

Direction (1-10): Read the passage carefully and answer the question that follow. Certain words are printed in bold to help you locate them while answering some of the question:

Technology can be most broadly defined as the entities, both material and immaterial, created by the application of mental and physical effort in order to achieve some value. In this usage, technology refers to tools and machines that may be used to solve real-world problems. It is a far-reaching term that may include simple tools, such as a crowbar or wooden spoon, or more complex machines, such as a space station or particle accelerator. Tools and machines need not be material; virtual technology, such as computer software and business methods, fall under this definition of technology.

The word "technology" can also be used to refer to a collection of techniques. In this context, it is the current state of humanity's knowledge of how to combine resources to produce desired products, to solve problems, fulfill needs, or satisfies wants; it includes technical methods, skills, processes, techniques, tools and raw materials. When combined with another term, such as "medical technology" or "space technology," it refers to the state of the respective field's knowledge and tools. "State-of-the-art technology" refers to the high technology available to humanity in any field.

Technology can be viewed as an activity that forms or changes culture. Additionally, technology is the application of math, science, and the arts for the benefit of life as it is known. A modern example is the rise of communication technology, which has lessened barriers to human interaction and, as a result, has helped **spawn** new subcultures; the rise of cyber culture has, at its basis, the development of the Internet and the computer. Not all technology enhances culture in a creative way; technology can also help facilitate political **oppression** and war via tools such as guns. As a cultural activity, technology **predates** both science and engineering, each of which formalizes some aspects of technological **endeavour**.

1. What is virtual technology, according to the passage?

- A. A space station or particle accelerator.
B. Computer software and business methods.
C. Technical methods, skills, processes, techniques, tools and raw materials.
D. The state of the respective field's knowledge and tools.
E. None of the above.

2. How do developments of technology bring out cultural changes?

A. It has lessened barriers to human interaction and, as a result, has helped spawn new subcultures; the rise of cyber culture has, at its basis, the development of the Internet and the computer.

B. It combines resources to produce desired products, to solve problems, fulfill needs, or satisfies wants.

C. Technology refers to tools and machines that may be used to solve real-world problems.

D. As a cultural activity, technology predates both science and engineering.

E. None of the above.

3. Which two fields have been stated as an example which when combined with technology state the respective field's knowledge and tools?

A. Virtual technology, space technology.

B. Science, engineering technology.

C. Medical technology, space technology.

D. All of the above.

E. None of the above.

4. Pick out the word that is most nearly the same in meaning as the word printed in BOLD type, as used in the passage.

SPAWN

A. Generate

B. Beget

C. Ruin

D. Halt

E. None of these

5. Pick out the word that is most nearly the same in meaning as the word printed in BOLD type, as used in the passage.

OPPRESSION

A. Persecution

B. Democracy

C. Emergency

D. Fair

E. B and D.

6. Pick out the word that is most opposite in meaning as the word printed in BOLD type, as used in the passage.

ENDEAVOR

A. Negligence

B. Avocation

C. Contemplate

D. Exertion

E. B and D.

14. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. spree B. rise
 C. plunge D. demolition
 E. No correction required
15. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. boost B. recover
 C. maintain D. sustain
 E. No correction required
16. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. managed B. agitated
 C. breached D. stood
 E. No correction required
17. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. gadget B. thing
 C. product D. process
 E. No correction required
18. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. hinder B. assimilate
 C. nullify D. ostracize
 E. No correction required
19. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. spanned B. produced
 C. acquired D. raised
 E. No correction required.
20. Choose the correct answer from the given options to fill the blanks which are numbered.
 A. features B. plight
 C. matters D. prospects
 E. No correction required

Directions (21-30): Which of the phrases (A), (B), (C) and (D) given below each sentence should replace the phrase printed in **bold** type to make the sentence grammatically correct. If the sentence is correct as it is, mark (E), i.e., 'No correction required' as the answer.

21. When we went to wonder of worlds, I loved that **really big old silver antique car** that was parked in the parking lot of the East India Mall.
 A. Really old silver big antique car
 B. Really big silver old antique car
 C. Really big silver antique car
 D. Really big old silver antique car
 E. No correction required

22. Each individual knows how to **protected on own** life and it should be left to his discretion.
 A. Protected by own
 B. Protect by own
 C. Protect his own
 D. Protected his own
 E. No change required
23. The last few **decades has seen** a great deal of political instability in India.
 A. Decade had seen
 B. Decade has seen
 C. Decades have seen
 D. Decade have seen
 E. No change required
24. He admired the speed with which Koti completed the work and **appreciating the method adopted** by him
 A. appreciate the method being adopted
 B. appreciated the method adopted
 C. appreciate the method of adoption
 D. appreciate the adopting method
 E. No correction required
25. I had met him after the party **where he had been** given an inspiring speech
 A. when he had
 B. where he would have
 C. in which he was given
 D. where he had
 E. No correction required
26. After the success of our project we have been receiving **more requests than** we do not have the resources to handle them.
 A. many requests but
 B. most of the requests
 C. more requests that
 D. too many requests
 E. No correction required
27. The poor Brahmin led a **hand to mouthful existence** and could use any job which paid him a little.
 A. handful to mouthful existence
 B. hand to mouth existence
 C. handing for mouthful existing
 D. hand and mouth exist
 E. No correction required
28. In order to **earning decent living** we need to have a good job which pays a substantial amount of money.
 A. earned decency life
 B. earning decency live
 C. earn a decent living
 D. earned decently life
 E. No correction required

29. We went to the famous restaurant to eat and were **served piped hot** food.
- served piping hotter
 - serving pipe hot
 - served piping hot
 - serve pipe hotten
 - No correction required

30. When he fell down the ditch, he shouted with all his might **so that to catch** someone's attention.
- such that to catch
 - so as to catch
 - so that to catching
 - so then to catch
 - No correction required

Direction (31-35): In the following question, two equations I and II are given. Solve both the equations carefully & answer the questions given below:

31. I. $2x^2 - 7x + 6 = 0$
 II. $y^2 - 3y + 2 = 0$
- $x < y$
 - $x > y$
 - $x \leq y$
 - $x \geq y$
 - $x = y$ or no relation can be established.

32. I. $3x^2 + 4x + 1 = 0$
 II. $y^2 + 5y + 6 = 0$
- $x < y$
 - $x > y$
 - $x \leq y$
 - $x \geq y$
 - $x = y$ or no relation can be established.

33. I. $2x^2 + 5x + 2 = 0$
 II. $y^2 + 9y + 20 = 0$
- $x < y$
 - $x > y$
 - $x \leq y$
 - $x \geq y$
 - $x = y$ or no relation can be established.

34. I. $x^2 - 7x + 10 = 0$
 II. $y^2 - 12y + 35 = 0$
- $x < y$
 - $x > y$
 - $x \leq y$
 - $x \geq y$
 - $x = y$ or no relation can be established.

35. I. $(x-12)^2 = 0$
 II. $y^2 = 144$
- $x < y$
 - $x > y$
 - $x \leq y$
 - $x \geq y$
 - $x = y$ or no relation can be established.

36. **Direction:** What will come in place of the question mark (?) in the following number series?
 14, 8, 9, 14.5, 30, ?
- 72
 - 73
 - 74
 - 75
 - 76

37. **Direction:** What will come in place of the question mark (?) in the following number series?
 77, 85, 69, 101, 37, ?
- 105
 - 125
 - 145
 - 165
 - 185

38. In the following number series, one number is missing. What should come at the place of missing number (?)
 20, 29, 54, 103, 184, ?
- 301
 - 302
 - 303
 - 304
 - 305

39. **Direction:** What will come in place of the question mark (?) in the following number series?
 7, 8, 18, 57, ?, 1165
- 212
 - 217
 - 232
 - 247
 - 275

40. **Direction:** What will come in place of the question mark (?) in the following number series?
 5, 7, 18, 47, 103, ?
- 155
 - 175
 - 195
 - 215
 - 235

41. **Direction:** What should come in place of question mark (?) in the following question? (You do not have to calculate the exact value.)

$$13.03^2 + ? + 21.998 \times 4.012 = 298.998$$

- 12
- 42
- 92
- 132
- 172

42. **Direction:** What approximate value will come in place of the question mark (?) in the following question?

$$\sqrt{33125} \times \sqrt{2600} - (83.01)^2 = (?)^2 + (36.99)^2$$

- 24
- 39
- 36
- 28
- 32

43. What approximate value will come at the place of question mark (?) in the following question?

$$\sqrt{454 + 985} - ?^2 \div 18.752 = 18.9001$$

- A. 19
B. 18
C. 21
D. 25
E. 15
44. **Directions:** What approximate value will come in place of the question mark (?) in the following question? (You are not expected to calculate the exact value)

$$7441 \div 34 \times 12 = ? \times 9 + 110$$

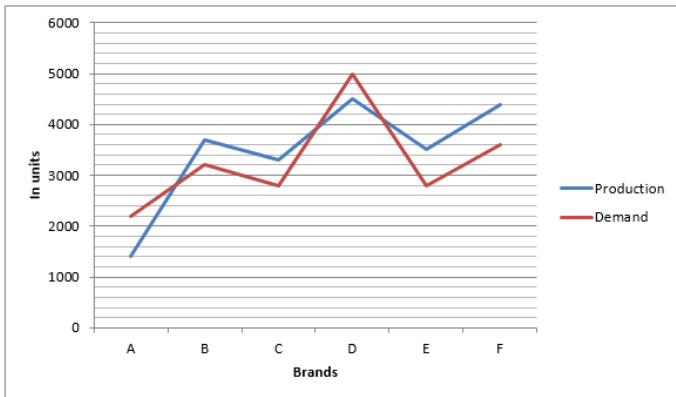
- A. 420
B. 280
C. 590
D. 350
E. 220
45. **Directions:** What approximate value will come in place of question mark (?) in the following questions? (You are not expected to calculate the exact value.)

$$5466.97 - 3245.01 + 1122.99 = ? + 2309.99$$

- A. 1130
B. 1000
C. 1100
D. 1030
E. 1060

Direction (46-50): Study the following graph carefully to answer the question given below:

Given below is the demand and production of 6 brands (in units) of a product in the year 2016.



46. If the demand for brand C product increase by 75% then to meet the demand production should be increased by what percent?
- A. 32.65%
B. 48.48%
C. 57.14%
D. 31.25%
E. None of these

47. Brand A increase its production to meet its demand. With every 160 unit produced the brand increases its price by 10%. If the earlier price of one product was INR 5000 then find the new price of the product.

- A. INR 5500
B. INR 6655
C. INR 7320.5
D. INR 8052.55
E. Cannot be determined

48. The demand for brand D product fell. The new demand is 20% less than its production. Find by what percentage demand fell?

- A. 28%
B. 30%
C. 38.88%
D. 72%
E. 32%

49. Brand B decreased its price of the product to meet its demand to its production. When the price decreased by 12% the demand increased by 25%. If the ratio between the new price and new demand is 11:20 then find the price of the product before the decrease.

- A. INR 2500
B. INR 2300
C. INR 2200
D. INR 2000
E. INR 2800

50. The production of brand E and F took together is approx. what percent of total demand of E and F?

- A. 81%
B. 21%
C. 123%
D. 121%
E. 23%

51. Ratio between height of 2 cylinder is in the ratio 3:5. Their volumes are in the ratio 27:80. Find ratio between their radius.

- A. 1/2
B. 2/3
C. 3/4
D. 4/5
E. None of these

52. B is 20% efficient than A. B started the work & do it for x days. And then B is replaced by A. And A completed the remaining work in x+8 days. Ratio of work done by A & B is 3:2. In how many day A & B working together to complete the whole work?

- A. 120/12
B. 150/11 days
C. 140/13 days
D. 100/33 days
E. 75/12 days

53. The time taken for covering 'X' Km by downstream is equal to 'X-18' by covering upstream. Upstream speed is 6 km/hr less than that of downstream. If the speed of the boat in still water is 15 km/hr. What is the value of 'X'.

- A. 51
B. 52
C. 53
D. 54
E. 55

54. A sum of Rs. 91,000 is borrowed at 20% per annum compounded annually. If the amount is to be paid in two years, the amount will be?
 A. 1,20,000 Rs. B. 1,25,760 Rs.
 C. 1,27,526 Rs. D. 1,31,040 Rs.
 E. 1,34,034 Rs.
55. If an article is marked 40% above the cost price. If discount of $x\%$ is given on the marked price of the article then final profit of 12% is obtained. Now if CP of a new article is 120 Rs. and $x\%$ profit is desired then what should be the selling price of that new article?
 A. 140 B. 142
 C. 144 D. 146
 E. 148
56. A, B and C started a business and invested in the ratio of 3:4:5. After 4 months, A withdrew $\frac{1}{12}$ th amount of what B and C invested. If the annual income was 9200, then what was the share of B?
 A. 3280 B. 3480
 C. 3200 D. 3880
 E. 4080
57. In a 40 litres mixture acetic acid and sodium acetate are in the ratio 3:1, find the amount of sodium acetate solution to be added to make the ratio 2:3.
 A. 40 litres B. 20 litres
 C. 15 litres D. 30 litres
 E. 35 litres
58. Radhika has two daughters by name Rinku and Sindhu. The ratio of the age of Radhika and Rinku is 3:1 and that of Rinku and Sindhu is 8:5. Given that Rinku is six years elder to Sindhu. Find the ratio of their ages after 12 years.
 A. 29:15:12 B. 30:14:10
 C. 29:14:11 D. 30:14:11
 E. 30:13:11
59. Three years ago the average age of Mohan's family having 5 members was 17 years. Mohan becomes father but the average age of his family is same today. What is the present age of baby?
 A. 1 year B. 2 years
 C. 3 years D. 4 years
 E. 5 years
60. Out of 12 persons, 11 spend Rs.2000 monthly each. The twelfth person spends Rs.110 more than the average spending of the 12 people. How much money does the twelfth person spend?

- A. Rs.2200 B. Rs.2120
 C. Rs.3300 D. Rs.1800
 E. Rs.2010

Direction (61-65): Read the following information carefully and answer the questions given below.

NAME OF THE COLLEGES	TOTAL NUMBER OF STUDENTS (in 2016)	PERCENTAGE OF MALE STUDENTS
A	1850	54%
B	1550	66%
C	1340	45%
D	1675	56%
E	1250	72%
F	1450	38%

61. Find the average of the number of female in all the colleges except college C and E?
 A. 672.8 B. 683.5
 C. 750 D. 753.5
 E. 602.8
62. Find the average difference between the number of male and female students in all the colleges?
 A. 312.833 B. 314.60
 C. 313 D. 314.50
 E. None of these
63. The number of female students in college C is what approx. percent of the number of male students of college A?
 A. 70% B. 72%
 C. 74% D. 76%
 E. 77%
64. Out of total female in college E, 30% are in Arts department which is 35% of the total students in Arts department. Find out approximately how much percent of male students from E are in Arts department?
 A. 20% B. 22%
 C. 19% D. 23%
 E. 25%
65. Find the ratio of $\frac{2}{3}$ rd of college B male students and female students of college F.
 A. 29: 11
 B. 29: 33
 C. 33: 29
 D. 29: 22
 E. 22: 29

Direction (66-70): Study the following information carefully and answer the question based on it.

8 persons A, B, C, D, E, F, G and H have their birthdays on 14th and 21st of four different months, January, March, April and June not necessarily in the same order. A has birthday on even date and a month which having 31 days. Number of persons between C and F is same as the number of persons between B and H. H's birthday is neither on even number date nor in a month which having 31 days. B is not born after H. C is born before F and B, who is not born in January. D is not born in June. F was born on even number date. D's birthday is on odd number date and a month which having 31 days. B and H were not born in the same month. E was born after F. D is born before G.

66. How many persons born after F?
A. 1 B. 2
C. 3 D. 4
E. 5
67. Who among the following is not born in the month having 30 days?
A. F B. D
C. B D. H
E. E
68. Who among the following does not belong to the group?
A. A B. D
C. G D. B
E. H
69. How many persons have birthday between D and E?
A. 1 B. 2
C. 3 D. 4
E. 5
70. Who among the following is not born before F?
A. A B. D
C. C D. H
E. G

Directions (71-73): In these questions, relationship between different elements is shown in the statements. The statements are followed by two conclusions. Find the conclusion which is definitely true.

71. **Statements:**
 $A > B = C < D < E > F$
Conclusions:

- I. $F < C$
II. $A > D$
A. If only Conclusion I is true.
B. If only Conclusion II is true.
C. If either Conclusion I or II is true.
D. If neither Conclusion I nor II is true.
E. If both Conclusions I and II are true.

72. **Statements:**
 $A < B > C > D; A > E, D > F$
Conclusions:

- I. $F > B$
II. $B > E$
A. If only Conclusion I is true.
B. If only Conclusion II is true.
C. If either Conclusion I or II is true.
D. If neither Conclusion I nor II is true.
E. If both Conclusions I and II are true.

73. **Statements:**
 $A = B < C > D; E > C < F$
Conclusions:

- I. $E > A$
II. $F > D$
A. If only Conclusion I is true.
B. If only Conclusion II is true.
C. If either Conclusion I or II is true.
D. If neither Conclusion I nor II is true.
E. If both Conclusions I and II are true.

74. Which of the following symbols should replace the sign (\$) and (#) in the given expression in order to make the expression $S > J$ and $M \geq J$ is definitely true?
 $S \geq T \$ P > K \leq N, O < M = K \# J > L$
A. =, < B. >, ≤
C. <, ≥ D. <, ≤
E. >, ≥

75. Which of the following symbols should replace the \$ and # in the given expression in order to make the expression $L \geq S$ and $N > T$ is definitely true?
 $N > O \leq L = P \$ T, H > M \leq T \# S < N$
A. >, < B. ≥, ≤
C. >, = D. <, ≤
E. >, ≥

Direction (76-80): Study the following information carefully and answer the questions given below:

Eight persons P, Q, R, S, T, U, V and W are sitting in a straight line and facing north direction. Their ages are, 12, 14, 18, 26, 29, 35, 42 and 67. The one who is 12 years old is 4th to the left of the eldest person, who is sitting at the end. The sum of the ages of S

and Q is equal to P. S is not the youngest person. S and W are neighbours of Q. R's age is not an even number and he is older than W and younger than U. Only 3 persons are sitting between S and U. Only 2 persons are sitting between Q and T, who is 29 years old. P is not the neighbour of U. R is not sitting to the left of Q.

76. Who among the following sits at the end?
 A. T B. P
 C. Q D. S
 E. W
77. Who among the following sits third to the left of W?
 A. S
 B. The one who is 12 years old
 C. The one who is 26 years old
 D. T
 E. U
78. Which of the following pair is neighbour of U?
 A. R and W B. S and P
 C. W and V D. R and V
 E. Q and R
79. Who among the following is 14 years old?
 A. P B. Q
 C. R D. U
 E. S
80. How many persons are younger than W?
 A. 1 B. 2
 C. 3 D. 4
 E. None
81. **Direction:** If 1 number is added in even digit in the given number 9458732 and 2 is subtracted in odd digit, then how many digit is repeated in the newly formed number?
 A. 1 B. 2
 C. 3 D. 4
 E. 5
82. In a certain code language 'green grass everywhere' is written as 'dik pa sok' and 'cow eats grass' is written as 'nok ta pa'. How is 'cow' written in that code language?
 A. nok B. ta
 C. nok or ta D. Data inadequate
 E. None of these

Direction (83-85): Study the following information carefully and answer the questions given below:

Each of the six students got different marks in an exam. D got less marks than only B. E got more marks than only two students. A didn't get less marks than E. C did not get least

marks. The one who got second lowest, got 160 marks. A got 205 marks.

83. The one who got maximum marks, got 100 marks more than C. Which of the following mark is got by one who got maximum marks?
 A. 225 B. 270
 C. 260 D. 300
 E. None of these
84. Which of the following is true with respect to F as per the given information?
 A. The possible marks, got by F is 165
 B. F got minimum marks.
 C. Only two students got more marks than F
 D. F definitely got more marks than C
 E. None of these
85. Which of the following may be the possible number of marks which E got?
 A. 210 B. 140
 C. 185 D. 159
 E. None of these

Direction (86-90): Study the following information carefully and answer the question given below:

There are eight persons A, B, C, D, E, F, G and H. They are born in the month (Same for each person) of different years i.e. 1976, 1980, 1982, 1990, 1991, 1995, 2000 and 2005. There ages are considered as on the same month of 2017. B is born in odd number year but he is not the youngest. E is 37 years old now. C was born in 1990. G is at least 9 years older than B. D is younger than B and born in odd number year. A is 18 years younger than G. F is older than D but not the older person. Not more than 2 persons are younger than F.

86. Who among the following is youngest person?
 A. A B. C
 C. D D. B
 E. G
87. How many persons are older than C?
 A. 2 B. 3
 C. 1 D. None
 E. more than 3
88. What is the difference of age between F and E?
 A. 15 years B. 10 years
 C. 30 years D. 4 years
 E. 12 years

89. If all the persons are arranged according to their names according to alphabet series from youngest to oldest then how many of them position will remain unchanged?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

90. Who among the following is born in 1982?

- A. D
- B. G
- C. A
- D. C
- E. H

Direction (91-96): Study the following information carefully and answer the questions given below:

Seven persons A, B, C, D, E, F and G attends seminar on different dates starting from 21st June to 27th June but not necessarily in the same order. They like different brands laptop, Lenovo, Dell, Apple, Sony, Samsung, Asus, and HP. They have different brands of watch, Sonata, Rolex, Titan, Maxima, Casio, Fossil and Diesel.

The one who has Diesel attends a seminar on an even numbered date. E has Rolex and F doesn't have Maxima. G attends the seminar on the last day. The one who has Diesel likes either Apple or Asus laptop. A has Titan but he doesn't like HP and is not attend the seminar just before or just after B. F likes Dell and attends the seminar three days before the one who likes Samsung. D neither likes Samsung nor Asus laptop. The one who likes HP attends the seminar on 25th June. B likes Sony wearing also have Sonata watch and not attends the seminar just before or just after F, who attends the seminar on an odd numbered date. The one who likes Apple neither has Casio nor Maxima. B attends the seminar just before D and none of them likes HP. The one who has Casio attends the seminar on the 2nd day.

91. Who among the following attends the seminar on 3rd day?

- A. D
- B. The one who likes Dell
- C. C
- D. The one who has Diesel
- E. The one who likes Samsung

92. Which of the following is correct combination for D?

- A. Lenovo-Casio
- B. Dell-Sonata
- C. Samsung-Rolex
- D. Sony-Fossil
- E. HP-Rolex

93. How many persons attend the seminar between the one who likes Samsung and the one who has Fossil?

- A. 0
- B. 1
- C. 2
- D. 3
- E. 4

94. If all the persons rearranged according to their names (alphabetically) from the starting date then who among the following likes Apple?

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

95. Which of the following combination is correct?

- A. D-Lenovo-Fossil
- B. E-HP-Titan
- C. A-Sony-Maxima
- D. F-Dell-Diesel
- E. A-Samsung-Titan

96. 'B' is related to 'Dell' and 'F' is related to 'Rolex' in the same way then who among the following is related to 'Maxima'?

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

Directions (97-98): Study the following information carefully and answer the questions given below:

- * D is the mother of E, who is the sister of F.
- * A is the father of C. B is wife of A.
- * F is son of C.

97. How is E related to A?

- A. Son
- B. Grandson
- C. Granddaughter
- D. Daughter
- E. None of these

98. How is B related to D?

- A. Mother-in-law
- B. Sister
- C. Mother
- D. Can't be determined
- E. None of these

Directions (99-100): Study the following information carefully and answer the questions given below:

Rahul starts running from point A and runs 15 km towards south. He takes a left turn and runs 20 km. Now he runs 9 km after taking a right turn. He finally takes a right turn and runs 20 km and stops at point B.

99. How far is point B with respect to point A?

- A. 24 km
- C. 45 km
- E. 49 km
- B. 40 km
- D. 29 km

100. Towards which directions was Rahul moving before he stopped at point B?

- A. North
- C. West
- E. North-West
- B. East
- D. South
