,then m value updates as $m=2^1 \Rightarrow 3$. If condition gets false so else block gets executed and update $m=3^2 \Rightarrow 1$. Output: 1.

Q2

7

Solution

m value gets updated with maximum element from the given array. So output is 7.

Q3

true

true

true

false

22

Solution

Initially t=0,

k=0,t=25,True

k=1,t=45,True

k=2,t=75,True

k=3,t=93,True

k=4,t=110,False

m=110/25=> 22

Q4

2

Solution

Initially m=0, when j=0, first if block executes and update m=3, second if block gets failed.

When j=1, first if block gets failed and second block gets executed and update m=1. Process repeated until j=4. When j=4, second if block executes and

a[4]+1 updated to m (i.e. 1+1 =2) .output: 2.

Q5

23

Solution

No Solution

Section 5 - Numerical Puzzle Solving

Q1

9

Solution

$27 \times 2 = 54$

$43 \times 2 = 86$

So,

$$58/2 = \mathbf{29}$$

Q2

4

Solution

8	2	1	5	4	1
10	6	0	1	4	2
2	6	6	1	2	6
(8x2)-10=6	(2x6)-6=6	(1x6)-0=6	(5x1)-1=4	(4x2)-4=4	(1x6)-2=4

Q3

10

Solution

$$(3+1) \times 7 = 28$$

$$(4+1) \times 20 = 100$$

$$(\mathbf{10}+1) \times 11 = 121$$

Q4

45

Solution

18	41	21
34	$41+34+35+40 = 150$	40
16	35	19
24	$184-46-47-46 = 45$	21
46	184	46
22	47	25

Section 6 - English Grammer

Q1

is

Solution

"Each" is singular, so the verb should be singular ("is").

Q2

is

Solution

"News" is treated as a singular noun, so the verb should be singular ("is").

Q3

is

Solution

"The number" is a singular subject, so the verb should be singular ("is").

Q4

had already gone

Solution

No Solution

Q5

should have

Solution

No Solution

Section 7 - English Writing

Q1

Sample Essay

Keywords

personal, life, identity, teamwork, purpose, ethics, balance,