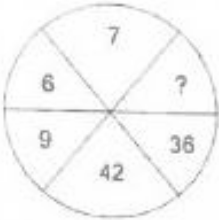


## Part – 1 : General Intelligence

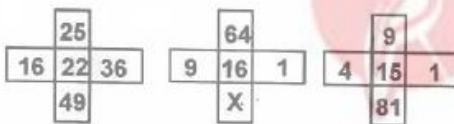
**Directions :** Select the missing numbers from the given responses.

1.



- A. 54
- B. 78
- C. 34
- D. 24

2.



- A. 4
- B. 2
- C. 16
- D. 32

3.



- A. 11
- B. 10
- C. 7
- D. 4

4. 05 06 07 08  
10 18 21 40  
07 09 10 ?

- A. 13
- B. 11

- C. 20
- D. 15

### Question Nos. 5 to 7

**Directions :** A series is given, with one term missing. Choose the correct alternative from the given ones that will complete the series.

5. 127, 131, 139, ?, 151, 157, 163, 167

- A. 141
- B. 143
- C. 147
- D. 149

6. 1, 1, 2, 3, 5, ?, 13, 21

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

7. 361, ?, 169, 121, 49, 25

- A. 289
- B. 196
- C. 256
- D. 324

### Question Nos. 8 to 16

**Directions :** Find the odd word/ letters/ number from the given alternatives.

8.

- A. aacdff
- B. ggijkk
- C. mmopqq
- D. qqstuu

9.

- A. 6
- B. 15
- C. 12
- D. 17

10.

- A. 853
- B. 734
- C. 532
- D. 751

11.

- A. Solid
- B. Plump
- C. Fathom
- D. Thick

12.

- A. Whim
- B. Quirk
- C. Caprice
- D. Foible

13.

- A. FUEV
- B. QPSR
- C. VUXW
- D. YXWV

14.

- A. RQP
- B. HGF
- C. NPR
- D. DCB

15.

- A. IJKL
- B. PONM
- C. HGFE
- D. DCBA

16.

- A. 3463
- B. 5725
- C. 6514
- D. 8948

17. Arrange the following words as per the reverse order in a dictionary.

- 1. multitude
- 2. multinational
- 3. multiplier
- 4. multinomial
- 5. multilingual

A. 1 3 4 2 5

B. 5 4 3 2 1

C. 4 5 3 2 1

D. 1 3 2 4 5

### Question Nos. 18 to 20

**Directions :** Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?

18. oopqop\_qoo\_qo\_oqo\_pq

- A. opop
- B. poop
- C. oppo
- D. popo

19. \_ \_ babbba\_a\_ \_

- A. babbb
- B. baaab
- C. ababb
- D. bbaba

20. a\_baa\_baa\_ba

- A. bab
- B. bbb
- C. bba
- D. aab

21. **Directions:** Which conclusion is true with respect to the given statements

Statement :

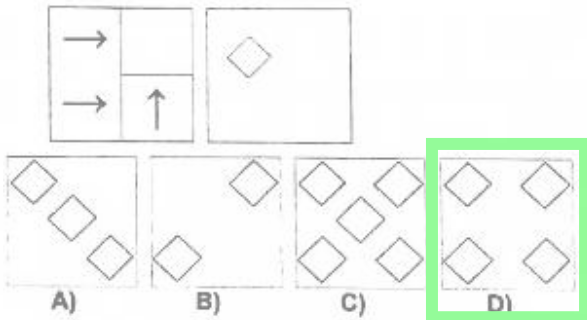
- 1. All squares are rectangles.
- 2. All rectangles are polygons.

Conclusion :

- A. Square is a polygon.
- B. Square is not a rectangle.
- C. Square is not a polygon.

D. Square is a rectangle and polygon.

22. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicates how it will appear when opened.



Question Nos. 23 to 31

**Directions :** Select the related word/ letters/ number from the given alternatives.

23. Vacation : Holiday :: Vocation : ?

- A. Money
- B. Career**
- C. Degree
- D. Pleasure

24. 32 : 28 :: 160 : ?

- A. 80
- B. 120
- C. 140**
- D. 110

25. SNAKE : VQDNH :: CRADLE :: ?

- A. FUDGOH**
- B. EVFGOF
- C. EUDGOH
- D. FVDGPH

26. FE : HG :: ML : ?

- A. QP
- B. PO
- C. ON**
- D. JI

27.  $\sqrt{AFI} : 13 :: \sqrt{DDA} : ?$

- A. 21**
- B. 24
- C. 22
- D. 12

28. Perch : Fresh water :: ? : Salt water

- A. Crocodile
- B. Snake
- C. Cod**
- D. Frog

29. 196 : 256 :: ? : 400

- A. 144
- B. 452
- C. 324**
- D. 204

30. 414 : 636 :: 325 : ?

- A. 414
- B. 222
- C. 636
- D. 547**

31. Eyes : Tears :: \_\_\_ : \_\_\_

- A. Hunger : Bread
- B. Sea : Water
- C. Heart : Artery
- D. Volcano : Lava**

32. Six faces of the dice are A, B, C, D, E and F. A is adjacent to B. B is adjacent to D but not C. E is adjacent to D and F. What is the side opposite to A?

- A. C
- B. F
- C. D
- D. E**

33. Ali had Rs 320. He spent  $\frac{3}{4}$  of it to buy a watch. Of the remainder, he used  $\frac{1}{8}$  of it to buy a pen. How much money is left?

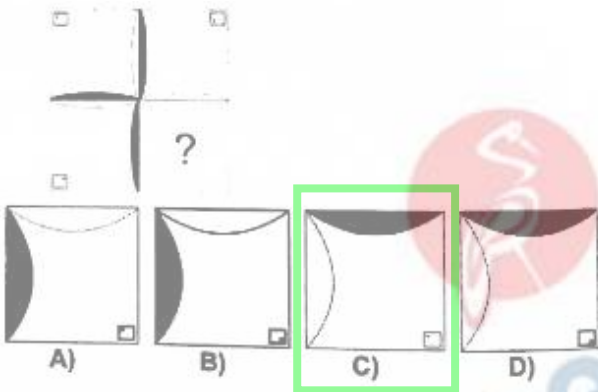
- A. 70**
- B. 120
- C. 90

D. 100

34. Karan has a brother 'Prem' and a sister 'Neesha'. Karan's wife is 'Naj' and has a daughter 'Naksha'. Naksha got married with Neesha's son Akbar and has a baby girl 'Riya'. What is relation between 'Naksha' and 'Neesha' ?

- A. Niece and Aunt
- B. Mother and grand daughter
- C. Sister
- D. Mother and daughter

35. Which answer figure will complete the pattern in the question figure?



**Question Nos. 36 to 37**

**Direction :** From the given alternative words, select the word which cannot be formed using the letters of the given word:

36. Correspondence

- A. Correspond
- B. Condense
- C. Respondent
- D. Respond

37. Calculate

- A. Cat
- B. Team
- C. Tea
- D. Late

38. If 'Stress is coded as Rstress. Then 'Pulse' will be coded as -

- A. Fulse
- B. Rulse
- C. Qulse
- D. Oulse

39. If ARMS equal 1234 then MARS will equal to :

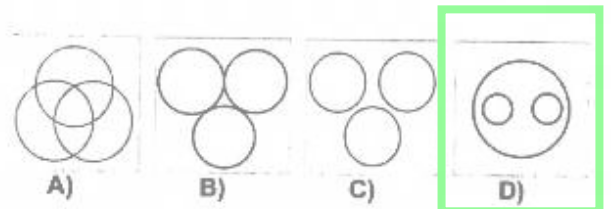
- A. 4213
- B. 4321
- C. 1243
- D. 3124

40. If Sita walks 10 Km towards West, then turned towards South and walked 10 Km, then turned East walked 10 Km, and turned North walked 10 Km. How far she is from starting point?

- A. 0 Km
- B. 40 Km
- C. 20 Km
- D. 10 Km

41. Identify the diagram that best represents the relationship among calasses given below :

Social sciences, History and Geography



42. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix-1 are numbered from 0 to 4 and that of Matrix-2 are numbered from 5 to 9. A letter from these matrices can be represented first by its row and next by its column. e.g., 'M' can be represented by 01,10 etc.. and 'R' can be represented by 58,85 etc. Similarly, you have to identify the set for the word 'NOW'

MATRIX-1  
आव्यूह - 1

	0	1	2	3	4
0	I	M	W	S	Q
1	M	W	S	Q	I
2	W	S	Q	I	M
3	S	Q	I	M	W
4	Q	I	M	W	S

MATRIX-2  
आव्यूह - 2

	5	6	7	8	9
5	O	A	D	R	N
6	A	D	R	N	O
7	D	R	N	O	A
8	R	N	O	A	D
9	N	O	A	D	R

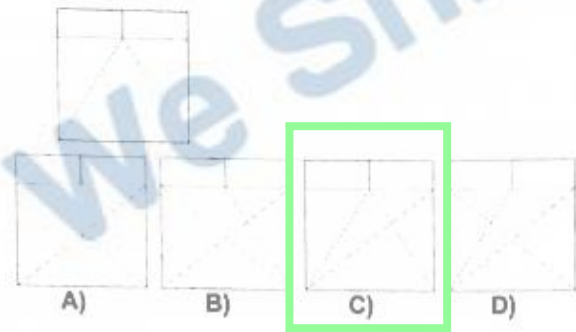
- A. 86, 58, 11  
 B. 55, 78, 11  
 C. 95, 55, 34  
 D. 95, 67, 02

43. Arrange the following words as per order in the dictionary.

- Silt
- Silicon
- Silicate
- Silken

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

44. From the given answer figures, select the one in which the question figure is hidden/embedded.



45. If + stands for division ; x stands for addition ; - stands for multiplication, ÷ stands for subtraction, which of the following is correct ?

- a.  $25 \times 3 - 7 \div 8 + 12 = 18$   
 b.  $25 + 3 \times 7 - 8 \div 12 = 10.89$   
 c.  $25 - 3 \div 7 \times 8 + 12 = 132$   
 d.  $25 \div 3 \times 7 - 8 + 12 = 19.3$

- A. c  
 B. b  
 C. d  
 D. a

46. **Directions:** In the question two statements are given each followed by two conclusions, I and II. You have to consider the statements to be true even if they seem to be at variance from commonly known facts. You have to decide which of the given conclusions, if any, follows from the given statements.

**Statement :**

- Some clerks are poor;
- A is poor

**Conclusion :**

- A is clerk
- A has a large family.

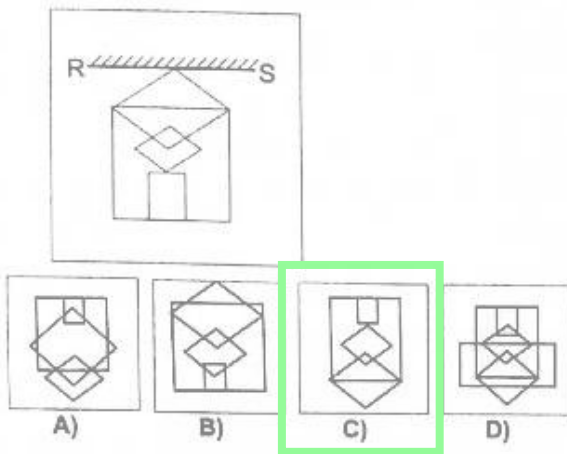
- A. Both conclusions I and II  
 B. Only conclusion II  
 C. Only conclusion I follows  
 D. Neither conclusion I nor II

47. Which one of the given responses would be a meaningful order of the following in ascending order?

- atom
- matter
- molecule
- electron

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

48. If a mirror is placed on the line RS, then which of the answer figures is the right image of the given figure ?



49. Laxmi went 10 Km to the West from my house, then turned left and walked 20 Kms. She then turned East and walked 25 Kms & finally turning left covered 20 Kms. How far was she from my house?

- A. 5 Kms
- B. 10 Kms
- C. 40 Kms
- D. 15 Kms

50. Insert the arithmetical operations in the following numerical figure -

$$4\_3\_4 = 48$$

- A. ++
- B. x +
- C. + -
- D. x x

## Part - II: English Language

**Question Nos. 51 to 60 Directions :** In the following passage some of the words have been left out. Read the passage carefully and choose the correct answer to each question out of the four alternatives and fill in the blanks.

### PASSAGE

Past I us in understanding our present world in a II better way. If we know III our ancestors lived or IV the wars were waged, we can understand the today's world V and get ideas for a VI future. What appears to VII as wrong today could have been right VIII . It is also interesting to know how IX in the past X the life of humans.

51.  
A. (I)-help  
B. (I)-helps  
C. (I)-helped  
D. (I)-is helping
52.  
A. (II)-more  
B. (II)-just  
C. (II)-much  
D. (II)-most
53.  
A. (III)-how  
B. (III)-where  
C. (III)-why  
D. (III)-when
54.  
A. (IV)-which  
B. (IV)-when  
C. (IV)-why  
D. (IV)-how
55.  
A. (V)-well  
B. (V)-best  
C. (V)-betterment  
D. (V)-better

56.  
A. (VI)-fairest  
B. (VI)-fairy  
C. (VI)-fair  
D. (VI)-fairer

57.  
A. (VII)-they  
B. (VII)-us  
C. (VII)-him  
D. (VII)-them

58.  
A. (VIII)-earliest  
B. (VIII)-later  
C. (VIII)-early  
D. (VIII)-earlier

59.  
A. (IX)-inventions  
B. (IX)-inventors  
C. (IX)- adventures  
D. (IX)-inventing

60.  
A. (X)-improves  
B. (X)-improve  
C. (X)-improved  
D. (X)-improvement

### Question Nos. 61 to 64.

Direction: Some parts of the sentences have errors and some are correct. Find out which part of sentence has an error and blacken the circle corresponding to the appropriate option. If a sentence is free from error, blacken the circle corresponding to 'No error' option in the answer sheet.

61. When the workers threatened to go on a strike, the mill owner declared a lay off on his mill.
- A. No error  
B. declared a lay off on his mill.  
C. go on a strike, the mill owner  
D. When the workers threatened to
62. The people gathered at the funeral to pay respect.

- A. The people gathered  
B. to pay respect.  
C. at the funeral  
D. No error

63. Iodine deficiency is an easy and inexpensive nutrient disorder to prevent.

- A. No error  
B. nutrient disorder to prevent  
C. in an easy and inexpensive  
D. Iodine deficiency

64. Whoever assumes his statement true is foolish.

- A. is foolish  
B. No error  
C. his statement true  
D. Whoever assumes

#### Question Nos.65 to 68

Directions : Out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.

65. Desultory

- A. Diminish  
B. Forsake  
C. Frugal  
D. Random

66. Jealous

- A. Greedy  
B. Lustful  
C. Envious  
D. Proud

67. Quest

- A. Search  
B. Decision  
C. Test  
D. Trial

68. Diligent

- A. Energetic  
B. Modest  
C. Intelligent  
D. Industrious

#### Question Nos. 69 to 72

Directions : Sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out the four and indicate it by blackening the appropriate circle in the Answer Sheet.

69. The cold breath of autumn had \_\_\_ the ivy leaves from the vine and the branches remained almost bare.

- A. stricken  
B. strucked  
C. strike  
D. striking

70. You take a decision. The ball is in \_\_\_\_\_ now.

- A. your net  
B. your court  
C. your pocket  
D. your garden

71. We can \_\_\_\_\_ right and wrong.

- A. distinguished for  
B. distinguish between  
C. distinguish from  
D. distinguish by

72. He is a man of \_\_\_\_\_ simplicity.

- A. child  
B. childish  
C. childlike  
D. childless

#### Question Nos. 73 to 76

Directions : Choose the word opposite in meaning to the given word and mark it in the Answer Sheet.



73. Defile

- A. purify
- B. yield
- C. describe
- D. repair

74. Desist

- A. hope
- B. assign
- C. continue
- D. request

75. Sterile

- A. fertile
- B. infertile
- C. barren
- D. dense

76. Prudent

- A. miserly
- B. foolish
- C. careless
- D. strange

#### Question Nos. 71 to 80

**Directions :** Out of the four alternatives, Choose the one which can be substituted for the given words/sentences and indicate it by blackening the appropriate circle in the Answer Sheet.

77. Introductory part or line to a discourse or play

- A. Monologue
- B. Epilogue
- C. Blurb
- D. Prologue

78. A handsome man

- A. Tycoon
- B. Adonis
- C. Debonair
- D. Cavalier

79. Intentional damage to arrest

production

- A. Modus operandi
- B. Nemesis
- C. Sangfroid
- D. Sabotage

80. A cinema show held in the afternoon.

- A. Entertainment
- B. Play
- C. Matinee
- D. Premier

#### Question Nos.81 to 84

**Directions :** Four alternatives are given for the Idiom/Phrase underlined. Choose the alternative which best expresses the meaning of the Idiom/Phrase and mark it in the Answer Sheet.

81. To take after

- A. to write down
- B. to resemble
- C. to cheat
- D. to remove

82. The jury is out

- A. No decision has been reached.
- B. The jury has taken a break between hearings.
- C. The entire jury decides to stay out of the proceedings
- D. A jury member is absent.

83. Have a finger in every pie

- A. to be efficient
- B. to be greedy
- C. to be meddling
- D. to be quarrelsome

84. She paid a flying visit to Mumbai to see her ailing father.

- A. a surprise visit
- B. a very long visit
- C. a very short visit
- D. went by aeroplane

Question Nos. 85 to 88

Directions : The 1st and the last part of the sentence/passage are numbered 1 and 6. The rest of the sentence/passage is split into four parts and named P, Q, R & S. These four parts are not given in their proper order. Read the sentence/passage and find out which of the four combinations is correct. Then find the correct answer and indicate it by blackening the appropriate circle in the Answer Sheet.

85. I. Glorious tributes were paid  
P- who, after fighting a battle with cancer,  
Q- the original superstar of Bollywood  
R- passed away last month  
S- to the legendary Rajesh Khanna,  
6. at his residence in Mumbai.

- A. SRPQ
- B. SQPR
- C. QSPR
- D. SQRQ**

86. I. Though the government  
P- the growth of population  
Q- has undertaken a series of plans  
R- and for raising the standard of living of the people  
S- for economic development 6. has upset all the plans.

- A. SRPQ
- B. QSRP**
- C. SPQR
- D. QPRS

87. I. What gives some persons  
P- torturing physical pain  
Q- after experiencing  
R- after the loss of a precious loved one  
S- the power to fight on  
6. day after day?

- A. PQRS
- B. PSQR
- C. PQSR
- D. SRQP**

88. I. A volcano is an opening or rupture in a planet's surface.

P- Erupting volcanoes can pose many hazards.

Q- This opening allows magma, ash and gases to escape from below the surface.

R- Volcanic ash can be a threat to aircraft.

S- Volcanoes are generally found where tectonic plates are diverging or converging.

6. Historically, so-called volcanic winters have caused catastrophic famines

- A. SQRQ
- B. QSPR**
- C. SPQR
- D. RSPQ

Question Nos. 89 to 92

Directions : Four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet

89.  
A. Ingenous  
**B. Ingenious**  
C. Ingenius  
D. Ingeneous

90.  
A. Plegiarist  
**B. Plagiarist**  
C. Plagraist  
D. Plagearist

91.  
A. Acomodation  
**B. Accommodation**  
C. Accomodation  
D. Acommodation

92.  
A. Purritaniccal  
B. Puritannical  
**C. Puritanical**  
D. Purritanical

### Question Nos. 93 to 96

Directions : A sentence / a part of the sentence is underlined. Below are given alternatives to the underlined part which may improve the sentence. Choose the correct alternative. In case no improvement is needed choose "No Improvement"

93. I'm really sorry but I haven't got much money myself.

- A. I'm really sorry but I do not have much money myself.
- B. I'm really sorry but I have very few money myself.
- C. I'm really sorry I have lesser money myself.
- D. No improvement

94. Both of them are good, but this is the best of the two.

- A. good
- B. No improvement
- C. better
- D. much betterment

95. He said, 'Let the show begins'

- A. No improvement
- B. 'Let the show begin'
- C. 'Let's the show begin'
- D. 'Let the show to begin'

96. The museum's collection includes artefacts dated back to prehistoric times.

- A. date backs to
- B. No improvement
- C. dating back to
- D. date back to

### Question Nos.97 to 98

**Direction :** A sentence has been given in Direct/ Indirect. Out of the four alternatives suggested, select the one which best expresses the same sentence in Indirect/Direct and mark your answer in

the Answer Sheet.

97. My brother told me that he would buy me a notepad the next day.

- A. My brother said to me "I would buy you a notepad tomorrow."
- B. My brother "I am going to buy you a notepad tomorrow."
- C. My brother said to me, "I will be buying you a notepad tomorrow."
- D. My brother said to me, "I shall buy you a notepad tomorrow."

98. The peon said to his officer, "Please forgive me".

- A. The peon requested his officer to forgive him.
- B. The peon told his officer please forgive him.
- C. The peon requested his officer that he forgive him.
- D. The peon said to his officer that he should forgive him.

### Question Nos.99 to 100

**Directions :** A sentence has been given in Active/Passive Voice. Out of the four alternatives suggested, select the one which best expresses the same sentence in Passive/Active Voice and mark your answer in the Answer Sheet.

99. Take the medicine.

- A. Let the medicine be taken
- B. The medicine must take you.
- C. The medicine is to be taken by you
- D. You are requested to take the medicine

100. I cannot trust him any more.

- A. He may not be trusted by me any more.
- B. He cannot be trusted by me any more.
- C. He cannot trust by me any more.
- D. He could not be trusted by me anymore.

### Part - III : Quantitative Aptitude

101. If  $p^3 - q^3 = (p - q) \{(p - q)^2 - xpq\}$ , then find the value of  $x$  is:

- A. -1
- B. -3**
- C. 1
- D. 3

102. Simon purchased a bicycle for Rs. 6810. He had paid a VAT of 13.5%. The list price of the bicycle was:

- A.
- B.
- C.**
- D.

103. A circle touches the four sides of a quadrilateral ABCD. The value of  $(AB + CD)$  is equal to:  $CB + DA$

- A. Rs. 6140**
- B. Rs. 6696.50
- C. Rs. 6000
- D. Rs. 5970.50

104. The radius of a hemispherical bowl is 6 cm. The capacity of the bowl is: (Take  $\pi = 22/7$ )

- A.  $345.53 \text{ cm}^3$
- B.  $452.57 \text{ cm}^3$**
- C.  $495.51 \text{ cm}^3$
- D.  $452 \text{ cm}^3$

105. In a business A and C invested amounts in the ratio 2 : 1 whereas A and B invested amounts in the ratio 3 : 2. If their annual profit be Rs. 157300, then B's share in the profit is:

- A. Rs. 24200
- B. Rs. 48400**
- C. Rs. 48000
- D. Rs. 36300

106. ) If is a tower with F on the ground.

The angle of elevation of T from A is  $x^\circ$  such that  $\tan x = 2/5$  and  $AF = 200\text{m}$ , The angle of elevation of T from a nearer point B is  $y^\circ$  with  $BF = 80\text{m}$ . The value of  $y^\circ$  is:

- A.  $30^\circ$
- B.  $60^\circ$
- C.  $45^\circ$**
- D.  $75^\circ$

107. A student goes to school at the rate of  $2^{1/2}$  Km/hr and reaches 6 minutes late. If he travels at the speed of 3 Km/hr he is 10 minutes early. What is the distance to the school?

- A.  $3^{1/4}$  Km
- B. 4 Km**
- C.  $3^{1/2}$  Km
- D. 1 Km

108. ) The sum of the perfect squares between 120 and 300 is:

- A. 1400**
- B. 1024
- C. 1296
- D. 1204

109. If A, B, C are the angles of a  $\Delta ABC$  then following is equal to:

$$\sin\left(\frac{B-C}{2}\right)$$

A)  $\sec \frac{B}{2}$

B)  $\sec \frac{A}{2}$

**C)  $\cos \frac{A}{2}$**

D)  $\operatorname{cosec} \frac{A}{2}$

### Question Nos.110 to 113

**Directions:-** The following table shows the world production of steel in 1920 - 1927. Study the table and answer the question.

YEAR वर्ष	1920	1921	1922	1923	1924	1925	1926	1927
PRODUCTION (in Million Tons) उत्पादन (मिलियन टनो में)	71.30	43.51	67.66	76.23	77.23	88.93	91.75	100.17



110. The ratio of production of steel in the year 1924 and 1925 to that of 1923 and 1927 is:

- A. 2005 : 2077
- B. 2205 : 2007
- C. 2077 : 2205
- D. 2205 : 2077

111. The average production of steel is:

- A. 76.09
- B. 77.10
- C. 75.13
- D. 74.07

112. The difference of the production of steel in the year 1923 and 1924 is x% of 1927. Then the value of x is approximately:

- A. .001
- B. 1
- C. .1
- D. .01

113. The number of years during which the company has its production less than the average production during 1920 - 1927 is approximately:

- A. 6
- B. 2
- C. 3
- D. 4

114) If  $\sin \Theta + \cos \Theta = \sqrt{2} \sin (90^\circ - \Theta)$  then  $\cot \Theta$  is equal to:

- A.  $\sqrt{2} - 1$
- B.  $\sqrt{2}$
- C.  $\sqrt{2} + 1$
- D.  $\sqrt{0}$

115. A and B can do a piece of work in 15 days. B and C can do the same work in 10 days and A and C can do the same in 12 days. Time taken by A, B and C together to do the job is:

- A. 4 days
- B. 9 days
- C. 5 days
- D. 8 days

116) AB is the diameter of a circle with centre O. P be a point on it. If  $\angle POA = 120^\circ$ . Then,  $\angle PBO = ?$

- A.  $50^\circ$
- B.  $120^\circ$
- C.  $45^\circ$
- D.  $60^\circ$

117. The mean high temperature of the first four days of a week is  $25.5^\circ \text{c}$  whereas the mean of the last four days is  $25.5^\circ \text{c}$ . If the mean of the whole week is  $25.2^\circ \text{c}$  then the temperature of the 4<sup>th</sup> day is:

- A.  $25^\circ \text{c}$
- B.  $25.2^\circ \text{c}$
- C.  $25.6^\circ \text{c}$
- D.  $25.5^\circ \text{c}$

### Question Nos.118 to 122

**Directions:-** The pie chart shows how the school funds is spent under different heads in a certain school. Using the pie chart answer the questions.



118. Which head uses 25% of the funds?

- A. Sports
- B. Art and Craft**
- C. Library
- D. Misc

119. Which head has the maximum expenditure?

- A. Art & Craft
- B. Library
- C. Sports**
- D. Science

120. What percentage of the total expense is spent on library?

- A. 24
- B. 20
- C. 16.6**
- D. 24.3

121. What is the ratio of expenditure on sports to that on art and craft?

- A. 1 : 4
- B. 4 : 3**
- C. 2 : 1
- D. 1 : 1

122. Which heads have the same amount of expenditure?

- A. Science and Misc
- B. Misc and Library
- C. Sports and Science
- D. Library and Science**

123. Each side of a cube is decreased by 25%. Find the ratio of the volumes of the original cube and the resulting cube.

- A. 8 : 1
- B. 64 : 27**
- C. 64 : 1
- D. 27 : 64

124. For real a, b, c if  $a^2 + b^2 + c^2 + ab + bc + ca$ , the value of  $\frac{a+c}{b}$  is:

- A. 3

- B. 1
- C. 2**
- D. 0

125) The value of the following is:

$$\frac{(\tan 20^\circ)^2}{(\operatorname{cosec} 70^\circ)^2} + \frac{(\cot 20^\circ)^2}{(\sec 70^\circ)^2} + 2 \tan 15^\circ \cdot \tan 45^\circ \cdot \tan 75^\circ$$

- A. 4
- B. 2
- C. 1
- D. 3**

126. There is 10% loss if an article is sold at Rs. 270. Then the cost price of the article is:

- A. Rs. 320
- B. Rs. 270
- C. Rs. 300**
- D. Rs. 250

127) If  $x + y = 2a$ , then the value of

$$\frac{a}{x-a} + \frac{a}{y-a} \text{ is :}$$

- A. 2
- B. 0**
- C. 1
- D. -1

128. The base of a right prism is a trapezium whose lengths of two parallel sides are 10 cm and 6 cm and distance between them is 5 cm. If the height of the prism is 8 cm, its volume is:

- A.  $310 \text{ cm}^3$
- B.  $300.5 \text{ cm}^3$
- C.  $300 \text{ cm}^3$
- D.  $320 \text{ cm}^3$**

129. On what sum of money will the difference between simple interest and compound interest for 2 years at 5% per annum be equal to 63?

- A. Rs. 25,200**
- B. Rs. 24,600
- C. Rs. 25,500
- D. Rs. 24,800

130) If  $\frac{x+3}{3x} = 1$

then the value of  $x^3$  is?

- A. -27
- B. 1
- C. 27
- D. 0

131. The ratio of two numbers is 3 : 4 and their LCM is 120. The sum of numbers is:

- A. 140
- B. 35
- C. 70
- D. 105

132. A hemisphere and a cone have equal bases. If their heights are also equal, then the ratio of their curved surfaces will be:

- A. 1 : 2
- B. 1 :  $\sqrt{2}$
- C.  $\sqrt{2} : 1$
- D. 1

133. A shop of electronic goods is closed on Monday. The average sales per day for remaining six days of a week is Rs. 15640 and the average sale of Tuesday to Saturday is Rs. 14124. The sales on Sunday is:

- A. Data inadequate
- B. Rs. 21704
- C. Rs. 23220
- D. Rs. 20188

134.  $9x^2 + 25 - 30x$  can be expressed as the square of:

- A.  $-3x - 5$
- B.  $3x - 5$
- C.  $3x^2 - 25$
- D.  $3x + 5$

135) AB and AC are tangents to a circle with centre O. A is the external point of the circle. The line AO intersect the chord BC at D. The measure of the  $\angle BDO$  is:

- A.  $75^\circ$
- B.  $45^\circ$
- C.  $90^\circ$
- D.  $60^\circ$

136. Let ABC be an equilateral triangle and AD perpendicular to BC. Then  $AB^2 + BC^2 + CA^2 = ?$

- A.  $3AD^2$
- B.  $5AD^2$
- C.  $4AD^2$
- D.  $2AD^2$

137. A man buys a TV priced at Rs. 16000. He pays Rs. 4000 at once and the rest after 15 months on which he is charged a simple interest at the rate of 12% per year. The total amount he pays for the TV is:

- A. Rs. 17,800
- B. Rs. 18,200
- C. Rs 17,200
- D. Rs 16,800

138. The total discount on Rs. 1860 due after a certain time at 5% is Rs. 60. find the time after which it is due:

- A. 9 months
- B. 10 months
- C. 8 months
- D. 7 months

139. The difference between the greatest and the least four digit numbers that begins with 3 and ends with 5 is:

- A. 990
- B. 900
- C. 909
- D. 999

140. What is the position of the circumcentre of an obtuse-angled triangle?

- A. It lies inside the triangle.
- B. It is the mid point of the largest side.
- C. It lies outside the triangle.**
- D. It is the vertex opposite to the largest side.

141. D and E are mid-points of sides AB and AC respectively of the  $\triangle ABC$ . A line drawn from A meets BC at H and DE at K.

- A. 1 : 3
- B. 2 : 1
- C. 1 : 2
- D. 1 : 1**

142. If  $\sqrt{33} = 5.745$ , then the value of the following is approximately:

$$\frac{\sqrt{3}}{\sqrt{11}}$$

- A. 6.32
- B. 2.035
- C. 1
- D. 0.5223**

143. The value of the following is:

$$\left(\frac{\sin 47^\circ}{\cos 43^\circ}\right)^2 + \left(\frac{\cos 43^\circ}{\sin 47^\circ}\right)^2 - 4\cos^2 45^\circ$$

- A)  $\frac{1}{2}$
- C) 1

B) -1

**D) 0**

144. The greatest four digit number which is exactly divisible by each one of the numbers 12, 18, 21 and 28.

- A. 9828**
- B. 9928
- C. 9882
- D. 9288

145. The number of pair of positive integers whose sum is 99 and HCF is 9 is:

- A. 2
- B. 4
- C. 3
- D. 5**

146. 50% of a number when added to 50 is equal to the number. The number is:

- A. 150
- B. 75
- C. 50
- D. 100**

147. A train passes an electrical pole in 20 seconds and passes a platform 250m long in 45 seconds. Find the length of the train:

- A. 400m
- B. 250m
- C. 200m**
- D. 300m

148. An epidemic broke out in a village in which 5% of the population died. Of the remaining, 20% fled out of panic. If the present population is 4655, then the population of the village originally was:

- A. 5995
- B. 6125**
- C. 6000
- D. 5955

149. A pipe can fill a tank in 24 hrs. Due to a leakage in the bottom, it is filled in 36 hrs. If the tank is half full, how much time will the leak take to empty the tank?

- A. 24 hrs
- B. 72 hrs
- C. 36 hrs**
- D. 48 hrs

150. The difference between simple interest and the true discount on Rs. 2400 due 4 years hence at 5% per annum simple interest is:

- A. Rs. 50
- B. Rs. 30
- C. Rs. 70
- D. Rs. 80**



## Part - IV: General Awareness

151. Dry ice is the solid form of:

- A. Carbon di-oxide
- B. Water
- C. Air
- D. Nitrogen

152. Which one of the following wood is used in making cricket bats?

- A. Cedrus deodara
- B. Salix purpurea
- C. Linum usitatissimum
- D. Morus alba

153. What is 'Talcher' important for?

- A. Cable industry
- B. Heavy water plant
- C. Hydro-electricity generation
- D. Atomic reactor

154. Who is the founder of the concept "Sarvodaya"?

- A. K G Mushroowala
- B. Mahatma Gandhi
- C. Yinobha Bhawe
- D. Jai Prakash Narayan

155. World's largest producer of coffee?

- A. Argentina
- B. Peru
- C. India
- D. Brazil

156. The battle of Plassey was fought between :

- A. Mir Khasim and Robert Clive
- B. Mir Jafar and Robert Clive
- C. Sirajudduala and Robert Clive
- D. None of the options

157. When and where did the concept of Earth hour began?

- A. In June, 2007 in Christchurch, Newzealand

- B. In April, 2008 in Tokyo, Japan'
- C. In May, 2009 in Colombo, Sri Lanka
- D. In March, 2007 in Sydney, Australia

158. The Industrial Development Bank of India was set up in:

- A. July/ 1968
- B. July/ 1966
- C. July/ 1964
- D. July/ 1962

159. The instrument used to measure pressure:

- A. Anemometer/
- B. Aneroid Barometer
- C. Thermometer
- D. Hygrometer

160. Eddie Redmayne, won the Oscar (2015) for Best Actor for which film?

- A. Birdman
- B. None of the options
- C. The Theory of Everything
- D. Still Alice

161. Who invented the Safety razor?

- A. Gillette
- B. Steve Cher
- C. Steve Job
- D. Lar Strauss

162. 'Cloud burst' means

- A. Fonnation of artificial
- B. Abnormally heavy downpour of rain, associated with a thunderstorm.
- C. Presence of scattered flakes of cloud in the sky.
- D. Sowing of seeds of a crop in cloudy weather.

163. More than 50% of the world's coal deposits are held by:

- A. China, India and Russia
- B. China. India and USA
- C. India, Russia and USA
- D. USA, Russia and China

164. The intensity ratio of waves is 25 : 9.  
What is the ratio of their amplitudes?

- A. 25: 9
- B. 5: 3**
- C. 3: 5
- D. 50: 18

165. Which was the first talkie film made in India?

- A. Raja Harishchandra
- B. Kisan Kanya
- C. Mother India
- D. Alam Ara**

166. How many states are there in the Indian Union?

- A. 21
- B. 28
- C. 29**
- D. 30

167. Which day is observed as World AIDS Day?

- A. March 20<sup>th</sup>
- B. December 1<sup>st</sup>**
- C. March 1<sup>st</sup>
- D. December 20<sup>th</sup>

168. When number of turns in a coil is trippled, without any change in the length of coil, its self inductance becomes?

- A. one-third
- B. six times
- C. three times
- D. nine times**

169. Which factor is necessary for the development of democratic institutions?

- A. Respect for individual right**
- B. A one-party system
- C. Strong military forces
- D. An agricultural economy

170. Which one of the following is odd?

- A. SNMP

- B. IMAP
- C. SMTP
- D. POP**

171. First human heart transplant was performed in:

- A. 1972
- B. 1967**
- C. 1959
- D. 1955

172. When was the last telegram sent in India?

- A. July 30, 2013
- B. June 14, 2013
- C. August 1, 2013
- D. July 14, 2013**

173. Which of the following property of sound is affected by change in air temperature ?

- A. Amplitude
- B. Wavelength
- C. Frequency**
- D. Intensity

174. The directive principles incorporated in the Indian Constitution have been inspired by the constitution of :

- A. Canada
- B. Ireland**
- C. USA
- D. Australia

175. National Renewal fund (NRF) was instituted for the purpose of :

- A. Rural reconstruction
- B. Providing pension for retiring employees
- C. Restructuring and Modernisation of**

industries

D. Social security

176. The common name of sodium bicarbonate is:

A. Baking powder

B. Baking soda

C. Soda ash

D. Soda lime

177. Who was Akbar's famous revenue minister?

A. Humayun

B. Tansen

C. Todarmal

D. Rana Pratap Singh

178. How many Nobel Prize awards are awarded each year?

A. 8

B. 5

C. 6

D. 10

179. 'Red Data Book' provides an account of ?

A. Endangered plants only

B. Endangered plants and animals

C. Fossil plants

D. Extinct animals only

180. The serious environmental degradation of Maldives is considered to be essentially due to:

A. Industrial pollution of water and air

B. Constant soil erosion

C. None of options

D. High population density

181. RBI's deadline to exchange pre 2005 currency notes of Rs. 500 and Rs. 1000 is:

A. December 31, 2015

B. January 1, 2015

C. April 1, 2015

D. March 31, 2015

182. Who was the first Indian to become member of British Parliament?

A. Surendranath Banerjee

B. D.N. Wacha

C. Firozshah Mehta

D. D. Dadabhai Naoroji

183. The Indian, who won the Grammy Award 2015 in the new age album category is:

A. Musician Ricky Kej

B. Author Neela Vaswani

C. Singer Kavita Krishnamurthy

D. Musician A.R. Rahman

184. Phycology is the study of:

A. Algae

B. Lichens

C. Fungi

D. Bacteria

185. Who among the following rulers abolished Jaziya?

A. Jahangir

B. Balban

C. Aurangzeb

D. Akbar

186. A bullet of mass 'm' and velocity 'a' is fired in to a large block of wood of mass 'M'. The final velocity of the system is:

- A)  $\frac{M}{m+M} a$   
B)  $\frac{m+M}{M} a$   
C)  $\frac{m}{m+M} a$  ✓  
D)  $\frac{m+M}{m} a$

187. If there is one million  $Mg^{2+}$  ions in  $MgCl_2$ , how many chloride ions are there?

- A. Ten million  
B. Two million  
C. Half a million  
D. One million

188. Which one of the following is not coal variety?

- A. Peat  
B. Lignite  
C. Dolomite  
D. Bituminous

189. Who wrote the famous novel 'The Guide'?

- A. Chetan Bhagat  
B. Arundhati Roy  
C. R.K. Narayan  
D. Satyajit Ray

190. The non-cooperation movement was called off due to?

- A. Jallian walla Bagh Tragedy  
B. Chauri Chaura Incident  
C. Poona pact  
D. Gandhi- Irwin pact

191. The idea of parliamentary form of government is adapted from:

- A. US  
B. USSR  
C. UK  
D. Ireland

192. The total utility from 9 units of commodity x is 20 and from 10 units is 15. Calculate the marginal utility from 10<sup>th</sup> unit.

- A. -0.5  
B. 0.5  
C. 5  
D. -5

193. Name the first Asian country to Orbit Mars.

- A. Japan  
B. China  
C. India  
D. Pakistan

194. Soilless agriculture refers to:

- A. Inter- cropping  
B. Sericulture  
C. Hydroponics  
D. Hygroponics

195. The gas that causes suffocation and death when coal or coke is burnt in a closed room is:

- A. Ethane  
B. Carbon di-oxide  
C. Methane  
D. Carbon monoxide

196. In which year was the first world environment day observed?

- A. 1973
- B. 1980
- C. 1972
- D. 1974

197. Pick out the person associated with the coining of the term 'gene':

- A. Morgan
- B. Mendel
- C. Johanssen
- D. Waldeyer

198. Which U.S. President announced the "New Deal" for economic recovery in the aftermath of the Great Depression?

- A. J.F. Kennedy
- B. Benjamin Franklin
- C. Abraham Lincoln

D. Roosevelt

199. Barter transactions means:

- A. Coins are exchanged for goods.
- B. Goods are exchanged with goods.
- C. Money acts as a medium of exchange.
- D. Goods are exchanged with gold.

200. Which of the following memories must be refreshed many times per second?

- A. Dyanamic RAM
- B. Static RAM
- C. ROM
- D. EPROM