



## CMAT 4th May 2023 Slot-2

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## Quantitative Techniques and Data Interpretation

1. Given below are two statements :

Statement I: A savings account at Bank A pays 6.2% interest, compounded annually. Bank B's savings account pays 6% compounded semi-annually. Bank B is paying less total interest each year.

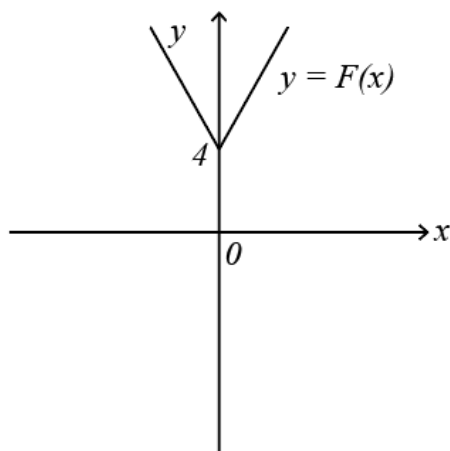
Statement II: A sum of money at a certain rate of compound interest doubles in 3 years. In 9 years, it will be P times original principal. Then  $P = 9$ .

In the light of the above statements, choose the **correct** answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

2. Consider the following figure that shows the graph of the function F defined by

$F(x) = |2x| + 4$  for all numbers x:



For which of the following functions G defined for all numbers x does the graph of G intersect the graph of F?

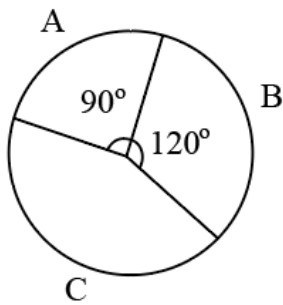
- A  $G(x) = x + 3$
- B  $G(x) = 2x - 2$
- C  $G(x) = 2x + 3$
- D  $G(x) = 3x - 2$

3. If the selling price of 320 Web Cameras is equal to the cost price of 400 Web Cameras, then the percentage profit is :

- A 12%
- B 20%
- C 40%

D 25%

4. The cost of the three components A, B and C of an electronic machine worth ₹12,000 in 2020 is given as a Pie-chart as shown below :



In the following year, the cost of these three components A, B, and C increased by 10%, 20%, and 10% respectively. The cost of the three components A, B, and C respectively in 2021, was

- A ₹3,300, ₹4,950, ₹5,350
- B ₹3,300, ₹4,800, ₹5,500
- C ₹3,200, ₹4,700, ₹5,600
- D ₹3,600, ₹4,800, ₹5,600
5. What is the 95th term of the following letter series?  
A, A, B, B, B, B, C, C, C, C, C, D, D, D, D, D, D, D, E, ...
- A H
- B I
- C J
- D K
6. A certain sum of money earns a simple interest of ₹ 800 over 2-year period. The same sum of money invested at the same rate of interest and same period on a compound interest basis earns an interest of ₹ 900. What is the sum?
- A ₹1,200
- B ₹1,600
- C ₹2,000
- D ₹2,400
7. If  $x > 0$ , then which of the following expressions are equal to  $3.6\%$  of  $\frac{5x}{12}$ ?
- A. 3 percent of  $20x$
- B.  $x$  percent of  $\frac{3}{2}$
- C.  $3x$  percent of  $0.2$
- D.  $0.05$  percent of  $3x$
- E.  $\frac{3x}{200}$
- Choose the correct answer from the options given below:
- A A and B only

- B A and E only
- C C and D only
- D B and E only

8. Given below are two statements :

Statement I : Ravi walks from his house at a speed of 5 km per hour and reaches the college 10 minutes late. If he increases the speed by 1 km per hour next day, he reaches the college 4 minutes earlier than the scheduled time. If the college is P km far from his house, then  $P = 7.5$  km.

Statement II: Amit runs  $2\frac{1}{3}$  times as fast as Babita. If Amit gives Babita a start of 80 meters, then the winning post must be 140 meters far so that Amit and Babita might reach it at the same time.

In the light of the above statements, choose the **correct** answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

9. Let a, b and c be the ages of three persons P, Q and R respectively where  $a \leq b \leq c$  are natural numbers. If the average age of P, Q, R is 32 years and if the age of Q is exactly 6 years more than that of P, then what is the minimum possible value of c?

- A 34 years
- B 36 years
- C 38 years
- D 32 years

10. Given below are two statements :

A number of distinct 8-letter words are possible using the letters of the word SYLLABUS. If a word is chosen at random, then

Statement I: The probability that the word contains the two S's together is  $\frac{1}{4}$

Statement II : The probability that the word begins and ends with L is  $\frac{1}{28}$ .

In the light of the above statements, choose the **correct** answer from the options given below

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

11. What is the probability of getting a sum of 22 or more when four dice are thrown?

A  $\frac{5}{432}$

B  $\frac{4}{648}$

C  $\frac{1}{144}$

D  $\frac{7}{36}$

12. A train running at 18 km per hour crosses a mark on the platform in 9 seconds and takes 25 seconds to cross the platform. If P is the length of the train and Q is the length of the platform in meters, then (P, Q) = \_\_\_\_\_ .

A (45, 80)

B (45, 75)

C (50, 90)

D (50, 80)

13. Three pipes P, Q and R can fill a tank in 6 hours. After working at it together for 2 hours, R is closed and both P and Q can fill the remaining part in 7 hours. The number of hours that will be taken by R alone to fill the tank is

A 10

B 12

C 14

D 16

14. What is the area of an equilateral triangle whose inscribed circle has radius R?

A  $4R^2$

B  $4\sqrt{3}R^2$

C  $(3 + 2\sqrt{2})R^2$

D  $3\sqrt{3}R^2$

15. The number of all integers n for which  $n^2 + 96$  is a perfect square, is

A 4

B 6

C 8

D 10

16. Given below are two statements :

Statement I: The number of ways to pack six copies of the same book into four identical boxes where a box can contain as many as six books, is 9.

Statement II: The minimum number of students needed in a class to guarantee that there are at least six students whose birthday fall in the same month, is 61 .

In the light of the above statements, choose the **correct** answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

17. Given below are two statements :

Statement I: The ratio of the son's age to the father's age is 1 : 5. The product of their ages is 245. The ratio of the son's age to the father's age after 9 years will be 3 : 5.

Statement II: A milkman adds 30 litres of water to 70 litres of milk. After selling  $\frac{1}{5}$ th of the total quantity, he adds water equal to the quantity he sold. The proportion of water to milk he sells now would be 28 : 72.

In the light of the above statements, choose the **correct** answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

18. If  $x - \frac{1}{x} = y$ ,  $y - \frac{1}{y} = z$ ,  $z - \frac{1}{z} = x$ , then which of the following equations are true?

- A.  $\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 0$
- B.  $\frac{1}{x^2} + \frac{1}{y^2} + \frac{1}{z^2} = 8$
- C.  $\frac{1}{xy} + \frac{1}{yz} + \frac{1}{zx} = -3$

Choose the correct answer from the options given below:

- A A and B only
- B A and C only
- C B and C only
- D A, B and C only

19. If  $5^a = 9^b = 2025$ , then the value of  $\frac{ab}{a+b} = \underline{\hspace{1cm}}$ .

- A 4
- B 3
- C 2

20. Arrange the following numbers in increasing order :

A.  $\sqrt{59} - \sqrt{51}$

B.  $\sqrt{37} - \sqrt{29}$

C.  $\sqrt{87} - \sqrt{79}$

D.  $\sqrt{79} - \sqrt{71}$

Choose the correct answer from the options given below:

A  $B < A < D < C$

B  $C < D < B < A$

C  $B < A < C < D$

D  $C < D < A < B$

## Logical Reasoning

21. Identify odd group of letters:

CE, IK, SV, FH, UW

A sv

B IK

C uw

D FH

22. Select the pair which has same type of relationship like Barometer : Pressure

A Force:KG

B Richter Scale : Heat

C Weighing Scale : Meter

D Thermometer : Temperature

23. The question consists of a statement, followed by two arguments numbered I and II. You have to decide which of the argument is a 'strong' argument and which is a 'weak' argument.

Statement

Arguments I : Women should be allowed to go out alone.

Arguments II : Yes. It would make them independent and safe.

Arguments III : No. They are under the protection of their male affines and they should be with them always

- A. Only argument I is strong
- B. Only argument II is strong
- C. Both arguments I and II are strong
- D. Both arguments I and II are weak

Choose the most appropriate answer from the options given below :

- A A
- B B
- C C
- D D

24. One statement and two assumptions for the statement are given. Read the statement, think about the assumptions and mark the correct option which is implicit in the statement.

Statement I : Some people believe in the existence of god.

Arguments II : Not everything in this world is created by humans.

Arguments III : Human beings are imperfect.

- A. Only argument I is implicit
- B. Only argument II is implicit
- C. Both arguments I and II are implicit
- D. Neither I nor II are implicit

Choose the most appropriate answer from the options given below :

- A A
- B B
- C C
- D D

25. A statement below is followed by two conclusions I and II. Assuming that everything in the statement is correct, consider the two conclusions together and decide which of them follows beyond reasonable doubt, from the information given in the statement.

Statement I : In a one day match, total runs made by a team were 200. Out of which 160 runs were made by the spinners.

Conclusions I : 80% of the team consists of spinners

Conclusions II : The opening batsmen were spinners

- A Only I follows
- B Only II follows
- C Both I and II follow
- D Neither I nor II follows

26. Abhishek, Bineeta, Manisha, Hari, Vaishali, and Gaurav are sitting around a circular table not necessarily in the same order. Some of them are facing the centre and the remaining are facing away from the centre.



- (i) Gaurav sits immediate left of Bineeta
- (ii) Only Abhishek and Bineeta face away from the centre
- (iii) Vishali and Hari are sitting next to each other
- (iv) There are two people between Hari and Gaurav
- (v) Abhishek is the neighbour of both Manisha and Gaurav

If Hari and Abhishek interchange their places (having same facing direction) then who among the following sits to the immediate left of Abhishek?

- A** Vaishali
- B** Hari
- C** Manisha
- D** Gaurav

**27.** A  $3 \times 3$  matrix is filled with the numbers from 31 to 39 according to the following rules :

- (a) 38 is above 39 and to the right of 32
- (b) 33 is to the right of 37 and above 39 which is to the left of 34
- (c) 32 is to the left of 35
- (d) 37 is above 36 and 32
- (e) 31 is above 35

'Above' and 'below' mean that they are in the same column while 'left' and 'right' mean that the numbers are in the same row.

What is the sum of the numbers in the middle row?

- A** 101
- B** 105
- C** 107
- D** 109

**28.** Find the odd one among the following :

- A** 143
- B** 168
- C** 225
- D** 195

**29.** Two statements are given below, there may be cause and effect relationship between the two statements. These may be the result of same cause or independent cause. Read both the statements and mark the answer :

Statement I : There is an increase in the water level of all the water tanks supplying drinking water to the city in the last fortnight.

Statement II : Most of the trains were cancelled due to waterlogging on the tracks.

- A** Statement I is the cause and Statement II is the effect

- B The Statement II is the cause and Statement I is the effect
- C Both the Statement I and Statement II are effects of independent causes
- D Both the Statement I and Statement II are effects of the same common cause

30. Find the missing term :

$ZA_5, Y_4B, XC_6, W_3D, \text{---}?$

- A  $UD_2$
- B  $VE_1$
- C  $V_4C$
- D  $DD_3$

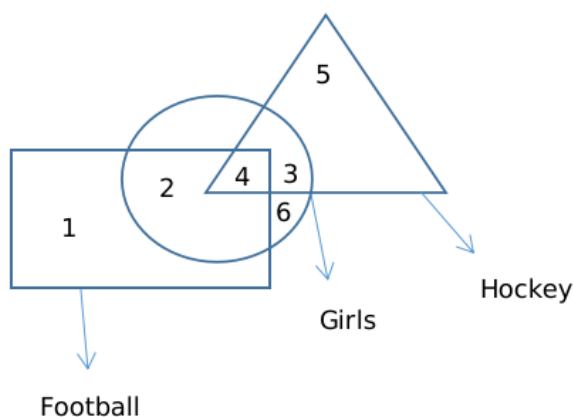
31. If 23rd April, 1995 is a Tuesday, then what will be the day on 23rd April, 1988?

- A Monday
- B Friday
- C Saturday
- D Sunday

32. In a certain code language, if the word BEAUTIFUL is coded as BFLTAEIUU, then how is the word TECHNICAL coded in that language?

- A CTNLHAEI
- B CCAEIHNLNT
- C CAEICHLNT
- D CCHLNTAEI

33. Given below is the diagram which represents various sports played by the students. Based on the diagram find the number of girls who neither play hockey nor football



- A 6
- B 9
- C 8
- D 7

34. Given below are two statements :

Statement I: If 'some students are intelligent' is true, then 'some students are not intelligent' is also true.

Statement II: If 'all logicians are mathematician' is true, then 'some non-mathematicians are not logicians' will be true.

In the light of the above statements, choose the correct answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

35. In a certain code, 'CAB' is written as 75, How will 'RULE' be written as?

- A 85
- B 64
- C 45
- D 52

36. If MOUSE is written as FTVPN, then RACKET is written as

- A UELBCS
- B GSWRM
- C UFLDBS
- D HFMDBS

37. Match List - I with List-II :

**LIST I****LIST II**

- |     |        |       |        |
|-----|--------|-------|--------|
| (A) | EMBARK | (I)   | QGPIJC |
| (B) | DECIDE | (II)  | CKDCPI |
| (C) | PEOPLE | (III) | NCQRJC |
| (D) | SINGLE | (IV)  | BCEKBC |

Choose the **most appropriate** option from those given below:

- A (A)-(II); (B)-(IV); (C)-(III); (D)-(I)
- B (A)-(I); (B)-(II); (C)-(III); (D)-(IV)
- C (A)-(IV); (B)-(I); (C)-(II); (D)-(III)
- D (A)-(IV); (B)-(III); (C)-(II); (D)-(I)

38. If % means 'is less than', \$ means 'is greater than' and # means 'is equal to' and given that  $a\%b$ ,  $c\#d$  and  $c\$b$  then which is true?

- A  $a > b$
- B  $a < c$
- C  $c > d > a$
- D  $d < b$

39. Complete the series 564, 152, 48, 21,  $\frac{?}{?}$  from the following options :

- A 132
- B 24.2
- C 15.25
- D 13.25

40. Out of 400 students who attended a seminar, 240 opted for written exam, 200 opted for presentations, 160 opted for assignments and 20 did not opt for giving any of the three methods of test. 200 students had exactly one of the three methods of test.

How many students opted for exactly two of the three testing methods?

- A 140

- B 160
- C 220
- D 170

## Language Comprehension

41. Pick the appropriate meaning of the term 'proscribe' used in the following sentence :-  
'Arms culture should be proscribed by the government.'

- A allowed
- B prescribed
- C prohibited
- D defended

42. Pick the correct option to complete the following sentences :-

- I. Gold and silver \_\_\_\_\_ precious metals.
- II. The ship with its crew \_\_\_\_\_ lost.
- III. No nook or corner \_\_\_\_\_ left unexplored.
- IV. Neither my friend nor I \_\_\_\_\_ to blame.

Choose the correct answer from the options given below :-

- A (I-is); (II-were); (III-was); (IV-are)
- B (I- is); (II-was); (III-were); (IV- am)
- C (I-are); (II-were); (III-was); (IV-are)
- D (I-are); (II-was); (III-was); (IV-am)

43. Choose the word that is closest in meaning to the following statement :-

A medicine to counteract poison

- A Antidote
- B Aquatic
- C Agnostic
- D Anthropology

44. Pick the correct sentence :-

- A I have passed the examination last year.

- B I pass the examination last year.
- C I am passing the examination last year.
- D I passed the examination last year.

45. Choose the correct meaning of the following idiom :-

Catch Twenty Two

- A A situation in which it's impossible to succeed because of conflicting rules or conditions.
- B When you have a large and difficult task to do in the future.
- C When one problem causes another problem, which then causes the first problem again.
- D When you are at the limit of your mental resources, desperate and without additional options.

**Instructions [46 - 49]**

Read the following passage and answer the questions that follow :

What is religion? A very complex question! We know religion and we live religion. But, how do we explain or define religion? Religion is one of the most sensitive and vulnerable aspects of human life from the very beginning. Though it looks simple, it is not a simple reality to be easily defined or explained. There are many theories proposed regarding the origin of religion as a result of the development of speculative, intellectual and scientific mind. However, in spite of the differences in the understanding of this important element, it is confirmed that it is purely a human activity and it has become an inevitable aspect of human life. In the West, under the influence of the inherited tradition of Judeo-Christian tradition, religion was understood more theistically while in the East, it was mostly a response to the experience of the natural powers that are beyond human control and also to the inner urge for an ethical and moral reference.

Etymologically, the word 'religion' is derived from the Latin root 'religare' and it means 'to bind fast'. Then 'religion' has certainly a strong emphasis on community aspects. It is something that binds fast the members of it together. When we start thinking seriously on religion, naturally we fall upon thoughts of the definition of religion. There are numberless definitions of religion, The meaning and definition of religion differs according to the socio-cultural and psychological background of the person who reflects upon it. Even the political setting inserts its influence on the understanding of the meaning of religion. Some of the definitions are phenomenological and try to expose the common elements that we see in the acknowledged world religions. For example, the human recognition of a superhuman power entitled to obedience and worship. Some others are interpretative definitions.

46. The meaning and definition of religion depends upon following factors :-

- A. Socio-cultural
- B. Political
- C. Psychological
- D. Phenomenological

Choose the correct answer from the options given below :-

- A A and C
- B B, C and D
- C B and D
- D A, B, C and D

47. In which tradition, religion is seen as a response to the experience of the natural powers?

- A Western Tradition

- B Eastern Tradition
- C Indo-western Tradition
- D Christian Tradition

48. Which of the phrases is closest in meaning to etymology?

- A Origin of ideas and thoughts
- B Origin of religion
- C Origin of human life
- D Origin of words and their meanings

49. Which of these statements are correct with reference to the above passage?

- A. Religion is one of the most sensitive aspects of human life form.
- B. Religion is purely a human activity.
- C. Religion doesn't bind the members of a community together.

Choose from the options given below:

- A A and B
- B Only B
- C A, B and C
- D Only A

50. Match List-I with List-II :

**LIST I**  
**(Foreign Phrases commonly  
used in English)**

- (A) **Carp Diem**
- (B) **Faux Pas**
- (C) **Magnum opus**
- (D) **Prima facie**

**LIST II**  
**(Meaning)**

- (I) **Accepted as such  
until proven**
- (II) **An embarrassing blunder**
- (III) **The most  
important work of**
- (IV) **Seize the day**

Choose the correct option from those given below :

- A (A)-(I); (B)-(II); (C)-(III); (D)-(IV)
- B (A)-(III); (B)-(II); (C)-(IV); (D)-(I)
- C (A)-(IV); (B)-(II); (C)-(III); (D)-(I)

D (A)-(II); (B)-(IV); (C)-(I); (D)-(III)

51. Replace the phrase in *italics* in the given sentence from the options given below to make a grammatically correct sentence :-

I don't think you need to explain the situation, your conduct is *speaking itself*.

A will speak to itself

B speak for itself

C has been speaking

D speaks about itself

52. Read the sentences given below :-

I. I do not know whether he will come or not.

II. I do not know that he will come or not.

Choose the correct answer from the options given below :-

A I is correct but II is incorrect

B I is incorrect but II is correct

C Both I and II are correct

D Both I and II are incorrect

53. Choose the correct order of the sentences to create a meaningful paragraph :-

P : At other times, it's a spontaneous communication within a small group of people.

Q : Oral storytelling is an old, widespread , and much-loved tradition in many cultures.

R : This spontaneity is enjoyed by both children and adults.

S : It's sometimes a performing art that involves interaction between the storyteller and the audience.

codes:

A PQSR

B QSPR

C RPSQ

D SRPQ

54. Find out which part of the sentence has an error, if there is no error, mark option 4

A the primary objective of the essay is to draw

B analogies between the two work

C addressing the common memories and trauma of dislocation

D no error



55. Find out which part of the following sentence has an error :-

The earth moves round the sun, Isn't it?"

- A The earth moves
- B Round the sun
- C Isn't it?
- D No error

56. Choose the correct option of Active Voice sentence for the given sentence of Passive Voice :-

The child was looked after by the maid.

- A The maid looked after the child.
- B The maid was looked after by the child.
- C The maid was looking after the child.
- D The maid will look after the child.

57. Choose the correct one word substitute for the following phrase :-

Lasting for a very short time

- A Vulnerable
- B Ambivalent
- C Ephemeral
- D Flamboyant

58. Identify which of the sentence are correct :

- A. She was pouring water in the jug.
- B. My father was angry with my brother.
- C. Rama has been living in Delhi for 1975.
- D. The children laughed at the beggar.
- E. The patient was crying on pain.

Choose the correct answer from the options given below :-

- A B and D only
- B A, B and D only
- C A, B and E only
- D B, D and E only

59. Identify the correct passive voice form of the following sentence :-

My mother cooks Italian food every Sunday.

- A Every Sunday Italian food cooked by my mother.

- B Italian food is cooked by my mother every Sunday.
- C Italian food is being cooked by her every Sunday.
- D Italian food was cooked by my mother every Sunday.

60. Find out which part of the following sentence has an error :-

"Neither he nor I are wrong"

- A Neither he
- B nor I
- C are wrong
- D no error

## General Awareness

61. Who was associated with the philosophy, 'Divinity in Humanity'?

- A Swami Ramkrishna Paramhansa
- B Mother Teresa
- C Swami Vivekananda
- D Swami Sivananda

62. Match List-I with List-II :

### LIST I

- (A) Solarimeter
- (B) Anemometer
- (C) Thermocouple
- (D) Venturi tube

### LIST II

- (I) wind velocity
- (II) flow of liquid
- (III) solar radiation
- (IV) temperature

Choose the **most appropriate** option from those given below :

- A** (A)-(III); (B)-(I); (C)-(II); (D)-(IV)  
**B** (A)-(III); (B)-(II); (C)-(I); (D)-(IV)  
**C** (A)-(I); (B)-(III); (C)-(IV); (D)-(II)  
**D** (A)-(III); (B)-(I); (C)-(IV); (D)-(II)

**63.** Match List-I with List-II :

LIST I	LIST II
<b>(A) Rungrado</b>	<b>(I) Softball</b>
<b>(B) MCG</b>	<b>(II) Basketball</b>
<b>(C) Unites Centre</b>	<b>(III) Football</b>
<b>(D) Rhoads</b>	<b>(IV) Cricket</b>

Choose the **most appropriate** option from the those given below:

- A** (A)-(I); (B)-(II); (IV); (D)-(III)  
**B** (A)-(II); (B)-(I); (C)-(IV); (D)-(III)  
**C** (A)-(III); (B)-(IV); (C)-(I); (D)-(II)  
**D** (A)-(III); (B)-(IV); (C)-(II); (D)-(I)

**64.** The author of the book, *The Struggle in My Life* is

- A** Jomo Keryatta  
**B** Nelson Mandela  
**C** Frederick Chiluba  
**D** Bishop Desmond Tutu

**65.** Match List -I with List -II

**LIST I**

- (A) Only Indian to win two individual Olympic Medals in 2012.
- (B) The first Indian and only player from his sports to compete at seven Olympic Games.
- (C) The youngest Indian participant at the 2000 Sydney Olympics to win Gold Medal for his country.
- (D) The first Indian to be World Champion in any sport and to become recipient of both Arjuna and Dronacharya Award.

**LIST II**

- (I) Leander Paes
- (II) Abhinav Bindra
- (III) Wilson Jones
- (IV) Sushil Kumar

Choose the **most appropriate** option from those given below :

- A (A)-(I); (B)-(IV); (C)-(II); (D)-(III)
- B (A)-(IV); (B)-(I); (II); (D)-(III)
- C (A)-(II); (B)-(I); (IV); (D)-(III)
- D (A)-(III); (B)-(II); (C)-(I); (D)-(IV)

66. Given below are two statements :

Statement I : The performance and potential of insurance sector is assessed using insurance density as an indicator.

Statement II : The performance and potential of insurance sector is assessed using insurance penetration as an indicator.

In the light of the above statements, choose the **most appropriate** answer from the options given below.

- A Both Statement I and Statement II are correct
- B Both Statement I and Statement II are incorrect
- C Statement I is correct but Statement II is incorrect
- D Statement I is incorrect but Statement II is correct

67. Given below are two statements :

Statement I : According to IT rules 2021 social media platforms with minimum 50 lakh registered users are classified as significant social media intermediaries.

Statement II : OTT platforms cannot upload content which is adult and explicit in nature.

In the light of the above statements, choose the **most appropriate** answer from the options given below.

- A Both Statement I and Statement II are correct
- B Both Statement I and Statement II are incorrect
- C Statement I is correct but Statement II is incorrect

D Statement I is incorrect but Statement II is correct

68. Who among the following thinkers is attributed with the following statement? "So long as the millions live in hunger and ignorance, I hold every man a traitor, who having been educated at their expense, pays not the least heed to them?"

A Ram Manohar Lohia

B Swami Vivekananda

C M. N. Roy

D Raja Ram Mohan Roy

69. Who was chosen as the first Satyagrahi to launch the individual Satyagrah in 1940?

A Jawaharlal Nehru

B Bal Gangadhar Tilak

C Brahma Datt

D Acharya Vinoba Bhave

70. Who among the following is a Structural Biologist who shared the 2009 Nobel Prize in Chemistry for studies on the structure and function of Ribosome and is a Padma Vibhushan Awardee?

A Vijayan O V

B Venkatraman Ramakrishnan

C Har Gobind Khorana

D Venkayya Pingali

71. In November, 2020 Union Cabinet gave its nod to merge which two banks?

A Lakshmi Vilas Bank with Allahabad Bank

B DBS Bank of India with Allahabad Bank

C Lakshmi Vilas Bank with DBS Bank of India

D DBS Bank of India with Karur Vysya Bank

72. Given below are two statements :

Statement I : Nilgiri hills connect Eastern and Western Ghats

Statement II : Satpura hills connect Eastern and Northern Ghats

In the light of the above statements, choose the **most appropriate** answer from the options given below.

A Both Statement I and Statement II are correct

- B Both Statement I and Statement II are incorrect
- C Statement I is correct but Statement II is incorrect
- D Statement I is incorrect but Statement II is correct

73. Which of the following Indian rivers are part of the Peninsular River System?

- A. Betwa
- B. Beas
- C. Narmada
- D. Gandhak
- E. Tapi

Choose the **most appropriate** answer from the options given below :

- A A and C only
- B C and D only
- C C and E only
- D A, B and C only

74. Which of the following are the names of the actual Corona Virus Variants?

- A. Alpha Variant
- B. Beta Variant
- C. Gamma Variant
- D. Delta Variant
- E. The Kappa Variant

Choose the **most appropriate** answer from the options given below :

- A A, B and D only
- B D only
- C A, B, C, D and E
- D A, B, C and D only

75. Who can dissolve the Lok Sabha before the expiry of its normal term of 5 years?

- A The Prime Minister
- B The President of India
- C The President on the recommendation of the Prime Minister
- D The President on the recommendation of the speaker

76. Which of the following Bengali works of fiction is often considered as the first political novel in India?

- A Anandmath
- B Gora

C Onti Dani (Lone Voice)

D Ghasiram Kotwal

77. Which of the following is true regarding History of Buddhism in India?

- A. The Turkish killed large number of Buddhist monks in Bihar
  - B. The Brahmana Pashyamitra Shunga persecuted the Buddhists
  - C. The Huna king Mihirakula killed hundreds of Buddhists
  - D. The Shaivite Shashanka of Gauda felled the Bodhi tree at Bodh Gaya
  - E. Hsuan Tsang stated that 1600 stupas and monasteries were destroyed and thousands of monks killed
- Choose the **most appropriate** answer from the options given below :

A A, D and E only

B A and E only

C A only

D A, B, C, D and E

78. Which of the following is/are true regarding the Judicial system of India?

- A. There can be maximum of 20 judges in the Supreme Court of India.
- B. Judges of Supreme Court retire at the age of 65 years.
- C. Among the High Courts of India, the highest number of cases are pending at Allahabad High Court, as on March, 2022.
- D. Among the High Courts the least number of cases are at Karnataka High Court.
- E. There are 29 High Courts in India.

Choose the **most appropriate** answer from the options given below

A A, B, C and D only

B B, C and E only

C A, C and D only

D B and C only

79. Who among the following sportsperson was appointed as the Vice-Chancellor of Delhi Sports University in June 2021?

A P. T. Usha

B Abhinav Bindra

C Kamam Malleswari

D Rajyavardhan Singh Rathore

80. Given below are two statements :

Statement I : The branch of science which shows inter-relationship of living organism and their environment is called genetics.

Statement II : The techniques of recording and reproducing three dimensional images of object is known as lexicography.

In the light of the above statements, choose the **correct** answer from the options given below.

- A Both Statement I and Statement II are true
- B Both Statement I and Statement II are false
- C Statement I is true but Statement II is false
- D Statement I is false but Statement II is true

## Innovation and Entrepreneurship

81. What is the full form of EPCG?

- A Export Promotion Capital Goods
- B Export Promotion Council of Goods
- C Export Potential of Capital Goods
- D Export Promotion Council of Government

82. The primary focus of SMILE loan of SIDBI is to

- A Upgrade their machinery with state-of-the-art equipment
- B To meet the debt-equity ratio of a unit or to help in its growth and expansion
- C For technology upgradation and expansion
- D One-time non-recurring loan for start ups

83. 'Entrepreneur' means

- A to struggle
- B to undertake
- C to invent
- D to motivate

84. An entrepreneur who is the owner of more than one business is called



- A Portfolio entrepreneur
- B Intrapreneur
- C Corporate entrepreneur
- D Owner entrepreneur

85. The start-up loans offered by MUDRA banks to small enterprises, business which are non-corporate, and non-farm small/micro enterprises is up to the limit of Rs \_\_\_\_\_ lacs.

- A 20
- B 10
- C 40
- D 30

86. Which are the BRIC countries?

- A Britain, Russia, India and Canada
- B Brazil, Russia, India and China
- C Bangladesh, Rwanda, India and China
- D Bhutan, Rwanda, India and Cuba

87. Entrepreneurship can be best described as

- A Process that requires setting up a business
- B Taking a significant risk in a business context
- C Having a strong vision
- D A process involving innovation and value creation

88. A person who improves an existing business is called

- A A changeling
- B A leader
- C A professional
- D An Intrapreneur

89. The legal term for brand is

- A Patent
- B Licence

**C** Trademark

**D** TOM

**90.** Which of these theories involve taking a moderate amount of risk as a function of skill and not chance?

**A** Need for achievement

**B** Need for affiliation

**C** Need for authority

**D** Need for independence

**91.** For a project to be viable, the first necessary condition is

**A** That it should have a market

**B** That it should have government support

**C** That its expected return should be greater than bank rate

**D** That it should be based on tried and tested technology

**92.** As business grows, time management continues to be an issue, but the entrepreneur's major concern usually becomes :

**A** Setting goals

**B** Finding, retaining, and motivating qualified employees

**C** Measuring performance

**D** All of these

**93.** \_\_\_\_\_ entrepreneurs suffer losses, as they refuse to make any modifications in the existing production methods.

**A** Drone

**B** Passionate

**C** Imitative

**D** Possessive

**94.** Which of the following is not a legitimate way of bringing a new business idea to market?

**A** A start up

**B** Business plan

**C** A buy-out

**D** Franchise

**95.** The business plan of a venture must show consistent, but manageable projected growth because :

**A** Many entrepreneurs fail after expanding too rapidly

**B** Investors want to see quick growth

**C** Banks are interested in profits, not expenses

**D** Bankers and investors prefer small companies

**96.** Entrepreneurs have to deal with

**A** internal uncertainties only

**B** external uncertainties only

**C** Both external and internal uncertainties

**D** Neither external nor internal uncertainties

**97.** In context of market feasibility analysis the analyst should consider the following factor as a priority

**A** Target market attractiveness

**B** Financing of market expenditure

**C** Availability of marketing personnel

**D** Market leadership

**98.** According to Gary Hamel, which one of the following propositions is one of the four pillars to create value for the company and the customer?

**A** The well-being innovation

**B** The management innovation

**C** The digital innovation

**D** The financial innovation

**99.** Which type of innovation seeks to make a better product to target the high-end of the market?

**A** Sustaining innovation

**B** Low-end disruptive innovation

**C** New market disruptive innovation

**D** Quantity based innovation

**100.** Which of the following statement(s) is/are true?

- A. Technical feasibility is not required in case of hospital projects.
- B. Pattern of financing is ignored while computing cost of capital
- C. CPM is superior to PERT in some situations
- D. Infrastructure projects are ideally financed through long term sources.
- E. Cost of internally generated funds is zero.

Choose the correct answer from the options given below:

- A** B, E only
- B** D and E only
- C** A and B only
- D** C and D only



# Answers

## Quantitative Techniques and Data Interpretation

<b>1.C</b>	<b>2.D</b>	<b>3.D</b>	<b>4.B</b>	<b>5.C</b>	<b>6.B</b>	<b>7.D</b>	<b>8.D</b>
<b>9.A</b>	<b>10.A</b>	<b>11.A</b>	<b>12.A</b>	<b>13.C</b>	<b>14.D</b>	<b>15.C</b>	<b>16.A</b>
<b>17.B</b>	<b>18.B</b>	<b>19.C</b>	<b>20.D</b>				

## Logical Reasoning

<b>21.A</b>	<b>22.D</b>	<b>23.D</b>	<b>24.B</b>	<b>25.D</b>	<b>26.A</b>	<b>27.B</b>	<b>28.C</b>
<b>29.D</b>	<b>30.B</b>	<b>31.A</b>	<b>32.D</b>	<b>33.A</b>	<b>34.D</b>	<b>35.D</b>	<b>36.C</b>
<b>37.A</b>	<b>38.B</b>	<b>39.D</b>	<b>40.A</b>				

## Language Comprehension

<b>41.C</b>	<b>42.D</b>	<b>43.A</b>	<b>44.D</b>	<b>45.C</b>	<b>46.D</b>	<b>47.B</b>	<b>48.D</b>
<b>49.A</b>	<b>50.C</b>	<b>51.B</b>	<b>52.A</b>	<b>53.B</b>	<b>54.B</b>	<b>55.C</b>	<b>56.A</b>
<b>57.C</b>	<b>58.B</b>	<b>59.B</b>	<b>60.C</b>				

## General Awareness

<b>61.A</b>	<b>62.D</b>	<b>63.D</b>	<b>64.B</b>	<b>65.B</b>	<b>66.A</b>	<b>67.C</b>	<b>68.B</b>
<b>69.D</b>	<b>70.B</b>	<b>71.C</b>	<b>72.C</b>	<b>73.C</b>	<b>74.C</b>	<b>75.C</b>	<b>76.A</b>
<b>77.D</b>	<b>78.D</b>	<b>79.C</b>	<b>80.B</b>				

## Innovation and Entrepreneurship

<b>81.A</b>	<b>82.B</b>	<b>83.B</b>	<b>84.A</b>	<b>85.B</b>	<b>86.B</b>	<b>87.D</b>	<b>88.D</b>
<b>89.C</b>	<b>90.A</b>	<b>91.A</b>	<b>92.B</b>	<b>93.A</b>	<b>94.B</b>	<b>95.A</b>	<b>96.C</b>
<b>97.A</b>	<b>98.B</b>	<b>99.A</b>	<b>100.D</b>				

# Explanations

## Quantitative Techniques and Data Interpretation

### 1. C

Statement I:

Bank A:  $r = 6.2\%$  and compounded annually

$$\text{Compound interest at the end of an year} = P \left(1 + \frac{6.2}{100}\right) - P = \frac{6.2P}{100}$$

Bank B:  $r = 6\%$  and compounded semi-annually

$$\text{C.I} = P \left(1 + \frac{3}{100}\right)^2 - P = \frac{P(6.09)}{100}$$

Interest is less in bank B.

Therefore, statement I is correct.

Statement II:

Let the sum of money be 'S'

It is given,

$$S \left(1 + \frac{r}{100}\right)^3 = 2S$$

$$\left(1 + \frac{r}{100}\right)^3 = 2$$

$$\left(1 + \frac{r}{100}\right)^9 = 4$$

$$S \left(1 + \frac{r}{100}\right)^9 = 4S$$

Therefore,  $P = 4$

Statement II is incorrect.

The answer is option C.

### 2. D

$$F(x) = |2x| + 4$$

$$\text{Option A: } G(x) = x + 3$$

If  $x > 0$  or  $x = 0$

$$2x + 4 = x + 3$$

$$x = -1 < 0$$

Therefore, this case is not possible.

If  $x < 0$

$$-2x + 4 = x + 3$$

$$3x = 1$$

$$x = 1/3 > 0$$

Therefore, this case is not possible.

$$\text{Option B: } G(x) = 2x - 2$$

If  $x > 0$  or  $x = 0$

$$2x + 4 = 2x - 2$$

This case is not possible.

If  $x < 0$

$$-2x + 4 = 2x - 2$$

$$x = 1.5 > 0$$

This case is not possible.

Option C:  $G(x) = 2x + 3$

If  $x > 0$  or  $x = 0$

$$2x + 4 = 2x + 3$$

This case is not possible.

If  $x < 0$

$$-2x + 4 = 2x + 3$$

$$x = 0.25 > 0$$

This case is not possible.

Option D:  $G(x) = 3x - 2$

If  $x > 0$  or  $x = 0$

$$2x + 4 = 3x - 2$$

$$x = 6$$

This case is possible.

Therefore, the answer is option D.

**3. D**

It is given,

$$320SP = 400CP$$

$$4SP = 5CP$$

$$\text{Profit percentage} = \frac{SP - CP}{CP} \times 100 = \frac{\frac{5CP}{4} - CP}{CP} \times 100 = 25\%$$

The answer is option D.

**4. B**

In 2020:

$$\text{Cost of component A} = \frac{90}{360} \times 12000 = 3000$$

$$\text{Cost of component B} = \frac{120}{360} \times 12000 = 4000$$

$$\text{Cost of component C} = \frac{150}{360} \times 12000 = 5000$$

In 2021:

$$\text{Cost of component A} = 1.1 \times 3000 = \text{Rs } 3300$$

$$\text{Cost of component B} = 1.2 \times 4000 = \text{Rs } 4800$$

$$\text{Cost of component C} = 1.1 \times 5000 = \text{Rs } 5500$$

The answer is option B.

**5. C**

A - 2 terms

B - 4 terms

C - 6 terms

..

$2 + 4 + 6 + \dots + 2n$  terms  $\Rightarrow$  this sum should be greater than or equal to 95.

$$2(1 + 2 + 3 + \dots + n) \geq 95$$

$$n(n+1) \geq 95$$

If  $n = 9$ , we get only 90 terms.

95th term occurs when  $n = 10$ , i.e. J.

The answer is option C.

**6. B**

Let the amount invested be 'P' and the rate of interest be 'r'.

Simple interest =  $\frac{P \times r \times 2}{100}$

$$\frac{Pr}{100} = 400$$

$$\text{Compound interest} = P \left(1 + \frac{r}{100}\right)^2 - P = 900$$

$$P \left(\frac{r}{100}\right)^2 + \frac{2Pr}{100} = 900$$

$$P \left(\frac{r}{100}\right)^2 = 100$$

$$400 \left(\frac{r}{100}\right) = 100$$

$$r = 25\%$$

$$P = \frac{400(100)}{25} = \text{Rs } 1600$$

The answer is option B.

**7. D**

It is given,  $x > 0$

$$3.6\% \text{ of } \frac{5x}{12} = \frac{3.6}{100} \times \frac{5x}{12} = \frac{36}{1000} \times \frac{5x}{12} = \frac{3x}{200}$$

$$\text{A) } 3 \text{ percent of } 20x = \frac{3(20x)}{100} = \frac{3x}{5} \neq \frac{3x}{200}$$

$$\text{B) } x \text{ percent of } \frac{3}{2} = \frac{x}{100} \left(\frac{3}{2}\right) = \frac{3x}{200}$$

$$\text{C) } 3x \text{ percent of } 0.2 = \frac{3x}{100} (0.2) = \frac{6x}{1000} = \frac{3x}{500} \neq \frac{3x}{200}$$

$$\text{D) } 0.05 \text{ percent of } 3x = \frac{0.05}{100} (3x) = \frac{3x(5)}{10000} = \frac{3x}{2000} \neq \frac{3x}{200}$$

$$\text{E) } \frac{3x}{200}$$

Only B and E are equal to the calculated value.

Therefore, the answer is option D.

**8. D**

Statement I:

Let the actual time taken by Ravi to reach the college be 't'.

If Ravi travels at a speed of 5 km/hr, time taken is  $t + \frac{10}{60}$

If Ravi travels at a speed of 6 km/hr, time taken is  $t - \frac{4}{60}$

$$\text{Distance} = \text{speed} \times \text{time} = P = 5 \left(t + \frac{10}{60}\right) = 6 \left(t - \frac{4}{60}\right)$$

$$5 \left(t + \frac{10}{60}\right) = 6 \left(t - \frac{4}{60}\right)$$

$$5t + \frac{50}{60} = 6t - \frac{24}{60}$$

$$t = \frac{74}{60}$$

$$\text{Distance(P)} = 5 \left(\frac{74}{60} + \frac{10}{60}\right) = 5 \left(\frac{84}{60}\right) = 7 \text{ km}$$



Therefore, statement I is incorrect.

Statement II:

Let the speed of Babita be  $3x$ .

The speed of Amit is  $7x$ .



B covers distance  $y$ .

In the same time, A should cover  $80+y$ .

$$\frac{y}{3x} = \frac{80+y}{7x}$$

$$7y = 240 + 3y$$

$$4y = 240$$

$$y = 60$$

$$\text{Total distance} = 80 + 60 = 140\text{m}$$

Therefore, statement II is correct.

The answer is option D.

9. **A**

It is given,

$$a + b + c = 96 \text{ and } a \leq b \leq c$$

It is also given that age of Q is 6 years more than the age of P, i.e.  $b = a + 6$

Minimum value  $c$  can take is equal to  $b$ , i.e.  $a + 6$

$$a + a + 6 + a + 6 = 96$$

$$3a = 84$$

$$a = 28$$

$$\text{Minimum possible value of } c = 28 + 6 = 34 \text{ years}$$

The answer is option A.

10. **A**

Total number of 8-letter words possible using letters S, Y, L, L, A, B, U, S is  $\frac{8!}{2!2!}$

Statement I:

We can find total number of 8-letter words by considering 2 S's as a single unit and arranging 7 units, i.e. (SS), Y, L, L, A, B, U

$$\text{Total number of ways} = \frac{7!}{2!}$$

$$\text{Required probability} = \frac{\frac{7!}{2!}}{\frac{8!}{2!2!}} = \frac{2}{8} = \frac{1}{4}$$

Therefore, statement I is correct.

Statement II:

We can find total number of 8-letter words such that L's are at ends by arranging remaining 6 letters in the middle.

$$\text{Total number of ways} = \frac{6!}{2!}$$

$$\text{Required probability} = \frac{\frac{6!}{2!}}{\frac{8!}{2!2!}} = \frac{2}{56} = \frac{1}{28}$$

Therefore, statement II is correct.

The answer is option A.

**11. A**

Sum is 24: The only possibility is (6,6,6,6) → 1 way

Sum is 23: The only possibility is (6,6,6,5) →  $\frac{4!}{3!} = 4$  ways

Sum is 22: There are two possibilities, i.e. (6,6,6,4) and (6,6,5,5)

(6,6,6,4) →  $\frac{4!}{3!} = 4$  ways

(6,6,5,5) →  $\frac{4!}{2!2!} = 6$  ways

Total number of ways satisfying the given condition = 1 + 4 + 4 + 6 = 15

Total number of possibilities = (6)(6)(6)(6)

$$\text{Required probability} = \frac{15}{1296} = \frac{5}{432}$$

The answer is option A.

**12. A**

Speed of train = 18 km/hr = 5 m/s

Let the length of train be 'P'

It is given,

$$\frac{P}{5} = 9$$

$$P = 45\text{m}$$

Let the length of platform be 'Q'

It is given,

$$\frac{P+Q}{5} = 25$$

$$P+Q = 125$$

$$Q = 125 - 45 = 80\text{m}$$

$$(P, Q) = (45, 80)$$

The answer is option A.

**13. C**

It is given that P, Q and R together can complete the work in 6 hrs.

P, Q and R together worked for 2 hours, this implies they completed 1/3rd of the work.

R left and remaining work is finished by P and Q in 7 hours.

Therefore, P and Q completed 2/3rd of the work in 7 hours.

This implies P and Q together can complete the work in 21/2 hours.

Let the total work be LCM(6, 21/2), i.e. 42 units.

P, Q and R together can complete 7 units in one hour.

P and Q together can complete 4 units in one hour.

This implies, R can complete 3 units in one hour.

$$\text{Time taken by R alone to complete the work} = \frac{42}{3} = 14 \text{ hours}$$

The answer is option C.

14. **D**

If  $a$  is the length of equilateral triangle, height is  $\frac{\sqrt{3}a}{2}$

$$\text{Inradius} = \frac{\sqrt{3}a}{2} \left( \frac{1}{3} \right) = \frac{a}{2\sqrt{3}}$$

$$\text{It is given, } R = \frac{a}{2\sqrt{3}}$$

$$\text{Area of triangle} = \text{Inradius} * \text{semiperimeter} = R \left( \frac{3a}{2} \right) = \frac{3R}{2} (2\sqrt{3}R) = 3\sqrt{3}R^2$$

The answer is option D.

15. **C**

$$\text{Let } n^2 + 96 = k^2$$

$$k^2 - n^2 = 96$$

$$(k + n)(k - n) = 96$$

$$(k + n)(k - n) = 2 \times 48, 4 \times 24, 6 \times 16, 8 \times 12, 12 \times 8, 16 \times 6, 24 \times 4, 48 \times 2$$

$n$  can take 8 values, i.e. -23, -10, -5, -2, 2, 5, 10 and 23.

The answer is option C.

16. **A**

Statement 1

We need to pack 6 indistinguishable books into 4 indistinguishable boxes

The ways we can pack the books are

6, 0, 0, 0 (only one way as 0, 6, 0, 0 or 0, 0, 6, 0 won't be different as boxes are identical)

5, 1, 0, 0

4, 2, 0, 0

4, 1, 1, 0

3, 3, 0, 0

3, 2, 1, 0

3, 1, 1, 1

2, 2, 2, 0

2, 2, 1, 1.

so total 9 ways

Hence statement 1 is correct.

Statement 2

To calculate the minimum number of students required, we need to consider the worst case scenario i.e. the birthdays of students are evenly spread across all the 12 months. We'll have to assume that there are at least 5 birthday is each month, so the total number of students required =  $5 * 12 = 60$ . To assure that there is 1 month in which we have 6 birthdays, we'll have to add 1 to this number, hence the minimum number of students required =  $60 + 1 = 61$

17. **B**

Statement I:

It is given that the ratio of son's age to father's age is 1:5

Let the son's age be  $x$  and father's age be  $5x$ .

$$(x)(5x) = 245$$

$$x = 7$$

Therefore, son's age is 7 years and father's age is 35 years.

After 9 years, son's age is 16 years and father's age is 44 years.

$$\text{Ratio} = 16 : 44 = 4 : 11$$

Statement II:

Initially - 70L milk and 30L water

After selling  $\frac{1}{5}$ th of the solution - 56L milk and 24L water

Adding water - 56L milk and 44L water

$$\text{water:milk} = 44:56 = 11:14$$

The answer is option B.

18. **B**

It is given,

$$x - \frac{1}{x} = y, y - \frac{1}{y} = z \text{ and } z - \frac{1}{z} = x$$

Adding all the given equations, we get

$$x + y + z - \frac{1}{x} - \frac{1}{y} - \frac{1}{z} = y + z + x$$

$$\frac{1}{x} + \frac{1}{y} + \frac{1}{z} = 0$$

Therefore, equation A is correct.

$$x - \frac{1}{x} = y, y - \frac{1}{y} = z \text{ and } z - \frac{1}{z} = x$$

Squaring on both the sides and adding three resultant equations, we get

$$x^2 + \frac{1}{x^2} - 2 + y^2 + \frac{1}{y^2} - 2 + z^2 + \frac{1}{z^2} - 2 = y^2 + z^2 + x^2$$

$$\frac{1}{x^2} + \frac{1}{y^2} + \frac{1}{z^2} = 6$$

Therefore, equation B is incorrect.

The answer is option B.

19. **C**

It is given,

$$5^a = 9^b = 2025$$

$$5^a = 2025$$

Applying log on both the sides, we get

$$\log_5 5^a = \log_5 2045$$

$$a = \log_5 2045$$

Similarly, we get  $b = \log_9 2045$

$$\frac{ab}{a+b} = \frac{1}{\frac{1}{a} + \frac{1}{b}}$$

$$\frac{1}{a} = \log_{2045} 5$$

$$\frac{1}{b} = \log_{2045} 9$$

$$\frac{1}{a} + \frac{1}{b} = \log_{2045} 45$$

$$\frac{ab}{a+b} = \log_{45} 2045 = 2$$

The answer is option C.

20. **D**

$$8 = (\sqrt{59} - \sqrt{51}) (\sqrt{59} + \sqrt{51})$$

$$8 = (\sqrt{37} - \sqrt{29}) (\sqrt{37} + \sqrt{29})$$

We know that,  $\sqrt{59} + \sqrt{51}$  is greater than  $\sqrt{37} + \sqrt{29}$

This implies,  $\sqrt{37} - \sqrt{29}$  is greater than  $\sqrt{59} - \sqrt{51}$  as the product is constant.

Similarly,  $\sqrt{59} - \sqrt{51}$  is greater than  $\sqrt{79} - \sqrt{71}$  and  $\sqrt{79} - \sqrt{71}$  is greater than  $\sqrt{87} - \sqrt{79}$ .

The correct order is  $B > A > D > C$

The answer is option D.

## Logical Reasoning

21. **A**

In the following group of letters, CE has one letter gap between them (C\_E). IK has one letter gap (I\_K), SV has (S\_ \_ V) two letter gap, FH has one letter gap between them (F\_H), and UW has one letter gap (U\_W).

Hence, all the groups of letters have one letter gap between the first letter and the second letter, except SV.

Hence, SV is the odd one out.

The correct option is A.

22. **D**

From the information given in the question, we can infer that we need to check for such a relationship where the instrument is being used to measure the physical quantity. (since Barometer is being used to measure atmospheric pressure.)

In option A, the unit of force is given as kg, which is not a correct relationship. Richter scale is used to measure the strength of earthquakes, but in the option, it is linked to heat. Therefore, option B is not correct.

The weighing scale measures the weight of an object, whose unit is Kg. Hence, this is wrong. The thermometer measures temperature, which is the correct relationship.

The correct option is D.

23. **D**

In this question, the argument I is weak since it fails to provide probable support for its conclusion.

Similarly, argument II is also weak since it is an argument with no proper support (they are just assuming it without any strong premises).

Therefore, option D is the correct answer.

25. **D**

From the given statement, we can conclude that 80% of the runs are scored by spinners, which doesn't imply that 80% of the team consists of spinners. Therefore, the conclusion 1 is not correct.

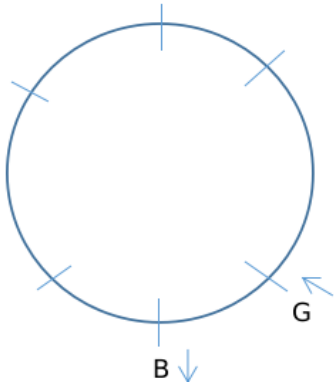
Similarly, we cannot conclude anything about the openers, whether they are spinners or not. Hence, conclusion 2 is not correct.

Therefore, the correct answer is D.

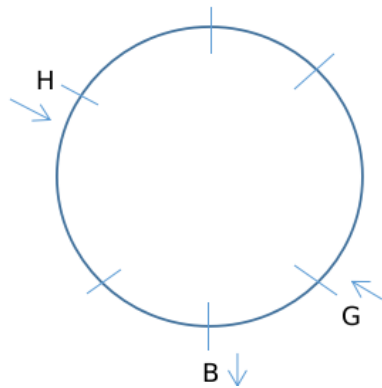
26. **A**

It is given that only Abhishek(A) and Bineeta(B) face away from the centre, which implies Manisha(M), Hari(H), Vaishali(V), and Gaurav(G) face the centre. (point 2)

Gourav is on the immediate left of Bineeta (Bineeta faces away from the centre). (point 1)

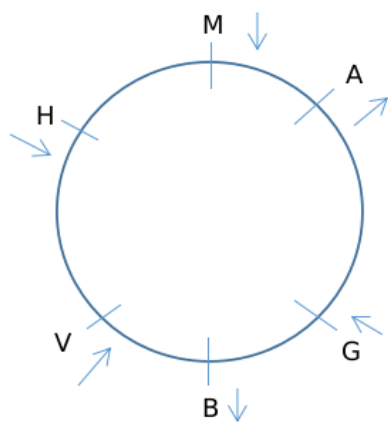


There are two people between Gourav and Hari ( both are facing inwards) (point 4)

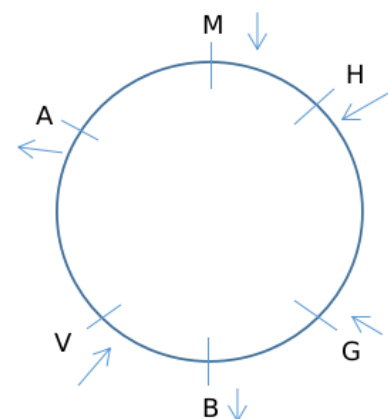


It is given that Abhishek is the neighbour of both Manisha and Gourav, which implies Abhishek sits between Manisha and Gourav. Vaishali and Hari seats adjacent to each other.

The final diagram:



After Hari interchanges his position with Abhishek (having the same direction), the diagram will look like:



From the diagram, we can see that Vaishali sits to the left of Abhishek. The correct answer is A.

27. **B**

From points a, b, and d, we can say that:

37	33	
32	38	
36	39	34

From point C, we can say that 32 is to the left of 35, and 31 is above 35.

Therefore,

The final table looks like this:

37	33	31
32	38	35
36	39	34

Hence, the sum of the middle row is  $(32+38+35) = 105$ . The correct option is B.

28. **C**

The four numbers are 143, 168, 195, and 225

The difference,  $(168-143) = 25$ ,  $(195-168) = 27$ , hence the next difference should be 29. Hence the next number should be  $(195+29) = 224$ .

Therefore, 225 is the odd number here. The correct option is C.

29. **D**

Both statements are the effect of the same cause, which is related to the heavy increase of the water layer due to some reason.

Hence, option D is the correct answer.

30. **B**

There is no number with the first alphabet in the first and the third terms, which implies the fifth term will be V(alphabetically, the order decreases starting with z). The second letter in each term increases starting with A. Hence the second letter in the fifth term is E. (VE)

Hence option B is the correct answer.

31. **A**

The odd days from 23rd April 1988 to 23rd April 1995 is  $(1+1+1+2+1+1+1) = 8$ . Hence 23rd April 1998 will be one day lesser than 23rd April 1995. If 23rd April 1995 is Tuesday, then 23rd April 1988 is Monday.

Hence, the correct answer is option A.

32. **D**

In this question, we are first separating the consonants and rearranging them in alphabetical order, then rearranging the vowel alphabetically.

Hence, for the word BEAUTIFUL, we separate the consonants (B, T, F, L) and vowels (E, A, U, I, U)

Now we will arrange the consonants in alphabetical order and then the vowels.

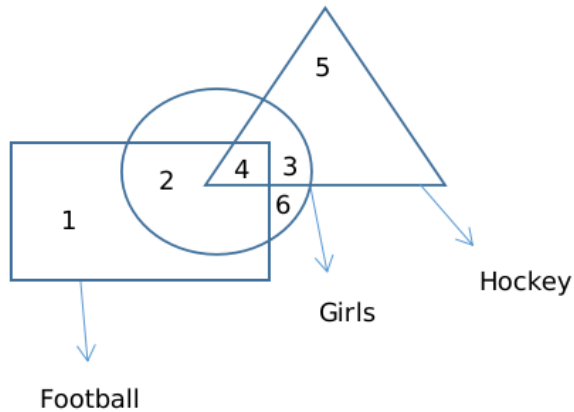
Hence, the word will be BFLTAEIUU.

Similarly, TECHNICAL can be written as the first separate consonants (T, C, H, N, C, L), and (E, I, A). Then after rearranging, we will get:

CCHLNTAEI,

The correct option is D.

33. **A**



From the given diagram, we can see that '6' is neither included in the triangle nor the rectangle, implying 6 girls don't participate in hockey or football.

Therefore, the correct option is A.

34. **D**

Statement I is false because some students are intelligent implies two cases: 1. all the students are intelligent. 2. some students are not intelligent.

Any of these can be correct. Hence, statement 1 is also false.

Statement II is true since all the logicians are mathematicians, which implies that all the non-mathematicians can't be logicians, which implies some non-mathematicians are not logicians.

The correct option is D.

35. **D**

The value of CAB is 75. C appears as a 24th letter when we take it in reverse alphabetical order. A is the 26th letter, and B is the 25th letter. The sum of these letters is  $(24+26+25) = 75$ .

R is the 9th word in reverse alphabetical order, U is the 6th word, L is the 15th word in reverse, and E is the 22nd letter in reverse alphabetical order.

Hence, the sum is  $(9+6+15+22) = 52$ .

The correct option is D

36. **C**

If MOUSE is written as FTVPN, we have first reversed the word MOUSE to ESUOM, and then we have written the next letter of each letter ( E as F, S as T, and so on).

Therefore, firstly RACKET can be written in the reverse order TEKCAR, and then we will write the next letter corresponding to each letter.

Hence, RACKET can be written as UFLDBS.

The correct answer is C

37. **A**



Every word has six letters in it, in which the first 2 letters are changed by (-2), the next 2 letters are changed by (+2), and the last 2 letters are changed by (-2).

Hence, EMBARK can be written as E(-2) => C, M(-2) => K, B(+2) => D, A(+2) => C, and R(-2) => P, and K(-2) => I, Hence, EMBARK can be written as CKDCPI. (A-ii)

Hence, the correct option is A.

38. **B**

$a \% b$  means a is less than b.  $c \# d$  means c is equal to d, and  $c \$ b$  means c is greater than b.

Therefore,  $a < b < c = d$

Option B is correct.

39. **D**

Firstly,  $(564/4) = 141 + 11 \Rightarrow 152$ .

$(152/4) = 38 + 10 \Rightarrow 48$

$(48/4) = 12 + 9 \Rightarrow 21$ , and  $(21/4) + 8 = 13.25$

Hence the next term is 13.25. The correct option is D

40. **A**

20 did not appear for any of the three methods. Hence, the total number of students who appeared in the tests  $(400 - 20) = 380$ .

$(240 + 160 + 200) = 600$  students = exactly I + 2 (exactly II) + 3(exactly III)  $\Rightarrow 2(\text{exactly II}) + 3(\text{exactly III}) = 400$

Exactly I + exactly II + exactly III = 380  $\Rightarrow$  exactly II + exactly III = 180  $\Rightarrow 2(\text{exactly II}) + 2(\text{exactly III}) = 360 \Rightarrow$  exactly III = 40

Therefore, exactly II =  $180 - 40 = 140$ . Hence, the correct option is A.

## Language Comprehension

41. **C**

The word 'proscribe' means to prohibit or forbid something.

Options A, B, and D are antonyms of proscribe, while option C is the correct meaning of the word.

The correct option is C.

42. **D**

I. **Gold and silver \_\_\_\_\_ precious metals:** In this sentence, the verb "are" is the correct form to use with the subject "Gold and silver." The subject is plural, so the verb should also be in the plural form. Therefore, "are" is the appropriate option to complete the sentence.

II. **The ship with its crew \_\_\_\_\_ lost:** In this sentence, the verb "was" is the correct form to use with the subject "The ship with its crew." The subject is singular, so the verb should also be in the singular form. Therefore, "was" is the appropriate option to complete the sentence.

III. **No nook or corner \_\_\_\_\_ left unexplored:** In this sentence, the verb "was" is the correct form to use with the subject "No nook or corner." Although the subject contains multiple elements connected by "or," it is considered singular. Therefore, the verb should be in the singular form. Therefore, "was" is the appropriate option to complete the sentence.

IV. **Neither my friend nor I \_\_\_\_\_ to blame:** In this sentence, the verb "am" is the correct form to use with the compound subject "Neither my friend nor I." The pronoun "I" functions as the subject of the sentence and requires the singular form of the verb "am." Therefore, "am" is the appropriate option to complete the sentence.

The correct option is D.

43. **A**

A medicine to counteract poison is called an 'Antidote'.

Thus, the correct option is A.

44. **D**

The statement in option A is incorrect because it combines the present perfect tense ("have passed") with a specific past time reference ("last year"). The present perfect tense is used to indicate actions that occurred at an indefinite time in the past, not with a specific time reference like "last year." Therefore, the use of "have passed" in this sentence is incorrect.

The sentence in option B is incorrect because it uses the present tense ("pass") to describe an action that occurred in the past ("last year"). When referring to a specific past time, the correct verb form to use is the past tense, which is "passed" in this case.

The sentence in option C is incorrect because it combines the present continuous tense ("am passing") with a specific past time reference ("last year"). The present continuous tense is used to describe ongoing actions happening in the present, not in the past. Therefore, using "am passing" in this sentence to refer to an action in the past is incorrect.

The sentence in option D is the correct sentence. It uses the past tense ("passed") to indicate that the action of passing the examination occurred in the past. The time frame "last year" further specifies when the action took place, making this sentence grammatically correct.

The correct option is D.

45. **C**

Catch twenty two refers to a dilemma or difficult circumstance from which there is no escape because of mutually conflicting or dependent conditions.

Since only option C captures its essence, the correct option is C.

46. **D**

*"There are numberless definitions of religion, The meaning and definition of religion differs according to the **socio-cultural** and **psychological** background of the person who reflects upon it. Even the **political setting** inserts its influence on the understanding of the meaning of religion. Some of the definitions are **phenomenological** and try to expose the common elements that we see in the acknowledged world religions."*

From the above excerpt, we can see that all four options have their influence on the meaning of the religion.

The correct option is D.

47. **B**

*"In the West, under the influence of the inherited tradition of Judeo-Christian tradition, religion was understood more theistically while in the East, it was mostly a response to the experience of the **natural powers that are beyond human control and also to the inner urge for an ethical and moral reference.**"*

Thus, the correct option is B.

48. **D**

The word 'etymology' refers to **the history of a word or phrase shown by tracing its development and relationships.**

Thus, out of the four options, the closest option is D.

49. **A**

Statements A and B are supported by the information provided in the passage. The passage highlights that religion is a sensitive and vulnerable aspect of human life, indicating its significance and impact. It also mentions that religion is purely a human activity, emphasizing its association with human beliefs, practices, and

experiences. However, the passage does not support the statement that religion doesn't bind the members of a community together. In fact, it emphasizes that religion strongly emphasises community aspects and serves as something that binds the members of a community together.

The correct option is A.

50. **C**

The meaning of the words given in the left column is as follows:

Crap Diem: to urge someone to make the most of the present time or seize the day.

Faux Pas: an embarrassing or tactless act or remark in a social situation.

Magnum Opus: a great work and especially the greatest achievement of an artist or writer.

Prima Facie: sufficient to raise a presumption unless disproved or rebutted.

Thus, the correct order will be (A)-(IV); (B)-(II); (C)-(III); (D)-(I)

The correct option is C.

51. **B**

In the given sentence, the phrase "speaking itself" is grammatically incorrect. The correct phrase should be "speak for itself."

The phrase "speak for itself" means something that is evident or self-explanatory without the need for further explanation. In this context, it implies that the person's conduct is clear and communicates the situation effectively, eliminating the need for additional clarification.

The correct option is B.

52. **A**

The sentence I is grammatically correct. It uses the correct subordinating conjunction "whether" to introduce a subordinate clause indicating uncertainty about whether he will come or not. The structure "whether he will come or not" is commonly used to express doubt or uncertainty about a future event.

Sentence II is not grammatically correct. It uses the conjunction "that" instead of "whether," which is incorrect in this context. The correct construction, in this case, is to use "whether" to introduce the subordinate clause expressing uncertainty.

The correct option is A.

53. **B**

The sentence Q introduces the topic of oral storytelling and highlights its significance as a traditional practice in various cultures. It sets the context for the subsequent sentences. Sentence S expands on the nature of oral storytelling by emphasizing its role as a performing art. It highlights the interactive aspect of storytelling, where the storyteller engages with the audience during the performance. Sentence P presents an alternative aspect of oral storytelling, suggesting that it can also occur in an informal and spontaneous manner within small groups. Sentence R concludes the paragraph by stating that the spontaneity of oral storytelling is appreciated by people of all ages, including both children and adults. It emphasizes the universal appeal and enjoyment derived from this form of communication.

Thus, the correct order will be QSPR.

The correct option is B.

54. **B**

In option B "analogies between the two work", the word "work" should be pluralized to "works" to match the plural noun "analogies."

Thus, the correct option is B.

55. **C**

The error in the sentence is in the tag question at the end: "Isn't it?". The correct tag question to use in this case is "doesn't it?" instead of "isn't it?" since the main verb in the sentence is "moves," which is a present simple tense verb.

The correct option is C.

56. **A**

To convert a sentence into an active voice, we need to make the subject of the passive sentence (the child) the doer of the action. The verb should be in the active form, and the object (the child) should become the subject.

Therefore, the correct option is "The maid looked after the child."

The correct option is A.

57. **C**

The word ephemeral is used as an adjective to denote something that lasts for a very short time.

Thus, the correct option is C.

58. **B**

Sentence C: The correct sentence should be: "Rama has been living in Delhi since 1975." The preposition "since" is used to indicate the starting point of an action or state.

Sentence E: The correct sentence should be: "The patient was crying in pain." The preposition "in" is used to indicate the state or condition the patient is experiencing

Sentences A, B, and D are correct, and hence, the correct option is B.

59. **B**

In the original sentence, "My mother cooks Italian food every Sunday," the subject "my mother" is performing the action of cooking Italian food. In the passive voice, the subject of the sentence becomes the receiver of the action, and the focus is on the action itself rather than the doer.

The correct passive voice form of the sentence is "Italian food is cooked by my mother every Sunday."

The correct option is B.

60. **C**

The error in the sentence is in the verb agreement. The correct form should be:

"Neither he nor I am wrong."

Since "I" is the first person singular pronoun, the verb should be in the singular form "am" instead of the plural form "are."

The correct option is C.

General Awareness

Innovation and Entrepreneurship

81. **A**

The full form of EPCG is "Export Promotion Capital Goods." EPCG is a scheme introduced by the Government of India to promote the import of capital goods to enhance the export competitiveness of Indian industries. Under the EPCG scheme, eligible exporters can import capital goods at concessional customs duty rates or even duty-free, subject to certain export obligations. The scheme aims to facilitate acquiring advanced technology and machinery by Indian exporters to improve their manufacturing capabilities and enhance export performance.

82. **B**

The primary focus of the SMILE (SIDBI Make in India Soft Loan Fund for MSMEs) loan of SIDBI is option B) To meet the debt-equity ratio of a unit or to help in its growth and expansion. The SMILE loan scheme aims to provide financial assistance to Micro, Small, and Medium Enterprises (MSMEs) in India to help them meet their

debt-equity ratio requirements and support their growth and expansion plans. It helps MSMEs in accessing affordable and flexible financing options to meet their working capital needs, purchase machinery and equipment, and expand their business operations.

**83. B**

The term "entrepreneur" refers to option B) to undertake. An entrepreneur is an individual who takes the initiative and assumes the risk of starting and managing a business venture. They identify opportunities, organize resources, and create and implement innovative ideas to establish and grow a successful business. Entrepreneurship involves the process of recognizing a business opportunity, developing a business plan, acquiring the necessary resources, and taking the necessary actions to establish and run a business. While an entrepreneur may struggle, invent, or motivate as part of their entrepreneurial journey, the fundamental meaning of "entrepreneur" is someone who undertakes entrepreneurial activities.

**84. A**

An entrepreneur who is the owner of more than one business is called option A) Portfolio entrepreneur. A portfolio entrepreneur is an individual who manages multiple businesses or ventures simultaneously. They may have ownership stakes in different companies or may have started and established multiple businesses themselves. Portfolio entrepreneurs are skilled at diversifying their business interests and managing multiple enterprises concurrently. They often leverage their knowledge, experience, and network across their various businesses to maximize their entrepreneurial endeavors.

**85. B**

The start-up loans offered by MUDRA (Micro Units Development and Refinance Agency) banks to small enterprises, non-corporate businesses, and non-farm small/micro enterprises have a limit of Rs 10 lacs (10,00,000) as per the MUDRA loan categories

Option B is correct

**86. B**

The BRIC countries are a grouping acronym that represents four major emerging economies: Brazil, Russia, India, and China.

Option B is correct.

**87. D**

Entrepreneurship can best be described as:

D) A process involving innovation and value creation.

Entrepreneurship is not limited to simply setting up a business or taking significant risks, although those elements can be part of the entrepreneurial process. At its core, entrepreneurship involves identifying opportunities, developing innovative ideas, and creating value by introducing new products, services, or business models. Entrepreneurs often take risks, but their primary focus is on creating something new, bringing about change, and capturing opportunities in the marketplace.

Having a strong vision can be a characteristic of entrepreneurship, but it is not a comprehensive description of the concept. Entrepreneurship encompasses a broader process of identifying, evaluating, and pursuing opportunities through innovation and value creation.

Therefore, option D) A process involving innovation and value creation, is the most accurate description of entrepreneurship.

**88. D**

A person who improves an existing business is often referred to as an "intrapreneur." (Option D)

**89. C**

The legal term for brand is C) Trademark.

A) Patent: Legal protection for new inventions or innovations.

B) License: Permission to use someone else's intellectual property.

D) TOM: This option is not a recognized legal term in the context of brand or intellectual property.

**90. A**

The theory that involves taking a moderate amount of risk as a function of skill and not chance is the "Need for Achievement" theory, option A. The Need for Achievement theory, proposed by psychologist David McClelland, suggests that individuals with a high need for achievement are motivated by the desire to excel, accomplish challenging goals, and take moderate risks to achieve success. These individuals are driven by a sense of personal accomplishment and actively seek tasks that offer them opportunities to demonstrate their skills and abilities.

**91. A**

The first necessary condition for a project to be viable is that it should have a market, option A. A project needs to have a potential customer base or target market that is willing to pay for the product or service being offered. Without a market, there would be no demand for the project's output, making it unlikely to succeed. Identifying and assessing the market potential is crucial in determining the viability of a project. While government support, expected return, and reliance on tried and tested technology can be important factors, the presence of a market is typically considered the primary condition for a project's viability.

**92. B**

As business grows, time management continues to be an issue, but the entrepreneur's major concern usually becomes finding, retaining, and motivating qualified employees.

The answer is option B.

**93. A**

"Drone" entrepreneurs suffer losses as they refuse to make any modifications in the existing production methods. Drone entrepreneurs are characterized by their rigid adherence to established practices and resistance to change. They may be unwilling to adapt or innovate, which can result in losses as the business environment evolves and new approaches or technologies emerge. Their reluctance to modify production methods can lead to inefficiencies or the inability to keep up with market demands, ultimately affecting the business's profitability.

**94. B**

Start-ups, Franchises, and buy-ins are legitimate ways on how someone can bring a new business idea to market.

Therefore, the answer is option B.

**95. A**

The business plan of a venture should show consistent but manageable projected growth because many entrepreneurs fail after expanding too rapidly. Sustainable growth allows for a strong foundation, operational efficiency, and risk management. While some investors may prefer quick growth, it depends on their specific objectives. Banks consider profitability along with other factors. Bankers and investors evaluate opportunities based on multiple factors, not just the size of the company.

**96. C**

Entrepreneurs have to deal with: C) Both external and internal uncertainties.

Entrepreneurship involves operating in an environment that is characterized by various uncertainties and risks. These uncertainties can arise from external factors such as changes in market conditions, customer preferences, technological advancements, regulatory changes, and economic fluctuations. Additionally, entrepreneurs also face internal uncertainties related to their business operations, such as resource allocation, talent management, product development, and financial stability.

Successful entrepreneurs must navigate and address both external and internal uncertainties to make informed decisions, adapt to changing circumstances, and mitigate risks. They need to stay proactive, gather information, analyze market trends, assess their internal capabilities, and make strategic adjustments to ensure their ventures remain competitive and sustainable.

**97. A**

In the context of market feasibility analysis, the analyst should consider option A) Target market attractiveness as a priority factor. Market feasibility analysis involves assessing the viability and potential success of entering a specific market. Target market attractiveness refers to the desirability and potential profitability of the market segment being considered. By prioritizing target market attractiveness, the analyst evaluates factors such as market size, growth rate, customer demand, competition, and profitability potential. This assessment helps in understanding whether the target market presents a favorable opportunity for the product or service being offered and whether it aligns with the company's objectives and capabilities. Analyzing target market attractiveness provides insights into the market's potential for generating sales, revenue, and long-term success, thus guiding the decision-making process.

**98. B**

According to Gary Hamel, one of the four pillars to create value for the company and the customer is option B) The management innovation. Gary Hamel, a management expert and author, emphasizes the importance of management innovation as a crucial element for creating value. Management innovation involves developing new and effective ways of organizing, leading, and managing within a company. It focuses on improving the efficiency, effectiveness, and agility of the organization's management practices and processes. By innovating in management, companies can drive productivity, foster creativity and collaboration, empower employees, and adapt to changing market conditions, ultimately creating value for both the company and its customers.

**99. A**

The type of innovation that seeks to make a better product to target the high-end of the market is option A) Sustaining innovation. Sustaining innovation involves incremental improvements and advancements in existing products or services to enhance their features, performance, or quality. This type of innovation aims to cater to the needs and preferences of existing customers in the higher-end or premium market segments by providing them with improved or superior offerings. Sustaining innovation helps companies maintain their competitive advantage, retain their customer base, and capture higher profit margins by offering enhanced value propositions to discerning customers.

**100. D**

PERT is best for research and development projects, but CPM is for non-research projects like construction projects. Therefore, CPM is superior to PERT in some situations. Statement C is true.

Therefore, the answer is option D.