

AP ICET 2024 Shift- I

Analytical Ability

Instructions [I - 20]

In the following questions numbered I to 20, a question is followed by data in the form of two statements labelled as I and II. You have to decide whether the data given in the statement is sufficient to answer the questions.

I. What is the length of the train A?

I. A passes a pole in 10 sec.

II. A crosses a man standing on a platform $\frac{1}{6}$ th of a minute.

A if the statement I alone is sufficient to answer the question.

B if the statement II alone is sufficient to answer the question.

C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.

D if both the statements I and II together are not sufficient to answer the question and additional data is required.

Answer: D

2. What is $a : b : c$?

I. $a^2 + 4b^2 = 4ab$

II. $a^2 + 5b^2 + 4c^2 = 4b(a + c)$

A if the statement I alone is sufficient to answer the question.

B if the statement II alone is sufficient to answer the question.

C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.

D if both the statements I and II together are not sufficient to answer the question and additional data is required.

Answer: B

3. Is x a prime number?

I. x leaves remainder 2 when divided by 4.

II. x leaves remainder 3 when divided by 5.

- A** if the statements I alone is sufficient to answer the question.
- B** if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: D

4. What is more efficient among two persons A and B?

- I. A and B together can complete a job in 10 days.
- II. A alone can complete the job in 15 days.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: C

5. If $x, y, z \in \mathbb{R}$ and $z \neq 0$. What is the value of $\frac{xy}{z^2}$?

- I. $x = y$
- II. $x^2 + y^2 = 0$

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: B

6. 15 men can plough a field of 36 acres in 6 days. What is the area that can be ploughed by 25 men?

- I. 25 men work for 12 days.
- II. Each man works for 8 hours in a day.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: A

7. What is the statement number that should be subtracted from N to make it perfect square?

- I. $4000 < N < 5000$
- II. $N = 4628$

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: B

8. What are the co-ordinates of the point P?

- I. P lies on the line which makes an angle of 45° with the x - axis.
- II. The line passes through origin.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: D

9. What is the area of the circle?

- I. The circle passes thorough 4 vertices of a square.
- II. The circle is inscribed in a square of side 10 cm.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: B

10. Among the real number a and b , is a greater than b ?

- I. $a^2 + b^2$
$$\begin{array}{r} a \\ \times \quad 3 \\ \hline \end{array}$$
- II. $b = 5$

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: D

11. Is the integer ' a ' even?

- I. $8a$ is an even integer.
- II. $9a$ is an odd integer.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: B

12. What is the slope of the straight line?

- I. The straight line passes through the origin and the point $(3, 2)$
- II. The straight line passes through $(-3, -2)$,

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: A

13. How many items are sold in the shop?

- I. A shop keeper sells each of the items at Rs. 50/-.
- II. The shop keeper gets a profit of Rs. 1000/- for his investment of Rs. 4000/- .

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: C

14. Is $x = 0$?

- I. The arithmetic mean of x, y, z, t is 6.
- II. The arithmetic mean of x, y, z, t is 8.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: C

15. Is the positive integer n divisible by 720?

- I. n is divisible by 48 and 15.
- II. $n = b(b + 1)b + 2(b + 3)(b + 4)(b + 5)$ for some positive integer b .

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: B

16. What is the total depreciation in the cost of the house at the end of 4 years?

- I. Rate of depreciation of the house is 10% per annum.
- II. Area of the house is 1000 sq.m.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: D

17. What are the three number in geometric progression?

- I. Product of numbers = 1000
- II. The three numbers are even.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: D

18. What is the remainder obtained when n is divided by 10?

- I. $n = 6^k$, k is an integer $n \geq 1$.
- II. k is a the real number.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.

- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: A

19. What is the number of divisors of n ?

- I. $n = p^5, q^4$; p, q are distinct primes
- II. n is divisible by only two distinct primes.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: A

20. What is the radius of the circle.

- I. Circumference of the circle is $a\pi$ unit and the area of the circle is $b\pi$ sq.units.
- II. $a = b$.

- A if the statements I alone is sufficient to answer the question.
- B if the statements II alone is sufficient to answer the question.
- C if the statements I and II together are sufficient to answer the question but neither statement alone is sufficient.
- D if both the statements I and II together are not sufficient to an answer the question and additional data is required.

Answer: C

Instructions [21 - 25]

In each of the following questions, a sequence of number or letters that follow a definite pattern is given. Each question has a blank space. This has to be filled by the correct answer from the four given options to complete the sequence without breaking the pattern.

21. DRUM : IWZR :: _____ GQNSI

- A BLIND

B BLINK

C BRAVE

D BRAKE

Answer: A

22. ARC : DOF : ALI : _____

A DOL

B DIF

C DOF

D DIL

Answer: D

23. Tiger : Goat :: _____ Herbivore

A Carnivore

B Onmivore

C Parasite

D Insectivore

Answer: A

24. I : 18 :: _____ 13

A L

B N

C M

D O

Answer: B

25. 12 : 1728 :: _____ : 2744

A 13

B 15

C 14

Answer: C

Instructions [26 - 30]

Pick up the odd thing out in the following options and mark its number as your answer for the question:

- A 30**
- B 60**
- C 90**
- D 150**

Answer: A

- A PELICAN**
- B PENGUIN**
- C SEAGULL**
- D HUMMING BIRD**

Answer: D

- A 710**
- B 120**
- C 24**
- D 6**

Answer: A

- A $x^2 + y^2 + xy$**
- B $x^3 + y^3 + x^2y$**
- C $x^2 + y^2 + x$**
- D $x^4 + y^4 + x^2 + y^2$**

Answer: C

A 1427

B 97

C 1649

D 67

Answer: C

Instructions [26 - 40]

Note: The following question follows a definite pattern. Observe the same and fill in the blank with suitable answer.

26. $(3, 4, 5), (5, 12, 13), (6, 8, 10), (7, 24, 25), (17, 144, 145), \underline{\hspace{2cm}}$ -
(48, 55, 73)

A (20, 27, 28)

B (20, 99, 101)

C (20, 25, 29)

D (20, 30, 40)

Answer: B

27. $(0, 0), (\frac{\pi}{6}, \frac{1}{3}), (\frac{\pi}{3}, \frac{1}{3}), (\frac{\pi}{2}, \infty), (\frac{2\pi}{3}, \frac{1}{3}), \underline{\hspace{2cm}}$

A $(\frac{5\pi}{6}, -\frac{1}{3})$

B $(\frac{5\pi}{6}, -\frac{1}{3})$

C $(\frac{5\pi}{6}, -\frac{1}{2})$

D $(\frac{5\pi}{6}, -\frac{1}{2})$

Answer: A

28. 2, 26, 242, , 19682

A 2186

B 1266

C 986

Answer: A

29. $2 + 5, 9 + 4, 5, \dots, 161 + 72, 5$

- A** $18 + 16, 5$
- B** $38 + 17, 5$
- C** $64 + 32, 5$
- D** $72 + 64, 5$

Answer: B

30. $E14W, F13T, I17Y, \dots$

- A** $O20Y$
- B** $O18Y$
- C** $O12Y$
- D** $O14Y$

Answer: A

31. $2, 10, 30, 68, 130, \dots$

- A** 226
- B** 196
- C** 222
- D** 210

Answer: C

32. $35, 105, 319, 958, \dots$

- A** 2845
- B** 2855
- C** 2865
- D** 2875

Answer: D

33. 42, 56, 72, 90, 110, _____

- A** 110
- B** 120
- C** 132
- D** 140

Answer: C

34. ICET, KAGR, _____, OWVKN, QUML, SSOJ

- A** MYIP
- B** NXIP
- C** MXIP
- D** NYIP

Answer: A

35. INDIA, KQIPL, _____, OWSDH, QZXKS, SCCR

- A** OTMWW
- B** MTNWW
- C** NTMWW
- D** OTNWW

Answer: B

36. $\frac{1}{a-b}$, $\frac{1}{a^2-b^2}$, $\frac{1}{(a+b)^2(a-b)}$, $\frac{1}{(a+b)^2(a^2-b^2)}$, $\frac{1}{(a+b)^3(a^2-b^2)}$

- A** $\frac{1}{(a+b)^5(a-b)}$
- B** $\frac{1}{(a+b)^5(a-b)^3}$
- C** $\frac{1}{(a^5-b^5)}$

D
$$\frac{1}{(a^5-b^5)(a-b)}$$

Answer: A

37. 5, 30, 35, 2 30, 3 5, _____.

A 5 2

B 5 3

C 15

D 42

Answer: A

38. D, F, J, P, _____, H

A V

B W

C X

D Z

Answer: C

39.
$$\frac{1}{-6}, \frac{1}{3}, \frac{1}{13}, \frac{5}{26}, \frac{5}{46}, \frac{1}{73}$$

A $10^{\frac{1}{6}}$

B $9^{\frac{2}{5}}$

C $10^{\frac{2}{3}}$

D $10^{\frac{1}{3}}$

Answer: D

40. 3, 5, 2, 4, 1, 3, _____

A 3

B 1

C 6

D 0

Answer: D

Instructions [41 - 43]

Note:

The following table gives the number of students admitted into various courses of a university. Using this data, answer the questions.

| Year → | 2016 | 2017 | 2018 | 2019 |
|---------------------|-------------|-------------|-------------|-------------|
| Course ↓ | | | | |
| Chemistry | 50 | 40 | 55 | 58 |
| Mathematics | 52 | 56 | 58 | 60 |
| Physics | 60 | 58 | 45 | 52 |
| Botany | 5 | 56 | 58 | 55 |
| Zoology | 62 | 65 | 54 | 52 |
| Biochemistry | 60 | 50 | 55 | 58 |

41. Taking all the four years into consideration, in which course there were maximum number of admissions?

- A Physics**
- B Zoology**
- C Mathematics**
- D Chemistry**

Answer: B

42. What is the percentage increase in admissions of mathematics in 2019 compared to 2016 (approximately)?

- A 15.38%**
- B 15.36%**
- C 15.28%**
- D 15.30%**

Answer: A

43. What is the ratio of the number of students admitted into the university in 2017 to that of 2019?

- A 65 : 69**
- B 65 : 67**

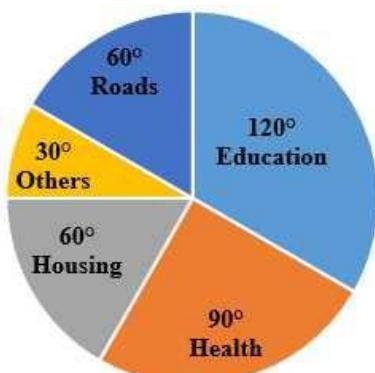
C 55 : 59

D 55 : 57

Answer: C

Instructions [44 - 46]

Note: The following Pie chart shows how the municipal funds are spent under different heads in a year. Study the chart carefully and answer the questions.



44. Which single head uses 25% of the total funds?

A Health

B Education

C Housing

D Roads

Answer: A

45. What percentage of the funds is spent on housing?

A $\frac{2}{193}$

B $\frac{1}{163}$

C $\frac{15}{163}$

D $\frac{2}{163}$

Answer: D

46. What is the ratio of the expenditure on education to that on health?

A 3 : 2

B 2 : 3

C 3 : 4

D 4 : 3

Answer: D

Instructions [47 - 50]

Note:

The survey of 36 students in a class pertaining to reading habits of three types of books; Novels (N), Fiction (F) and Comics (C) revealed the following information:

12 students read N

15 read F

12 read C

3 read both N and C

5 read both N and F

4 read both F and C

And only one reads all of the three books.

Using this information, answer the questions from 52 to 55.

47. The number of students who do not read any of these kinds of books is

A 5

B 6

C 7

D 8

Answer: D

48. How many read exactly how of three type of books?

A 7

B 8

C 9

D 10

Answer: C

49. How many read only Fiction?

A 6

B 7

C 8

D 9

Answer: B

50. How many read C but not F?

A 8

B 9

C 7

D 6

Answer: A

Instructions [51 - 55]

Each of the following questions used a different coding pattern. Identify the pattern and answer the questions.

51. In a certain code, if 'SPRING' is coded as 'USWPYT' then in the same code, the word that is coded as 'CXYBXA' is

A SUMMER

B WINTER

C AUTUMN

D YELLOW

Answer: C

52. In a certain code, if 'JANUARY' is coded as 'OFSZFWD' then code for 'NOVEMBER' is _____

A STAJRGJW

B STAKRMJW

C STAJSHJW

D STAKRGKW

Answer: A

53. In a certain code, if the word 'AMAZON' is coded as 'ZNZALM' then in the same code the word 'INFOSYS' is coded as

- A RMLUHBH
- B RLUMHBH
- C RUMHLBH
- D RMULHBH

Answer: D

54. In a certain code, if 'BLUE' is coded as 'ZIQZ', then the code for 'LATE' is

- A JXPZ
- B JPXZ
- C JPZX
- D JXZP

Answer: A

55. In a certain code, if 'BOMBAY' is coded as 'MOBYAB' then the code word for 'RAMDAS' is

- A SADMAR
- B SADRAM
- C MARSAD
- D DASRAM

Answer: C

Instructions [56 - 60]

For the words in English alphabet a code is evolved by the following rules:

- i. Vowels in a word are kept as it is in their position as they appear
- ii. The consonants that appear consecutively twice or more will be reversed in the same position. If only one consonant appears keep it as it is.

The same are used for decoding.

Using these codes answer the questions.

56. The code for the word BROTHERS is

- A RBOHTER

B RBEHTOR

C BTORREH

D BTERROH

Answer: A

57. The word coded a 'ARAKUVALLEY' is

A ARAKULLEYVAE

B YLLEARAKUAR

C ARAKUVALLEY

D VALLARAKUYE

Answer: C

58. The code for 'PYTHAGORUS' is

A SUROGAHTYP

B YPHTOGRASU

C HTPYOGORUS

D HTYPAGORUS

Answer: D

59. In the code of 'QUESTION', the letters in 1, 2, 3, 3, 8 places in that order are

A NOIIT

B QUEEN

C QUAAN

D TUAAN

Answer: B

60. The setting of letters coded as 'LLYSABUS' is

A SYLLABUS

B LYSLABUS

C YSLLABUS

D SUBALLYS

Answer: A

61. If February 10, 2022 is Thursday then the day on Christmas in the same year is?

A SUNDAY

B MONDAY

C THURSDAY

D SATURDAY

Answer: A

62. The time between 6 o'clock and 7 o'clock when the two hands of the clock are at 150° angle with each other for the first time is

A $4\frac{5}{11}$

B $7\frac{5}{11}$

C $5\frac{5}{11}$

D $6\frac{5}{11}$

Answer: C

63. The angle between the two hands of the clock at 6:30 AM is

A 15°

B 12°

C 10°

D 18°

Answer: A

64. A and B are children of C. D and E are brother whose father is B. A is mother of F. Then B is related to F as

A Father

- B** Uncle
- C** Brother
- D** Grand Father

Answer: B

65. A train for Hyderabad leaves every 50 minutes from Bangalore. An announcement was made at Bangalore station that a train to Hyderabad left 40 minute ago and the next train is at 4:30 PM. Then the time of the announcement is

- A** 4:20 PM
- B** 4:15 PM
- C** 3:55 PM
- D** 3:50 PM

Answer: A

66. A person starts from home at 9:15 AM to reach a meeting place. Which is 72 km from his home. He travelled by a car at a speed 60 kmph and reached the meeting place 13 minute before the scheduled time. Then the scheduled time of the meeting is

- A** 10:14 AM
- B** 10:30 AM
- C** 10:40 AM
- D** 10:04 AM

Answer: C

67. Ten persons $a_1, a_2, a_3, \dots, a_{10}$ are sitting around a circle at equal distances facing the centre. a_1 is opposite to a_8 , a_2 is to the right of a_8 , a_3 is opposite to a_2 , a_5 is opposite to a_7 who is the neighbour of a_1 , a_7 and a_9 are neighbour of a_4 , a_{10} is opposite to a_9 and a_6 is his neighbour. Then the neighbours of a_3 are

- A** a_1 and a_{10}
- B** a_2 and a_5
- C** a_6 and a_8
- D** a_7 and a_{10}

Answer: A

68. If the symbol \wedge denotes ' \times ' the symbol δ denotes ' $-$ ' and the symbol μ denotes '+', ϕ denotes ' \div ', then $(5 \wedge 4\mu 7)\delta(6\phi 3 \wedge 5\delta 3) =$

- A 20
- B 53
- C 14
- D 52

Answer: A

69. For integers (a, b) , define $a \oplus b = r$ and $a \odot b = s$, where r and s are the remainders, respectively when $a + b$ and $a \cdot b$ are divided by 7. Then, $(25 \oplus 40) \odot 10 =$

- A 2
- B 5
- C 6
- D 4

Answer: C

70. For $x, y \in \mathbb{R}$ define $x \oplus y = (x + y + 1)^2$ and $x \ominus y = (x - y + 2)^2$, then $(1 \oplus 4) \ominus (2 \oplus 5) =$

- A 576
- B 676
- C 625
- D 729

Answer: B

Communication Ability

Instructions [71 - 76]

Choose the correct meaning of the word given

71. Pejorative

- A Derogatory

B Didactic

C Developing

D Donating

Answer: A

72. Convivial

A Pleasant

B Painful

C Odorous

D Tasty

Answer: A

73. Efficacious

A Useless

B Useful

C Contradictory

D Cautious

Answer: B

74. Ubiquitous

A Nowhere

B Fortuitous

C Omnipresent

D Omnipotent

Answer: C

75. Frailty

A Confusion

- B Loyalty**
- C Patience**
- D Weakness**

Answer: D

76. *Gratuitous*

- A Derogatory**
- B Necessary**
- C Ancillary**
- D Complimentary**

Answer: D

77. Choose the correct antonym of the word given

Furtive

- A Sneaky**
- B Hidden**
- C Open**
- D Secretive**

Answer: C

78. Choose the correct synonym of the word given

Guile

- A Deceit**
- B Happiness**
- C Safety**
- D Honesty**

Answer: A

79. Choose the correct meaning of the expression given

Polygamy is the state of being

- A** married to many
- B** unmarried
- C** divorced
- D** married to one

Answer: A

80. Choose the correct meaning of the underlined idiom in the given sentence

"Did you notice how Satis got the cold shoulder from Dileep".

- A** was welcomed by
- B** was ignored
by
- C** had a fight
with
- D** accepted the prize from

Answer: B

Instructions [81 - 82]

Fill in the blank by choosing the correct word given

81. They could go to the college as the flood water _____

- A** decided
- B** conceded
- C** receded
- D** proceeded

Answer: C

82. The new drug is able to _____ the development of cancerous cells

- A** promote
- B** arrest
- C** uphold
- D** endorse

Answer: B

83. Choose the correct meaning of the word given

Abet

A Resist

B Buy

C Assist

D Prohibit

Answer: C

Instructions [84 - 86]

Fill in the blank by choosing the correct word given

84. The police could _____ the thief after a long chase.

A amend

B append

C commend

D apprehend

Answer: D

85. 'Entomology' is a science of _____ .

A birds

B insects

C reptiles

D mammals

Answer: B

86. The partnership entity is _____

A legal entity

B neither entity nor accountable entity

C legal and accountable entity

D legal and unaccountable entity

Answer: C

Instructions [87 - 100]

Choose the appropriate answer

87. The most basic language a computer is said to understand is

- A bandwidth**
- B binary code**
- C byte**
- D boot**

Answer: B

88. ASCII stands for

- A American Standard Code for Information Interchange**
- B American Software Code for Information Interchange**
- C American Software Code for Information Interface**
- D American Standard Code for Information Interface**

Answer: A

89. DSL (Digital Subscriber Line) is related to _____

- A distant band**
- B broadband**
- C digital cable band**
- D digital standard band**

Answer: B

90. A computer program that functions as an intermediary between a computer user and the computer hardware is called

- A software**

- B** hardware
- C** operating system
- D** driver

Answer: C

91. Induction of an employee in a company takes place

- A** at the college campus
- B** before recruitment
- C** after selection
- D** after probation and confirmation

Answer: D

92. Another name for application software is

- A** end user software
- B** utility software
- C** specific software
- D** practical software

Answer: A

93. Restarting the computer without turning off the power is called

- A** warm boot
- B** cold start
- C** old start
- D** young boot

Answer: A

94. Using social network to promote a product on social media platforms is called

- A** social marketing
- B** viral marketing

- C social advertising
- D data drives advertising

Answer: C

95. Which feature is used to save a web page's location for future retrieval?

- A Benchmark
- B Save
- C Find
- D Bookmark

Answer: D

96. The capacity of a networked connection is determined by

- A bandwidth
- B megabyte
- C binary code
- D debugging

Answer: A

97. The transistorized computer circuits were introduced in the

- A first generation
- B Second generation
- C third generation
- D fourth generation

Answer: B

98. A financial inducement to an employee, so that he may not leave the place where he is working is called

- A group norm
- B golden handshake

- golden
- C** handcuffs
- D** global shift

Answer: C

99. Dividend is paid on

- A** company debentures
- B** company deposits
- C** company shares
- D** company bonds

Answer: C

00. Directors of a joint stock company are elected by

- A** government representatives
- B** SEBI
- C** shareholders of the company
- D** stock exchange representatives

Answer: C

Instructions [101 - 106]

Fill in the blank by choosing the correct answer

01. He gave the presentation _____ being ill.

- A** from
- B** despite
- C** with
- D** on

Answer: B

02. If you are thinking about investing overseas, experienced guide?

- A doesn't it make
- B is it not making
- C does it make
- D did not make

Answer: A

03. I am sorry _____ the mistake

- A from
- B with
- C for
- D at

Answer: C

04. The book _____ five section .

- A comprises of
- B comprises
- C consists
- D comprises to

Answer: B

05. They wanted to get their work done by hook or _____ crook.

- A for
- B by
- C at
- D upon

Answer: B

06. The watchman prevented Ravi _____ parking his vehicle near the gate.

- A with
- B from
- C for
- D on

Answer: B

07. Choose the option that is the passive form of the given sentence

The detective found the lost necklace.

- A The lost necklace was found by the detective
- B The lost necklace had been find by the detective
- C The lost necklace founded by the detective
- D The lost necklace should find the detective

Answer: A

Instructions [108 - 109]

Fill in the blank by choosing the correct answer

08. I was amazed _____ their audacity.

- A in
- B at
- C for
- D to

Answer: B

09. Raju loves to munch smoothing _____ he is watching a movie on television

- A however
- B despite
- C so
- D while

Answer: D

10. Choose the option that is active form of the given sentence

The marathon race was by Shiva in record time.

- A** Shiva will run the marathon race in record time.
- B** Shiva runs the marathon race in record time.
- C** Shiva had ran the marathon race in record time.
- D** Shiva ran the marathon race in record time.

Answer: D

Instructions [111 - 120]

Fill in the blank by choosing the correct answer

11. You _____ wear your best shoes if you are going out for dinner.

- A** had to
- B** had to better
- C** should better
- D** could better

Answer: C

12. Had the police not reached there in time the bandits ___ him.

- A** would like
- B** will have killed
- C** would have killed
- D** had killed

Answer: C

13. If they were rich enough, they _____ that expensive car.

- A** will buy
- B** would have bought
- C** should buy

D will have bought

Answer: B

14. 'He took up the gauntlet thrown up by his colleagues' means that he _____ their challenge.

- A refused
- B postponed
- C accepted
- D suspended

Answer: C

15. We must distinguish the good from _____ bad.

- A a
- B an
- C the
- D in

Answer: C

16. Gandhiji is _____ the father of the _____ Nation.

- A called
- B called as
- C known
- D remembered

Answer: A

17. In large cities people are cut _____ from nature.

- A away
- B off
- C out

D down

Answer: B

18. Hope _____ the best and prepare for the worst.

A on

B at

C by

D for

Answer: D

19. The active voice of 'A most enjoyable time was had by everybody' may be 'Everybody _____ a most enjoyable time'.

A has

B have

C had

D been

Answer: C

20. He is interior _____ me.

A than

B to

C by

D on

Answer: B

Instructions [121 - 125]

Read the passage below and choose the correct answer for the questions.

Surveillance has increased manifold since the 9/11 terror attacks on the world Trade Centre in the U.S. This increase in Surveillance today shape the relationship between the state and the individual. The state keeps an eye on its citizens thereby positing each and every citizen as a potential wrong-doer. For instance the proliferation of the CCTV cameras in streets, restaurant and in every imaginable public space has now become an order of increased vigilance. In fact, the camera need not even be functional in order to make the citizens behave themselves - its mere presence is enough to scare the citizens into submission. Such is

the power of the mere potential of Surveillance.

Surveillance studies have shown that these techniques might not be too effective at all time , citizens might feign decent behavior in order to avoid themselves from getting into a tussle with the law of the land. But it does not assure the state of reformation in the attitude of the citizens. It is a mere eye-wash. It works only ,when the citizen truly desires to transform his or her attitude and adopt decency in all walks of life.

The act of constant Surveillance makes the state a voyeur - a person who derives pleasure from watching event unfold in a secretive manner. A recent case in point would be the raid on a hotel in the so-called cosmopolitan city of Mumbai where young couples were consensually residing. The state has today entered the bed-room. And this is an unhealthy proposition.

21. Who is shaping the relationship of the state and the individual according to the passage?

- A** Social media
- B** Press
- C** Welfare schemes
- D** Surveillance

Answer: D

22. Identify the word that comes close to the meaning of the word "Proliferation" found in the first paragraph

- A** absence
- B** presence
- C** suppression
- D** expansion

Answer: D

23. Even the potential of surveillance is carried out

- A** with the mere presence of the device camera
- B** with the actual functioning of camera
- C** with mere warming of surveillance on the wall
- D** with the conditioning of the mind of the people

Answer: A

24. " citizens might feign decent behaviour....." could mean:

- A citizen really behaving decently
- B citizen pretending decent behaviour
- C citizens being different to decent behaviour
- D citizens openly opposing decent behaviour

Answer: B

25. "It is mere eye-wash." What is the idiomatic implication for the theme of surveillance of the passage?

- A sincere solution
- B permanent solution
- C cleaning eyes
- D insincere solution

Answer: D

Instructions [126 - 130]

Read the passage below and choose the correct answer for the questions.

Today's world can truly be called a "society of spectacle", a phrase that the French sociologist and thinker Guy de Bord used decades earlier. Every act of lived experience has today become a spectacle. It would be a little incorrect to say that this craze for spectacle-izing everything that occurs around us is a recent phenomenon. If one had watched the *Pirate of the Caribbean* movies, one would realize that even in the late eighteenth century, executions were public events - a large portion of the populace would gather around the site of the hanging in the city square in order to see justice being meted out in front of their very own eyes. It was also a form of popular entertainment. It was a sort of a collective public blood-letting.

The spectacle that the contemporary society has become an overwhelming experience. One enters into a restaurant, orders an exotic dish - but the proof of having eaten the same doesn't exist until tons of photograph are clicked from varied angles and shared on social networking sites. One goes for a holiday to a calm and serene location, but is all the while busy telling the world about it as if one has to document every movement of one's existence. When does one live that moment then? Perhaps it is in the documentation that one survives these days!

26. What is the implication of the phrase coined by "society of the spectacle" by the French sociologist and thinker, Guy de Bord?

- A Society turning everything into spectacles
- B Society turning every lived experience into a spectacle
- C Society interested in enjoying its privacy

D Society interested in enjoying every moment

Answer: B

27. What is the recent phenomenon of society that has become a craze for it?

A Abusing internet

B Paying through credit cards

C Spectacle-izing

D Avoiding real socializing

Answer: C

28. According to the passage, these days proof of having eaten exists in

A clicking the food that is ordered for and putting them on the social networking sites

B preferring a restaurant that is famous for the quality of the food

C paying huge bill

D enjoying the food that has been ordered for

Answer: A

29. The author of the passage brings a parallel to the theme of collective enjoyment by referring to a film. What is the parallel?

A Collective participation in a singing

B Joining a chorus of a song

C Parking in a food in public

D Watching the spectacle of collective blood letting

Answer: D

30. According to the passage what is given priority by the contemporary society?

A Living in the present

B Living in the past

C Documenting the present

D Living in the future

Answer: C**Instructions [131 - 135]**

Read the passage below and choose the correct answer for the questions.

The Odisha government on Thursday started evacuating people from low - lying areas in several coastal districts to safer places as cyclone Fani is likely to hit the State's coast in Puri district on Friday evening.

As the sky remained overcast since morning, light rain has begun in many areas in the coastal belt. More than eight lakh people were to be brought to cyclone shelters and other safer places by this evening, according to official . Adequate arrangements have been made at the cyclone shelter. The India Meteorological Department has predicted that Fani will make landfall at around 5.30 p.m on Friday, wind speeds at 170-180 kmph gusting to 200 kmph, accompanied by tidal surge of about 1.5 metres.

As many as 25 terms of the National Disaster Response Force (NDRF). Odisha Disaster Rapid Action Force (ODRAF) along With State fire service personnel have been engaged in the evacuation exercise. Defence forces are on high alert to meet any eventuality.

The East Cost Railway has announced to run at least tree special trains from Puri to West Bengal during the day. ore than 80 trains had been cancelled between Bhadrak and Vizianagararn stations on Thursday. 14 distiicts in Odisha hich are likely to be affected by the cyclone are Ganjam, Gajapati, Puri, Khurda, Nayagarh, Cuttack, Dhenkanal Jagatsinghpur, Kendrapara Jajpur, Keonjhar, Bhadrak, Balasore and Mayurbhanj.

Chief Minister Naveen Patnaik on Thursday appealed to the people to not panic, and cooperate with the administration in handling the situation. Stating that the State government was fully ready to tackle the situation. Mr. Patnaik emphasized the need to pay special attention to women, children, elderly and people with disabilities during the cyclone. The Chief Minister met the telecom operators at the State Secretariat this morning and reviewed their preparedness to maintain communication link during the cyclone. Mr. Patnaik also held one-on-one talks with Secretaries of line departments, regarding their preparedness.

31. Which of the following statements sums up what the passage is primarily a bout?

- A** The efforts of the disaster management forces to avert the danger.
- B** The relief measures taken up by the various national bodies.
- C** The Chief Minister's assurance to the people of the affected areas.
- D** The measures taken to compensate the extent of loss and damage to human beings.

Answer: A

32. The passage does not refer to preparedness with respect to _____

- A** trains
- B** fire safety
- C** communication modes

D human beings

Answer: B

33. According to this passage how many persons have been moved to safer places?

A 25 lakh

B 14 lakh

C 8 lakh

D 5 lakh

Answer: C

34. Which of the following departments did the Chief Minister peak to directly?

A Disaster management

B Line

C Meteorological

D Railway

Answer: B

35. From the style of the passage, it can be inferred that it is a, _____.

A newspaper report ,about a national disaster

B statistical report about environmental issues

C scholarly article on cyclones

D government document about measures to be taken to face disasters

Answer: A

Instructions [136 - 140]

Read the passage below and choose the correct answer for the questions.

Every time someone mails a letter or hands over a currency note in India, every time an Indian bureaucrat stamps a document with an official seal, they are handling a symbol that dates back over 2,000 years: four lions sculpted in stone, one facing in each direction. The man who created this potent and enduring icon is a towering mysterious figure in India's history, a king from the third century BC whose ideas - above all, that a ruler must accept the diversity of his subjects' beliefs - were long forgotten but returned to inspire the modern day Indian state.

We know that today by the name Ashoka, to look at he was unprepossessing - a bit of a lens - breaker, as they say in Bollywood: short, fat and famously afflicted by bad skin. Yet he was a lucky man too, known in his lifetime as devanampiya, 'beloved of the gods'. He transformed what was still a nascent sect - Buddhism - into a world religion, transmitting its ethical vision across the subcontinent and the rest of Asia. And, most unusually for a royal- in any country at the time or since he spread his ideas not through violence, but through moral force and persuasion.

36. The symbol the first paragraph describes is that of

- A the four lions
- B a letter
- C a document
- D modern India

Answer: A

37. The most important idea the modern Indian state has taken from Ahoka is _____

- A Buddhism
- B accepting diversity of beliefs
- C the four lion
- D Bollywood

Answer: B

38. The word 'unprepossessing' means

- A Attractive
- B Unlucky
- C Handsome
- D Unappealing

Answer: D

39. In the spread of Buddhism, Ashoka used _____ force.

- A physical
- B political
- C brute

D motal

Answer: D

40. Identify the wrong statement about Ashoka.

- A He was not called Ashoka during his life time.
- B He was instrumental in the spread of Buddhism in Asia.
- C He suffered from a skin disease.
- D He was considered handsome.

Answer: D

Mathematical Ability

41. If $2^{x+l} + 3^y = 59$ and $2^{x+3} + 3^{y+1} = 209$, then the length of the hypotenuse of the right - angle triangle having x and y as sides is

- A 13
- B 13
- C 5
- D 5

Answer: C

42. If $a^x = b^y = c^z = a^w$ and $abc = d^3$ then the harmonic mean of x, y and z is

- A $\frac{1}{w}$
- B w
- C $3w$
- D $\frac{3}{w}$

Answer: B

43. If $25x^2 + 58y^2 + 16z^2 = 30xy + 56yz$, then $x : y : z =$

A 12 : 20 : 35
B 28 : 50 : 245
C 35 : 21 : 12
D 84 : 130 : 215

Answer: A

44. If $x : y = 3 : 7$ and $x + y = 80$ then $x + 6 : y + 4 =$

A 3 : 2
B 2 : 3
C 2 : 1
D 1 : 2

Answer: D

45. If a and b are two non-zero unequal numbers, then

$$(a-b)(\frac{a-b}{a+b})$$

A $1 - 2 \frac{1}{a+b}$

B $1 + 2 \frac{1}{a+b}$

C $1 - 2 \frac{ab}{a+b}$

D $1 + 2 \frac{ab}{a+b}$

Answer: C

46. $5 + 2 \frac{6}{8} + 8 - 2 \frac{15}{15} =$

A $2 - 5$
B $2 + 5$
C $3 - 5$
D $3 + 5$

Answer: B

47. The number of positive divisors of $13!$ is

- A 1440
- B 1584
- C 1312
- D 13

Answer: C

48. If the ten digit number $235a43b316$ is divisible by 9 and $a - b = 5$ then the ordered pair $(a, b) =$

- A (6,1)
- B (7,2)
- C (3,8)
- D (5,9)

Answer: B

49. The greatest common divisor of the numbers $a = 15^3 \cdot 12^4$ and $b = 15^4 \cdot 12^3$ is

- A $15^3 \cdot 12^3$
- B $15^3 \cdot 12^4 \cdot 2$
- C $15^3 \cdot 12^4 \cdot 3$
- D $15^3 \cdot 12^4 \cdot 5$

Answer: C

50. If an aluminium ware of length 8 m 96 cm; and a copper wire of 5 m 12 cm are cut into pieces of equal length 'l' cm, then the maximum possible value of 'l' is

- A 32
- B 64
- C 128
- D 256

Answer: C

51. In the decimal representation of $\frac{5}{22}$ the digit at the 27th decimal place is

- A 1
- B 2
- C 5
- D 7

Answer: D

52. If a is the reciprocal of the sum of the reciprocals of $\frac{5}{3}$ and $\frac{7}{5}$; and is half of the reciprocal of 23 then $\frac{a}{5b} =$

- A 3
- B 5
- C 7
- D 23

Answer: C

53. If a_1, a_2, a_3 and a_4 is the decreasing order of the elements in the set $\left\{ \frac{2}{7}, \frac{7}{5}, \frac{9}{5}, 7, 15, 8, 20 \right\}$ then $a_2 + a_3 =$

- A $\frac{2}{7}$
- B $\frac{17}{56}$
- C $\frac{19}{56}$
- D $\frac{11}{12}$

Answer: D

54. If $x = \sqrt[3]{23}, y = \sqrt[3]{29}$ and $z = \sqrt[4]{23}$, then

- A $x > z > y$
- B $y > x > z$
- C $y > z > x$

D $x > y > z$

Answer: D

55. If 8% of a property is worth Rs. 1.76 lakhs, then the worth of the whole property (in lakh of rupees) is

A 5.5

B 11

C 22

D 33

Answer: C

56. For a fraction if the numerator is increased by 20% and the denominator decreased by 20% we get $\frac{7}{4}$. Then the original fraction is

A $\frac{8}{21}$

B $\frac{7}{22}$

C $\frac{6}{19}$

D $\frac{5}{17}$

Answer: A

57. After two successive discounts of 10% each on the marked price of an item if a person bought it for Rs .810/-, then the marked (in rupees) of the item is

A 1200

B 1100

C 1000

D 900

Answer: C

58. An article when sold at 5% profit yields Rs. 15 more than when it is sold at a loss of 10%. The cost price (in rupees) of the article is

A 75

B 100

C 150

D 180

Answer: B

59. A and B enter into a partnership investing capitals in the ratio 3 : 4. At the end of the three months A has withdrawn and B continued for some time. If the profits are shared in the ratio 1 : 4 at the end of the business. the number of month B continued the business is

A 5

B 6

C 9

D 10

Answer: B

60. A person P started a business and after 6 months Q joined him with an investment equal to one-third of P. The share of Q (in Rs.) in the year-end profit of R. 3,50,000/- is

A 1,50,000

B 1,00,000

C 90,000

D 50,000

Answer: D

61. Pipe P and Q can fill an empty tank individually in 9 hours and 12 hour respectively. If these are opened alternately every hour, starting with P, the pipe that fills the tank finally and the total time taken are given by

A P fills and it takes 10^4

B Q fills and it takes 10^3

C P fills and it takes 10^3

D Q fills and it takes 10^4

Answer: A

62. Tap A and B take 6 hours and 8 hours respectively to fill an empty tank and another tap C empties the full tank in x hours. Due to a problem, tap C could not be closed. If it took 12 hour for them to fill the tank, then the value of x is

- A 4
- B $\frac{1}{42}$
- C $\frac{3}{44}$
- D $\frac{5}{44}$

Answer: D

63. Three trains A, B and C moving with respective speeds S_1, S_2 and S_3 kmph take t_1, t_2 and t_3 hours respectively to cover a distance of x km. If $S_1 : S_2 : S_3 = 3 : 4 : 5$, then $t_1 : t_2 : t_3 =$

- A 5 : 4 : 3
- B 20 : 15 : 12
- C 16 : 15 : 9
- D 15 : 9 : 12

Answer: B

64. A train takes 40 minutes to cover a distance of 60 km. If its speed is reduced by 15 kmph, then the time it takes (in minutes) to cover the same distance is

- A 45
- B 48
- C 54
- D 60

Answer: B

65. A person P is 3 time more efficient than another person Q in doing a job. If Q alone needs 60 hours to complete the work then the time (in hours) required for P and Q together to complete it is

- A 12
- B 15
- C 20

D 25

Answer: B

66. If A, B and C can complete a work individually in 20 days, 15 days and 12 days, respectively. A and C started the work together and left it after 4 days. The number of days needed for B to complete the remaining work is

A 10

B 9

C 8

D 7

Answer: D

67. In a right angled isosceles triangle the length of its hypotenuse is 12 cm. If the area of the triangle is a sq.cm, then the number of distinct prime divisors of the number a is

A 1

B 2

C 4

D 9

Answer: B

68. The maximum possible length (in meter) of the rod that can be placed in a rectangular field of area 120 sq. m, and having perimeter 46 m, is

A 23

B 24

C 19

D 17

Answer: D

69. If the volume of a sphere of radius ' r ' is equal to the volume of a cylinder whose base radius is h and height, then $h =$

$\frac{r}{2}$ and

- A $\frac{4}{3}r$
- B $\frac{8}{3}r$
- C $\frac{16}{3}r$
- D $\frac{20}{3}r$

Answer: C

70. The volume (in cubic cm) of the metal required to manufacture a hollow pipe of 56 cm length 4 cm thickness and whose outer perimeter is 440 cm is

- A 95,744
- B 96,344
- C 90,544
- D 96,444

Answer: A

71. If a copper solid sphere of radius 3 cm is melted and drawn into a wire of diameter 0.2 cm, then the length (in meters) of the wire is

- A 24
- B 36
- C 72
- D 96

Answer: B

72. A cube has a side of 1 cm. If its side is increased by 5%, then the percentage increase in its lateral surface area is

- A $108\frac{3}{4}\%$
- B $104\frac{3}{4}\%$
- C $102\frac{1}{2}\%$
- D $104\frac{1}{4}\%$

Answer: D

73. The length breadth and height of a room are 4 m, 3 m and 5 m respectively. The cost (in Rs.) of painting the 4 walls of the roof and its roof at the rate of Rs. 40 per sq. m. is

- A 4250/-
- B 2880/-
- C 3200/-
- D 3280/-

Answer: D

74. If a positive integer n divides $a - b$ where a and b are integers then we write $a \equiv b \pmod{n}$. The number of primes p with $2 \leq p < 100$ and $p \equiv 5 \pmod{7}$ is

- A 11
- B 7
- C 5
- D 3

Answer: C

75. The remainder obtained when 3^{58} is divided by 28 is

- A 25
- B 15
- C 21
- D 26

Answer: A

76. If p, q are two statements, then $p \rightarrow (p \rightarrow (p \rightarrow q))$ is equivalent to

- A $p \vee p$
- B $p \wedge p$
- C $p \rightarrow p$
- D $q \rightarrow p$

Answer: C

77. If a set A has 6 elements, then the number of reflexive relations that can be defined on A is

- A 2^{30}
- B $2^{36} - 2^6$
- C 30
- D 2^6

Answer: A

78. The intercept made by the line passing through the points (3, -5) and (7, 1) on the y - axis is

- A $\frac{-19}{3}$
- B $\frac{-19}{2}$
- C $\frac{19}{3}$
- D $\frac{19}{2}$

Answer: B

79. $\tan\left(-\frac{23\pi}{4}\right) =$

- A 3
- B - 3
- C -1
- D 1

Answer: D

80. The angles of elevation of the top of a tower of height 80 when observed from two points A, B on the level ground which are on either side of the tower and collinear with the foot of the tower are respectively 30° and 45° then the distance between A and B in meters) is

- A $80(\sqrt{3} + 1)$
- B $\frac{80(\sqrt{3}+1)}{3}$
- C $80(\sqrt{3} - 1)$

80(3-1)
3

D

Answer: A

81. If $x - 17$ is a factor of the polynomial $p(x)$ then a factor of $p(4x + 1)$ is

- A $x + 1$
- B $x + 4$
- C $x - 1$
- D $x - 4$

Answer: D

82. In an arithmetic progression the sum of the first 21 terms is 1470, then the 11th term of that progression is

- A 735
- B 147
- C 140
- D 70

Answer: D

83. $\lim_{x \rightarrow 1} \frac{x^3 - 3x^2 + 5x - 3}{x^2 + 4x - 5} =$

- A $\frac{2}{3}$
- B $\frac{1}{3}$
- C $\frac{2}{5}$
- D $\frac{3}{5}$

Answer: B

84. The term independant of x in the expansion of $(x^4 - 3x^3)^8$ is

- A $2^{14} \times 3 \times 7$

B $2^{15} \times 3 \times 7$

C $2^{14} \times 3^2 \times 7$

D $2^{16} \times 3^2 \times 7$

Answer: C

85. The area of the circle (in sq. cm) that can be inscribed in an equilateral triangle of area $16\sqrt{3} \text{ cm}^2$ is

A 64π

B $\frac{64}{3\pi}$

C $\frac{16}{3\pi}$

D 16π

Answer: C

86. If the arithmetic mean of 15, 21, 17, x , 19, 24, 45, 37 is 29, then $x =$

A 34

B 44

C 54

D 64

Answer: C

87. If the arithmetic mean of the first n natural number is 191, then the sum of the digits in n is

A 12

B 11

C 10

D 9

Answer: A

88. The median of the following data is:

A 16.35

B 17.50

C 18.21

D 19.30

Answer: B

89. If the mode and the median of a data are 75 and 69 respectively, then the mean of the data is

A 74

B 71

C 68

D 66

Answer: D

90. The standard deviation of the natural numbers

101, 103, 105, ..., 197 is

A $5\sqrt{2}$

B $10\sqrt{2}$

C $20\sqrt{2}$

D $40\sqrt{2}$

Answer: C

91. If x_1, x_2, \dots, x_{20} are observations in a data whose mean is 4 and variance is 9, then

$$\sum_{i=1}^{20} x_i(x_i + 1) =$$

A 180

B 280

C 380

D 580

Answer: D

92. When 3 fair dice are thrown at random, the probability of getting different numbers on them is

A 30
B 5
C 4
D 9
D 6
D 31

Answer: B

93. If a fair coin is tossed six times, the probability of getting exactly 4 consecutive heads is

A 5
B 64
C 5
D 35
C 15
D 64
D 15
D 32

Answer: A

94. If 3 boys and 4 girls sit in a row at random, then the probability that all boys sit together is

A 5
B 7
C 4
D 7
C 2
D 7
D 1
D 7

Answer: D

95. If two cards are drawn at random from a well shuffled pack of 52 cards, then the probability that both are not spade cards is

A 16
B 17
C 19
D 54
C 16
D 34
D 19
D 34

Answer: D