1. A ball tied with a string to a rotating shaft revolves at uniform speed. As the shaft is suddenly brought to rest the string starts getting round the shaft with the angular velocity of the ball.
   a) increasing   b) decreasing
   c) remaining constant   d) becoming zero

2. If an apple is released from an orbiting spaceship, it will-
   a) fall towards the earth
   b) move along with spaceship at the same speed
   c) move at a higher speed
   d) move at a lower speed

3. What happens when water is cooled from 8°C to 0°C?
   a) Its volume decreases uniformly, becoming minimum at 0°C
   b) Its density increases uniformly, attaining maximum value at 0°C
   c) Its volume decreases upto 4°C and then increases
   d) Its density decreases upto 4°C and then increases

4. During summer, we feel comfortable under a fan because it -
   a) throws cool air on us
   b) sets the air in motion, thereby increasing the evaporation of sweat
   c) produces convection currents
   d) produces air which carries heat away from the body

5. Light waves are different from sound waves in that—
   a) light waves are electromagnetic but sound waves are not
   b) light waves can travel through water but sound waves cannot
   c) light travels with the same speed in all media
   d) light waves produce interference but sound waves do not

6. Planets are—
   a) luminous bodies which twinkle
   b) non - luminous bodies which twinkle
   c) luminous bodies which don't twinkle
   d) non - luminous bodies which don't twinkle
7. If you move towards a mirror at the speed of 10 cm/s, then your image will approach you at the speed of—
   a) 5 cm/s  
   b) 10 cm/s  
   c) 20 cm/s  
   d) Data inadequate

8. In outer space a spaceman—
   a) cannot see stars during day time  
   b) cannot see stars at all  
   c) can see stars during day - time opposite sun  
   d) can see stars during day time in all directions

9. The soap bubbles look coloured when viewed in white light due to—
   a) scattering of light by thin layer  
   b) interference of light by thin layer  
   c) trasmission of light  
   d) characteristics of the colours of soap - solution

10. Which of the following devices changes the electrical energy into mechanical energy?
    a) Dynamo  
    b) Electric motor  
    c) Inductor  
    d) Rectifier

11. The function of a moderator in a nuclear reactor is to—
    a) moderate the number of secondary neutrons  
    b) moderate the velocity of secondary neutrons  
    c) increase the number of fissionable nuclei  
    d) control the fission reaction

12. Which planets do not have satellites revolving around them?
    a) Mars and Venus  
    b) Mercury and Venus  
    c) Mars and Mercury  
    d) Neptune and Pluto

13. The absolute zero of temperature is—
    a) the starting point of any scale of temperature  
    b) the lowest temperature that is theoretically possible  
    c) the temperature at which the vapours of all liquid substances freeze  
    d) the temperature at which all substances exists in the vapour phase
14. Heavy water–
   a) contains more dissolved air
   b) contains more dissolved minerals and salts
   c) contains deuterium in place of hydrogen
   d) contains organic impurities

15. Animal charcoal is obtained by–
   a) the destructive distillation of bones
   b) burning the bones of animals in contact with air
   c) burning the flesh of animals
   d) burning the bones of animals out of contact with air

16. Polythene is industrially prepared by the polymerisation of–
   a) Methane       b) Acetylene    c) Ethylene       d) Ethane

17. 'Fixation of nitrogen' implies–
   a) the liquefication of nitrogen
   b) the conversion of atmospheric nitrogen into useful compounds
   c) the conversion of nitrogen into amines
   d) the solidification of nitrogen gas of the atmosphere

18. Oxidation is a process which involves–
   a) the loss of electrons
   b) the gain of hydrogen
   c) the gain of electrons
   d) no change in electrons

19. The bleaching agent of the colour of the clothes is–
   a) Sodium chloride
   b) Sulphur dioxide
   c) Carbon dioxide
   d) Sulphur trioxide

20. Emerald is formed of–
   a) Berilium
   b) Chromium
   c) Aluminium
   d) Magnesium

21. On February 20, 1947, British Prime Minister announced the decision of British Government to leave India till–
   a) August 1947
   b) January 1948
   c) June 1948
   d) August 1948

22. The objective of Red Shirts movement was–
   a) creation of independent Pashtunistan
   b) creation of Pakistan
   c) activities of trade unions in India
   d) free India from the British
23. Find the oddman out of the following sites of Harappa civilization?
   a) Kalibanga  
   b) Mohanjodaro  
   c) Lothal  
   d) Surkotada
24. In the world congress of religions in Chicago in 1893 who represented India?
   a) Dadabhai Naoroji  
   b) Swami Dayanand  
   c) Swami Vivekananda  
   d) Ramkrishna Paramhans
25. Babar was cremated in ............ as he desired.
   a) Kabul  
   b) Peshawar  
   c) Delhi  
   d) Agra
26. The SWADESHI movement in India was started during -
   a) Champaran Satyagraha of Gandhi  
   b) Movement against partition of Bengal  
   c) Movement against Rowlat Act  
   d) First non - cooperation movement in 1919 - 22
27. Fill in the blank with appropriate adjective.
   Do you have ............ tea in the pot?
   a) any  
   b) some  
   c) few  
   d) none
28. What are potato ores?
   a) Nodules on the sea bed containing a variety of minerals  
   b) Seed potato grown in Himachal Pradesh  
   c) Iron ore having a large concentration of Sulphur  
   d) Ores of nuclear minerals
29. What is Obra known for?
   a) A new refinery  
   b) Thermal power station  
   c) An upcoming aluminium plant  
   d) Bird sanctuary
30. Where are diesel locomotives manufactured?
   a) Chittaranjan  
   b) Varansi  
   c) Bhopal  
   d) Jamshedpur
31. On which river is the Nagarjunasagar project located?
   a) Krishna  
   b) Godavari  
   c) Kaveri  
   d) Tapti
32. What is Operation Flood concerned with?
   a) Flood Control  
   b) The provision of irrigation facilities  
   c) The creation of buffer stocks of food grains  
   d) Improving the availability of milk in the cities
33. In which area is the deodar tree commonly found?
   a) Tropical evergreen forests  
   b) Tropical deciduous forests  
   c) Thron forests  
   d) Alpine forests

34. KP Canal joins—
   a) Andhra Pradesh and Karnataka  
   b) Andhra Pradesh and Tamil Nadu  
   c) Karnataka and Tamil Nadu  
   d) Andhra Pradesh and Orissa

35. The Niger River falls in—
   a) Arctic Ocean  
   b) Bay of Mexico  
   c) Gulf of Guinea  
   d) Pacific Ocean

36. The Annapurna mountain peak is situated in—
   a) India  
   b) Nepal  
   c) China  
   d) Pakistan

37. Victoria island is situated in ........
   a) Arctic Ocean  
   b) Indian Ocean  
   c) North Atlantic Ocean  
   d) Pacific Ocean

38. Dr. S. Radha Krishnan was ........
   a) First President of India  
   b) First Education Minister  
   c) First Speaker of Indian Parliament  
   d) First Vice-President of India

39. Apsara is a—
   a) Nuclear reactor  
   b) Nuclear submarine  
   c) Tank carrier submarine  
   d) Mountain peak

40. The first Indian pilotless rocket is—
   a) Luna - 9  
   b) Apollo  
   c) Luna - 10  
   d) Lakshya

41. The famous Vishwanath temple is situated in ........
   a) Puri  
   b) Pachmarhi  
   c) Varanasi  
   d) Ellora

42. Gomateshwar statue is situated in—
   a) Subramanyam road  
   b) Shravanabelagola  
   c) Ellora  
   d) Kolkata

43. Who is known as Gandhi of Bihar?
   a) Dr. Rajendra Prasad  
   b) M.K. Gandhi  
   c) Khan Abdul Gaffar Khan  
   d) Lal Bahadur Shastri
44. The International Labour Organisation is headquartered at—
   a) Geneva   b) New York   c) Rome   d) Paris

45. Yakshagan is the folk dance of—
   a) Tamil Nadu   b) Kerala   c) Karnatakak   d) Andhra Pradesh

46. McMohan Line is an international border line between—
   a) Pakistan and Afghanistan   b) India and China
   c) India and Pakistan   d) India and Nepal

47. Vaccination is invented by—
   a) Edward Jenner   b) Louis Pasteur
   c) Wating   d) None of these

48. Basketball team has ........ number of players.
   a) 5   b) 6   c) 7   d) 8

49. The strength of the legislative council of a state cannot exceed ...... of the membership of the legislative assembly.
   a) one - half   b) one - third   c) one - fourth   d) one - fifth

50. The Chief Justice and other judges of the High Court retire at the age of—
   a) 60 years   b) 62 years   c) 65 years   d) 70 years

51. Which of the following statements correctly describes a hung parliament?
   a) A parliament in which no party has a clear majority
   b) The Prime Minister has resigned but the parliament is not dissolved
   c) The parliament lacks the quorum to conduct business
   d) None of these

52. The final authority to make a proclamation of emergency rests with—
   a) the Parliament   b) the President
   c) council of Ministers   d) the Prime Minister

53. The given figure is a symbol of
   a) FBI   b) Radio
   c) Olympics   d) CBI
54. The following graph shows—

![Graph showing percentage of price hike over years (81 to 85)]

a) Low growth  
b) Constant growth  
c) First moderate then more growth  
d) Fall in price

55. A man is walking in a rectangular field whose perimeter is 6 km. If the area of rectangular field be 2 sq km, then what is the difference between the length and breadth of the rectangle?

- a) \( \frac{1}{2} \) km  
- b) 1 km  
- c) \( \frac{3}{2} \) km  
- d) 2 km

56. If a watch runs 5 minutes fast every hour, then the angle traversed by a second hand in one minute is—

- a) 360°  
- b) 360.5°  
- c) 390°  
- d) 380°

**Directions (Q. 57 and 58): Find the oddman out.**

57. a) Mahanadi  
    b) Cauvery  
    c) Narmada  
    d) Krishna

58. a) Yuri Gagarin  
    b) Rakesh Sharma  
    c) Neil Armstrong  
    d) Edmund Hillary

59. 563, 647, 479, 815, (.....)

- a) 672  
- b) 386  
- c) 279  
- d) 143

60. 2, 6, 12, 20, 30, 42, 56, (.....)

- a) 60  
- b) 64  
- c) 70  
- d) 72

61. If FRIEND is coded as HUMJTK, how is CANDLE written in that code.

- a) EDRIRL  
- b) DCQHQK  
- c) ESJFME  
- d) FYOBOC

62. In a certain code INSTITUTION is written as NOITUTITSNI. How is PERFECTION written in that code?

- a) NOICTEFREP  
- b) NOITCEFERP  
- c) NOITCEFRPE  
- d) NOITCEFREP

63. If water is called blue, blue is called red, red is called white, white is called sky, sky is called rain, rain is called green and green is called air, which of the following is the colour of milk?

- a) Air  
- b) Green  
- c) White  
- d) Sky
64. A man said to a lady, "Your mother's husband's sister is my aunt." How is the lady related to the man?
   a) Daughter  b) Mother  c) Sister  d) Aunt

Directions (Q. 65 to 67): Read the following information and answer the questions given below it. Six students A, B, C, D, E and F are sitting in the field. A and B are from Nehru House while the rest belong to Gandhi House. D and F are tall while the others are short. A, C and D are wearing glasses while the others are not.

65. Which two students who are not wearing glasses are short?
   a) A and F  b) C and E  c) B and F  d) E and F

66. Which short student of Gandhi House is not wearing glasses?
   a) F  b) E  c) B  d) A

67. Which tall student of Gandhi House is not wearing glasses?
   a) B  b) C  c) F  d) E

Directions (Q. 68 to 72): Read the following information carefully and answer the questions.

(i) P, Q, R, S, T and U are the six members of a family in which there are two married couples.
(ii) Teacher T, is married to a doctor who is mother of R and U.
(iii) Lawyer Q is married to P.
(iv) P has a son and a grandson.
(v) Out of the two married women one is a house wife.
(vi) There are one student and a male engineer in the family.

68. How is P related to R?
   a) Maternal father  b) Mother  c) Sister  d) Grand mother

69. Who is the house wife?
   a) P  b) Q  c) S  d) None of these

70. How is R related to U?
   a) Brother  b) Sister  c) Brother or sister  d) Information inadequate

71. Which of the following groups denote the female group?
72. Which of the following is correct with respect to grand daughter in the family?
   a) He is a lawyer  
   b) She is a student  
   c) He is an engineer  
   d) Information inadequate

73. Which one of the following Venn - diagrams best illustrates the three classes: Rhombus, Quadrilaterals, Polygons?
   a)  
   b)  
   c)  
   d)  

74. How many even numbers are there in the following sequence of numbers which are immediately followed by an odd number as well as immediately preceded by an even number?
   8 6 7 6 8 9 3 2 7 5 3 4 2 2 3 5 5 2 2 8 11 9
   a) Three  
   b) Five  
   c) Six  
   d) None of these

75. In a row of girls, Shilpa is eighth from the left and Reena is seventeenth from the right. If they interchange their positions, Shilpa becomes fourteenth from the left. How many girls are there in the row?
   a) 25  
   b) 27  
   c) 29  
   d) None of these

76. Kailash remembers that his brother Deepak's birthday falls after 20th May but before 28th May, while Geeta remembers that Deepak's birthday falls before 22nd May and after 12th May. On what date Deepak's birthday falls?
   a) 20th May  
   b) 21st May  
   c) 22nd May  
   d) Cannot be determined

77. If \( \times \) means +, \( - \) means \( \times \), \( \div \) means +, and + means -, then
   \((3 - 15 \div 19) \times 8 + 6 = ?\)
   a) 8  
   b) 4  
   c) 2  
   d) −1

78. Arrange the following in a meaningful order:
   Doctor, Fever, Medicine, Medical shop
   a) Medicine, Doctor, Medical shop, Fever  
   b) Doctor, Medical shop, Medicine, Fever
c) Fever, Doctor, Medical Shop, Medicine

d) Medical Shop, Medicine, Fever, Doctor

79. Out of the questions solved by a student the number of incorrect solutions was twice the correct answers. He solved 48 questions. How many answers were correctly solved?

a) 12       b) 16       c) 24       d) 18

80. People and horses in the same number were going somewhere. Half of the owners were riding their horses and the remaining were walking on foot with the horses. If the total number of feet of walkers was 70. How many were the horses?

a) 10       b) 12       c) 14       d) 16

Directions (Q. 81 to 83): Study the arrangement and select the missing number.

81.  

<table>
<thead>
<tr>
<th>28</th>
<th>5</th>
<th>14</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>6</td>
<td>39</td>
<td>?</td>
</tr>
<tr>
<td>48</td>
<td>7</td>
<td>27</td>
<td>16</td>
</tr>
</tbody>
</table>

82. Find the missing number

3 33 2 4 54 2 3 6 5

a) 78      b) 82      c) 94      d) 86

83. Find the missing number?

216 27 125 64

a) 4       b) 305      c) 343      d) 729

84. The appropriate meaning of IMPAIR is

a) separate       b) make amends

c) make worse      d) falsify

85. The appropriate meaning of SUBLIME is

a) unconscious   b) respected   c) exalted   d) sneaky
86. The opposite meaning of ANOMALY is—
   a) desperation          b) requisition
   c) registry             d) regularity

87. The opposite meaning of BEAUTIFY is—
   a) disfigure            b) horrify         c) magnify       d) stupefy

88. Give one word for 'A number of things together'.
   a) assemblage           b) series          c) appendage     d) serial

89. Give one word for 'A document written by hand'.
   a) profile             b) back            c) manuscript    d) red-tape

90. The meaning of the phrase 'To set the people by ears' is—
   a) to punish heavily    b) to insult and disgrace people
   c) to box the people    d) to excite people to a quarrel

91. The meaning of the phrase 'To wash dirty line in public' is
   a) to quarrel in the open
   b) to do some ugly work in public.
   c) to discuss dirty and scandalous matters of personal nature in the presence of strangers.
   d) to wash one's clothes in the open.

Directions (Q. 92 and 93): Fill in the blanks to complete the sentence.

92. Gita bought a saree which ............ two hundred rupees.
   a) costed              b) cost             c) had costed    d) was costed

93. As soon as the monsoon ............ transport in the inner city becomes more and more difficult.
   a) have started        b) had started     c) started      d) starts

Directions (Q. 94 and 95): Detect the word with incorrect spelling from the given choices.

94. a) Silent            b) silence        c) Prefer        d) Preferene
95. a) Allusion         b) Alluminium    c) Allurement     d) Alignment

Directions (Q. 96 and 97): Choose the word with correct spelling.

96. a) Commition        b) Commission    c) Comission     d) Commision
97. a) Pneumonia  b) Neumonia  c) Pnemonia  d) Pnemonia

Directions (Q. 98 and 99): Fill in the blanks with appropriate article.

98. God made country .......... man made town.
   a) an  b) a  c) the  d) no article

99. Do you intend to travel by the water or by ....... land?
   a) an  b) a  c) the  d) no article

Directions (Q. 100): Find the mistake in the appropriate part of given sentence. In case there is no mistake, choose option (d).

100. The master of a ship (a)/ are still seen (b)/ in the place where it sank. (c)/ No error (d)

ANSWERS
1-a; 2-b; 3-c; 4-b; 5-a; 6-d; 7-c; 8-c; 9-b; 10-c; 11-b; 12-b; 13-b; 14-c; 15-a; 16-c; 17-b; 18-b; 19-b; 20-b; 21-c; 22-d; 23-b; 24-c; 25-a; 26-b; 27-b; 28-a; 29-b; 30-b; 31-a; 32-d; 33-a; 34-b; 35-c; 36-b; 37-a; 38-d; 39-a; 40-d; 41-c; 42-b; 43-a; 44-a; 45-c; 46-b; 47-b; 48-a; 49-b; 50-b; 51-a; 52-b; 53-c; 54-c; 55-b; 56-b; 57-c; 58-d; 59-d; 60-d; 61-a; 62-d; 63-d; 64-c; 65-c; 66-b; 67-c; 68-a; 69-b; 70-c; 71-d; 72-d; 73-a; 74-a; 75-d; 76-b; 77-c; 78-c; 79-b; 80-c; 81-b; 82-d; 83-c; 84-c; 85-c; 86-d; 87-a; 88-a; 89-c; 90-d; 91-c; 92-a; 93-d; 94-d; 95-b; 96-b; 97-a; 98-d; 99-c; 100-b.