SSC COMBINED GRADUATE LEVEL (TIER - I)
Model Practice Paper – 2

Part - A
General Intelligence & Reasoning

Directions (1-9): In each of the following questions, select the related word / letters / number / figure from the given alternatives.

1. **XgmE : EmgX : : ? : BacK**
    1) AckB   2) KcaC
    3) KcaB   4) KacC

2. **GH: 78:: EF : ?**
    1) 34   2) 45
    3) 56   4) 78

3. **80: 730:: ? : 344**
    1) 70   2) 40
    3) 48   4) 52

4. **130: 154:: 178:?**
    1) 24   2) 180
    3) 204   4) 206

5. **60: 36:: 100:?**
    1) 100   2) 10000
    3) 516   4) 1000

6. **CEDH: HDEC::? : PNRV**
    1) VRNP   2) RNPV
    3) NRVP   4) VNRP

7. **Paper: Pencil:: Cup : ?**
    1) Drink   2) Saucer
    3) China Clay 4) Tea

8. **Tadpole: Frog:: Leveret : ?**
    1) Hen   2) Lion
    3) Hare   4) Horse

9. **PZQW: NXOU:: FISK : ?**
    1) EFPJ   2) FERI

3) DGQI   4) HKVM

Directions (10-19): In each of the following questions find the odd word / letters / number pair from the given alternatives.

10. 1) NMOL   2) PKQI
    3) RISH   4) TQUF

11. 1) AUgPZ   2) YGLhT
    3) MXiDV   4) KFeCO

12. 1) 27   2) 57
    3) 67   4) 87

13. 1) 5 – 8   2) 17 – 32
    3) 19 – 38   4) 21 – 40

14. 1) 63   2) 81
    3) 121   4) 225

15. 1) 4 – 11 – 70   2) 3 – 27 – 39
    3) 15 – 85 – 4   4) 21 – 7 – 35

16. 1) Stethoscope 2) Microscope
    3) Telescope   4) Binocular

17. 1) Tabla   2) Veena
    3) Sitar   4) Ektara

18. 1) POT   2) TAB
    3) HOLDS   4) LEVEL

19. 1) ZX   2) TR
    3) IF   4) OM

Directions (20-24): A series is given with one/two term(s) missing. Choose the correct alternative from the given ones that will complete the series.

20. 1, 2, 8, 33, 148, ?
1) 265   2) 465
3) 565   4) 765

21. 18, 22, 21, 20, 24, 18, ?
1) 27   2) 36
3) 16   4) 28

22. AJKTU,   BILSV,   CHMRW, DCNQX, ?
1) FEOYZ   2) EFOPY
3) EOFZA   4) EFOPZ

23. hgf, kji, n <u>??</u>
1) lp   2) up
3) oq   4) ml

24. 210, 195, 175, 150, 120, ?
1) 75   2) 85
3) 90   4) 95

25. Arrange the following words according to the dictionary
1. Matter   2. Motive
3. Mockery   4. Manage
5. Movies

1) 4, 1, 2, 5, 3   2) 4, 2, 3, 5, 1
3) 3, 2, 1, 4, 5   4) 4, 1, 3, 2, 5

26. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it?
XY_KX_ZK_YZK XYZ_ _

1) ZYXKX   2) ZYKXZ
3) ZKXYK   4) ZXYKX

27. Which one of the given responses would be a meaningful order of the following?
1. Plant   2. Thread
3. Seed   4. Shirt
5. Cotton

1) 3, 1, 2, 5, 4   2) 3, 1, 5, 2, 4
3) 1, 3, 2, 4, 5   4) 1, 3, 2, 5, 4

Directions (28-29): One statement is given followed by two conclusions, I and II. You have to consider the statement to be true, even if it seems to be at variance from commonly known facts. You have to decide which of the given conclusions, if any; follow(s) from the given statement.

28. Statement: The present education system needs thorough overhauling.
Conclusions:
I. Overhauling   results   in improvement.
II. The present education system is outdated.
1) Only I follow
2) Only II follows
3) Both I and II follow
4) Neither I nor II follows

29. Statement: To achieve economic development, people should work hard.
Conclusions:
I. Economic   development   is directly related to people's hard work.
II. Working hard by all the people is impossible.
1) Only I follow
2) Only II follows
3) Both I and II follow
4) Neither I nor II follow

30. Vijit walks 10 metres westward then turns left and walks 10 metres. He then again turns left and walks 10 metres. He takes a 45 degree turn rightwards and

walks straight. In which direction is he walking now?

1) South   2) West

3) South-East   4) South-West

31. Sanmitra walked 8 m towards the north. He turned to his right and walked 16m, then turned to his left and walked 5 m and again he turned to his left and walked 16 m. Now how far is he from his starting point?

1) 32 m   2) 23 m

3) 13 m   4) 16 m

32. Five children are standing in a row. O is third from M who is standing left of N and P is on the left of Q who is second from N. What is the position of P from the right?

1) Third   2) First

3) Fourth   4) Second

33. Select the correct equation after interchanging operations and numbers as given below.
$\times$ **and +; 12 and 16**

1) $(60 \div 16) \times 14 = 70$

2) $(55 - 12) + 3 = 42$

3) $(40 \times 8) - 12 = 36$

4) $(36 + 18) \div = 30$

34. One-third of Ramesh's marks in Arithmetic is equal to half his marks in English. If he gets 150 marks in the two subjects together, how many marks has he got in English?

1) 60   2) 120

3) 30   4) 50

35. Raju and Nirmala celebrated their first wedding anniversary on Sunday, the 5th December 1993. What would be the day of their wedding anniversary in 1997?

1) Wednesday   2) Thursday

3) Friday   4) Tuesday

36. My age is two years less than twice that of my brother. If I am sixteen years old, how old is my brother?

1) 7 years   2) 9 years

3) 10 years   4) 14 years

37. If Sudha is the daughter of the wife of the only son of the father of Priya's father, how is Sudha related to Priya, if Sudha's grandfather has no grandson?

1) Sister   2) Cousin

3) Sister-in-law   4) Mother

38. Amar's place is 10th in the line containing 50 members. What is his place from the other end?

1) 40th   2) 20th

3) 39th   4) 41st

39. Some equations are solved on the basis of a certain system. For the same basis, find the correct answer for the unsolved equation. If 837 = 452 and 106 = 769, then $708 \div 77 = ?$

1) 9   2) 10

3) 11   4) 12

40. Select correct combination (sequence) of mathematical signs to replace * signs to balance the equation: 9 * 4 * 22 * 14

1) $\times = -$ 2) $\times - =$

3) $= \times$ 4) $- \times =$

41. Choose the diagram which represents the relationship among the following:

Capsules; Antibiotics; Injections

1)   2)

3)   4)

42. From the given alternatives select the word which *cannot* be formed using the letters the given word.

Given word:

QUINTESSENCE

1) Essence   2) Entice

3) Sequin   4) Question

43. If LOSE is coded as 1357 and GAIN is coded as 2468, what do the figures 84615 stand for?

1) NAILS   2) SNAIL

3) LANES   4) SLAIN

44. Rearrange the given jumbled letters to make a meaningful word.

Given letters:

riytaraplamen

1) Lamination   2) Realignment

3) Parliamentary   4) Replacement

45. Select the missing number from the given alternatives.

2(18)208, _____, 4(36)409, 5(45)509

1) 3(27)309   2) 2(42)309

3) 3(56)409   4) 3(64)409

46. Find the missing number (?).

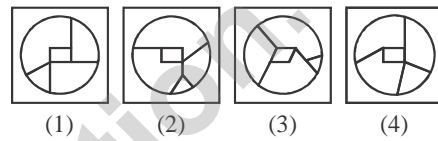| 3	4	5
2	3	4
1	2	3
14	29	?

1) 50   2) 30
3) 40   4) 32

47. Among the four answer figures, which figure can be formed from the cut-pieces given below in the question figure?

Question Figure

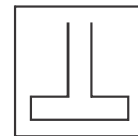Answer Figures

(1)   (2)   (3)   (4)
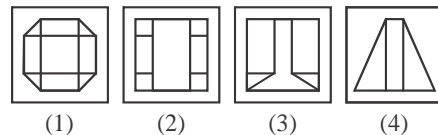
48. How many triangles are there in the given diagram?
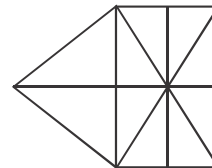
1) 18   2) 17
3) 16   4) 15

49. In which answer figure is the question figure embedded?
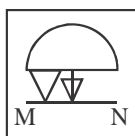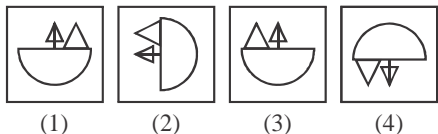
Question Figure

Answer Figures

(1)   (2)   (3)   (4)

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

Question Figure

Answer Figures

(1)　　(2)　　(3)　　(4)

Part - B
General Awareness

51. Exercise duty on a commodity is payable with reference to its
1) Production
2) Production and sale
3) Production and transportations
4) Production, transportation and sale

52. Green Revolution was most successful in
1) Punjab and Tamil Nadu
2) Punjab, Haryana and UP
3) Haryana
4) UP and Maharashtra

53. Amartya Sen was awarded the Nobel Prize for his contribution to
1) Monetary Economics
2) Welfare Economics
3) Econometrics
4) Development Economics

54. Pham Binh Minh declared in July 2013 that India has the right to pursue exploration and exploitation work for hydrocarbons in South China Sea, in the Exclusive Economic Zone of his country. Pham Binh Minh is the Foreign Minister of
1) Russia　　　　2) Thailand
3) Malaysia　　　4) Vietnam

55. Blue Revolution is related to
1) Fish production
2) Milk production
3) Oil production
4) Food production

56. Which one of the following pairs of goods is an example for Joint Supply?
1) Coffee and Tea
2) Ink and Pen
3) Tooth brush and Paste
4) Wool and Mutton

57. Scheduled Banks have to be registered with
1) SEBI　　　　2) RBI
3) Finance Ministry　　4) SBI

58. Which organisation collects data for the unorganised sector?
1) NSSO　　　　2) CSO
3) ASI　　　　　4) RBI

59. Who among the following visited Gandhiji in South Africa?
1) B. G. Tilak
2) Vallabhbhai Patel
3) G. K. Gokhale
4) J. L. Nehru

60. Who was the Constitutional Advisor to the Constituent Assembly of India?
1) Dr. Rajendra Prasad
2) Dr. B. R. Ambedkar
3) Sir B. N. Rao
4) Shri K. M. Munshi

61. Who was the First Speaker of Independent India's Lok Sabha?
1) Hukam Singh
2) Bali Ram Bhagat

3) Rabi Ray

4) G. V. Mavalankar

62. Which of the following state governments, in July 2013, decided to launch a new scheme, "Mythri" to provide monthly pension of 500 for transgender?

1) Tamil Nadu   2) Kerala

3) Karnataka   4) Punjab

63. The secretary General of UNO is appointed by

1) The General Assembly

2) The Security Council

3) The International Court of Justice

4) The General Assembly on the recommendations of the Security Council

64. In which year Salt Satyagraha took place?

1) 1929   2) 1930

3) 1931   4) 1932

65. How many Fundamental Duties are included in Indian Constitution?

1) Nine   2) Ten

3) Eleven   4) Twelve

66. The Constitution of India lays down that the two Houses of Parliament must be summoned at least

1) Four times a year

2) Thrice a year

3) Twice a year

4) Once a year

67. The PC (personal computer) and the Apple Macintosh are examples of two different _____.

1) Platforms

2) Applications

3) Programs

4) Storage devices

68. The Vice-President of India is also the

1) Speaker of Lok Sabha

2) Ex-office Chairman of Rajya Sabha

3) Head of the State

4) Head of the Government

69. Through which Educational Report Calcutta University came into existence?

1) Macaulay's

2) Hunter Commission

3) Charter Act

4) Wood's Dispatch

70. Cabinet Mission came to India in the year

1) 1946   2) 1945

3) 1942   4) 1940

71. Buddhism made an important impact by allowing two sections of society into its fold. They were

1) Merchants and Priests

2) Moneylenders and Slaves

3) Warriors and Traders

4) Women and Sudras

72. Muslim League was founded in the year

1) 1900   2) 1905

3) 1906   4) 1902

73. Who introduced the famous Persian Festival of Nauroz?

1) Alauddin Khalji

2) Iltutmish

3) Firoz Tughlaq

4) Balban

74. **According to the New York Stock Exchange announcement in July 2013, which of the following banks has become the World's Largest Bank by market capitalization?**
    1) ICBE
    2) Wells Fargo & Co
    3) JP Morgan
    4) Citigroup

75. **India's trade with the Roman Empire came to an end with the invasion of Rome by the**
    1) Arabs   2) Hungarians
    3) Hunas   4) Turks

76. **'Ain-i'Akbari' has been authored by**
    1) Abul Fazl   2) Ali Birand
    3) Ferishta   4) Amir Khusro

77. **The famous revolutionary song 'Sarfaroshi ki tamanna ab hamare dil mein hai....' was composed by**
    1) Bhagat Singh
    2) Khudiram Bose
    3) Chandrasekhar Azad
    4) Ramprasad Bismil

78. **The first Viceroy of India was**
    1) Lord Canning
    2) Lord Hardinge
    3) Lord Dalhousie
    4) Lord Elgin

79. **The famous 'Gir' forests are located in**
    1) Mysore   2) Kashmir
    3) Gujarat   4) Kerala

80. **In which of the following grouping of States of India is rubber grown on a commercial scale?**
    1) Maharashtra-Gujarat-Madhya Pradesh
    2) Kerala-Tamil Nadu-Karnataka
    3) Sikkim-Arunachal Pradesh-Nagaland
    4) Orissa-Madhya Pradesh-Maharashtra

81. **The surface temperature of the sun is estimated as**
    1) 6000 °C   2) 12000 °C
    3) 18000 °C   4) 24000 °C

82. **Which one of the following planets has no moon?**
    1) Mars   2) Neptune
    3) Mercury   4) Pluto

83. **The standard time of India is**
    1) $5\frac{1}{2}$ hours ahead of GMT
    2) $4\frac{1}{2}$ hours behind of GMT
    3) 4 hours ahead of GMT
    4) $5\frac{1}{2}$ hours behind of GMT

84. **Black Forests are found in**
    1) France   2) Germany
    3) Czechoslovakia 4) Rumania

85. **The Earth rotates on its axis at an inclination of**
    1) $23\frac{1}{2}^{o}$ 2) $22\frac{1}{2}^{o}$
    3) $21\frac{1}{2}^{o}$ 4) $20°$

86. **Which of these harbours is not a natural harbour?**
    1) Chennai   2) Mumbai
    3) Cochin   4) Paradip

87. **Which of the following was, on 2 July 2013, declared as being the first "smoke-free" state in India for achieving 85.42 percent compliance with section 4 of the Cigarettes and other Tobacco Product Act (COTPA) 2003?**
    1) Himachal Pradesh
    2) Odisha
    3) Jharkhand
    4) Haryana

88. **Sucrose content in sugarcane decreases**
    1) If high rainfall occurs during the period of growth of the plant.
    2) If frost occurs during the period of ripening.
    3) If there is fluctuation in temperature during the period of growth of the plant.
    4) If there is high temperature during the time of ripening.

89. **Which of the following awards is instituted by the UNESCO?**
    1) Nehru Award for International Understanding
    2) Kalinga Prize
    3) Arjuna Award
    4) Nobel Prize

90. **The concept of 'Survival of the fittest' was first advocated by**
    1) Oparin   2) Darwin
    3) Spencer   4) Haeckel

91. **Tamiflu is frontline drug against**
    1) Bird flu   2) Cancer
    3) AIDS   4) Polio

92. **Which country of the following has the largest Muslim population?**
    1) India   2) Pakistan
    3) Indonesia   4) Saudi Arabia

93. **Why excessive heating and repeated use of cooking oil are most undesirable?**
    1) The oil vapour can cause indoor pollution.
    2) Carcinogenic substances like benzpyrene are produced.
    3) Nutrient value of food is lost.
    4) Loss and wastage of oil.

94. **From which of the following Upanishads the words 'Satyameva Jayate' inscribed in Devanagari Script below the abacus of the State Emblem are?**
    1) Prashna   2) Mundaka
    3) Mandukya   4) Ishavasya

95. **Helgoland is an island of which of the following countries?**
    1) Britain   2) Germany
    3) USA   4) Indonesia

96. **Which country, on 28 June 2013, became the first to allow doctors to use a controversial IVF technique that would lead to creation of babies with three parents that could prevent mitochondrial disease?**
    1) Sweden   2) China
    3) Britain   4) USA

97. **In which of the following countries does 'Three Gorges Dam' called world's largest concrete structure lie?**
    1) China   2) Taiwan
    3) Malaysia   4) Thailand

98. The name of the first cloned sheep was
    1) Molly   2) Dolly
    3) Jolly   4) Rolly

99. Which of the following is the Third largest country in population after China and India?
    1) Bangladesh
    2) United States of America
    3) Indonesia
    4) Japan

100. Who among the following was defeated by Prithvi Raj Chauhan in the first battle of Tarain?
    1) Balban
    2) Muhammad Ghori
    3) Mahmud of Ghazni
    4) Iltutmish

Part - C
Quantitative Aptitude

101. In two types of stainless steel, the ratio of chromium and steel are 2: 11 and 5: 21 respectively. In what proportion should the two types be mixed so that the ratio of chromium to steel in the mixed type become 7: 32 ?
    1) 2: 3   2) 3: 4
    3) 1: 2   4) 1: 3

102. A sum of Rs.7000 is divided among A, B, C in such a way that the shares of A and B are in the ratio 2 : 3 and those of B and C are in the ratio 4 : 5. The share of B is
    1) 2400   2) 3000
    3) 1600   4) 2000

103. Tera worth Rs.126 per kg and Rs.135 per kg are mixed with a third variety in the ratio 1: 1: 2. If the mixture is worth Rs.153 per kg, the price of the third variety per kg will be
    1) 175.5   2) 180.0
    3) 169.5   4) 170.0

104. In the afternoon, a student read 100 pages at the rate of 60 pages per hour. In the evening, when she was tired, she read 100 more pages at the rate of 40 pages per hour. What was her average rate of reading, in pages per hour?
    1) 60   2) 70
    3) 48   4) 50

105. The mean weight of 34 students of a school is 42 kg. If the weight of the teacher be included, the mean rises by 400 grams. Find the weight of the teacher (in kg).
    1) 55   2) 57
    3) 66   4) 56

106. A cricketer has a mean score of 60 runs in 10 innings. Find out how many runs are to be scored in the eleventh innings to raise the mean score to 62?
    1) 83   2) 82
    3) 80   4) 81

107. A rader purchases a watch and a wall clock for Rs.390. He sells them making a profit of 10% on the watch and 15% on the wall clock. He earns a profit of Rs.51.50. The difference between the original prices of the wall clock and the watch is equal to

1) 80   2) 120
3) 110   4) 100

108. The wrong numbers in the series 2, 9, 28, 65, 126, 216, 344 is

1) 65   2) 216
3) 9   4) None of these

109. Eight consecutive numbers are given. If the average of the two numbers that appear in the middle is 6, then the sum of the eight given numbers is

1) 54   2) 64
3) 36   4) 48

110. If $(1 \times 2 \times 3 \times 4 \times .... \times n) = \lfloor n$, **then** $(\lfloor 14 - \lfloor 13 - \lfloor 12)$ **is equal to**

1) $14 \times 13 \times (\lfloor 13)$ 2) $13 \times 12 \times (\lfloor 12)$
3) $14 \times 12 \times (\lfloor 12)$ 4) $14 \times 12 \times (\lfloor 13)$

111. A and B together can do a piece of work in 12 days, while B alone can finish it in 30 days. A lone can finish the work in

1) 20 days   2) 25 days
3) 15 days   4) 18 days

112. A and B can do a job together in 12 days. A is 2 times as efficient as B. In how many days can B alone complete the work?

1) 18   2) 9
3) 36   4) 12

113. The marked price is 20% higher than cost price. A discount of 20% is given on the market price. By this type of sale, there is

1) 4 % loss   2) 2% loss
3) No loss no gain   4) 4% gain

114. A chair listed at Rs.350 is available at successive discounts of 25% and 10%. The selling price of the chair is

1) Rs.236.25   2) Rs.230.25
3) Rs.240.25   4) Rs.242.25

115. The tradesman marks his goods at such a price that after allowing a discount of 15%, he makes a profit of 20%. What is the marked price of an article whose cost price is Rs.170?

1) Rs.240   2) Rs.260
3) Rs.220   4) Rs.200

116. A prism has as the base a right angled triangle whose sides adjacent to the right angles are 10 cm and 12 cm long. The height of the prism is 20 cm. The density of the material of the prism is 6 gm/cubic cm. The weight of the prism is

1) 6.4 kg   2) 7.2 kg
3) 3.4 kg   4) 4.8 kg

117. Three circles of radii 4 cm, 6 cm and 8 cm touch each other pair wise externally. The area of the triangle formed, by the line segments joining the centres of the three circles is

1) $144\sqrt{13}$ Sq.cm

2) $12\sqrt{105}$ Sq.cm

3) $6\sqrt{6}$ Sq.cm

4) $24\sqrt{6}$ Sq.cm

118. The radius of the base of a right circular cone is doubled. To keep the volume fixed, the height of the cone will be

1) One-fourth of the previous height

2) $\dfrac{1}{\sqrt{2}}$ times of the previous height

3) Half of the previous height

4) One-third of the previous height

119. The base of a cone and a cylinder have the same radius 6 cm, they have also the same height 8 cm. The ratio of the curved surfaces of the cylinder to that of the cone is

1) 8: 5   2) 8: 3

3) 4: 3   4) 5: 3

120. The ratio of length of each equal side and the third side of an isosceles triangle is 3: 4. If the area of the triangle is $8\sqrt{5}$ square unit the third side is

1) 16 unit   2) $5\sqrt{10}$ unit

3) $8\sqrt{2}$ unit   4) 12 unit

121. In a circle of radius 21 cm, an arc subtends an angle of 72° at the centre. The length of the arc is

1) 21.6 cm   2) 26.4 cm

3) 13.2. cm   4) 19.8 cm

122. The x-intercept of the graph of 7x – 3y = 2 is

1) $\dfrac{3}{4}$ 2) $\dfrac{3}{7}$

3) $\dfrac{2}{5}$ 4) $\dfrac{2}{7}$

123. A sales man expects a gain of 13% on his cost price. If in a month his sale was Rs.791000, what was his profit?

1) Rs. 85659   2) Rs. 88300

3) Rs. 91000   4) Rs. 97786

124. A merchant fixed the selling price of his articles at Rs. 700 after adding 40% profit to the cost price. As the sale was very low at this price level, he decided to fix the selling price at 10% profit. Find the new selling price.

1) 500   2) 550

3) 450   4) 490

125. A saves 20% of his monthly salary. If his monthly expenditure is Rs.6000, then his monthly savings is

1) Rs.1500   2) Rs.1800

3) Rs.1200   4) Rs.4800

126. From 2008 to 2009, the sales of a book decreased by 80%. If the sales in 2010 were the same as in 2008, by what percent did it increase from 2009 to 2010?

1) 120%   2) 400%

3) 80%   4) 100%

127. The speed of a bus is 72 km/hr. The distance covered by the bus in 5 seconds is

1) 100 m   2) 60 m

3) 50 m   4) 74.5 m

128. Two men start together to walk a certain distance, one at 4 km/h and another at 3 km/h. The former arrives half an hour before the latter. Find the distance.

1) 8 km   2) 7 km

3) 6 km   4) 9 km

129. A person invests Rs.12000 as fixed deposit at a bank at the rate of 10% per annum simple interest. But due to some pressing needs he has to withdraw the entire money after 3 years, for which the bank allowed him a lower rate of

interest. **If he gets Rs.3320 less than what he would have got at the end of 5 years, the rate of interest allowed by the bank is**

1) $7\dfrac{5}{9}\%$ 2) $7\dfrac{4}{9}\%$

3) $7\dfrac{8}{9}\%$ 4) $8\dfrac{7}{9}\%$

130. The compound interest on Rs.30000 at 7% per annum for a certain time is Rs.4347. The time is

1) 3 years 2) 4 years

3) 2 years 4) 2.5 years

131. A man standing at a point P is watching the top of a tower, which makes an angle of elevation of 30°. The man walks some distance towards the tower and then his angle of elevation of the top of the tower is 60°. If the height of the tower is 30 m, then the distance he move is

1) 22 m 2) $22\sqrt{3}\,$m

3) 20 m 4) $20\sqrt{3}\,$m

132. If $x = \sqrt{3} + \sqrt{2}$**, then the value of** $\left(x + \dfrac{1}{x}\right)$ **is**

1) $2\sqrt{2}$ 2) $2\sqrt{3}$

3) 2 4) 3

133. If p + q = 10 and pq = 5, then the numerical value of $\dfrac{p}{q} + \dfrac{q}{p}$ **will be**

1) 16 2) 20

3) 22 4) 18

134. If $a + \dfrac{1}{a} = \sqrt{3}$**, then the value of** $a^6 - \dfrac{1}{a^6} + 2$ **will be**

1) 1 2) 2

3) $3\sqrt{3}$ 4) 5

135. An equilateral triangle TQR is drawn inside a square PQRS. The value of the angle PTS, in degrees is

1) 120 2) 150

3) 75 4) 90

136. If a, b and c are the three sides of a triangle and a² + b² + c² = ab + bc + ca, then the triangle is

1) Right-angled

2) Obtuse-angled

3) Equilateral

4) Isosceles

137. The distance between the centres of two equal circles, each of radiuses is 3 cm, 10 cm. The length of a transverse common tangent is

1) 8 cm 2) 10 cm

3) 4 cm 4) 6 cm

138. If the perimeter of a right-angled triangle is 56 cm and area of the triangle is 84 sq. cm, then the length of the hypotenuse is (in cm)

1) 25 2) 50

3) 7 4) 24

139. In $\Delta ABC,$ $\angle A = 30^{o}, \angle B = 60^{o}.$ **Find** $\angle C$ **in circular measure.**

1) $\dfrac{2\pi^{c}}{3}$ 2) $\dfrac{3\pi^{c}}{4}$

3) $\dfrac{\pi^{c}}{6}$ 4) $\dfrac{\pi^{c}}{2}$

140. If $\cos\theta + \sec\theta = 2$, **the value of** $\cos^6\theta + \sec^6\theta$ **is**

1) 4   2) 8

3) 1   4) 2

Directions (141-145): The following pie-chart shows the performance in an examination in a particular year for 360 students. Study the pie-chart and answer the questions.

141. The number of students who passed in second division is more than those in first division by

1) 109   2) 108

3) 111   4) 112

142. The ratio of successful students to the failed students is

1) 1 : 9   2) 2 : 7

3) 9 : 1   4) 5 : 1

143. The percentage of students who have failed in the examination is

1) 10%   2) 30%

3) 20%   4) 36%

144. The total number of students who have passed in 2nd and 3rd division is

1) 270   2) 108

3) 162   4) None

145. The number of students who passed in first division is

1) 64   2) 74   3) 45   4) 54

Directions (146-150): The following is a horizontal bar diagram showing the accidents in which two wheelers are involved with other objects. Study the diagram and answer the questions.

OBJECTS HIT

146. The difference in percentage between the accidents involving two-wheelers other objects is respectively.

1) 77, more   2) 77, less

3) 54, more   4) 54, less

147. 60% of the accidents are involved due to

1) Cars, buses, tanker lorry and pedestrians

2) Cars, tanker lorry, bicycles and stationary vehicles

3) Two-wheelers, cars, buses and stationary vehicles

4) Two-wheelers, cars, buses and tanker lorry

148. If the data of the bar diagram is represented by a pie-chart, and the angle of a sector of the pie-chart is 36°, then this sector represents the accidents involving

1) Pedestrians

2) Bicycles

3) Buses

4) Stationary vehicles

149. The percentage of accidents in which pedestrians and cyclists are involved is

1) 24   2) 6

3) 60   4) 20.4

150. The percentage by which the accidents involving buses is less than the accidents involving tanker lorry is

1) 6   2) 4

3) 40   4) 28

Part - D
English Comprehension

Directions (151-155): In the following questions, some of the sentences have errors and some have none. Find out which part of a sentence has an error. If there is no error; the answer is (4).

151. We saw (1) / sand sculptures (2) / in the beach. (3) / No error. (4)

152. Everybody in the office (1) / has left early, (2) / haven't they? (3) / No error. (4)

153. The teacher told that. (1) / the students should have gone to the library (2) / instead of having wasted their time. (3) / No error (4).

154. He is (1) / one of the tallest boy (2) / in the class. (3) / No error. (4)

155. He was awarded (1) / with a doctorate degree (2) / for his new invention. (3) / No error. (4)

Directions (156-160): In the following questions, some of the sentences are given with blanks to be filled in with appropriate words.

156. The work was _____ by the rains.

1) Restricted   2) Prevented

3) Hampered   4) Obstructed

157. He knows French and German _____ Russian.

1) Beside   2) Besides

3) Aside   4) Except

158. His reputation has been _____ by his foolish acts.

1) Increased   2) Decreased

3) Retrieved   4) Tainted

159. Meditation is ____ way to calm your nerves.

1) A best

2) One of the best

3) The best

4) An best

160. The Prime Minister of England called _____ the President of America.

1) In   2) Out

3) On   4) At

Directions (161-165): In the following questions, out of the four alternatives, choose the one which best expresses the meaning of the given word.

161. INADVERTENT

1) Thoughtless

2) Unintentional

3) Insane

4) Unintelligent

162. BARREN

1) Insane   2) Rough

3) Infertile   4) Lush

163. ABSTAIN

   1) Insist   2) Persist

   3) Refrain   4) Resist

164. COUNTERFEIT

   1) Constant   2) Unknown

   3) Blased   4) Fake

165. NOVICE

   1) Expert   2) Specialist

   3) Generalist   4) Beginner

Directions (166-170): In the following questions, choose the word opposite in meaning to the given word.

166. DIMINISH

   1) Increase   2) Improve

   3) Introduce   4) Decrease

167. COMPLY

   1) Challenge   2) Complain

   3) Conform   4) Compete

168. TREACHEROUS

   1) Tactful   2) Violent

   3) Faithful   4) False

169. INQUISITIVE

   1) Inadequate   2) Immature

   3) Uncomfortable   4) Unconcerned

170. AFFLUENCE

   1) Poverty   2) Influence

   3) Neglect   4) Semblance

Directions (171-175): In the following questions, four alternatives are given for the idiom/phrase **bold** in the sentence. Choose the alternative which best express the meaning of the idiom/phrase.

171. Do not **run down** your friends in public.

   1) Fight with

   2) Follow

   3) Make a mention of

   4) Criticize

172. Most parents find it difficult **to make both ends meet** because of inflation.

   1) To lead a lavish life

   2) To live within one's income

   3) To live a miserly life

   4) To lead an active life

173. The students were advised to **pore over** the lessons thoroughly.

   1) To through   2) Go down

   3) Go off   4) Go out

174. The two famous writers **crossed swords** with each other on every issue.

   1) Fought physically

   2) Crossed the road on meeting

   3) Took different routes

   4) Disagreed

175. The traffic came to a **standstill** after the heavy downpour of rain.

   1) Complete halt

   2) Accident spot

   3) Diversion

   4) Confused disorder

Directions (176-180): In the following questions, a part of the sentence is **bold**. Below are given alternatives to the underlined part at (1), (2) and (3) which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (4).

176. Both the **mother-in-laws** welcomed the newlyweds with garlands of flowers.

   1) Mother-in-laws

2) Mother-in-law

3) Mothers-in-law

4) No improvement

177. The workers looked **run down**.

1) Happy

2) Relaxed

3) Exhausted

4) No improvement

178. The relatives **comforted** the old man whose wife had died.

1) Sympathized with

2) Pitied

3) Consoled

4) No improvement

179. They obtained the top-sacred information by **wrong** means.

1) Clever

2) Fraudulent

3) Bad

4) No improvement

180. His speech **was broadcasted** over the radio last Thursday.

1) Was broadcast

2) Had been broadcast

3) Has been broadcast

4) No improvement

Directions (181-185): In the following questions, out of the four alternatives, choose the one which can be substituted for the given words/sentence.

181. To agree to something

1) Assure   2) Assent

3) Adapt   4) Adhere

182. A person who withdraws from the world to live in seclusion and often in solitude

1) Iconoclast   2) Recluse

3) Sage   4) Priest

183. A love of books

1) Bibliomaniac   2) Bibliophile

3) Bibliographer   4) Bilingualist

184. Occurring at irregular intervals in time

1) Epidemic   2) Endemic

3) Temporal   4) Sporadic

185. To keep a great person or event in people's memory

1) Communicate

2) Commensurate

3) Commemorate

4) Commiserate

Directions (186-190): In the following questions, groups of four words are given. In each group, one word is correctly spelt. Find the correctly spelt word.

186. 1) Columen   2) Autumn

3) Condamm   4) Symptem

187. 1) Precarius   2) Preceede

3) Premier   4) Preperation

188. 1) Corespondent

2) Commandent

3) Superintendent

4) Attendent

189. 1) Imaginery   2) Dictionary

3) Itinerery   4) Stationerry

190. 1) Pronounciation

2) Repercution

3) Rehabilitation

4) Tution

Directions (191-200): In the following passage, some of the words have been left out. First read the passage over and try to understand what it is about. Then

fill in the blanks with the help of the alternative given.

PASSAGE

Experts are beginning to suspect that one of the major **191** of crime in modern cities is the actual design of the city. Oscar Newman, a professor of architecture, in his book titled "Defensible Space" has **192** the results of his research on this question. The effect of environment **193** crime is twofold.

Prof. Newman's research shows that some buildings may encourage people not only to interfere but to allow crimes to **194** crowded apartments in a huge block bring people physically together but isolate them **195**. People living in what is **196** one building with a common entry fell isolated within their own apartments.

They are unconcerned 197 their neighbours. Some years ago, a girl was stabbed to death 198 a period of half an hour while hundreds of people living in the block 199 without interfering, with even calling the police.

The other obvious effect of the design of buildings is that it affords room for crimes. Hidden nooks and corners, spaces between buildings out of 200 are convenient spots where crimes can be committed without the fear of detection.

191. 1) Expositions   2) Causes
      3) Theories   4) Results

192. 1) Published   2) Printed
      3) Predicted   4) Pasted

193. 1) On   2) In
      3) Over   4) About

194. 1) Witness   2) Show
      3) Appear   4) Happen

195. 1) Spiritually   2) Cognitively
      3) Intellectually 4) Mentally

196. 1) Essentially   2) Deliberately
      3) Accidentally   4) Ideologically

197. 1) For   2) With
      3) About   4) At

198. 1) Between   2) Through
      3) Over   4) Across

199. 1) Viewed   2) Studied
      3) Observed   4) Vision

200. 1) Sight   2) Vision
      3) Visual   4) Observation

KEY

1. **3**	2. **3**	3. **3**	4. **3**	5. **1**
6. **1**	7. **2**	8. **3**	9. **3**	10. **2**
11. **2**	12. **1**	13. **3**	14. **1**	15. **1**
16. **1**	17. **1**	18. **3**	19. **3**	20. **4**
21. **1**	22. **2**	23. **4**	24. **2**	25. **4**
26. **1**	27. **2**	28. **3**	29. **1**	30. **4**
31. **3**	32. **3**	33. **4**	34. **1**	35. **3**
36. **2**	37. **1**	38. **4**	39. **4**	40. **2**
41. **3**	42. **4**	43. **1**	44. **3**	45. **1**
46. **1**	47. **4**	48. **2**	49. **3**	50. **3**
51. **1**	52. **2**	53. **2**	54. **4**	55. **1**
56. **4**	57. **2**	58. **1**	59. **3**	60. **3**
61. **4**	62. **3**	63. **4**	64. **2**	65. **2**
66. **3**	67. **1**	68. **2**	69. **4**	70. **1**
71. **4**	72. **3**	73. **4**	74. **2**	75. **3**
76. **1**	77. **4**	78. **1**	79. **3**	80. **2**
81. **1**	82. **3**	83. **1**	84. **1**	85. **1**

86. **1**	87. **1**	88. **2**	89. **2**	90. **2**
91. **1**	92. **3**	93. **2**	94. **2**	95. **2**
96. **3**	97. **1**	98. **2**	99. **2**	100. **2**
101.**3**	102. **1**	103. **1**	104. **3**	105. **4**
106. **2**	107. **3**	108. **2**	109. **4**	110. **3**
111. **1**	112. **3**	113. **1**	114. **1**	115. **1**
116. **2**	117. **4**	118. **1**	119. **1**	120. **4**
121. **2**	122. **4**	123. **3**	124. **2**	125. **1**
126. **2**	127. **1**	128. **3**	129. **2**	130. **3**
131. **4**	132. **2**	133. **4**	134. **2**	135. **2**
136. **3**	137. **1**	138. **1**	139. **4**	140. **4**
141. **2**	142. **3**	143. **1**	144. **1**	145. **4**
146. **4**	147. **3**	148. **4**	149. **1**	150. **2**
151. **2**	152. **4**	153. **1**	154. **2**	155. **3**
156. **4**	157. **2**	158. **4**	159. **3**	160. **3**
161. **2**	162. **3**	163. **3**	164. **4**	165. **4**
166. **1**	167. **1**	168. **3**	169. **4**	170. **1**
171. **4**	172. **2**	173. **1**	174. **4**	175. **1**
176. **3**	177. **3**	178. **3**	179. **2**	180. **1**
181. **2**	182. **2**	183. **2**	184. **4**	185. **3**
186. **2**	187. **3**	188. **3**	189. **2**	190. **3**
191. **2**	192. **1**	193. **1**	194. **4**	195. **4**
196. **3**	197. **2**	198. **3**	199. **3**	200. **1**