CMAT 2021 Slot 1 Question Paper

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Quantitative Techniques and Data Interpretation

1. Two pipes A and B can fill a tank in 5 hours and 20 hours respectively. Both pipes together can fill the same tank in:

    A   4 hours

    B   6 hours

    C   10 hours

    D   2 hours

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2. In June-2020, the ratio of boys to girls in a college was 3 : 2. In September-2020, there were 80 fewer boys and 20 fewer girls in the college and the ratio of boys to girls was 7 : 5. What was the total number of students in the college in June-2020?
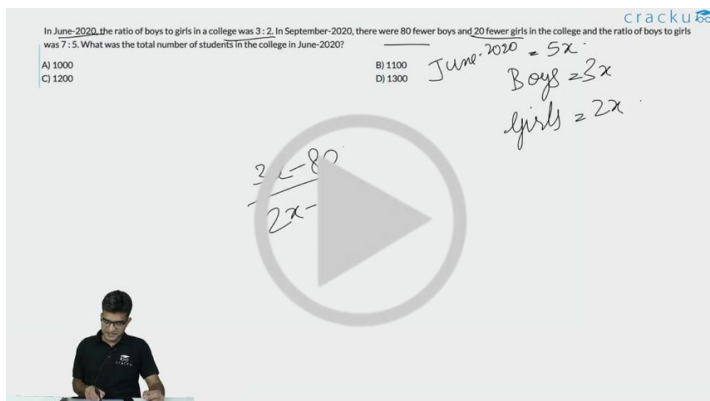
    A   1000

    B   1100

    C   1200

    D   1300

3. M is a 4-digit number. If the left most digit is removed, then the resulting three digit number is $\frac{1}{9}^{th}$ of M. How many such M's are possible?

A   10

B   9

C   8

D   7

4. L and M together can complete a piece of work in 72 days, M and N together can complete it in 120 days, and L and N together in 90 days. In what time can L alone complete the work?

A   150 days

B   80 days

C   100 days

D   120 days

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5. Given below are two statements
Statement I : The set of numbers(5,6, 7, p, 6, 7, 8, q) has an arithmetic mean of 6 and mode (most frequently occurring number) of 7. Then $p \times q = 16$.
Statement II: Let p and q be two positive integers such that $p + q + p \times q = 94$. Then $p + q = 20$.
In 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

6. A milkman adds 10 litres of water to 90 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:

   A   72 : 28

   B   28 : 72

   C   20 : 80

   D   30 : 70

A milkman adds 10 litres of water to 90 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:

A) 72 : 28   B) 28 : 72
C) 20 : 80   D) 30 : 70

7. In a $\triangle ABC, D, E$ and F are the mid-points of the sides AB, BC and CA respectively. Then the ratio of the area of a $\triangle DEF$ and the area of a $\triangle ABC$ is:

   A   1:4

   B   1:2

   C   2:3

   D   4:5

In a $\triangle ABC, D, E$ and F are the mid-points of the sides AB, BC and CA respectively. Then the ratio of the area of a $\triangle DEF$ and the area of a $\triangle ABC$ is:

A) 1:4   B) 1:2
C) 2:3   D) 4:5

8. A 100-meter long train crosses a 200-meter long and 20-meter wide bridge in 20 seconds. What is the speed of the train in Km/hour?

   A   45

   B   36

   C   54

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D   57.6

9. Given below are two statements:

Statement I: $\frac{\sqrt{7}+\sqrt{5}}{\sqrt{7}-\sqrt{5}} + \frac{\sqrt{7}-\sqrt{5}}{\sqrt{7}+\sqrt{5}} = 2$

Statement II: If $a + b + c = 0$, then $(a^3 + b^3 + c^3) \div abc = 3$

In 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

10. Given below are two statements:

Statement I : A coin is tossed three times. The probability of getting exactly two heads is 3/8

Statement II: In tossing of 10 coins, the probability of getting exactly 5 heads is 63/256

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 is true but Statement II is false

D   Statement I is false but Statement II is true

11. If $x^2 - 3x + 2$ is a factor of $x^4 - px^2 + q$, then (p,q) =

A   (5,2)

B   (5,4)

C   (-5,-4)

D   (-5,4)
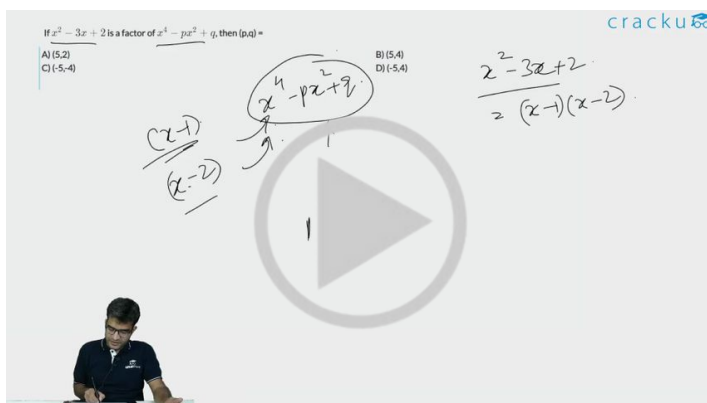
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12. In a 100 meter race, A beats B by 10 meters and B beats C by 5 meters. By how many meters does A beat C?

A   15.0 meters

B   15.5 meters

C   10.5 meters

D   14.5 meters
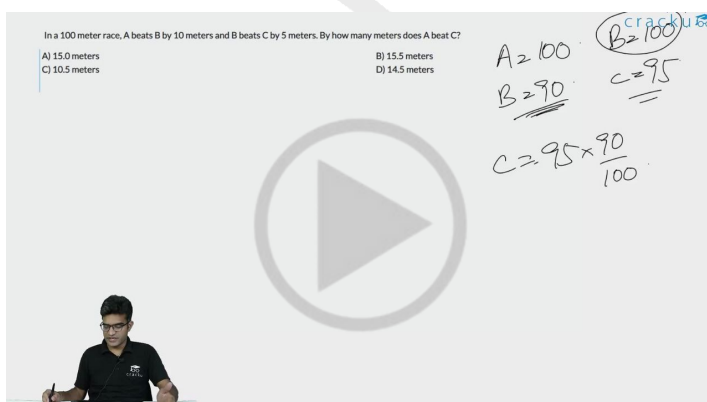
13. Mohan bought a trouser at 10% discount and sold it to Sohan at a loss of 10%. If Sohan paid Rs. 729 for the trouser to Mohan, then what was the undiscounted price of the trouser?

A Rs. 900/-

B Rs. 800/-

C Rs. 1000/-

D Rs. 911.25/-

14. Which of the following graphs represent the function of x?

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B)

C)

D)
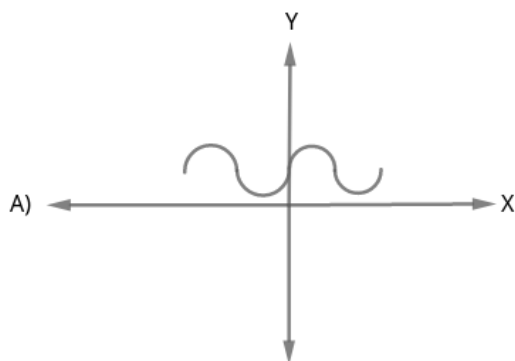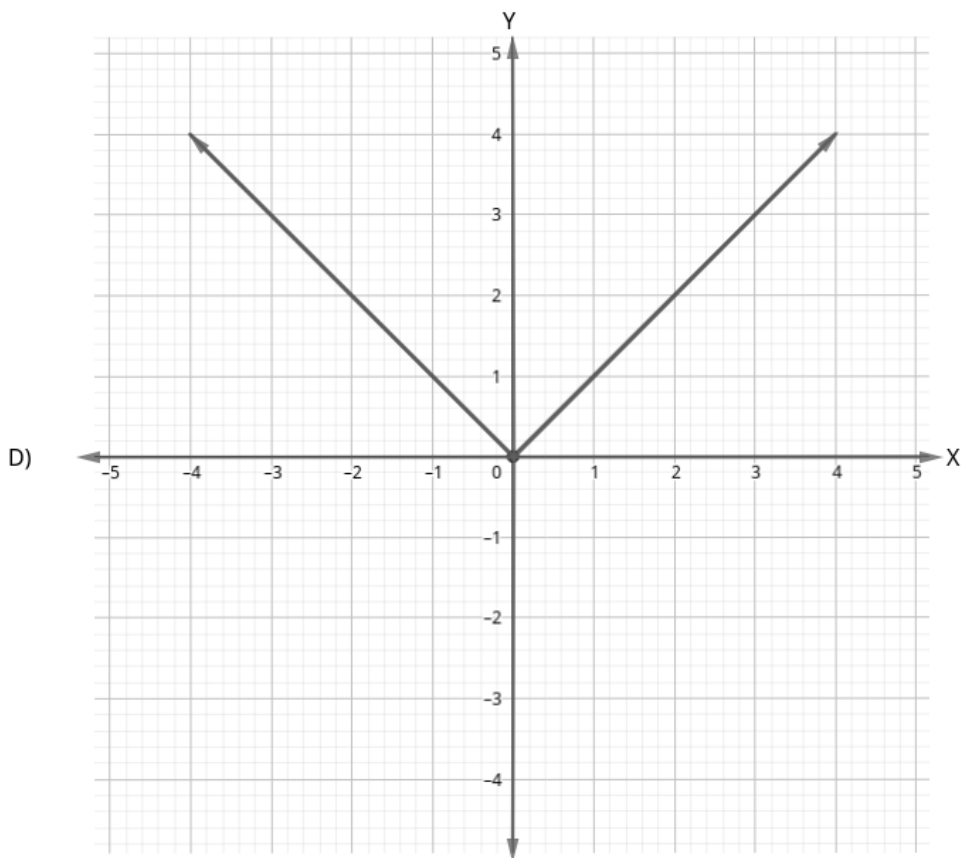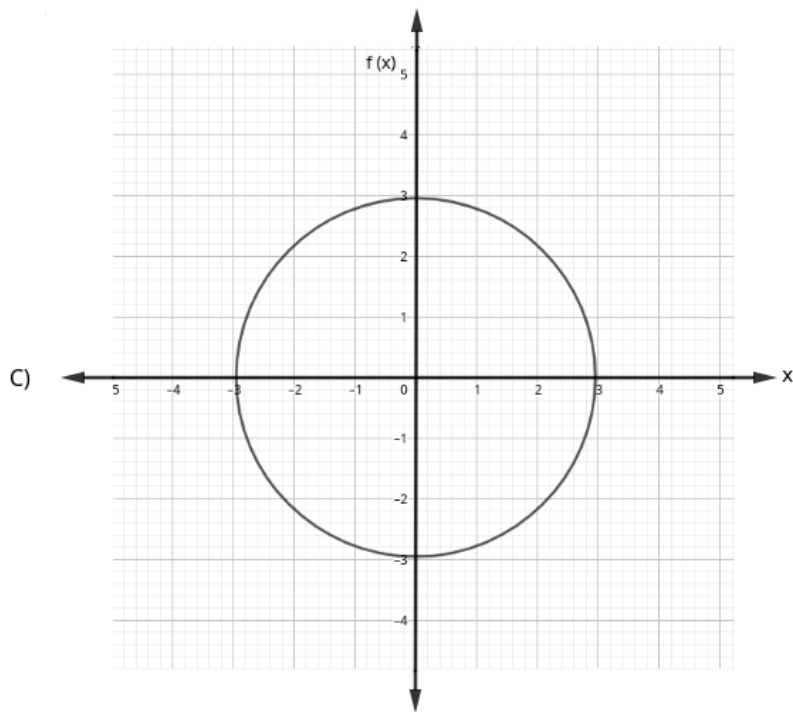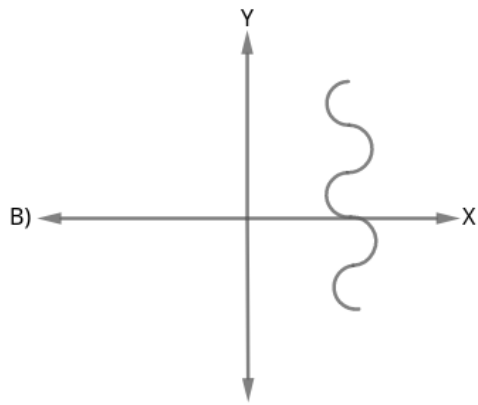
Choose the correct answer from the options given below :

A (A), (B) and (C) only

B (A), (B) and (D) only

C (A) and (D) only

D (A) and (C) only
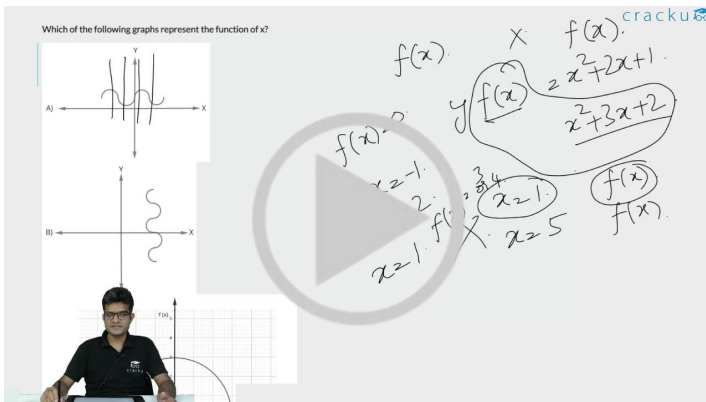
15. The following pie-chart indicates the monthly domestic budget of a family:
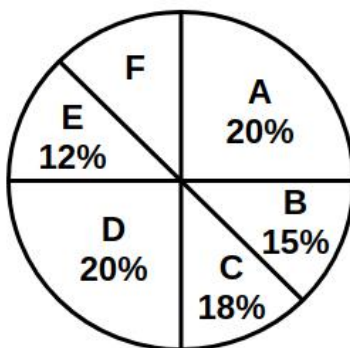
where A = Food: B = Conveyance; C = Clothing: D = House Rent: E = Miscellaneous Expenses: F = Saving.

If the monthly saving of the family is Rs. 4500, then the monthly income of the family is:

A Rs. 45000

B Rs. 30000

C Rs. 25000

D Rs. 20000

16. Two sisters Neha and Monica walk to school from the house. Neha takes 40 minutes while Monica takes 30 minutes. One day Neha started 5 minutes earlier than Monica. In how many minutes would Monica overtake Neha?

A 5

B   15

C   20

D   25

17. Given below are two statements
Statement I : A committee of 4 can be made out of 5 men and 3 women containing at least one woman in 65 ways.
Statement II : The number of words which can be formed using letters of the word ARRANGE' so that vowels always occupy even place is 36.

In 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

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18. If $A : B = C : D$, then the value of $\frac{A^2+B^2}{C^2+D^2}$ is

   A $\frac{1}{2}$

   B $\frac{A+B}{C+D}$

   C $\frac{A-B}{C-D}$

   D $\frac{A \times B}{C \times D}$
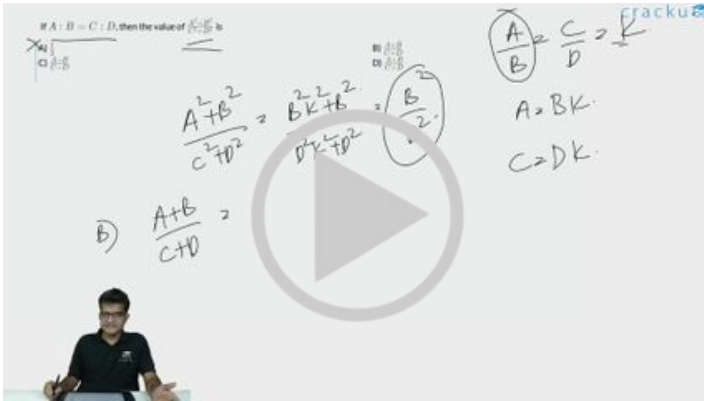
19. The dimensions of a floor are 18×24. What is the smallest number of identical square tiles that pave the entire floor without the need to break any tile?

   A   6

   B   24

   C   8

   D   12
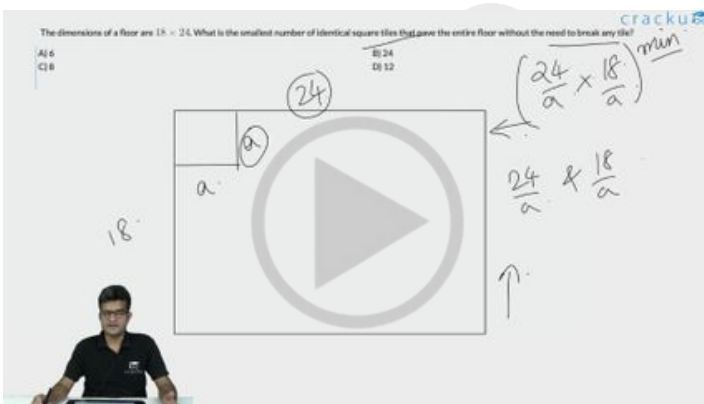
20. Which of the following statements regarding quadratic equations are true?

(A) Solution set for the equation $6x^2 - 5x = 4$ is $\left\{ -\frac{1}{2}, \frac{4}{3} \right\}$

(B) The nature of the roots of the equation $9x^2 + 6x + 1 = 0$ is equal, real and rational.

(C) If one root of $4x^2 - 3x + K = 0$ is 3 times the other, then $K = \frac{27}{256}$

A (A),(B) and (C)

B (A) and (B) only

C (B) and (C) only

D (C) and (A) only

21. Arrange the following rational numbers in ascending order:

(A) $\frac{-4}{5}$

(B) $\frac{-5}{12}$

(C) $\frac{-7}{18}$

(D) $\frac{-2}{3}$

A (A), (B), (D), (C)

B (C), (D), (B), (A)

C (A), (D), (B), (C)

D (D), (C), (B), (A)

22. Match List I with List II.

Let A and B be events with $P(A) = \frac{2}{3}, P(B) = \frac{1}{2}$ and $P(A \cap B) = \frac{1}{3}$

List		List-II	
Probability of an event		**Value**	
(A) $P(A \cap B^c)$		(I) $\frac{2}{3}$	
(B) $P(A \cup B^c)$		(II) $\frac{1}{3}$	
(C) $P(A^c \cap B^c)$		(III) $\frac{5}{6}$	
(D) $P(A^c \cup B^c)$		(IV) $\frac{1}{6}$	

(Here c stands for complement)

Choose the correct answer from the options given below:

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

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

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

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

23. In the year 2020, Production of Sugar (in Million Tonnes) by six major production units A-F of India are shown in the table given below:

Month	A	B	C	D	E	F
April	310	180	169	137	140	120
May	318	179	177	162	140	122
June	320	160	188	173	135	130
July	326	167	187	180	146	130
August	327	150	185	178	145	128

What was approximate percentage decrease in sugar production of unit B in June as compared to April?

A 8%

B 11%

C 15%

D 18%

24. The difference between the compound interest and simple interest for the amount Rs 5000/- in 2 years is Rs. 32. Then the rate of interest per annum is:

A 5%

B 8%

C 10%

D 12%

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25. Given below are two statements

Statement I: In the sequence of numbers 30, 90, 182, 306, 462,P........ . the term P is 650.

Statement II : There are 8 digits in 9^8 when it is expressed in decimal form.

In 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

Logical Reasoning

26. Find the number of triangles in the given figure :
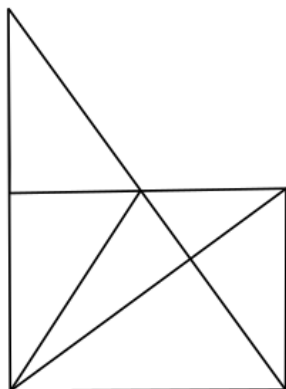
   A   11

   B   13

   C   15

   D   17

27. One statement and two conclusions for the statement are given. Read the statement, think logically about the conclusions and mark the correct option which follows the statement.

Statement : Socialization has an outcome.

Conclusion:
A. The persons being socialized acquire new skills.
B. Socialization does not lead to change in behaviour.

A   Only conclusion A follows

B   Only conclusion B follows

C   Either A or B follows

D   Neither A nor B follows

28. Find the missing number in the given series:
8, 13, 10, 15, 12, ____

A   14

B   17

C   18

D   20

29. Complete the sequence :
30, 56, 90, _____ , 182, 240.

A   145

B   132

C   110

D   160

30. Find out which of the given statement(s) is/are sufficient to answer the following question Who scored the highest marks in the class?
Statements :
(A) Pawan scored 98% marks in the class.
(B) Swati scored more than 98% marks in the class.
(C) The marks of all the students were less than that of Swati's marks.
Choose the correct answer from the options given below:

A   (A) only

B (B) and (C)

C (A), (B) and (C)

D (C) only

31. The given statement is followed by two arguments-I and II. Decide which argument(s) is/are correct for the statement.
Statement: We should plant more trees.
Argument I. Trees help in reducing pollution.
        II. Trees occupy too much of the earth's space.

A I is true

B II is true

C Either I or II

D Neither I nor II

32. Given below is a diagram of three circles X. Y and Z which represent musicians, singers and dancers, respectively. The circles intersect with each other and form regions- a, b, c and d. Select the region that represents musicians who are singers but not dancers.
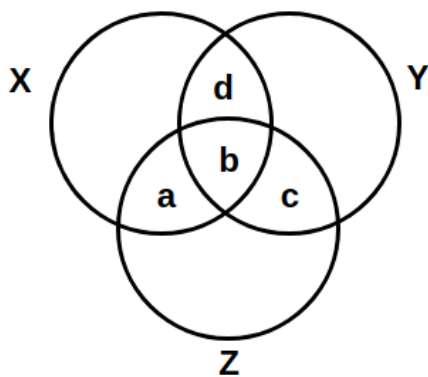
A Only c

B Only d

C a and d

D b and d

33. Find the odd one out :

A KMOQ

B SUWX

C ACEG

D IKMO

34. If CLAUSE is coded as ECSLUA. then the code of UMPIRE will be

A MRPIUE

B UEMRIP

C ERUMIP

D EURMIP

35. Find the wrong numberin this sequence :
72, 70, 67, 65, 58, 52, 45

  A 58

  B 65

  C 52

  D 70

36. In a certain language 'Roses are red' is coded as'ko ti na'. "Roses are beautiful' is coded as 'ho ti na'. Whatis the codefor'red' in that language?

  A ti

  B na

  C ho

  D ko

37. Six friends are sitting around a circular table in such a way that they are equidistant from each other. Kunal is sitting to the right of Alia and Dhruv is sitting between Arti and Jasmeet. Safi is sitting opposite to Jasmeet and to the right of Kunal. Who is sitting between Arti and Kunal?

  A Alia

  B Jasmeet

  C Safi

  D Dhruv

38. Select the suitable figure from the answer figure that would replace the question mark (?)

Problem Figure:

Answer Figure:

(A)   (B)   (C)   (D)

A   A

B   B

C   C

D   D

39. In a certain code, LUCKNOW is written as MTDJONX and SURFACE as TTSEBBF. How is HAPPINESS written in that code?

   A   IZQOJMFRT

   B   IBQQHOFRR

   C   GBQOHODRT

   D   GZQQJMDTT

40. In a certain code FLOWER is written as 325716 and WRITE as 76481. How is LITTER written in that code?

   A   314682

   B   241186

   C   248816

   D   748862

41. Sophia is walking in the east direction. After walking for some time. she turns left and then again turns 45^0 right. In which direction is she moving now?

   A   North

   B   West

C North-West

D North-East

42. Observe the given figure and read the statements (I), (II) and (III).
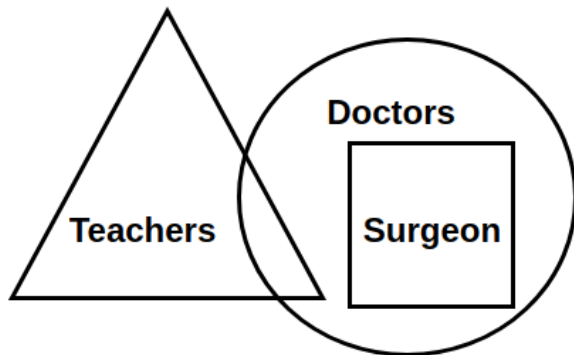
Statements:
(I) All teachers are doctors
(II) Some doctors are teachers
(III) All surgeons are doctors
Which of the following statement(s) is/are correct :

A (I), (II) and (III)

B (I) and (III)

C (I) and (II)

D (II) and (III)

43. Given below are two statements, one is labelled as Assertion A and the other is labelled as Reason R.

Assertion A : Solar energy is in abundance on the planet earth.
Reason R : Solar energy is available only in summer season.

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

A Both A and R are true and R is the correct explanation of A

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

C A is true but R is false

D A is false but R is true

44. P is the father of R, Q is the sister of P, R is the brother of C and S is the mother of P. How is R related to S?

A Grandson

B Granddaughter

C Mother

D Father

45. Ansh is taller than Akshita but shorter than Sharad. Akshita is shorter than Sharad but taller than Sneha. Who is the tallest one?

A Sharad

B Akshita

C Sneha

D Ansh

46. Choose the missing item in the series:
CDFG, IJLM, OPRS,_____, ABDE

A UWYZ

B TUVW

C UVXY

D STUV

47. In analogy, you are required to guess the relation between the two given words and fill in the blanks after finding the similar relationship by choosing any word from the options given below:
BEES : SWARM :: LIONS :_____

A SCHOOL

B PACK

C PRIDE

D BAND

48. A says to B, 'I am the mother of your grandfather's son.' How is A related to B?

A Grandmother

B Sister

C Daughter

D Grandson

49. Aman is five ranks ahead of Isha in a class of 30 students. If Isha's rank is 14th from the last, then what is Aman's rank starting from Chetan at the 1st position?

A 13th

B 12th

C 16th

D 19th

50. A, B, C and D play tennis. B and C play football also. D does not play chess but plays badminton. Who plays only tennis?

A D

B B

C A

D C

Language Comprehension

Instructions [51 - 53]

Read the given passage and answer the questions that follow.

Few doctor have any time for the study of philosophy, for their profession is an exacting one, and it is all they can do to keep abreast of its advances. What is true of Medical Science is also true of the whole civilized world. Men at present are so engrossed in their various occupations, in manufacturing goods, in buying and selling, in accumulating wealth or in struggling merely to maintain themselves that they have no time left to wonder what living is all about.

51. The expression "it is all they can do" in the first sentence conveys the idea of all that

A doctor can manage to do

B philosopherssay is good for man

C doctors are expected to do

D people todayare willing to do

52. The expression that "their profession is an exacting one" is the best described by which one of the following statements?

A Doctors have to be very precise in their work

B Medical Science is a well-defined subject

C Doctors have a challenging job with hardly any spare time

D   Medical Science is a more exact subject than philosophy

53. The author compares medical profession with various other occupation in order to show that

A   Doctors are much more busy than people in other occupations

B   Doctor had to read a great deal online people in other occupations

C   The study of philosophy is particularly important to doctors

D   People in their occupations have no more time to study philosophy than doctors have

Instructions [54 - 57]

Read the given passage and answer the questions that follow.

Our government has taken/ propose a number of major initiatives during the eleventh Five Year Plan. Some of the new initiative in the school and literacy sector and higher and technical education sector include : right of children to free and compulsory education, launching a Saakshar Bharat, ICT in secondary school and in open and distance learning. evolving a national curriculum framework for teacher education, examination reform in accordance with NCF- 2005, introducing a system of replacement of marks by grades at the secondary stage in school affiliated to CBSE. recommendation of Yash Pal Committee and National Knowledge Commission, establishment of 14 innovation Universities aiming at world class standards, setting up 10 new national institutes of technology. launching of new scheme of interest. subsidy on educational loan taken for professional courses by the economically weaker students, scheme for setting up of 374 model degree colleges in districts, 150 women's hostels for women of weaker sections and minorities, academic reforms like semester system, choice based credit system, regular revision of syllabi, impetus to research etc.

54. The free and compulsory education bill of the eleventh Five Year Plan is a major initiative towards

A   Technical Education

B   Mass education

C   Replacing Grade to marks

D   Sarva Shiksha Abhiyan

55. Technical education is encouraged by our government by the introduction of

A   ICT in open and distance learning

B   Ten new National Institutes of Technology

C   Innovation Universities

D   The National Knowledge Commission

56. In order to ensure all round development in the field of education our government should take steps towards

A   Educating all women and people below poverty line

B   The enhancement of the learning achievements

C The implementation of the eleventh Five Year Plan and the eradication of caste, creed and gender bias

D all of the above

57. The overall Idea behind the passage is

A Importance to higher education

B Importance to people below poverty line

C Women's education

D None of these

Instructions [58 - 60]

Read the given passage and answerthe questionsthat follow.

Education is not only an instrument for enhancingefficiency but also an effective tool of augmenting and widening democratic participation and upgrading the overall quality of individual and society. India has a vast population and to capture the potential demographic dividend to remove the acute regional, social and gender imbalances. the government is committed to make concerted efforts for improving the quality of education as mere quantitative expansion will not deliver the desired results in view of the fast changing domestic and global scenario.

58. High quality education can help the individual to balance between

A the mark system and the grading system

B regional, social and gender differences

C the inequalities between the rich and the poor

D the past, present and the future

59. According to the author, education not only enhances the efficiency of the learner, it also

A widens his / her democratic participation

B upgrading overall quality of individual

C improving society

D all of the above

60. Mere quantitative expression of education doesn't deliver the desired results, because

A education is the overall growth of a person

B the fast-changing global scenario is challenging

C it is the duty of the government to improve the quality of education

D people are willing to invest more on education

Instructions [61 - 64]

Read the given passage and answer the questions that follow.

Philosophy of Education is a label applied to the study of the purpose, process, nature and ideals of education. It can be considered a branch of both philosophy and education. Education can be defined as the teaching and learning of specific skills and imparting of knowledge, judgment and wisdom, is something broader than the societal institution of education we often speak of.

Many educationalists consider it a weak and woolly field, too far removed from the practical applications of the real world to be useful. But philosophers dating back to Plato and the Ancient Greeks have given the area much thought and emphasis, and there is little doubt that their work has helped shape the practice of education over the millennia.

Plato is the earliest important educational thinker, and education is an essential element in "The Republic" (his most important work on philosophy and political theory, written around 360 B.C.). In it, he advocates some rather extreme methods: removing children from their mothers' care and raising them as wards of the state, and differentiating children suitable to the various castes, the highest receiving the most education, so that they could act as guardians of the city and care for the less able. He believed that education should be holistic, including facts, skills, physical discipline, music and art. Plato believed that talent and intelligence is not distributed genetically and thus is be found in children born to all classes, although his proposed system of selective public education for an educated minority of the population does not really follow a democratic model.

Aristotle considered human nature, habit and reason to be equally important forces to be cultivated in education, the ultimate aim of which should be to produce good and virtuous citizens. He proposed that teachers lead their students systematically, and that repetition be used as a key tool to develop good habits, unlike Socrates' emphasis on questioning his listeners to bring out their own ideas. He emphasized the balancing of the theoretical and practical aspects of subjects taught, among which he explicitly mentions reading, writing, mathematics, music, physical education,literature, history, and a wide range of sciences, as well as play, which he also considered important.

During the Medieval period, the idea of Perennialism was first formulated by St. Thomas Aquinas in his work "De Magistro". Perennialism holds that one should teach those things deemed to be of everlasting importance to all people everywhere, namely principles and reasoning, not just facts (which are apt to change over time), and that one should teach first about people, not machines or techniques. It was originally religious in nature, and it was only much later that a theory of secular perennialism developed.

61. What is the difference between the approaches of Socrates and Aristotle?

A Aristotle felt the need for repetition to develop good habits in students: Socrates felt that students need to be constantly questioned

B Aristotle felt the need for rote-learning: Socrates emphasized on dialogic learning

C There was no difference

D Aristotle emphasized on the importance of paying attention to human nature; Socrates emphasized upon science

62. Why do educationists consider philosophy a 'weak and woolly' field?

A It is not practically applicable

B Its theoretical concepts are easily understood

C It is irrelevant for education

D None of the above

63. Were Plato's beliefs about education democratic?

A He believed that only the rich have the right to acquire education

B Yes

C He believed that only a select few are meant to attend schools

D He believed that all pupils are not talented

64. Why did Aquinas propose a model of education which did not lay much emphasis on facts?

A Facts are not important

B Facts do not lead to holistic education

C Facts change with the changing times

D Facts are frozen in time

65. Choose the appropriate option for the underlined phrase

Rama told his wife, he would not mind <u>standing and eat the dinner</u>.

A stand and eat the dinner

B stand and eating the dinner

C standing and eating the dinner

D no correction

66. The sentence is underlined in three separate parts and each one is labeled as (a), (b), (c). Read the sentence to find out whether there is an error in any underlined part. No sentence has more than one error. If you think there is no error in any part. You can choose option (d) :

If she will be promoted (a)/ she will get (b)/ a higher salary.(c)/ No error(d).

A a

B b

C c

D d

67. Select the option that corrects the underlined part.

Sabotage came from the French saboter, <u>which means "to</u> clatter with wooden shoes (sabots)".

    A   which means "to

    B   which means,"to

    C   that means "to

    D   that means -"to

68. Choose the word that is most nearly like that expressed in following statement:
One who is extremely fond of his wife :

    A   Utopia

    B   Uxorious

    C   Polygamist

    D   Recluse

69. Replace the underlined portion with the answer choice that results in a sentence that is clear and precise.

The train is <u>expected to arrive between 11 pm to 12 pm.</u>

    A   The train is expecting to between by 11 pm to 12 pm.

    B   The train is expected to arrive between 11 pm and 12 pm.

    C   The train is expected to arrive between 11 pm or 12 pm.

    D   The train is expected for arrival between 11 pm to 12 pm.

70. Find the alternative statement which meets the requirements of standard written in English.

The payment was collected by the hardworking salesman.

    A   The hardworking salesman collects the payment

    B   The hardworking salesman was able to collect the payment.

    C   The hardworking salesman collected the payment

    D   To collect the payment the salesman had to work hard.

71. Select the alternative that is the best substitute of the phrase.'a loud. harsh. piercing cry'.

    A   howl

    B   Noise

    C   Scream

D Screech

72. Choose the correct word/words to fill in the blanks.
Mr. Mehta,a biologist. spends three seasons in the US and returned with clear perceptions of that ____ and uninhabitable place.

A arid

B deserted

C rare

D nomadic

73. In light of her extraordinary creative budgeting proposal, a recent poll put Susan ahead of George in the race for governor and found her to be the best candidate of the two.

A In light of her extraordinarily creative budgeting proposal, a recent poll put Susan ahead of George in the race for governor, finding Susan to be the best candidate of the two.

B A recent poll put Susan ahead of George. in the race for governor, found Susan to be the better candidate of the two because of her extraordinarily creative budgeting proposal.

C In light of her extraordinarily creative budgeting proposal, a recent poll put Susan ahead of George in the race for governor and found her to be the better candidate of the two.

D In light of her extraordinary creative budgeting proposal, a recent poll put Susan ahead of George in the race for governor and found her to be the best candidate of the two.

74. Replace the underlined portion with the answer choice that results in a sentence that is clear, precise and meets the requirements of standard written English.

Jessica Mitford wrote The American Way of Death, a best-selling book <u>that led eventually</u> to an official investigation of the funeral industry.

A that led eventually

B that had led eventually

C that eventually led

D which eventually led

75. Choose the preferred idiom for the blanks :
I don't know I am ready to take the test now and I will ever be ready in the future.

A if, if

B whether, whether

C if, whether

D whether, if

General Awareness

76. Which one of the following statements best describes the term Social Cost of Carbon?
It is a measure, in monetary value, of the

A long-term damage done by a tonne of CO_2 emissions in a given year

B requirement of fossil fuels for a country to provide goods and services to its citizens, based on the burning of those fuels

C efforts put in by climate refugee to adapt to live in a new place

D contribution of an individual person to the carbon footprint on the planet Earth

77. With reference to the State Legislative Council in India, which among the following statements is / are correct?

(A) The Legislative Council is a continuing House & two-third of the members retire in two years.
(B) Members of local bodies elect one-third of the total number of members of the legislative council
(C) If a state legislative council is to be created or abolished, a resolution to that effect is to be first passed by the State legislature by a two-third majority

Choose the correct option from the options given below:

A Only (A) and (B)

B Only (B) and (C)

C Only (A) and (C)

D (A), B) and (C)

78. With which theatre in London. Shakespeare was associated with :

A The Globe

B London Coliseum

C West End Theatre

D Royal Court Theatre

79. Which of the following personalities has been appointed as the head of Tehelka Panel after the much in news resignation of its chief K.Venkataswamy?

A G.C. Saxena

B S.N. Variyawa

C   S.N. Phukan

D   Kuldeep Singh

80. How much India needs to invest on infrastructure to become USD trillion economy by 2024-25?

A   USD 1.2 trillion

B   USD 1.4 trillion

C   USD 1.6 trillion

D   USD 1.8 trillion

81. Which of the following eminent personalities was the ninth monarch of Thailand from the Chakri Dynasty as Rama IX?

A   Sirikit Kitiyakara

B   Vajiralongkorn

C   Ananda Mahidol

D   Bhumibol Adulyadej

82. Which of the following is not matched?

A   Article 54 : Presidential election

B   Article 55 : Manner of Presidential Election

C   Article 60 : Procedure for impeachment of the President

D   Article 123: Power of the President to promulgate ordinance

83. Which of the following committee made a recommendation that election commission should be a three member body?

A   Tarkunde Committee

B   Ashok Mehta Committee

C   Jeevan Reddy Committee

D   JP Committee

84. The language and ideals of the Preamble of Constitution of India is influenced / borrowed from which of the following constitution(s)?
(A) USA

(B) France
(C) Australia
Choose the correct answer from the options given below:

A   Only (A) & (B)

B   Only (B) & (C)

C   (A), (B) & (C)

D   Only (A) & (C)

85. In which among the following organ, "Bowman's Capsule" is found?

A   Liver

B   Kidney

C   Heart

D   Small intestine

86. Which of the following report is not matched correctly?

A   World Employment and Social Outlook: ILO

B   Global Financial Stability Report: IMF

C   Global Competitive Index: WEF

D   Global Economic Prospects:WTO

87. If another global financial crisis happens in the near future, which of the following actions/ policies are most likely to give some immunity to India?
(A) Not depending on short-term foreign borrowings.
(B) Opening up to more foreign banks.
(C) Maintaining full capital account convertibility.
Choose the correct answer using the options given below:

A   (A) only

B   (C) only

C   (A) & (B) only

D   (A), (B) & (C)

88. Which one of the following was the official mascot of Khelo India Youth Games, 2020?

A   Vijaya

B   Yaya

C   Rongmon

D   Ammu

89. To conquer and annex Peshawar and Punjab. Mahmud of Ghazni defeated?

A   Ghurids

B   Arabs

C   Karkotakas

D   Hindushahis

90. Consider the following statements regarding to the Sattriya dance and choose the correct answer from the options given below :
(A) Sattriya is a fusion of dance, drama and music.
(B) It follows the old living tradition of Vaishnavites of Assam.
(C) It is based on various Ragas and Talas of devotional songs of Tulsidas, Kabir and Mirabai.

A   Only (C)

B   Both (A) and (B)

C   Both (A) and (C)

D   All the above

91. Which one of the following mountain range lies in between Caspian Sea and Black Sea?

A   Caucasus

B   Carpathians

C   Apennine

D   Elburz

92. The Economic Survey 2020 suggests Employee Stock Ownership for which sector?

A   Manufacturing

B   Banking

C   Agriculture

D   Infrastructure

93. With the range of 16000 kms. which of the following is world's longest range intercontinental ballistic missile:

A   SS-18 Satan

B   Topolov-M

C   DongFeng 5A

D   Trident D5

94. The Paithan (Jayakwadi) Hydro-electric project. completed with the help of Japan, is on the river:

A   Ganga

B   Kaveri

C   Godavari

D   Narmada

95. L&T Technology Services, the engineering services arm of Larsen and Toubro Group. informed that it will acquire a 100 % stake in which Texas-based company?

A   PCL Construction

B   Bechtel Group Inc

C   Orchestra Technology

D   Turner Construction

96. Which of the following is the longest Indian Novel ever published in a single volume in English language:

A   Train to Pakistan

B   Revolution 2020

C   A Suitable Boy

D   The God of Small Things

97. RBI's Mega Bank Consolidation Plan of Merger of 10 banks into 4 became effective from which date?

A   1 January, 2020

B   1 March, 2020

C   31 March, 2020

D   1 April, 2020

98. Consider the following :
   (A) Mahavir Jayanti.
   (B) Buddha Purnima,
   (C) Guru Nank Jayanti
   Which among the following may fall in the same months of the Gregorian calendar?

   A   (B) and (C)

   B   (A) and (B)

   C   (A) and (C)

   D   (A), (B) and (C)

99. If we are using the following words in a game. Which game are we playing?
   Break, Cannons,Cue.In off, Jigger, Scratch

   A   Billiards

   B   Bridge

   C   Polo

   D   Baseball

100. The Vijayanagara king who employed skilled archers of the Turkish clan and raised the fighting capacity of
   his bowmen was :

   A   Bukka I

   B   Deva raya I

   C   Krishnadevaraya

   D   Ramaraya

Innovation and Entrepreneurship

101. Some one legally appointed to sell off the assets of a bankrupt firm is called

   A   An Auctioneer

   B   A Liquidator

   C   A Terminator

   D   An advocate

102. Mixed Economy refers to

A Coexistence of small and large industries

B Coexistence of agriculture and industry

C Coexistence of public and private sector

D Coexistence of domestic and foreign enterprises

103. The term bootstrapping is often associated with

A Start-ups

B Venture Capital Funds

C Financial institutions

D Non-Financial Institutions

104. Ru Pay has been launched by

A National Securities Depository Limited

B National Payments Corporation of India

C Central Depository Services Limited

D Reserve Bank of India

105. A startup defined as an entity that is headquartered in India, which was opened less than 10 years ago, and has an annual turn over less than

A Rs. 10 crore

B Rs. 100 crore

C Rs. 50 crore

D Rs. 1 crore

106. Who has launched the UPI-based payments app in the country by the name of 'Tez'?

A IBM

B Google

C Microsoft

D TCS

Instructions [107 - 115]

After reading the passage given below,choose the best answer to each question that follows.

What advice would I give to new entrepreneurs who need funding? Forget about your business plan and buy a lottery ticket — your chances are better. My point is that when you need venture funding no one will give any money until you already have a marketable product. In other words, funding comes just when you do not need it. A myth is that the way to start a venture is to create a great business plan, perfect your pitch, and then present this to investors, starting with venture capitalists. If that does not work, you knock on the door of angel investors. But ask any entrepreneur who has called on venture capitalists and they will probably tell you that it is almost impossible to even get calls returned. If venture capitalists do respond and you are invited to present your idea, the process will drag on for many months while you borrow more and survive on hope. If you do hit the jackpot, you are required to let the investors make many of the business decisions in exchange for an investment. To be fair, most business plans do not deserve funding. Venture capitalists receive hundreds of plans every week, and few are worth the paper they are printed on. Everyone jumps on the same new trend, or the ideas are so far out that they have no chance of success. And great ideas are not enough: it takes experienced management, excellent execution, and a receptive market. It is hard for even the best venture capitals to identify the potential successes. So what should an entrepreneur do? What all new entrepreneurs should understand is that, even if you have a realistic business plan for a great idea that can change the world, you need to develop it yourself until you can prove it. Focus on validating your idea and building it up. Raise money to get started by begging and borrowing from family and friends. And be prepared to dip into your savings and credit cards, obtain second mortgages, and perhaps look for consulting work or customer advances. There is no single recipe for developing your business idea yourself, but there are some essential ingredients. Here are some pointers: Consult widely. Share your ideas with those who have done it before. You can learn a lot from the experience of seasoned entrepreneurs, and they are much more approachable than you think. If you cannot find anyone who is excited about your idea, the chances are it is not worth being excited about. This may be time to reflect deeply and come up with another. Identify markets. Speak to anyone who can help you understand your target customers. If you can sell your concept, some customers may help you find it or agree to be a test site or a valuable reference. Customers do not usually know what they want, but they always know what they do not need. Make sure that there is a real need for your product. Start small. Your idea may be grand and have the potential to change the world, but you are only going to do this one step at a time. Look for simple solutions, test them and learn from the feedback. If you are starting a restaurant, work for some one else first. If you are creating a software product, learn by doing some consulting assignments or create some utilities. You do not have to start with the ultimate product. Watch every penny. Focus on revenue and profitability from the start. Find creative ways to earn cash by selling tactical products, prepaid licenses or royalties. Pay employees partially in stock. Look for access to free hardware or premises. And sweep the floors yourself. In short, use any methods to avoid costs. Prepare for the worst. It is going to take longer than you think. There will likely be product problems, unhappy customers, employee turnover, and lots of financial challenges. You may even fail a number of times before you achieve your goals. By learning from each success and failure alike, you increase the odds that you eventually make it. Keep your integrity. Never forget the importance of business ethics and your own values. Ethics need to be carefully sewn into the fabric of any start-up. And the only way to reach long-term success is by achieving outstanding customer satisfaction. With a lot of luck and hard work you may build a successful company that markets products customers really want. It is very likely that by this stage, you receive the phone calls from venture capitalists. This is the time to think of exit strategies and decide if you want to own a small piece of a big pie or a large piece of a small pie. (The passage taken from Book/News/Open source)

107. "a marketable product" as mentioned in the passage signifies:

A A product that appeals to buyers and sell at a certain price range to generate profit

B A product that appeals to investors and help them get their money back

C A product whose market value is increasing continuously and becoming difficult for buyers to buy the same

D A product that is appreciated by the media houses and earn revenue from advertisements

108. The phrase "and few are worth the paper they are printed on" as exists in the above passage means

A   The ideas are good

B   Hardly any idea is good

C   Some ideas are good

D   Thefew ideas that are good can get others to invest in it

109. "Exit strategies", as mentionedin the passage,signifies:

A   An entrepreneur's strategic plan to sell his or her ownership in a company to investors or another company

B   An entrepreneur's strategic plan to execute the daily plan for his/her business

C   An entrepreneur's strategic plan to conduct exit interviews for employees who plan to leave

D   An entrepreneur's strategic plan to analyse market and exit from one product to another

110. According to the passage which are the essential ingredients for developing a business idea?

A   Identify market but hide the idea from others

B   Consult widely. Share your ideas with entrepreneurs. Identify markets

C   Alwaysshare your ideas andgofor joint ventures

D   Always speak to your investors first even before you develop your idea

111. According to the given passage whichofthe following is NOT a correct statement?

A   Ethics need to be carefully sewn into the fabric of any start-up

B   Share your ideas with those who have doneit before

C   It also shows that the phenomenonis heterogeneous

D   In other words, funding comes just when you do not needit

112. A. It is hard for even the best venture capitals to identify the potential successes.
 B. Focus on validating your idea andbuildingit up.

A   According to the above passage, both A and B are true

B   According to the above passage, both A and B are false

C   According to the above passage A is true and isfalse

D   According to the above passage is false and B is true

113. What are the two business ideas that are shared in the passage as examples?

A   Starting a school and creating a web portal for selling grocery

B   Starting a clothing store and creating a web portal for house hold services

C   Starting a hospital and manufacturing a product

D   Starting a restaurant and creating a software product

114. Which of the following statements is true as per the given passage?

A   Investors always respond promptly to funding applications

B   Venture Capitalist is a sure source of funding for new businesses

C   Ethics need to be carefully sewn into the fabric of any start-up

D   The process of obtaining funding will proceed at a fast pace

115. Which of the following advices are given by the writer in this passage?

A   Make sure that you have enough money before you start your business

B   Make sure you have secured an educational degree before you start your business

C   Make sure that there is a real need for your product. Start small

D   Make sure that you have approached an angel investor before you start your business

116. The legal term for brandis :

A   Patent

B   Licence

C   Trademark

D   None of the above

117. Entrepreneurs are risk

A   Averse

B   Haters

C   Takers

D Lovers

118. Entrepreneurial intent is linked to:

A Personality traits and the likelihood that an individual would set up a new venture

B High rewards and low risks

C Tapping opportunities and seeking recognition

D Managing resources and family context

119. What type of financing do "Angel investors" usually provide?

A Debt

B Equity

C Stock sales

D None of the above

120. Market segments should compromise of customers who:

A Share similarities

B Do not share similarities

C Have bought the productor service previously

D Have not bought the productor service previously

121. The conclusion part of the business plan will identify the

A Feasibility of the business.

B Market description

C Administrative aspects of the business

D Business suppliers

122. The idea and actions that explain how an entrepreneur will make his/her venture profitable and impactful is commonly referred to as

A Mission

B Goal

C Strategy

D Objective

123. Among the barriers to entering an industry are:

A Patents

B Switching costs

C Status symbols

D All of the above

124. Team members need a:

A Similar set of competencies

B Identical competencies

C Diverse set of competencies

D Unusual set of competencies

125. A word, symbol, name, or device that a business uses to identify its goods and distinguish itself from others is called a

A Trade Mark

B Brand

C Asset

D Trade Secret

Answers

Quantitative Techniques and Data Interpretation

1.**A**	2.**D**	3.**D**	4.**D**	5.**B**	6.**B**	7.**A**	8.**C**
9.**D**	10.**A**	11.**B**	12.**D**	13.**A**	14.**C**	15.**B**	16.**B**
17.**A**	18.**D**	19.**D**	20.**B**	21.**C**	22.**A**	23.**B**	24.**B**
25.**A**							

Logical Reasoning

26.**B**	27.**A**	28.**B**	29.**B**	30.**D**	31.**A**	32.**B**	33.**B**
34.**D**	35.**B**	36.**D**	37.**C**	38.**D**	39.**A**	40.**C**	41.**D**
42.**D**	43.**C**	44.**A**	45.**A**	46.**C**	47.**C**	48.**A**	49.**B**
50.**C**							

Language Comprehension

51.**A**	52.**C**	53.**D**	54.**C**	55.**B**	56.**D**	57.**A**	58.**B**
59.**D**	60.**B**	61.**A**	62.**A**	63.**B**	64.**C**	65.**C**	66.**A**
67.**A**	68.**B**	69.**B**	70.**C**	71.**D**	72.**B**	73.**C**	74.**C**
75.**D**							

General Awareness

76.**A**	77.**B**	78.**A**	79.**C**	80.**B**	81.**D**	82.**C**	83.**A**
84.**C**	85.**B**	86.**D**	87.**A**	88.**A**	89.**D**	90.**B**	91.**A**
92.**B**	93.**A**	94.**C**	95.**C**	96.**C**	97.**D**	98.**B**	99.**A**
100.**B**							

Innovation and Entrepreneurship

101.**B**	102.**C**	103.**A**	104.**B**	105.**B**	106.**B**	107.**A**	108.**B**
109.**A**	110.**B**	111.**C**	112.**A**	113.**D**	114.**C**	115.**C**	116.**C**
117.**C**	118.**A**	119.**B**	120.**A**	121.**A**	122.**C**	123.**A**	124.**C**
125.**A**							

Explanations

Quantitative Techniques and Data Interpretation

1. **A**
Let the volume be 20 units
So A fills at 4 units/hr
B fills at 1 unit/hr
Now together they fill 4+1 = 5 units/ hour
Now time taken to fill completely : 20/5 = 4 hrs

▶ VIDEO SOLUTION

2. **D**
In June 2020
Let the number of boys be 3x
So number of girls will be 2x
Now number of boys in September 2020: 3x-80 and girls in September 2020 : 2x-20
Now as per given 3x-80:2x-20 =7:5
we get 15x-400 =14x-140
we get x=260
So number of students in June 2020 = 3x+2x =5x = 1300

▶ VIDEO SOLUTION

3. **D**
According to question,

Number AXYZ/9 = XYZ

It can be written as

A000/9 + XYZ/9 = XYZ

A000/9 + XYZ/9 = 9XYZ/9

A000/9 = 8XYZ/9

A000 = 8XYZ

We have to find the maximum value of A so that when A000 is divided by 8 gives three digit numbers.

7000/8= 875 and 8000/8=1000.

So, answer is 7.

▶ VIDEO SOLUTION

4. **D**
Let L does a units of work/day
M does b units of work/ day
N does c units of work/ day
Now as per given conditions :
Let work be W
So we get
W = 72(a+b) =120(b+c) =90(a+c)
we get
6a+6b = 10b +10c
we get 6a-4b-10c=0   (1)

also
4a+4b =5a+5c
we get a-4b+5c =0   (2)
From (1) and (2)
we get a=3 , b=2 and c=1
Now therefore W = 360
Now time taken by L alone to complete the work = 360/3 = 120 days

5. **B**

Statement 1:

It is given that the mode of the set is 7. Thus, either p or q(or both) will be 7.

Now, p*q will be a multiple of 7. But it is given that p*q = 16. Thus, this statement is false.

Statement 2:

It is given that p + q + p*q = 94

If p + q = 20, then p*q = 74.

Thus, either (p,q) will be (2,37), (37,2), (1,74) or (74,1).

Since none of the values will give a sum of 20, this statement is also false.

Thus, the correct option is B.

6. **B**
Initially Milkman has 90 liters of milk
Now amount of water added = 10 liters
So total quantity becomes : 100 liters
He sold 1/5 of quantity
so he sold 2 liters of water and 18 liters of milk (A total of 20 liters is sold)
Now he is left with 10-2 = 8 liters of water and 90-18 = 72 liters of milk.
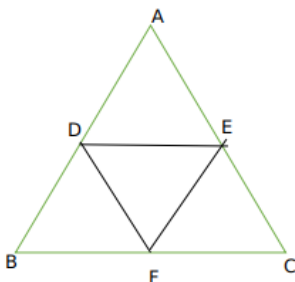Now he adds 20 liters of water
so the amount of milk and water with him will be : 72 and 28 respectively.

7. **A**
We are given :

Now In triangle ABC
using the mid point theorem
we get DE || BC and DE = $\frac{1}{2}(BC)$
Now ADE is similar to ABC
So Area of ADE : Area of ABC = (DE/BC)^2 = 1:4
Similarly Area of BDF :Area of ABC = 1:4
and Area of CEF : Area of ABC = 1:4
Now we can say if area of ABC = 4A
then area of ADE = area of BFD = area of CEF = a
Therefore area of DEF = 4a-3a =a
so area of DEF : area of ABC = 1:4

> ▶ VIDEO SOLUTION

8. **C**
We will only consider length of bridge
Now total distance = 100+200 = 300m
Now time taken to cross = 20 seconds
Therefore speed = 15m/sec = 15(18/5) = 54km/hr

> ▶ VIDEO SOLUTION

9. **D**
From statement 1 we get
Adding taking LCM
$$\frac{\left(\sqrt{7}+\sqrt{5}\right)^2 + \left(\sqrt{7}-\sqrt{5}\right)^2}{7-5}$$
= 12
So statement 1 is false
Now statement 2 is an identity
so 2 is true .

> ▶ VIDEO SOLUTION

10. **A**
Statement I:

Probability of getting head = P(H) = $\frac{1}{2}$

Probability of getting tail = P(T) = $\frac{1}{2}$

3 coins are tossed and probability of getting 2 heads = $3_{C_2}\left(\frac{1}{2}\right)^2\left(\frac{1}{2}\right)$ = $\frac{3}{8}$

Statement I is true.

Statement II:

10 coins are tossed and probability of getting exactly 5 heads = $10_{C_5}\left(\frac{1}{2}\right)^5\left(\frac{1}{2}\right)^5$ = $\frac{63}{256}$

Statement II is true

Answer is option A.

11. **B**

We have :
$f(x) = x^4 - px^2 + q$
Now $x^2 - 3x + 2 = (x-2)(x-1)$ is a factor of f(x)
so we can say f(2) = f(1) =0
substituting we get
1-p+q =0
p-q =1
and 16-4p+q =0
4p-q =16
solving we get
p=5 and q =4

12. **D**
Now
When A covers 100 meters
B covers 90 meters
so we can say Va :Vb = 100:90 = 10:9   (1)
Similarly Vb:Vc = 100:95 = 20:19   (2)
Now multiplying (1) and (2)
we get Va : Vc = 200:171
Now therefore when A covers 100 meters
C covers 85.5 meters
And so A beats C by 14.5 meters

13. **A**
It is given that Mohan bought a trouser at 10% discount and sold it to Sohan at a loss of 10%
Now Sohan paid Rs 729
So S.P for Mohan = 729
This is sold at 10% loss
so cost price of Mohan = 729/0.9 =810
Now Mohan bought for 810 at 10% discount
so original price (1-0.1) =810
We get undiscounted price = 900

14. **C**
Graph A and D represent the function of x, because a vertical line is drawn in (a) meets the graph at only one point i.e., for one x, in the domain there exist only one f(x) in the codomain.

15. **B**
We know
A+B+C+D+E+F =100
So we get F = 15%
Now let income be I

so we get I(0.15) = 45000
We get
I = 30,000

16. **B**
The distance covered by both Neha and Monica is same .
Now Neha takes 40 minutes to cover the distance which Monica covers in 30 minutes
So we can say their speed ratio = 3:4
Let speed of Neha be 3v and speed of Monica be 4v
Now in 5 minutes Neha would cover 15v of distance
Now Neha is ahead by 15v when Monica starts
so relative distance = 15v
And relative speed = 4v-3v =v
Therefore time to overtake = 15v/v = 15minutes

 ► VIDEO SOLUTION

17. **A**
Now we have 5 men and 3 women
committee of 4 to be made such that it has at least 1 woman
Case 1 :
1W and 3M
We get $^5C_3 \times {}^3C_1 \ = \ 30$
Case 2 : 2W 2M
$^5C_2 \times {}^3C_2 \ = \ 30$
Case 3 : 3W 1 M
$^5C_1 \times {}^3C_3 \ = \ 5$
So total cases = 65.
so 1 is true
Now
ARRANGE
If vowels to be at even position :
we get cases as $\frac{3!}{2!} \times \frac{4!}{2!}$ = 36
So statement 2 is true

 ► VIDEO SOLUTION

18. **D**
Let the ratio be K
so we can say A=BK
and C = Dk
Now $\frac{A^2+B^2}{C^2+D^2} \ = \ \frac{A^2\left(1+k^2\right)}{C^2(1+k^2)} \ = \ \frac{A^2}{C^2}$
Now checking the options
A,B,C gets eliminated
And AB/CD = $\frac{A^2}{C^2}$
so D is the correct

 ► VIDEO SOLUTION

19. **D**

We have dimensions : (24*18)

HCF (24, 18) = 6

Now Area of floor: 432

In order to minimise the number of tiles considering a tile with a dimension equivalent to the HCF, we have the dimension of the tile to 6*6 = 36 units.

A total of $\frac{432}{36}$ = 12 tiles are required.

Minimum number of tiles that pave the entire floor :(LCM)^2/Area = 12

20.**B**
We have :
$6x^2 - 5x - 4 \ = 0$
$=6x^2 - 8x + 3x - 4 \ = 0$
(2x+1)(3x-4)=0
so solution set is {-1/2 ,4/3}

$9x^2 + 6x + 1 \ = 0$
D = 36-36 =0
So we can say roots are real and equal

$4x^2 - 3x + k$=0
let roots be p and 3p
we get 4p =3/4
p =3/16
Now k/4 = 3p^2
we get k = 12p^2
we get k = 27/64
So A and B are true and C is false

21.**C**
We have :
$-\frac{4}{5}$, $-\frac{5}{12}$, $-\frac{7}{18}$, $-\frac{2}{3}$
Now LCM is 180

so we get :
$-\frac{144}{180}$, $-\frac{75}{180}$, $-\frac{70}{180}$, $-\frac{120}{180}$
Now arranging in ascending order
we get :
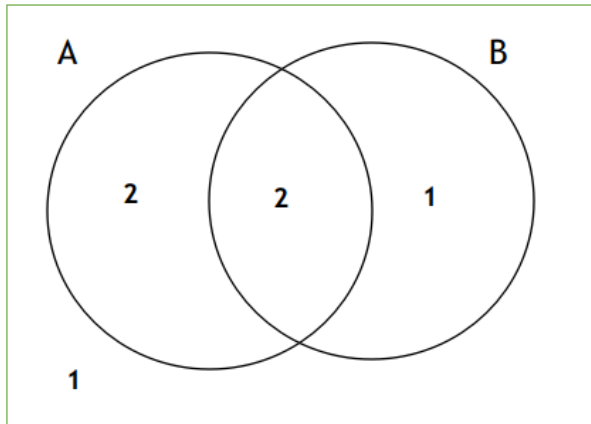$-\frac{144}{180} < -\frac{120}{180} < -\frac{75}{180} < -\frac{70}{180}$
so order is A<D<B<C

22.**A**
Let the sample size of the above events be 6 units.

Since $P(A) = \frac{2}{3}, P(B) = \frac{1}{2}$ and $P(A \cap B) = \frac{1}{3}$,

Then event A will have 4 units($\frac{2}{3} \times 6$), event B will have 3 units and event $A \cap B$ will have 2 units.

This can be expressed in terms of the Venn diagram as follows:

Now, it can be observed that $A \cap B^c = 2$ units.

Thus, $P(A \cap B^c) = \frac{2}{6} = \frac{1}{3}$.

Similarly, $A \cup B^c = 5$ units($A = 4$ and $B^c - A = 1$ units)

So, $P(A \cup B^c) = \frac{5}{6}$

Since only option A has $P(A \cap B^c) = \frac{1}{3}$ and $P(A \cup B^c) = \frac{5}{6}$,

The correct option is A.

23. **B**
Production of unit B in April = 180
Production of unit B in June = 160
Now therefore percentage decrease = $\frac{(180-160)}{180} \times 100 \approx 11\%$

24. **B**
The difference between C.I and S.I for a period of 2 years is given by : P(R/100)^2
So we get :
P(R/100)^2 = 32
5000(R/100)^2 = 32
(R/100)^2 = 32/5000 = 16/2500
We get
R/100 = 4/50
R = 8%

> ● VIDEO SOLUTION

25. **A**
We have :
30, 90, 182, 306, 462,P.
Now 90-30 =60 (1)
182-90 = 92 (2)
306-182 = 124   (3)
462 -306 = 156
If you observe , the first difference of the terms form an arithmetic progression
So we can say the next term will be
462 +156+32 = 462 +188 = 650
So P is 650
So statement 1 is true .

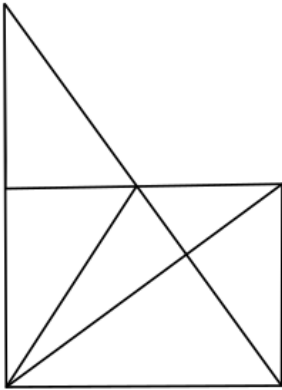Taking statement 2 :
we get 9^8
Now number of digits = [log9^8 +1]
we get [8log9+1]= 8
so number of digits in 9^8 is 8

Logical Reasoning

26. **B**

On counting the total triangles comes out to be 13

27. **A**
Has an outcome can be related to skills acquired if person is socialized so I follows and
Has an outcome does not mean change in behaviour so II do not follow

28. **B**
we have 8, 13, 10, 15, 12
Here the pattern is 8+5 =13 , 13-3 =10 , 10+5 =15 ;15-3 =12 so next term will be 12+5 =17

29. **B**
30, 56, 90, _____ , 182, 240.
Here the first differences forms an A.P with a common difference of 8
so we get next term as 90+42 = 132.

30. **D**
As per C Swati will be the highest scorer
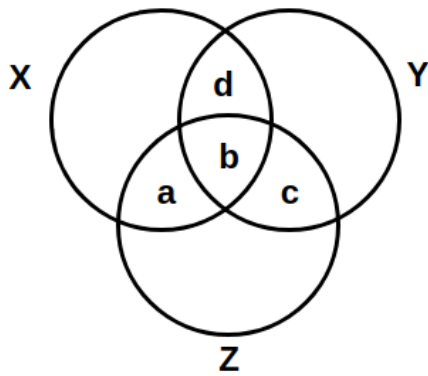so C alone is sufficient to determine the highest scorer .

31. **A**
Statement We should plant more trees.
Argument should be supportive and as 1st statement says it helps in reducing pollution which is goof 1 is correct
2 highlights a negative and will not be a reason to plant more trees so II is false .

32. **B**

X - Musicians
Y - singers
Z - Dancers
so we can say b represents all three and d will represent region pf Musicians and Singers but not Dancers

33. **B**
Except SUWX all have a uniform change from one alphabet to other .

34. **D**
CLAUSE is written as ECSLUA
Noe let C be 1 L be 2 A be 3 U be 4 S be 5 and E be 6
we get code as 615243
similarly taking UMPIRE as 1,2,3,4,5,6
we will get code as 615243
which will correspond to EURMIP

35. **B**
The series should be 72-2 =70 ; 70-3 =67 ;67-4=63 ;63-5 =58 ;58-6 =52 ; 52-7=45
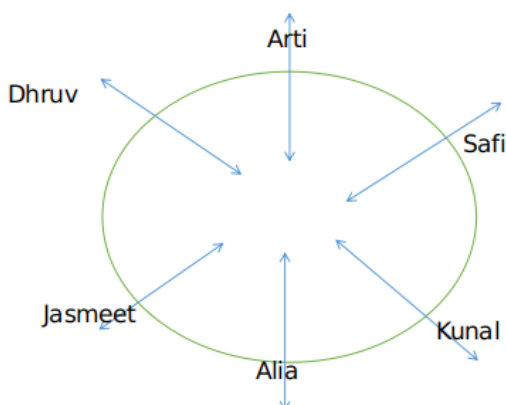so 65 is the wrong term

36. **D**
Comparing two statements
we have Roses are as common so we can say ti na will correspond to Roses are in any order
Therefore red will be ko

37. **C**
The arrangement will be :

Safi is sitting between Arti and Kunal

38. **D**
Following the pattern for both cross and circle we get D as the answer

39. **A**

LUCKNOW is written as MTDJONX
L+1 =M ;U-1 =T ;C+1=D;K-1=J;N+1=O;O-1=N;W+1=X
So following the pattern for HAPPINESS
we get code as IZQOJMFRT

40. **C**

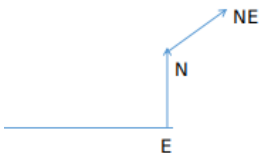FLOWER is written as 325716 and WRITE is written as 76481
Now L is 2 , I is 4 ,T is 8 , E is 1and R is 6 (Corresponding letter and alphabet)
So we get LITTER as : 248816

41. **D**

Her Path will be :

We can say she is moving in North East direction

42. **D**

The only conclusions that follows from the given venn are :Some doctors are teachers and All surgeons are doctors
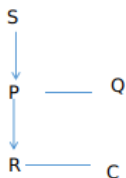Hence II and III is the answer.

43. **C**

Assertion is correct
Reason is wrong as solar energy is available throughout the year

44. **A**

We get the tree as :

So R is grandson of S.

45. **A**

From 1st line we get :
Sharad > Ansh > Akshita
From 2nd we get
Akshita > Sneha
so we get
Sharad > Ansh > Akshita > Sneha
Hence Sharad is the tallest

46. **C**
Considering the first letter of given terms
it forms pattern
C , I ,O,_ ,A
I and C have 5 alphabets between them , I and O also have 5 alphabets between them so we get first term as U .
Now considering 2nd letter of given terms :
D,J,P _,B
Here again D and J have 5 alphabets between them
J and P have 5 alphabets between them
So next letter will be V
so we get UV
We can conclude the answer will be UVXY

47. **C**
This is a collective noun question
so we get PRIDE .

48. **A**
Grandfather's son will be B 's father
And A will be the grandmother of B .

49. **B**
Ishan is 14th from last so Ishan is 30-14+1 = 17th from start
Aman is five ahead of Ishan so we get Aman's rank as 17-5 =12th from start

50. **C**
B and C plays football and Tennis
D plays badminton and Tennis
so A plays only Tennis

Language Comprehension

51. **A**
"*Few doctors have any time for the study of philosophy, for their profession is an exacting one, <u>and it is all they can do to keep abreast of its advances</u>...*"

The underlined portion from the passage excerpt refers to the doctors who can't take the time to study philosophy.

Only option A captures this idea. Thus, the correct answer is A.

52. **C**
"*Few doctors have any time for the study of philosophy, <u>for their profession is an exacting one</u>, and it is all they can do to keep abreast of its advances...*"

The underlined portion reflects the demanding nature of the doctor's work. Because of this, they don't have any time to study philosophy.

Option C captures this in the most appropriate way.

Although option A is true, it is not describing the underlined portion.

Options B and D are distorted inferences.

Thus, the correct option is C.

53. **D**

The case of doctors is presented here to exemplify people with occupations who, because of their demanding work, cannot give time to study philosophy.

Option D is the only option that rightly captures this idea.

Thus, the correct answer is D.

54. **C**

Among the options, only option C is mentioned as a new initiative by the government under the eleventh five year plan.

Hence, the answer is option C.

55. **B**

Among the options, only option B mentions an initiative towards encouraging technical education. The others are focused on primary, secondary schools and non-technical courses.

Hence, the answer is option B.

56. **D**

All the ideas mentioned in the options, if implemented, will lead to an all-round development in the field of education for India.

Hence, the answer is option D.

57. **A**

Throughout the passage, the author talks about the new initiatives under the eleventh Five Year Plan. Through the examples mentioned, we can observe that the author focuses mainly on the changes proposed for higher education.

Hence, among the options, A is the answer.

58. **B**

The passage mentions, "*India has a vast population and to capture the potential demographic dividend to remove the acute regional, social and gender imbalances, the government is committed to make concerted efforts for improving the quality of education*"

Hence, the required answer is option B.

59. **D**

From the first line of the paragraph, "Education is not only an instrument for enhancing efficiency but also an effective tool of augmenting and widening democratic participation and upgrading the overall quality of individual and society.", we can infer options A, B and C.

Hence, the answer is option D.

60. **B**

From the last line of the passage, "*mere quantitative expansion will not deliver the desired results in view of the fast changing domestic and global scenario*.", we can infer that option B is the answer.

61. **A**

From the fourth paragraph, *" He[Aristotle] proposed that teachers lead their students systematically, and that repetition be used as a key tool to develop good habits, unlike Socrates' emphasis on questioning his listeners to bring out their own ideas."*

Hence, option A is the required answer.

62. **A**

In the second paragraph, the author mentions, *"Many educationalists consider it a weak and woolly field, too far removed from the practical applications of the real world to be useful."*

Hence, the answer is option A.

63. **B**

In the third paragraph, the author mentions, *"Plato believed that talent and intelligence is not distributed genetically and thus is be found in children born to all classes"*

From this, we can infer that Plato's belief about education was democratic.

Hence, the answer is option B.

64. **C**

In the last paragraph, the author mentions that the idea of Perennialism, formulated by Aquinas, proposes teaching things that are of everlasting importance, unlike facts, that can change over time.

Hence, the answer is option C.

65. **C**

In the given sentence, we have used standing before the conjunction, and the word eat should also be in present participle form to satisfy the tense. Therefore, the correct sentence is ' Rama told his wife he would not mind standing and eating the dinner'.

Answer is option C.

66. **A**

If the sentence in 'if' clause is present tense and the sentence in main clause is simple future tense. Therefore, 'if' clause statement should be in present tense. The correct sentence is 'If she is promoted, she will get a higher salary'.

Answer is option A.

67. **A**

The given sentence is grammatically correct.

Answer is option A.

68. **B**

Uxorious - having great fondness for one's wife

Recluse: living a solitary life
Utopia: refers to an ideal place
Polygamist: refers to someone with multiple partners.

The answer is option B.

69. **B**

The preposition 'between' is always followed by a conjunction 'and'.

Answer is option B.

70. **C**

The given sentence is in passive voice and simple past tense. Option C is the correct answer, as the sentence is in simple past sense and the active voice of the given sentence.

Answer is option C.

71. **D**

screech - to utter a high piercing cry

Answer is option D.

72. **B**

An uninhabitable place is one where people cannot live. Hence, among the options, "deserted" is the suitable option.

73. **C**

'Better' is the comparative adjective we use when we compare exactly two persons. Options A and D are incorrect as best is used instead of better. Option B is incorrect as the sentence is grammatically incorrect and is not in a structured manner.

Answer is option C.

74. **C**

In the given sentence, adverb modifies the verb. Therefore, adverb is placed before the verb.

Answer is option C.

75. **D**

We use whether when there are two options available and we use if to introduce a condition.

Answer is option D.

General Awareness

Innovation and Entrepreneurship