TARA INSTITUTE

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NAME :...

ROLL NO. :...

Time Allowed: Two Hours
Maximum Marks: 200

INSTRUCTIONS

1. IMMEDIATELY AFTER THE COMMENCEMENT OF THE EXAMINATION, YOU SHOULD CHECK THAT THIS BOOKLET DOES NOT HAVE ANY UN PRINTED OR TORN OR MISSING PAGES OR ITEMS, ETC. IF SO, GET IT REPLACED BY A COMPLETE TEST BOOKLET.

2. ENCODE CLEARLY THE TEST BOOKLET SERIES **A**, **B**, **C** OR **D** AS THE CASE MAY BE IN THE APPROPRIATE PLACE IN THE ANSWER SHEET.

3. You have to enter your Roll Number on the Test Booklet in the Box provided alongside. **Do NOT** write anything else on the Test Booklet.

4. This Test Booklet contains 200 items (Questions). Each item is printed in English and Hindi. Each item comprises FOUR responses (answers). You will select the response which you want to mark on the Answer Sheet. In case you feel that there is more than one correct response with you consider the best. In any case, choose **ONLY ONE** response for each item.

5. You have to mark all your responses **ONLY** on the separate Answer Sheet provided. See direction in the answers sheet.

6. All items carry equal marks.

7. Before you proceed to mark in the Answer sheet the response to various items in the Test booklet, you have to fill in some particulars in the answer sheets as per instruction sent to you with your Admission Certificate.

8. After you have completed filling in all responses on the answer sheet and the examination has concluded, you should hand over to Invigilator only the answer sheet. You are permitted to take away with you the Test Booklet.

9. Sheet for rough work are appended in the Test Booklet at the end.

10. **Penalty for Wrong answers**
THERE WILL BE PENALTY FOR WRONG ANSWERS MARKED BY A CANDIDATE
(i). There are four alternatives for the answer to every question. For each question for which a wrong answer has been given by the candidate, **one-fourth (0.25)** of the marks assigned to that question will be deducted as penalty.
(ii). If a candidate gives more than one answer, it will be treated as a **wrong answer** even if one of the given answers happens to be correct and there will be same penalty as above to that question.
(iii). If a question is left blank, i.e., no answer is given by the candidate, there will be **no penalty** for that question.

DO NOT OPEN THIS BOOKLET UNTIL YOU ARE ASKED TO DO SO

PART - A

INTELLIGENCE AND REASONING

Directions : (Q.1-4) *Select the related word/letters/number/figure from the given alternatives–*

1. 2212 : 6636 : : 1122 : ?
   (a) 3366   (b) 2244
   (c) 2555   (d) 1133

2. ZWTQ : OLIF : : VSPM : ?
   (a) ZYVT   (b) SQOM
   (c) ROLI   (d) IFCA

3. Painter : Brush : : Astronomer : ?
   (a) Stethoscope   (b) Microscope
   (c) Telescope   (d) Periscope

4. TIME : MITE : : MATE : ?
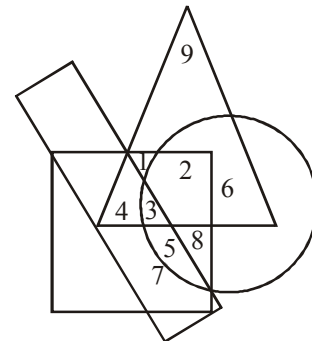   (a) TEAM   (b) META
   (c) TAME   (d) MEAT

Directions : (Q.5-10) *Select the one which is different from the other three responses.*

5. (a) Brother - Sister   (b) Mother - Father
   (c) Uncle - Aunt   (d) Husband - Wife

6. (a) RIQA   (b) AIRYS
   (c) AAPJN   (d) RNAI

7. (a) Valley : Depth   (b) High : Low
   (c) Good : Bad   (d) Black : White

8. (a) SATURDAY   (b) MONDAY
   (c) TUESDAY   (d) THURSDAY

9. (a) NJPL   (b) GRIT
   (c) OLPK   (d) SEUG

10. (a) ODFP   (b) KBDL
    (c) VIJW   (d) RFHS

Directions : (Q.11-15) *A series is given with one/two term missing. Choose the correct alternative from the given ones that will complete the series.*

11. 135, 126, 117, 108, 99, ?
    (a) 80   (b) 81
    (c) 89   (d) 90

12. CGR GJT KMV ?
    (a) LMT   (b) OPY
    (c) OPX   (d) PRZ

13. ABCDE, BDAEC, DEBCA ?
    (a) EACDB   (b) ECADB
    (c) EDCAB   (d) ECDAB

14. 365, 364, 355, 330, 281, ?
    (a) 280   (b) 200
    (c) 180   (d) 120

15. 4, 5, 6, 9, 8, 13, 10, ?
    (a) 14   (b) 15
    (c) 11   (d) 17

16. Find the wrong number in the following series–
    16, 16, 17, 21, 27, 46, 71
    (a) 27   (b) 46
    (c) 16   (d) 71

17. Daughter is to Father as Niece is to–
    (a) Nephew   (b) Cousin
    (c) Uncle   (d) Mother

18. How many such pairs of letters are there in the given word each of which has as many letters between them in the word as in the English alphabet.
    DABBLE
    (a) One   (b) Two
    (c) Three   (d) None of these

19. In the following diagram the triangle represents children, the circle represents rural population, the rectangle school going population and the square boys.
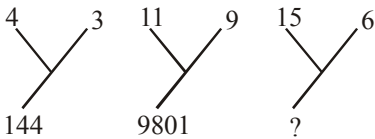

On the basis of above diagram, which number represents rural boys who are not school going ?
    (a) 1   (b) 2
    (c) 1, 2   (d) 1, 2, 8

20. An equation is solved on the basis of a certain system. On that basis, find out the correct answer from amongst the four alternatives for the unsolved equation.
    $6 \times 9 \times 3 = 369$
    $4 \times 6 \times 8 = ?$
    $5 \times 6 \times 4 = 456$
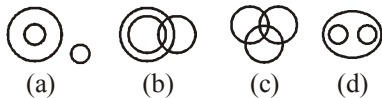   (a) 486   (b) 846
    (c) 684   (d) 864

21. If A stands for +, B for –, C for × and D for ÷ then, (3A5B2) C4D6 =
    (a) 3   (b) 4
    (c) 5   (d) 6

Directions(Q.22-23) : *Select the missing number from the given responses.*

22.
    4 ╲ ╱ 3   11 ╲ ╱ 9   15 ╲ ╱ 6
       144   9801   ?

    (a) 2250   (b) 8100
    (c) 11036   (d) 1216

23. 12(158)14   12(182)16   14(?) 16
    (a) 214   (b) 194
    (c) 184   (d) 164

24. From the four logical diagrams, select the one which best illustrates the relationship among:
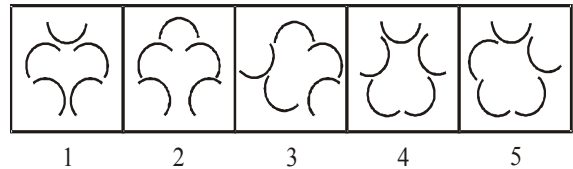   Vegetables, potatoes, brinjals

    (a)   (b)   (c)   (d)

Directions : (Q. 25-29) *Read the information given below carefully and answer the following questions.*

There are five persons A, B, C, D and E. One of them is a professor, one is a manager and another is a lawyer. C and E are unmarried women, who do not work, None of the women is a manager or professor. There is a married couple in which D is the husband. B is neither the manager nor the lawyer and is a made friend of A.

25. Who is the professor ?
    (a) A   (b) D
    (c) B   (d) C

26. The three women are –
    (a) A, B and E   (b) C, D and B
    (c) B, A and C   (d) A, C and E

27. Who is the manager ?
    (a) D   (b) A
    (c) B   (d) E

28. Who is the wife of D ?
    (a) C   (b) A
    (c) E   (d) None of the above

29. Who is the lawyer ?
    (a) A   (b) A
    (c) D   (d) C

30. Following question of five figures marked (a), (b), (c), (d) and (5) called the Problem Figures followed by four other Figures marked (a), (b), (c) and (d) called the Answer Figures. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures

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  1      2      3      4      5
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Answer Figures

Directions : (Q. 31-33) *Given below are some words in Column I and their equivalents in Column II. The letters in the codes are not necessarily in the same order as the letters in the words to which they stands but the same code stands for the same word. Study the two columns carefully and answer the questions.*

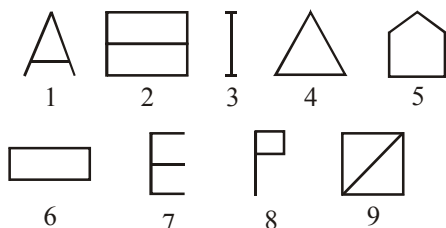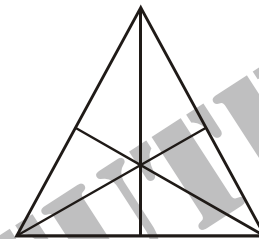| Column-I	Column-II
SBI	sa re ga
RED	ma pa ni
ASD	ga da pa
RIS	ma ga re

31. What will be code for word 'SERBIA' ?
    (a) ga ni ma sa re da   (b) ga ni ma pa re da
    (c) ga ma ni sa re da   (d) pa ga re ma ni sa

32. What will be the code for word 'BIRDS'?
    (a) ga sa re ma pa   (b) ma ga re sa pa
    (c) sa re ma pa ga   (d) ni ma pa ga re

33. What will be code for word 'DREADED' ?
    (a) pa ma ni da pa ma pa
    (b) pa sa ni ga pa ni pa
    (c) pa ma ni sa pa ni pa
    (d) pa ma ni da pa ni pa

34. If all the letters in the word 'SECONDARILY' are arranged alphabetically, which letter would come in the centre ?
    (a) E   (b) I
    (c) L   (d) N

35. Which word cannot be formed from the letters of the word 'CARDIOGRAM' ?

    (a) AEROGRAM   (b) RADIO

    (c) DIAGRAM   (d) CARGO

36. In a certain code PENCIL is written as TIRGMP. How is BOARD written in that code ?

    (a) FSEUH   (b) FSEVH

    (c) ESEVH   (d) FTEVH

37. R 4 3 % M @ K E F 5 A 3 J N 1 8 U c D B P 6 I W 7 q Q ★ Z

How many such numbers are there in the above arrangement, each of which is immediately followed by a letter but not immediately preceded by a symbol?

    (a) None   (b) Five

    (c) Two   (d) Three

38. If the given letters are rearranged, it forms a word which belongs to one of the four response options.

AAADMNR

    (a) Mountain   (b) Tree

    (c) River   (d) Monument

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

H – JH – IJHHI – HH – JH

    (a) IHJI   (b) HIHI

    (c) IHIJ   (d) HJHJ

40. Which one of the given responses would be a meaningful order of the following words ?

    (a) Plant   (b) Food

    (c) Seed   (d) Leaf

    (5) Flower

    (a) 1, 3, 4, 5, 2   (b) 3, 2, 4, 5, 1

    (c) 3, 1, 4, 5, 2   (d) 5, 4, 3, 2, 1

41. A series of figures are given which can be grouped into classes. Select the group into which the figures can be classified.

42. A man starts from a point and walks 2 km towards north. He turns right and walks 3 km. Then he turns left and travels 2 km. What is the direction he is now facing?

    (a) East   (b) West

    (c) South   (d) North

43. How many triangles are there in the following figure?

    (a) 16   (b) 13

    (c) 9   (d) 7

44. P is Q's brother. R is Q's mother. S is R's father. T is S's mother. He is P relate to T ?

    (a) Grand daughter   (b) Great grandson

    (c) Grandson   (d) Grand mother

45. If you are eleventh in a queue staring either end, how many are there in the queue ?

    (a) Eleven   (b) Twenty

    (c) Twenty one   (d) Twenty two

46. A word given in Capital Letters is followed by four answer words. Out of these only one cannot be formed using the letters of the given word. Find out that word.

ADMINISTRATION

    (a) Mind   (b) Ration

    (c) Minister   (d) Station

47. If A = 2, M = 26 and Z = 52, then BET = ?

    (a) 44   (b) 54

    (c) 64   (d) 72

48. Sohan started from point Y and travelled forward 8 km upto point Y, then turned towards right and travelled 5 km up to point Z then turned right and travelled 7 km up to point A and then turned towards right and travelled 5 km up to B. What is the distance between point B and X?

    (a) 1 km   (b) 2 km
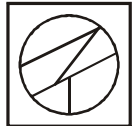
    (c) 3 km   (d) 4 km

49. Among five friends A is shorter than B but taller than E, C is slightly taller than B but D is slightly shorter than B and slightly taller than A. Who is the shortest ?

(a) A   (b) E

(c) C   (d) D

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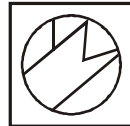
Question Figure :

Answer Figures :

(a)   (b)   (c)   (d)

PART - B
GENERAL AWARENESS

51. The Panchayat Raj system in India was introduced under the direction of which article of the constitution?

(a) 32   (b) 40

(c) 45   (d) 51

52. With which one of the following games is Pankaj Advani associated ?

(a) Cycling   (b) Shooting

(c) Swimming   (d) Triathion

53. What would be the power of an engine which supplies 18 kJ of energy per minute?

(a) 200 W   (b) 250 W

(c) 300 W   (d) 1080 W

54. Two spheres of the same metal have radii in the ratio 1 : 2. Their heat capacities are in what ratio?

(a) 1 : 2   (b) 1 : 4

(c) 2 : 1   (d) 1 : 8

55. What should be the gap between first No-confidence motion and second No-confidence motion ?

(a) 2 months   (b) 3 months

(c) 6 months   (d) 9 months

56. The word 'carbon credit' is related to ____

(a) construction industry

(b) carbon production

(c) medical science

(d) IT industry

57. Ball pen functions on the principle of–

(a) Viscosity   (b) Boyle's Law

(c) Gravitational force   (d) Surface tension

58. Which place among the following was the headquarters of the Portuguese in India ?

(a) Cochin   (b) Goa

(c) Calicut   (d) Cannanore

59. The king who is described as the 'Indian Napoleon' for his expansionist policies–

(a) Kumaragupta   (b) Chandragupta I

(c) Chandragupta II   (d) Samundragupta

60. What does 'Gold Standard' mean?

(a) It is a system, where the total currency is backed by gold reserves

(b) It is a system where the purity of gold is standardized

(c) It is a system where the value of ornaments is standardized

(d) It is a system on the basis of which IMF quota of member countries is decided

61. Which of the following is/are the sources of renewable energy ?

(A) Wind

(B) Solar

(C) Thermal

(a) Only (A)   (b) Only (B)

(c) Both (A)& (B)   (d) Both (A) & (C)

62. India stretches about ____ kms from North to South.

(a) 2400   (b) 3900

(c) 5200   (d) 3200

63. Which Five- Year Plan had an objective of "Rapid industrialization with particular emphasis on development of basic and heavy industries" ?

(a) First   (b) Second

(c) Third   (d) Fourth

64. The value of which one of the following quantities remains same in all systems of units?
    - (a) Acceleration due to gravity
    - (b) Specific gravity
    - (c) Pressure
    - (d) Density

65. Khajuraho temples are _____
    - (1) located in Madhya Pradesh
    - (2) located in Uttar Pradesh
    - (3) a holy place
    - (4) a tourist place
    - (5) an example of Indian Architectural genius.
    - (a) only (1), (2) & (3)
    - (b) only (2), (3) & (4)
    - (c) only (3), (4) & (5)
    - (d) only (1), (4) & (5)

66. Cyclones are also called _____
    - (1) hurricanes, (2) typhoons,
    - (3) tornados, (4) whirlpools,
    - (5) logos
    - (a) (1) and (2) (b) (2) and (3)
    - (c) (1), (2), (3) (d) (2), (3), (4)

67. Major carpet producing states are _____
    - (1) Uttar Pradesh
    - (2) Jammu and Kashmir
    - (3) Tamil Nadu
    - (4) Kerala
    - (5) Assam
    - (a) (1) and (2) (b) (2) and (3)
    - (c) (3) and (4) (d) (4) and (5)

68. One of the following states is famous for sandal wood oil, soaps etc. _____
    - (a) Tamil Nadu (b) Kerala
    - (c) Andhra Pradesh (d) Goa

69. The book "Discovery of India" was written by _____
    - (a) Dr. Ambedkar
    - (b) Pandit Jawaharlal Nehru
    - (c) M. K. Gandhi
    - (d) Dadabhai Navroji

70. Who of the following is an accomplished vocalist?
    - (a) Monu Mazumdar (b) Shiv Kumar Sharma
    - (c) Satish Gujral (d) Dinanath Mishra

71. What is the term of a Member of the Rajya Sabha?
    - (a) Three years (b) Four years
    - (c) Five years (d) Six years

72. Green House Effect ----
    - (a) is the increase in the temperature inside the green house where people can live in.
    - (b) is the increase in the temperature inside a kiln due to the green brick line.
    - (c) is the rise in temperature that Earth experiences because certain atmos-pheric gases trap heat of Sun
    - (d) All (a), (b) and (c)

73. The enzyme that coagulates milk into curd is–
    - (a) Rennin (b) Pepsin
    - (c) Resin (d) Citrate

74. With which one of the following games is the Hopman Cup associated?
    - (a) Badminton (b) Lawn Tennis
    - (c) Hockey (d) Football

75. The Union Executive of India consists of:
    - (a) The President; Vice-President, Lok Sabha Speaker and the Council of Ministers
    - (b) The President, Deputy Chairman of the Rajya Sabha, Lok Sabha Speaker and the Prime Minister
    - (c) The President and the Council of Ministers only
    - (d) The President, Vice-President and the Council of Ministers only

76. Electrolysis of an aqueous solution of copper sulphate using copper electrodes given–
    - (a) Copper at cathode and oxygen at anode
    - (b) Copper at anode and oxygen at cathode
    - (c) Copper at cathode and anodes dissolve to give copper
    - (d) Hydrogen at cathode and oxygen at anode

77. Burning pyrites ore gives out–
    - (a) Carbon dioxide gas
    - (b) Sulphur dioxide gas
    - (c) Nitrogen dioxide gas
    - (d) Nitric oxide gas

78. The Governor General of India impeached by the House of Commons in England was–
    - (a) Waren Hastings (b) Cornwallis
    - (c) Wellesley (d) William Bentinc

79. 'Panna' is an important place in Madhya Pradesh. It is famous for–

(a) Gold mines (b) Silver mines

(c) Diamond mines (d) Iron mines

80. The first operational electronic digital computer is–

(a) ENIAC (b) EDVAC

(c) EDSAC (d) UNIVAC

81. DTP stands for–

(a) Daily Text Printing (b) Desk Top Publishing

(c) Desk Top Printing (d) Daily Text Publishing

82. A surge of which hormone stimulates ovulation in human females?

(a) Luteinizing hormone

(b) Estrogen

(c) Follicle stimulating hormone

(d) Progesterone

83. Which one of the following carries out the function in human beings similar to the one which Malpighian tubules perform in cockroaches and other insects?

(a) Lungs (b) Kidneys

(c) Heart (d) Reproductive organs

84. Which one of the following diseases is caused by bacteria and spreads through faecal matter by houseflies?

(a) Pertussis (b) Typhoid

(c) Diphtheria (d) Chickenpox

85. Which one of the following cities is located on the bank of the Irrawady river?

(a) Bangkok (b) Hanoi

(c) Manila (d) Yangon

86. Granite and Basalt are the examples of which of the following?

(a) Sedimentary rocks (b) Metamorphic rocks

(c) Igneous rocks (d) Calcareous rocks

87. Which of the following two countries are separated by the 49th Parallel?

(a) North Korea and South Korea

(b) South Africa and Zimbabwe

(c) USA and Canada

(d) France and Germany

88. Which one among the following states has more population than the other three?

(a) Gujarat (b) Madhya Pradesh

(c) Orissa (d) Rajasthan

89. Match List I with List II and select the correct answer using the code given below the Lists:

List-I (National Highway No.)	List-II (Cities connected)
A. NH 5	1. Bhopal-Jaipur
B. NH 7	2. Bhubaneswar-Chennai
C. NH 9	3. Nagpur-Varanasi
D. NH 12	4. Pune-Hyderabad

Codes :

	A	B	C	D		A	B	C	D
(a)	2	1	4	3	(b)	4	3	2	1
(c)	2	3	4	1	(d)	4	1	2	3

90. Who of the following was a contemporary of Alexander, the Great?

(a) Bimbisara

(b) Chandragupta Maurya

(c) Ashoka

(d) Pushyamitra Sunga

91. Between whom was the Battle of Chausa fought?

(a) Bahadur Shah of Gujarat and Humayun

(b) Humayun and Sher Khan

(c) Akbar and Rana Pratap

(d) Jehangir and Rana Amar Singh

92. During the reign of Alauddin Khilji, who were amils ?

(a) Local landlords at village level

(b) Government agents to collect land revenue

(c) Khurasani and Multani traders of foodgrains

(d) Banjaras who carried the food-grains from villages to towns.

93. Which one among the following newspapers was published first?

(a) The Madras Mail

(b) The Indian Social Reformer

(c) The Bengal Gazette

(d) The Times of India

94. Who was the first Indian native ruler to accept the system of Subsidiary Alliance?

(a) Scindia of Gwalior (b) Nizam of Hyderabad

(c) Dalip Singh of Punjab (d) Gaikwad of Baroda

95. Who among the following was a founder of the Swaraj Party ?

   (a) Vallabbhai Patel   (b) Rajendra Prasad

   (c) C. R. Das   (d) Narendra Dev

96. Who among the following national leaders did not opt to defend the case dealing with the trial of the soldiers of the Indian National Army in 1945 ?

   (a) Sir Tej Bahadur Sapru

   (b) Bhulabhai Desai

   (c) C. Rajagopalachari

   (d) Jawaharlal Nehru

97. Aruna Asaf Ali was associated with which one of the following?

   (a) Bardoli Satyagraha

   (b) Quit India Movement

   (c) Civil Disobedience Movement

   (d) Khilafat Movement

98. What is the number of the permanent members of the UN Security Council?

   (a) Five   (b) Six

   (c) Ten   (d) Fifteen

99. Match List I with List II and select the correct answer using the codes given below the Lists :

List-I (U N Bodies)	List-II (Headquarters)
A. International Court of Justice	1. Geneva
B. Food and Agriculture Organization	2. Rome
C. UNESCO	3. Washington
D. WHO	4. The Hague
	5. Paris

   Codes :

	A	B	C	D		A	B	C	D
(a)	2	3	5	4	(b)	1	2	3	5
(c)	3	4	1	5	(d)	4	2	5	1

100. Which one among the following has the power to regulate the right of citizenship in India?

   (a) The Union Cabinet

   (b) The Parliament

   (c) The Supreme Court

   (d) The Law Commission

PART - C

NUMERICAL APTITUDE

Directions (51 - 55) : *What will come in place of question mark (?) in the following questions?*

101. $\sqrt{576} \div (4)^2 \times 7.4 + (7)^3 - 231 = ?$

   (a) 123.9   (b) 121.1

   (c) 111.4   (d) 123.1

102. $\left(\sqrt{3} - 2\right)^2 = ? - \sqrt{12} - \sqrt{36}$

   (a) $13 - 2\sqrt{3}$ (b) 13

   (c) $13 - 4\sqrt{3}$ (d) 1

103. $98 \div 14 \times 49 - 294 = (?)^2$

   (a) -14 (b) $\sqrt{7}$

   (c) $+7$ (d) 196

104. $(2 \times 3)^3 \div (4 \times 9)^2 \times (27 \times 8)^2 = (6)^?$

   (a) 5   (b) 6

   (c) 3   (d) 8

105. $(0.064) \times (0.4)^7 = (0.4)^? \times (0.0256)^2$

   (a) 17   (b) 2

   (c) 18   (d) 3

106. A man sold an item for ₹ 6,750- at a loss of 25%. What will be the selling price of same item if he sells it at a profit of 15%?

   (a) ₹ 10,530   (b) ₹ 9,950

   (c) ₹ 10,350   (d) ₹ 11,340

107. The sum of the circumference of a circle and the perimeter of a rectangle is 132 cms. The area of the rectangle is 112 sq. cms. and breadth of the rectangle is 8 cms. What is the area of the circle?

   (a) 616 sq. cm.   (b) 540 sq. cm.

   (c) 396 sq. cm.   (d) Cannot be determined

108. The length of the diagonal BD of the parallelogram ABCD is 18 cm. If P and Q are the centroid of the ΔABC and ΔADC respectively then the length of the line segment PQ is

   (a) 4 cm   (b) 6 cm

   (c) 9 cm   (d) 12 cm

109. If a chord of a circle of radius 5 cm is a tangent to a circle of radius 3 cm, both the circles being concentric, then the length of the chord is

   (a) 10 cm   (b) 12.5 cm

   (c) 8 cm   (d) 7 cm

110. Thirty five percent of 740 is 34 more than a number. What is two-fifth of the number?

    (a) 45　　　　　　(b) 90

    (c) 180　　　　　(d) 120

111. The ratio between the angles of a quadrilateral is 6 : 3 : 4 : 5. The smallest angle of a triangle is one-fourth the largest angle of the quadrilateral. Largest angle of the triangle is 10° more than second largest angle of the triangle. What is the second largest angle of the triangle?

    (a) 80°　　　　　(b) 60°

    (c) 70°　　　　　(d) 40º

112. A train covered a distance of 1235 kms. in 19 hours. Also, the average speed of a car is four-fifth the average speed of the train. How much distance will the car cover in 22 hours?

    (a) 1234 kms.　　(b) 1144 kms.

    (c) 1134 kms.　　(d) 1244 kms.

113. The side AB of a parallelogram ABCD is produced to E in such way that BE = AB, DE intersects BC at Q. The point Q divides BC in the ratio

    (a) 1 : 2　　　　(b) 1 : 1

    (c) 2 : 3　　　　(d) 2 : 1

114. O is the incentre of ∆ABC and ∠A = 30°, then ∠BOC is

    (a) 100°　　　　(b) 105°

    (c) 110°　　　　(d) 90°

115. The ratio between the present ages of Meera and Priya is 3 : 4 respectively. Ten years ago the ratio between their ages was 4 : 7 respectively. What will be Meera's age after 5 years?

    (a) 18 years　　　(b) 24 years

    (c) 23 years　　　(d) 29 years

116. The average marks of nine students in a group is 63. Three of them scored 78, 69 and 48 marks. What are the average marks of remaining six students?

    (a) 63.5　　　　(b) 64

    (c) 63　　　　　(d) 62

117. Twelve percent of Kaushal's monthly salary is equal to sixteen percent of Nandini's monthly salary. Suresh's monthly salary is half that of Nandini's monthly salary. If Suresh's annual salary is ₹ 1.08 lacs. What is Kaushal's monthly salary?

    (a) ₹ 20,000　　(b) ₹ 18,000

    (c) ₹ 26,000　　(d) ₹ 24,000

118. Six boys or four men can complete a piece of work in 24 days. In how many days will 3 boys and 10 men together complete the same piece of work?

    (a) 6　　　　　　(b) 8

    (c) 12　　　　　(d) Cannot be determined

119. The angles of a quadrilateral are in the ratio of 2 : 4 : 7 : 5. The smallest angle of the quadrilateral is equal to the smallest angle of a triangle. One of the angles of the triangle is twice the smallest angle of the triangle. What is the second largest angle of the triangle?

    (a) 80°　　　　　(b) 60°

    (c) 120°　　　　(d) Cannot be determined

120. A shopkeeper sells notebooks at the rate of ₹ 45 each and earns a commission of 4%. He also sells pencil box at the rate of ₹ 80 each and earns a commission of 20%. How much amount of commission will he earn in two weeks if he sells 10 notebooks and 6 pencil boxes a day?

    (a) ₹ 1,956　　　(b) ₹ 1,586

    (c) ₹ 1,496　　　(d) ₹ 1,596

121. Train-A crosses a stationary Train-B in 50 seconds and a pole in 20 seconds with the same speed. The length of the Train-A is 240 meters. What is the length of the stationary Train-B ?

    (a) 360 meters　　(b) 260 meters

    (c) 300 meters　　(d) Cannot be determined

122. One files a kite with a thread 150 metre long. If the thread of the kite makes an angle of 60° with the horizontal line, then the height of the kite from the ground (assuming the thread to be in a straight line) is

    (a) 50 metre　　　(b) $75\sqrt{3}$ metre

    (c) $25\sqrt{3}$ metre　(d) 80 metre

123. $\sin^2 5° + \sin^2 10° + \sin^2 15° + ... + \sin^2 85° + \sin^2 90°$ is equal to

    (a) $7\frac{1}{2}$　　　　(b) $8\frac{1}{2}$

    (c) 9　　　　　　(d) $9\frac{1}{2}$

124. In a test, minimum passing percentage for girls and boys is 35% and 40% respectively. A boy scored 483 marks and failed by 117 marks. What are the minimum passing marks for girls?

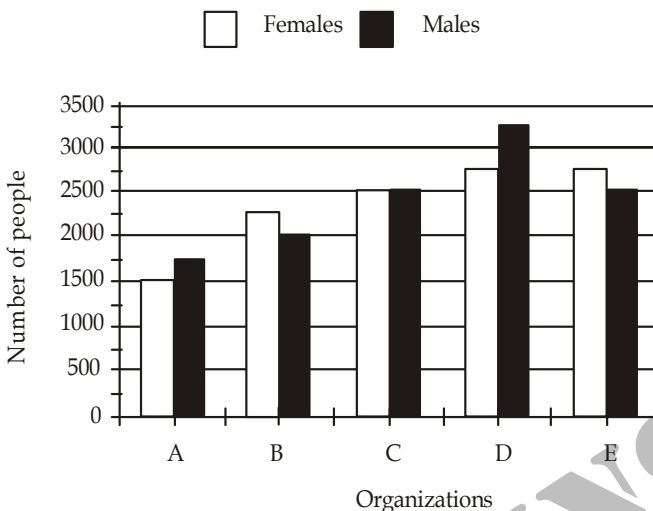   (a) 425　　　　　(b) 520

    (c) 500　　　　　(d) 525

125. 8 men can complete a piece of work in 20 days. 8 women can complete the same work in 32 days. In how many days will 5 men and 8 women together complete the same work?

(a) 16 days   (b) 12 days

(c) 14days   (d) 10 days

126. The area of a square is 1024 sq. cms. What is the respective ratio between the length and the breadth of a rectangle whose length is twice the side of the square and breadth is 12 cms. less than the side of the square?

(a) 5 : 18   (b) 16 : 7

(c) 14 : 5   (d) 16 : 5

127. The value of

$(\sin^2 1° + \sin^2 3° + \sin^2 5° + ... + \sin^2 85° + \sin^2 87° + \sin^2 89°)$ is

(a) $21\frac{1}{2}$ (b) 22

(c) $22\frac{1}{2}$ (d) $23\frac{1}{2}$

128. The numerical value of

$\cot 18° \left(\cot 72° \cos^2 22° + \dfrac{1}{\tan 72° \sec^2 68°} \right)$ is

(a) 1   (b) $\sqrt{2}$

(c) 3   (d) $\dfrac{1}{\sqrt{3}}$

129 The sum of five consecutive even numbers of set-A is 220. What is the sum of a different set of five consecutive numbers whose second lowest number is 37 less than double of the lowest number of set-A?

(a) 223   (b) 225

(c) 235   (d) 220

130. The bus fare for one person is ₹ 420 from Agra to Aligarh and train fare between the same places for one person is equal to three-fourth the bus fare for two persons between the same places. What is the total fare paid by 2 persons travelling by bus and 4 persons travelling by train between the two places?

(a) ₹ 3.360   (b) ₹ 3,460

(c) ₹ 3,440   (d) ₹ 3,406

131. The respective ratio between the speeds of a car, a jeep and a tractor is 3 : 5 : 2. The speed of the jeep is 250 percent the speed of the tractor which covers 360 kms in 12 hours. What is the average speed of car and jeep together?

(a) 60 km/hr.   (b) 75 km/hr.

(c) 40 km/hr.   (d) Cannot be determined

132. The total area of a circle and a square is equal to 5450 sq.cm. The diameter of the circle is 70 cms. What is the sum of the circumference of the circle and the perimeter of the square?

(a) 360 cms   (b) 380 cms.

(c) 270 cms.   (d) Cannot be determined

133. The ratio between the speed of a train and a car is 16 : 15 respectively. Also, a bus covered a distance of 480 kms. in 8 hours. The speed of the bus is three-fourth the speed of the train. How much distance will the car cover in 6 hours?

(a) 450 kms.   (b) 480 kms.

(c) 360 kms.   (d) Cannot be determined

134. Ram's present age is three times his son's present age and two-fifth of his father's present age. The average of the present ages of all of them is 46 years. What is the difference between the Ram's son's present age and Ram's father's present age?

(a) 68 years   (b) 88 years

(c) 58 years   (d) 78 years

135. The circumference of a circle is 10 cm. The side of a square inscribed in the circle is

(a) $\dfrac{100\sqrt{2}}{\pi}$ cm   (b) $\dfrac{50\sqrt{2}}{\pi}$ cm

(c) $\dfrac{100}{\pi}$ cm   (d) $50\sqrt{2}$ cm

136. A shopkeeper marks his goods 30% above his cost price but allows a discount of 10% at he time of sale. Hie gain is

(a) 21%   (b) 20%

(c) 18%   (d) 17%

137. Twenty percent of Anuj's annual salary is equal to seventy five percent of Raj's annual salary. Raj's monthly salary is 60% of Ravi's monthly salary. If Ravi's annual salary is ₹ 1.44 lacs. What is Anuj's monthly salary?

(a) ₹ 2,70,000   (b) ₹ 27,000

(c) ₹ 3,24,000   (d) ₹ 5,400

138. The largest and the second largest angles of a triangle are in the ratio of 3 : 2 respectively. The smallest angle is 20% of the sum of the largest and the second largest angles. What is the sum of the smallest and the second largest angles?

   (a) 80°   (b) 60°

   (c) 100°   (d) 90°

Directions (139-143) : *Study the following graph carefully to answer the questions that follow :*

Number of Females and Males working in five different Organizations

☐ Females   ■ Males

Organizations

139. The number of Males in the Organization D forms what percent of the total number of Employees from that Organization (rounded off to two digits after decimal)

   (a) 54.17   (b) 62.64

   (c) 52.25   (d) 61.47

140. What is the total number of employees working in Organization C and B together?

   (a) 8950   (b) 9520

   (c) 8250   (d) 9250

141. What is the total number of Females from all the Organizations togather ?

   (a) 11540   (b) 11755

   (c) 12440   (d) 10250

142. What is the respective ratio of the number of Females to the number of Males from Organization A ?

   (a) 11 : 8   (b) 7 : 6

   (c) 8 : 11   (d) 6 : 7

143. Number of Females from Organization E forms **approximately** what percent of the total number of Employees from that Organization ?

   (a) 58   (b) 60

   (c) 52   (d) 62

144. Rita invested 25% more than Sunil. Sunil invested 30% less than Abhinav who invested ₹ 6000/-. What is the respective ratio between the amount that Rita invested and the total amount invested by all of them together?

   (a) 35 : 104   (b) 13 : 29

   (c) 101 : 36   (d) 35 : 103

145. A man gets a simple interest of ₹ 1, 000/- on a certain principal at the rate of 5 p. c p .a. in 4 years. What compound interest will the man get on twice the principal in two years at the same rate?

   (a) ₹ 1,050   (b) ₹ 1,005

   (c) ₹ 11,025   (d) ₹ 1025

146. The perimeter of a square is equal to twice the perimeter of a rectangle of length 8 cms. and breadth 7 cms. What is the circumference of a semicircle whose diameter is equal to the side of the square?
(Rounded off to the two digits after decimal.)

   (a) 38.57 cms.   (b) 23.57 cms.

   (c) 42.46 cms.   (d) 47.47 cms.

147. If the radius of a sphere is increased by 2 cm, its surface area increases by 352 cm^2. The radius of the sphere before increase was $\left[\text{Take } \pi = \dfrac{22}{7} \right]$

   (a) 3 cm   (b) 4 cm

   (c) 5 cm   (d) 6 cm

148. The perimeter of a rhombus is 40 cm. If the length of one of its diagonals be 12 cm, the length of the other diagonal is

   (a) 14 cm   (b) 15 cm

   (c) 16 cm   (d) 12 cm

149. Radha's present age is three years less than twice her age 12 years ago. Also the respective ratio between Raj's present age and Radha's present age is 4: 9. What will be Raj's age after 5 years?

   (a) 12years   (b) 7 years

   (c) 21 years   (d) 17 years

150. The respective ratio between the speeds of a car, a train and a bus is 5 : 9 : 4. The average speed of the car, the bus and the train is 72 km./hr. together. What is the average speed of the car and the train together?

   (a) 82 km./hr.   (b) 78 km./hr.

   (c) 84 km./hr.   (d) Cannot be determined

PART - D

ENLGLISH COMPREHENSION

Directions: *In questions no. 151 to 155, some of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the rectangle corresponding to the appropriate letter (A, B, C). If a sentence is free from errors, blacken the rectangle corresponding to (d) in the Answer Sheet.*

151. (a) He will certainly help you
    (b) if you will ask him
    (c) in a pleasant manner.
    (d) No error.

152. (a) Most of the members at the meeting felt
    (b) that the group appointed for investigating the case
    (c) were not competent to do the job efficiently.
    (d) No error.

153. (a) If you listen with
    (b) the question carefully
    (c) you wil be able to answer them easily
    (d) No error.

154. (a) The customer handed over
    (b) a hundred-rupees note
    (c) to the shopkeeper.
    (d) No error.

155. (a) I have read
    (b) too many books
    (c) by R . K . Narayan.
    (d) No error.

Directions: *In questions no. 156 to 160, sentences are given with blanks to the filled in with an appropriate word. Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate rectangle in the Answer Sheet.*

156. The journey may be made by sea or___by road.
    (a) alternately   (b) alteringly
    (c) conversely   (d) alternatively

157. He has not attained the age of 18. He was, therefore, no____ to vote in this election.
    (a) power   (b) claim
    (c) right   (d) authority

158. The President today_____ the committee with the induction of the five new general secretaries in place of those dropped.
    (a) reconstituted   (b) reviewed
    (c) formed   (d) enlarged

159. To say that a rectangle will never be a square because it is a rectangle is simply to___ the very thing you profess to prove.
    (a) ensure   (b) insure
    (c) assume   (d) contradict

160. Traffic problems in Bombay are as serious as in any other city in India; and they are complicated by digging of roads by the corporation on this or that ____.
    (a) aspect   (b) pretext
    (c) intention   (d) instance

Directions: *In questions no. 161 to 165, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.*

161. FACULTY
    (a) privilege   (b) desire
    (c) branch   (d) ability

162. FORESEE
    (a) contemplate   (b) visualise
    (c) assume   (d) hypothesis

163. ANNEX
    (a) add   (b) low
    (c) copy   (d) initial

164. MENAGE
    (a) suffocation   (b) system
    (c) law   (d) household

165. DILEMMA
    (a) darkness   (b) freedom
    (c) trap   (d) confusion

Directions: *In question no. 166 to 170, out of the four alternatives, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.*

166. CORPULENT
    (a) sallow   (b) co-operative
    (c) enterprising   (d) emaciated

167. OCCIDENTAL
    (a) oriental   (b) accidental
    (c) coincidental   (d) confidential

168. FLACCID

(a) upright   (b) taut

(c) rough   (d) even

169. NEPOTISM

(a) midnight   (b) partiality

(c) impartiality   (d) chauvinism

170. ABSTEMIOUS

(a) fastidious   (b) punctilious

(c) dissipated   (d) prodigal

Directions: *In questions no. 171 to 175, four alternatives are given for the meaning of the given Idiom/ phrase. Choose the alternative which best expresses the meaning of the Indian/Phrase and mark in the Answer Sheet.*

171. *Blue blood*

(a) something impossible

(b) an aristocrat

(c) something costly

(d) a funny object

172. *At one's wit's end*

(a) to be very witty

(b) to confuse others

(c) to be completely confused

(d) to minimise expenses

173. *To eat an humble pie*

(a) to eat cheap food

(b) to eat slowly

(c) to swallow one's pride and apologise for doing something wrong

(d) to defy authority

174. A *snake in the grass*

(a) a very poisonous snake

(b) a secret agent

(c) an unrecognisable enemy or danger

(d) not a reliable person

175. *To turn over a new leaf*

(a) to change one's behaviour for the better

(b) to read something attentively

(c) to remain vigilant

(d) to be careful

Directions: *In questions no. 176 to 180, a sentence or underlined part thereof is given which may need improvement. Alternatives are given at (a), (b) and (c) below, which may be a better option. In case no improvement is needed, your answer is (d). Darken the appropriate rectangle in the Answer Sheet.*

176. I hope you vividly remember the premier of the film when I, my wife and you were present in the hall.

(a) my wife, I and you

(b) you, I and my wife

(c) my wife, you and I

(d) No improvement

177. Whenever my students come across new words, I ask them to look for them in the dictionary.

(a) to look it up

(b) to look them up

(c) to look at them

(d) No improvement

178. If the room had been brighter, I would have been able to read for a while before bed time.

(a) If the room was brighter

(b) If the room are brighter

(c) Had the room been brighter

(d) No improvement

179. his powerful desire brought about his downfall.

(a) His intense desire

(b) His desire for power

(c) His fatal desire

(d) No improvement

180. He sent a word to me that he would be coming late.

(a) sent word

(b) had sent a word

(c) sent words

(d) No improvement

Directions: *In questions no. 181 to 185, out of four alternatives, choose the one which can be substituted, for the given words/sentence and indicate it by blackening the appropriate rectangle in the Answer Sheet.*

181. A block of individual apartments

(a) flats   (b) congruence

(c) architecture   (d) condominium

182. A contraption used during French Revolution for beheading people

(a) guinea   (b) gabardine

(c) guillotine   (d) icicle

183. An imaginary but a perfect society

    (a) idealism   (b) cornucopia

    (c) utopia   (d) plethora

184. Genocide based on race or religion

    (a) apartheid   (b) segregation

    (c) animism   (d) pogrom

185. Theft of someone else's writings

    (a) facsimile   (b) plagiarism

    (c) forgery   (d) parody

Directions: *In question no. 186 to 190, groups of four words are given. In each group, one word is correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet.*

186. (a) Dammage   (b) Damaige

    (c) Dammege   (d) Damage

187. (a) Accomplish   (b) Acomplush

    (c) Ackmplesh   (d) Accompalish

188. (a) Puerrile   (b) Puerrille

    (c) Purrile   (d) Puerile

189. (a) Satelite   (b) Sattelite

    (c) Satellite   (d) Sattellite

190. (a) Klaptomania   (b) Klepptomania

    (c) Kleptemania   (d) Kleptomania

Directions: *In the following passage (question no. 191 to 200), some of the words have been left out. First read the passage over and try to understand what is about. Then fill in the blanks with the help of the alternatives given. Mark your answer in the Answer Sheet.*

PASSAGE(Q. Nos.191-200)

It is difficult to find a person who would put good word for the kind of bureaucracy we have in India. Incidentally, things may now be seen as coming to a head ...(191)... the attainment of independence, India ...(192)... from time to time several ...(193)... power committees or commissions to ...(194)... administration. In spite of all this, the impression ...(195)... that the Indian variety of bureaucracy has been slow and slothful. Fact is that the ...(196)... of bureaucurracy happens to be ...(197)... the same all over the world. Even in USA Presidents have ...(198)... a great deal of concern ...(199)... the manner in which buraeucurracy has been functioning at various levels. In spite of all this, not much change can be ...(200)... in the near future. One may feel like hanging one's head the despair unless one believes in some super human power the looks after our universe.

191. (a) From   (b) With

    (c) Till   (d) Since

192. (a) arranged   (b) appointed

    (c) framed   (d) selected

193. (a) great   (b) super

    (c) high   (d) multiple

194. (a) perform   (b) reform

    (c) revive   (d) transform

195. (a) insists   (b) subsists

    (c) consists   (d) persists

196. (a) structure   (b) function

    (c) growth   (d) behaviour

197. (a) practically   (b) structurally

    (c) precisely   (d) strictly

198. (a) asserted   (b) declared

    (c) voiced   (d) waged

199. (a) on   (b) at

    (c) with   (d) from

200. (a) accepted   (b) expected

    (c) affected   (d) admitted