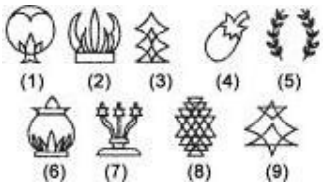
SOLVED PAPER
SSC COMBINED GRADUATE LEVEL PRELIM EXAM

Held on: 27.07.2008 (Second Sitting)

GENERAL INTELLIGENCE

1. A series of figures is given which can be grouped into classes. Select the group into which the figure can be classified from the given responses:



(a) 1, 4, 6 ; 2, 5, 7; 3, 8, 9
(b) 1, 2, 4 ; 5, 6, 7 ; 3, 8, 9
(c) 1, 4, 6 ; 3, 8, 7; 2, 5, 9
(d) 1, 2, 6 : 4, 7, 9 ; 3, 5, 8

2. From amongst the given alternatives, select the one in which the set of numbers is most like the set of numbers given below.
(17, 13,20)
(a) 8, 12, 19 (b) 11, 9, 30
(c) 8, 19, 11 (d) 5, 13, 11

3. The number of letters skipped in between adjacent letters in a series is 5. Which of the following series observes this rule ?
(a) CIOUA (b) CINUA
(c) CIOTA (d) CIOUZ

Directions (4-10): In each of the following questions, find the missing number/letters/figure from the given responses.

4. $\frac{D}{5}, \frac{G}{9}, \frac{J}{14}, \frac{M}{20}, ?$
(a) 26 (b) 26 (c) 9 (d) 27

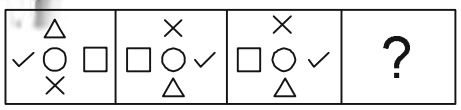
5. DWEV, FUGT, HSIR, ?
(a) JKQP (b) JPQK
(c) JQKP (d) JPKQ

6. 2, 15, 4, 47, 7, 118, 11, ?, ?
(a) 260, 15 (b) 252, 16
(c) 250, 17 (d) 254, 16

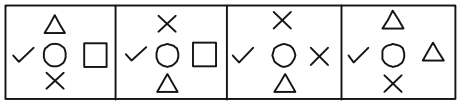
7. 313, 623, 933, 1243, ?
(a) 1863 (b) 2173
(c) 1553 (d) 2483

8. B2D, E3H, 14M, ?
(a) N5R (b) N5T
(c) N5S (d) N5Q

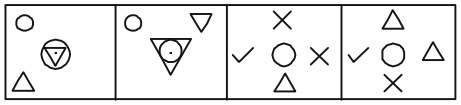
9. **Question Figure**



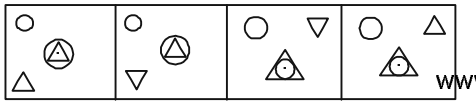
Answer Figure



10. **Question Figure**



Answer Figure



11. Which set of letters when sequentially placed at the gaps in the given letter series shall complet it ?

a c b – c e – f –

(a) dde (b) cde
(c) dee (d) ddg

Directions (12-13) : In each of the following questions which one of the given responses would be a meaningful order of the following words ?

12. 1. Heel 2. Shoulder 3. Skull 4. Neck 5. Knee 6. Chest 7. Thigh 8. Stomach 9. Face 10. Hand
(a) 3, 4, 7, 9, 2, 5, 8, 10, 6, 1
(b) 3, 9, 4, 2, 10, 6, 8, 7, 5,1
(c) 2, 4, 7, 10, 1 , 5, 8, 9, 6, 3
(d) 4, 7, 10, 1, 9, 6, 3, 2, 5, 8

13. 1. Study 2. Job 3. Examination 4. Earn 5. Appointment
(a) 1, 3, 5, 2, 4 (b) 1, 2, 3, 4, 5
(c) 1, 3, 2, 5, 4 (d) 1, 3, 5, 4, 2

14. C is wife of B, E is the son of C, A is the brother of B and father of D. What is the relationship of E to D?
(a) Mother (b) Sister
(c) Brother (d) Cousin

15. A was born 5 years before B, B is 4 years older than C and 3 years younger to D. If A is now 17 years old, how old is D ?
(a) 19 years (b) 15 years
(c) 12 years (d) 8 years

16. Six girl are standing in a circle facing to the centre. Bindu is to the left of Vijay. Rekha is in between Bindu and Mumtaz. Jessa is in between Vijay and Nirmala. Who is to the left of Mumtaz ?
(a) Rekha (b) Nirmala
(c) Vijay (d) Bindu

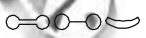
Direction (17-18): A word/ set of letters given in capital letters is followed by four answer words. Out of these only one cannot be formed by using the letters of the given word/set of letters. Find out that word.

17. EXAMINATION
(a) EXAMINE
(b) NATION
(c) NOTE
(d) TONE

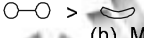
18. LEDMENTNOWGEACK
(a) KNOWLEDGE
(b) GENTLE
(c) AGENCY
(d) LODGE

19. In a code language, the following alphabets are coded in a particular way:

A C D E M S N R Q V L

< – E > ç || w = 

Which word can be decoded from the following?.

ç < =  >

(a) MASTER (b) MENACE
(c) MARVEL (d) MASQUE

20. If NATION is coded as 467234 and EARN is coded as 1654, then ATTENTION should be coded as
(a) 432769561 (b) 956143654
(c) 766412743 (d) 677147234

21. Some equations are solved on the basis of a certain system. On the basis, find out the correct answer from amongst the four alterna-tives for the unsolved equation a = 4(369)9, b = 6(246)4, c = 7(?)3
(a) 303 (b) 213
(c) 413 (d) 503

22. Which one of the following is correct?

6 * 3 * 4 * 45

(a) ÷, +, > (b) ÷, >, +
(c) >, ÷, + (d) +, >, ÷

23. Find the missing number from

4	9	17	6
20	5	8	9
7	23	9	9
?	9	4	19

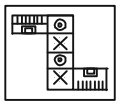
(a) 7 (b) 9
(c) 8 (d) 6

24. Somu travelled from a point A straight to B, a distance of 12 km. He turned right and travelled 8 km and reached point C. From that point took right turn and travelled 6 km, and reached point D. How far is he away from the starting point ?
(a) 10 km (b) 12 km
(c) 13 km (d) 14 km

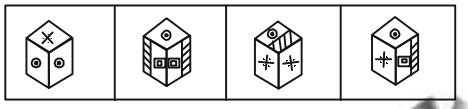
25. A and B start from a point simultaneously. A moves to his East and travels 2 km, and B moves to his south and travels 2 km. A takes turn 90° clock-wise and travels 2 km. B takes left turn 90° anticlockwise and travels 2 km. Where would they be found from the starting point?
(a) Both in South - East region
(b) Both in East region
(c) A in East and B in North region
(d) A in south and B in North region

26. Choose from the four answer figures, the figure that will be formed when question figure is folded into a box.

Question Figure:



Answer Figure:



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

27. Where is the invisible number in the two positions of the same cube ?

(a) Opposite of 2 (b) Opposite of 3
(c) Opposite of 4 (d) Opposite of 6

28. A 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 are to decide which of the given conclusions can definitely be drawn from the given statement. Indicate your answer.

Statement:

Child rearing is an art; young parents needs training in child - rearing practices.

Conclusions:

I. Now - a - days young parents know nothing about child rearing.
II. Training will enable the young couples become better parents.

(a) Only I follows
(b) Only II follows
(c) Neither I nor II follows
(d) Both I and II follow

29. A statement is given followed by four assumptions, (a), (b), (c) and (d). You have to consider the statement to be true, even if it seems to be variance from commonly known facts. You are to decide which of the given assumptions can definitely be drawn from the given statement. Indicate your answer.

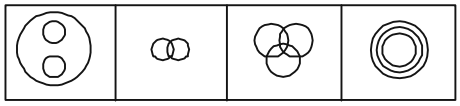
Statement:

Television has a strong influence in the young children's development.

Assumptions:

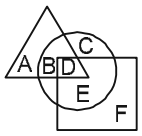
(a) Children watching TV should be controlled by the parents.
(b) Young Children should not be allowed to watch TV programmes
(c) Television affects the academic progress of the young children
(d) While developing TV programmes, educational, developmental and moral aspects of children should be taken care of

30. Identify the diagram that best represents the relationship among college students, singers and dancers.



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

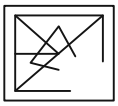
31. In the given figure, the circle represents boys, the triangle represent players and the square represents rural. What portion represents rural sports boys ?



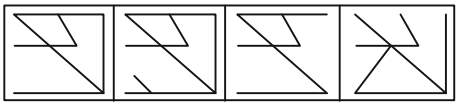
(a) E (b) F
(c) D (D) B

32. Which answer figure will complete the question figure ?

Question Figure



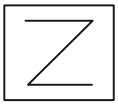
Answer Figure



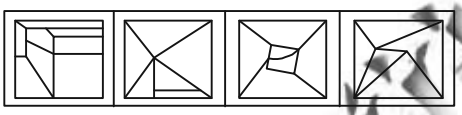
(a) (b) (c) (d)

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

Question Figure



Question Figure



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

Directions (34-44): In each following questions select the related word/letter/number/figure from the given alternatives.

34. Thread : Cloth :: Wire : ?
(a) Rope (b) Mesh
(c) Sieve (d) Telegraph

35. Scissors : Cloth :: ?
(a) Stone : Grinder (b) Axe : Wood
(c) Knife : Stone (d) Gun : Hunt

36. LJH : KKI :: CIA : ?
(a) BJB (b) BBC
(c) DBB (d) CBZ

37. EGIK : FILO :: FHJL :?
(a) JGMP (b) JGPM
(c) GJPM (d) GJMP

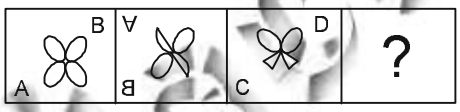
38. DRIVE : EIDRV :: BEGUM : ?
(a) EUBGM (b) MGBEU
(c) BGMEU (d) UEBGM

39. 49:81 ::64:?
(a) 36 (b) 100
(c) 121 (d) 144

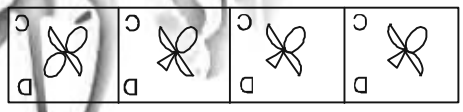
40. 371 : 150 :: 468: ?
(a) 247 (b) 357
(c) 246 (d) 345

41. 42: 31 :: ?
(a) 97: 86 (b) 53 : 46
(c) 79 : 86 (d) 64: 79

42. **Question Figures**

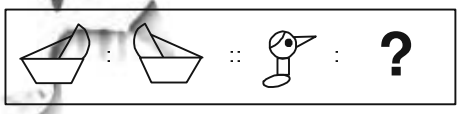


Answer Figure

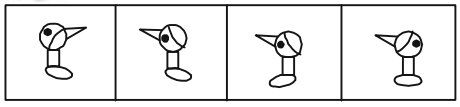


(a) (b) (c) (d)

43. **Question Figures**



Answer Figure



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

44. ADHM : ZWSN :: CFJO :?
(a) YVRM (b) WSPK
(c) XWTP (d) ZXVT

Directions (45-50): In each of the following questions find the odd word/letters/numbers/ figures from the given responses.

45. (a) Pond - Lake (b) Pistol - Gun
(c) Car - Bus (d) Church - Monument

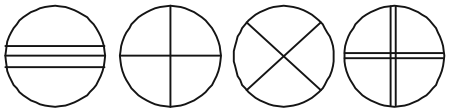
46. (a) Diligent (b) Dignified
(c) Dissident (d) Devoted

47. (a) ADGJ (b) NQTV
(c) PSVX (d) CFIK

48. (a) 64 (b) 900
(c) 343 (d) 1000

49. (a) 81 - 45 (b) 72 - 91
(c) 117 - 99 (d) 135- 126

50.



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

GENERAL AWARENESS

51. The Vice President of India is elected by
(a) the members of the Parliament
(b) the members of the Rajya Sabha
(c) the elected members of the Parliament
(d) the members of the Parliament and State Legislatures

52. When was the comprehensive reorganisation of Indian States completed in accordance with the recommendations of States Re-organisation Commission ?
(a) 1953 (b) 1956
(c) 1960 (d) 1966

53. When Mahatma Gandhi was assassinated, who said, "None will believe that a man like this in body and soul ever walked on this earth" ?
(a) Bertrand Russell
(b) Leo Tolstoy
(c) Albert Einstein
(d) Khan Abdul Ghaffar Khan

54. Who built the Tower of Victory' (Vijay Stambha) in the Chittor Fort?
(a) Rana Sanga (b) Rana Ratan Singh
(c) Rana Hamir Deva (d) Rana Kumbha

55. In violation of the Salt Laws, Gandhiji started a movement called
(a) Non-Cooperation movement
(b) Swadeshi Movement
(c) Civil Disobedience Movement
(d) None of the above

56. In which of the following wars, the French were completely de-feated by the English ?
(a) Battle of Wandiwash (b) Battle of Buxar
(c) Battle of Plassey (d) Battle of Adyar

57. The Cabinet Mission came to India in
(a) 1943 (b) 1944
(c) 1945 (d) 1946

58. The first to come and last to leave India were
(a) the Portuguese (b) the French
(c) the English (d) the Dutch

59. IR 20 and Ratna are two important varieties of
(a) wheat (b) bajra
(c) jowar (d) paddy

60. TheTrans-Siberian Railway (8960 km) connects ____in the West to___in the East.
(a) Moscow, Tashkent
(b) St. Petersburg, Omsk
(c) Moscow, Irkutsk
(d) St. Petersburg, Vladivostok

61. Indira Gandhi Rashtriya Udan Academy is located at
(a) Secunderabad (b) Rae Bareilly
(c) Jodhpur (d) Delhi

62. Which one of the following rivers of Peninsular India does not join Arabian Sea ?
(a) Periyar (b) Cauvery
(c) Narmada (d) Tapti

63. Which one of the following correctly describes AGNI ?
(a) A fighter plane
(b) A versatile tank
(c) A long-range missile
(d) A long-range gun

64. Instrument used for measuring area on maps is called
(a) Planimeter (b) Eidograph
(c) Pantograph (d) Opisometer

65. If the blood group of one parent is AB and that of the other O, the possible blood group of their child would he
(a) A or B
(b) A or B or O
(c) A or AB or O
(d) A or B or AB or O

66. How many hones are there in the human body?
(a) 187 (b) 287
(c) 206 (d) 306

67. Dinosaurs were
(a) mammals that became extinct
(b) large herbivorous creatures which gave rise to hippopotamus species
(c) egg-laying mammals
(d) reptiles that became extinct

68. Sweat glands in mammals are primarily concerned with
(a) removal of excess salts
(b) excretion of nitrogenous wastes
(c) thermoregulation
(d) sex-attraction

69. The vitamin that helps to prevent infections in the human body is
(a) vitamin A (b) vitamin B
(c) vitamin C (d) vitamin D

70. The normal RBC count in adult male is
(a) 5.5 million (b) 5.0 million
(c) 4.5 million (d) 4.0 million

71. A storm is predicted if atmospheric pressure
(a) rises suddenly (b) rises gradually
(c) falls suddenly (d) falls gradually

72. The gas which turns into liquid at the lowest temperature among the following is
(a) hydrogen (b) oxygen
(c) helium (d) nitrogen

73. An egg sinks in soft water but floats in a concentrated solution of salt because
(a) egg absorbs salt from the solution and expands
(b) albumin dissolves in salt solution and egg becomes lighter
(c) the density of salt solution exceeds the density of eggs
(d) water has high surface tension

74. What should a person on a freely rotating turn table do to decrease his (angular) speed ?
(a) Bring his hands together
(b) Raise his hands up
(c) Spread his hands outwards
(d) Sit down with raised hands

75. Gunpowder consits of a mixture of
(a) sand and TNT
(b) TNT and charcoal
(c) nitre, sulphur and charcoal
(d) sulphur, sand and charcoal

76. Which of the following is the sweetest sugar ?
(a) Sucrose (b) Glucose
(c) Fructose (d) Maltose

77. In nuclear reactors, graphite is used as a/an
(a) fuel (b) lubricant
(c) moderator (d) insulator

78. Which of the following celestial bodies contains abundant quantities of helium-3, a potential source of energy ?
(a) Earth (b) Moon
(c) Venus (d) Saturn

79. Which of the following International Tennis Tournaments is held on grass court ?
(a) US Open (b) French Open
(c) Wimbledon (d) Australian Open

80. What is the name of the writer of Indian origin whose novel, The Inheritance of Loss has bagged Man Booker Prize ?
(a) Vikrani Seth (b) Kiran Desai
(c) Salman Rushdie (d) V.S. Naipaul

81. Which country from the following is a permanent member of UN Security Council ?
(a) Switzerland
(b) People's Rupublic of China
(c) Japan (d) Ukraine

82. The Loktak Lake on which a hydroelectric project was constructed is situated in the State of
(a) Madhya Pradesh (b) Manipur
(c) Meghalaya (d) Himachal Pradesh

83. What is the motto incorporated under our National Emblem ?
(a) SatyamShivam
(b) Satyam Shivam Sundaram
(c) SatyarnevaJayate (d) Jai Hind

84. The H5N1 virus which causes bird flu was first discovered in
(a) 1991 (b) 1995
(c) 1997 (d) 2001

85. The Southern tip of India is
(a) Cape Comorin (Kanyakumari)
(b) Point Calimere
(c) Indira Point in Nicobar Islands
(d) Kovalam in Thiruvananthapuram

86. According to a resolution adopted by the United Nations General Assembly, 'International Day of Peace' is observed every year on
(a) September 1 (b) September 14
(c) September 21 (d) September 30

87. Where was the last Asia Pacific Economic Cooperation (APEC) Summit held ?
(a) Sydney (b) Auckland
(c) New York (d) Beijing

88. According to the UN Convention on the rights of children,which of the following is not a right ?
(a) Safe drinking water
(b) Adequate standard of living
(c) Education
(d) Marriage

89. Who is the author of Ageless Body, Timeless Mind?
(a) V.S. Naipaul (b) Deepak Chopra
(c) Dom Moraes (d) Tony Kusher

90. Which cricketer holds the record for scoring highest number of runs in a test match innings?
(a) Gary Sobers (b) Vivian Richards
(c) Sunil Gavaskar (d) Brian Lara

91. Which of the following is not considered as National Debt ?
(a) National Savings Certificates
(b) Long-term Government Bonds
(c) Insurance Policies
(d) Provident Fund

92. The main determinant of real wage is
(a) extra earning
(b) nature of work
(c) promotion prospect
(d) purchasing power of money

93. The birthrate measures the number of births during a year per
(a) 100 population (b) 1000 population
(c) 10000 population (d) 100000 population

94. Which of the following is not included in the National Income ?
(a) Imputed rent of owner-occupied houses
(b) Government expenditure on making new bridges
(c) Winning a lottery
(d) Commission paid to an agent for sale of house

95. Personal disposable income is
(a) always equal to personal income
(b) always more than personal income
(c) equal to personal income minus indirect taxes
(d) equal to personal income minus direct taxes

96. Who prepared the first estimate of National Income for the country ?
(a) Central Statistical Organisation National Income Committee
(c) Dadabhai Naoroji
(d) National Sample Survey Organisation

97. A Bill referred to a 'Joint Sitting' of the two Houses of the Parliament is required to be passed by
(a) a simple majority of the members present
(b) absolute majority of the total membership
(c) 3 rd majority of the members present
(d) 4 th majority of the members present

98. Who is the constitutional head of the Government of India ?
(a) President
(b) Prime Minister
(c) Chief Justice of India
(d) Attorney General

99. Who certifies a Bill to be a Money Bill in India ?
(a) Finance Minister
(b) President
(c) Speaker of the Lok Sabha
(d) Prime Minister

100. By which Amendment were 'Fundamental Duties' added to the Constitution ?
(a) 40th Amendment (b) 42nd Amendment
(c) 44th Amendment (d) 45th Amendment

NUMERICAL APTITUDE

101. By how much does $\left(\sqrt{12}+\sqrt{18}\right)$ exceed $\left(2\sqrt{3}+2\sqrt{2}\right)$?
(a) 2 (b) $\sqrt{3}$
(c) $\sqrt{2}$ (d) 3

102. The next number of the sequence 5, 10, 13, 26, 29, 58, 61,... is
(a) 122 (b) 120
(c) 93 (d) 64

103. In a certain year, the average monthly income of a person was Rs. 3,400. For the first eight months of the year, his average monthly income was Rs. 3,160 and for the last five months, it was Rs. 4,120. His income in the eighth month of the year was
(a) Rs. 3,160 (b) Rs. 5,080
(c) Rs. 15,520 (d) Rs. 5,520

104. The average age of 40 students of a class is 18 years. When 20 new students are admitted to the same class, the average age of the students of the class is increased by 6 months. The aver-age age of newly admitted students is
(a) 19 years (b) 19 years 6 months
(c) 20 years (d) 20 years 6 months

105. Of the three numbers, the second is twice the first and thrice the third. If the average of the three numbers is 44, the largest number is
(a) 24 (b) 72
(c) 36 (d) 108

106. A cricketer had a certain average of runs for his 64 innings. In his 65th innings, he is bowled out for no score on his part. This brings down his average by 2 runs. His new average of runs is
(a) 130 (b) 128
(c) 70 (d) 68

107. A man completed a certain journey by a car. If he covered 30% of the distance at the speed of 20km/hr, 60% of the distance at 40km/hr and the remaining distance at 10km/hr; his average speed for the whole journey was
(a) 25 km/hr (b) 28 km/hr
(c) 30 km/hr (d) 33 km/hr

108. The time duration of 1 hour 45 minutes is what percent of a day?
(a) 7.218 (b) 7.291
(c) 8.3 (d) 8.24

109. In an examination, 35% of the candidates failed in Mathematics and 25% in English. If 10% failed in both Mathematics and English, then how much percent passed in both the subjects ?
(a) 50 (b) 55
(c) 57 (d) 60

110. If $\frac{2}{3}$ of A = 75% of B = 0.6 of C, then A : B : C is
(a) 2 : 3 : 3 (b) 3 : 4 : 5
(c) 4 : 5 : 6 (d) 9 : 8 : 10

111. Each side of a rectangular field is diminished by 40%. By how much per cent is the area of the field diminished ?
(a) 32 (b) 64
(c) 25 (d) 16

112. The price of sugar rise by 25%. If a family wants to keep their expenses on sugar the same as earlier, the family will have to decrease its consumption of sugar by:
(a) 25% (b) 20%
(c) 80% (d) 75%

113. The price of an article is reduced by 25% but the daily sale of the article is increased by 30%. The net effect on the daily sale receipts is:
(a) $2\frac{1}{2}\%$ increase (b) $2\frac{1}{2}\%$ decrease
(c) 2 % increase (d) 2% decrease

114. If x earns 25% more than y. What percent less does y earn than x ?
(a) 16 (b) 10
(c) 20 (d) 25

115. The cost of an article was Rs 75. The cost was first increased by 20% and later on it was reduced by 20%. The present cost of the article is:
(a) Rs. 72 (b) Rs. 60
(c) Rs. 75 (d) Rs. 90

116. If A and B are in the ratio 3 : 4, and B and C in the ratio 12 : 13, then A and C will be in the ratio:
(a) 3 :13 (b) 9 : 13
(c) 36 :13 (d) 13 : 9

117. Four years ago, the ratio of A's age to B's age was 11 : 14 and four years later their ages will be in the ratio 13 : 16. The present age of A is:
(a) 48 years (b) 26 years
(c) 44 years (d) 28 years

118. In an alloy, zinc and copper are in the ratio 1 : 2. In the second alloy, the same elements are in the ratio 2 : 3. If these two alloys be mixed to form a new alloy in which two elements are in the ratio 5 : 8, the ratio of these two alloys in the new alloys is:
(a) 3 : 10 (b) 3 : 7
(c) 10 : 3 (d) 7 : 3

119. Ajar contained a mixture of two liquids A and B in the ratio 4 : 1. When 10 litres of the mixture was taken out and 10 litres of liquid B was poured into the jar, this ratio became 2 : 3. The quantity of liquid A contained in the jar initially was:
(a) 4 litres (b) 8 litres
(c) 16 litres (d) 40 litres

120. The salaries of A, B and C are in the ratio 1 : 3 : 4. If the salaries are increased by 5%, 10% and

15% respectively, then the increased salaries will be in the ratio:
(a) 20 : 66 : 95 (b) 21 : 66 : 95
(c) 21 : 66 : 92 (d) 19 : 66 : 92

121. The total marks obtained by Arun in English and Mathematics are 170. If the difference between his marks in these two subjects is 10, then the ratio of his marks in these subjects is:
(a) 7 : 8 (b) 8 : 7
(c) 9 : 8 (d) 9 : 7

122. A started a business with a capital of Rs. 1,00,000. One year later, B joined him with a capital of Rs 2,00,000. At the end' of 3 years from the start of the business, the profit earned was 84,000. The share of B in the profit exceeded the share of A by:
(a) Rs. 10,000 (b) Rs. 12,000
(c) Rs. 14,000 (d) Rs. 15,000

123. In a mixture of 75 litres, the ratio of milk to water is 2 : 1. The amount of water to be further added to the mixture so as to make the ratio of the milk to water 1 : 2 will be:
(a) 45 litres (b) 60 litres
(c) 75 litres (d) 80 litres

124. The ratio in which two sugar solutions of the concentrations 15% and 40% are to be mixed to get a solution of concentration 30% is:
(a) 2 : 3 (b) 3 : 2
(c) 8 : 9 (d) 9 : 8

125. A boy has a few coins of denominations 50 paise, 25 paise and 10 paise in the ratio 1 : 2 : 3. If the total amount of the coins is Rs 6.50, the number of 10 paise coins is:
(a) 5 (b) 10
(c) 15 (d) 20

126. A sum of Rs 13,360 was borrowed at $8\frac{3}{4}\%$ per annum compound interest and paid back in two years in two equal annual instalments. What was the amount of each instalment ?
(a) Rs. 5,769 (b) Rs. 7,569
(c) Rs. 7,009 (d) Rs. 7,500

127. If Rs 12,000 is divided into two parts such that the simple interest on the first part for 3 years at 12% per annum is equal to the simple interest on the second and part for $4\frac{1}{2}$ years at 16% per annum, the greater part is:
(a) Rs. 8,000 (b) Rs. 6,000
(c) Rs. 7,000 (d) Rs. 7,500

128. At what rate of simple interest per annum will a sum become $\frac{7}{4}$ of itself in 4 years ?
(a) 18% (b) $18\frac{1}{4}\%$ (c) $18\frac{3}{4}\%$ (d) $18\frac{1}{2}\%$

129. A sum of money at a certain rate per annum of simple interest doubles in the 5 years and at a different rate becomes three times in 12 years. The lower rate of interest per annum is:
(a) 15% (b) 20% (c) $15\frac{3}{4}\%$ (d) $16\frac{2}{3}\%$

130. A certain sum, invested at 4% per annum compound interest, compounded half-yearly, amounts to Rs. 7,803 at the end of one year. The sum is:
(a) Rs. 7,000 (b) Rs 7,200
(c) Rs. 7,500 (d) RS 7,700

131. The difference between compound and simple interests on a certain sum for 3 years at 5% per annum is Rs. 122. The sum is:
(a) Rs. 16,000 (b) Rs. 15,000
(c) Rs.. 12,000 (d) Rs. 10,000

132. A certain sum amount to Rs. 5,832 in 2 years at 8% per annum compound interest, the sum is:
(a) Rs. 5,000 (b) Rs. 5,200
(c) Rs. 5,280 (d) Rs. 5,400

133. The compound interest on a certain sum of money at 5% per annum for 2 years is Rs. 246. The simple interest on the same sum for 3 years at 6% per annum is:
(a) Rs. 435 (b) Rs. 450
(c) Rs. 430 (d) Rs. 432

134. A tradesman marks his goods at 25% above the cost price and allows purchasers a discount of $12\frac{1}{2}\%$. His profit is:
(a) 8% (b) 8.5%
(c) 8.625% (d) 9.375%

135. The marked price of watch was Rs. 820. A man bought the watch for Rs. 570.72 after getting two successive discounts, of which the first was 20%. The second discount was:
(a) 18% (b) 15%
(c) 13% (d) 11%

136. While selling a cooler, a shop-keeper gives a discount of 10% on the marked price. If he gives a discount of 12% he earns Rs 35 less as profit. The marked price of the cooler is:
(a) Rs. 1,650 (b) Rs. 1,625
(c) Rs. 1,725 (d) Rs. 1,750

137. A trader gains 15% after selling an item at 10% discount on the printed price. The ratio of the cost price and printed price of the item is:
(a) 18 : 23 (b) 17 : 18
(c) 17 : 23 (d) 18 : 25

138. A bicycle, marked at Rs. 2,000, is sold with two successive discount of 20% and 10%. An additional discounts of 5% is offered for cash payment. The selling price of the bicycle at cash payment is
(a) Rs. 1,368 (b) Rs. 1,468
(c) Rs. 1,568 (d) Rs. 1.668

139. If p men working p hours per day for p days produce p units of work, then the units of work produced by n men working n hours a day for n days is:
(a) $\frac{p^2}{n^2}$ (b) $\frac{p^3}{n^2}$
(c) $\frac{n^2}{p^2}$ (d) $\frac{n^3}{p^2}$

140. An empty tank can be filled by pipe'A in 4 hours and by pipe B in 6 hours. If the two pipes are opened for 1 hour each alternately with first opening pipe A, then the tank will be filled in:
(a) $1\frac{3}{4}$ hours (b) $2\frac{3}{5}$ hours
(c) $4\frac{2}{3}$ hours (d) $5\frac{1}{2}$ hours

141. A and B can separately complete a piece of work in 20 days and 30 days respectively. They worked together for some time, then B left the work. If A completed the rest of the work in 10 days, then B worked for:
(a) 6 days (b) 8 days
(c) 12 days (d) 16 days

142. A Boy and girl together fill a cistern with water. The boy pours 4 litres of water every 3 minutes and the girl pours 3 litres every 4 minutes. How much time will it take to fill 100 litres of water in the cistern ?
(a) 36 minutes (b) 42 minutes
(c) 48 minutes (d) 44 minutes

143. If 28 men complete 7/8 of a piece of work in a week, then the number of men, who must be engaged to get the remaining work completed in another week, is:
(a) 5 (b) 6 (c) 4 (d) 3

144. While working 7 hours a day, A alone can complete a piece of work in 6 days and B alone in 8 days. In what time would they complete it together, working 8 hours a day ?
(a) 3 days (b) 4 days
(c) 2.5 days (d) 3.6 days

145. A man can row 15km/hr down-stream and 9 km/hr upstream. The speed of the boat in still water is:
(a) 8 km/hr. (b) 10 km/hr.
(c) 15 km/hr. (d) 12 km/ hr.

146. From two places, 60 km apart, A and B start towards each other at the same time and meet each other after 6 hours. Had A travelled with 2/3 of his speed and B travelled with double of his speed, they would have met after 5 hours. The speed of A is:
(a) 4 km/hr. (b) 6 km/hr.
(c) 10 km/hr. (d) 12 km/hr.

147. A train, 150m long, passes a pole in 15 seconds and another train of the same length travelling in the opposite direction in 12 seconds. The speed of the second train is:
(a) 45 km./hr (b) 48 km./hr
(c) 52 km./hr (d) 54 km./hr

148. A, B, and C start together from the same place to walk round a circular path of length 12km. A walks at the rate of 4 km/hr., B km./hr and C 3/2km/hr. They will meet together at the starting place at the end of:
(a) 10 hours (b) 12 hours
(c) 15 hours (d) 24 hours

149. A train travelling at 48 km/hr crosses another train, having half its length and travelling in opposite direction at 42 km/hr, in 12 seconds. It also passes a railway platform in 45 seconds. The length of the railway platform is:
(a) 200 m (b) 300 m
(c) 350 m (d) 400 m

150. Ravi and Ajay start simultaneously from a place A towards B, 60 km apart. Ravi's speed is 4km/hr less than that of Ajay. Ajay, after reaching B, turns back and meets Ravi at a places 12 km away from B. Ravi's speed is:
(a) 12 km/hr (b) 10 km/hr
(c) 8 km/hr (d) 6 km/hr

151. Two boats A and B start towards each other from two places, 108 km apart. Speeds of the boats A and B in still water are 12km/hr and 15km/hr respectively. If A proceeds down and B up the stream, they will meet after.
(a) 4.5 hours (b) 4 hours
(c) 5.4 hours (d) 6 hours

152. In a fixed time, a boy swims double the distance along the current that he swims against the current. If the speed of the current is 3 km/hr, the speed of the boy in still water is
(a) 6 km/hr (b) 9 km/hr
(c) 10 km/hr (d) 12 km/hr

153. A person sold a horse at a gain of 15%. Had he bought it for 25% less and sold it for Rs. 600 less, he would have made a profit of 32%. The cost price of the horse was:
(a) Rs 3,750 (b) Rs 3,250
(c) Rs 2,750 (d) Rs 2,250

154. A piece of land came to a person through three middleman each gaining 20%. If the person purchased the land for Rs. 3,45,600 the original cost of the land was:
(a) Rs. 1,00,000 (b) Rs. 1, 50, 000
(c) Rs. 1,75,800 (d) Rs. 2,00,000

155. A man sold some articles at a gain of 10%. He spent his total sale proceeds to purchase such articles again. This time, while selling them, he incurred a loss of 10%. His loss or gain in the transaction was:
(a) 1% loss (b) 1% gain
(c) no profit no loss (d) 2% loss

156. A shopkeeper bought 80kg of sugar at the rate of Rs. 13.50 per kg. He mixed it with 120kg of sugar costing Rs. 16 per kg. In order to make a profit of 20%, he must sell the mixture at:
(a) Rs. 18 per kg (b) Rs. 17 per kg
(c) Rs. 16.40 per kg (d) Rs. 15 per kg

157. Some toffees were bought at the rate of 11 for Rs. 10 and the same number at the rate of 9 for Rs. 10. If the whole lot was sold at one rupee per toffee, then the gain or loss in the whole transaction was:
(a) loss of 1% (b) gain of 1%
(c) neither gain nor loss
(d) gain of 1.5%

158. A merchant finds his profit as 20% of the selling price. His actual profit is:
(a) 20% (b) 22%
(c) 25% (d) 30%

159. The height of an equilateral triangle is $4\sqrt{3}$ cm. The ratio of the area of its circumcircle to that of its incircle is:
(a) 2 : 1 (b) 4 : 1
(c) 4 : 3 (d) 3 : 2

160. A wire when bent in the form of an equilateral triangle encloses a region having area of $121\sqrt{3}$ cm^2. If the same wire is rebent into the form of a circle, its radibus will be $\left(\text{take } \pi = \frac{22}{7}\right)$
(a) 21 cm (b) 15.75 cm
(c) 10.5 cm (d) 9 cm

161. If the perimeter of a semicircular field is 144m, then the diameter of the field is take rz = 7^2
(a) 55m (b) 30m (c) 28m (d) 56m

162. The sides of a triangle are 6 cm, 8 cm and 10 cm. The area of the greatest square that can be in-scribed in it, is
(a) 18 cm2 (b) 15 cm2
(c) 2304 cm2 (d) 576 cm2

163. The perimeter (in metres) of a semicircle in numerically equal to its area (in square metres).
The length of its diameter is $\left(\text{take } \pi = \frac{22}{7}\right)$
(a) $3\frac{6}{11}$ metres (b) $5\frac{6}{11}$ metres
(c) $6\frac{6}{11}$ metres 2 (d) $6\frac{2}{11}$ metres

164. If S_1 and S_2 be the surface area of a sphere and the curved sur-face area of the circumscribed cylinder respectively, then S_1 is equal to

(a) $\frac{3}{4} S_2$ (b) $\frac{1}{2} S_2$

(c) $\frac{2}{3} S_2$ (d) S_2

165. The base of a conical tent is 19.2 metres in diameter and its height is 2.8 metres. The area (in square metres) of the canvas required to put up such a tent is nearly $\left(\text{use } \pi = \frac{22}{7}\right)$

(a) 3017.10 (b) 3170
(c) 301.71 (d) 30.17

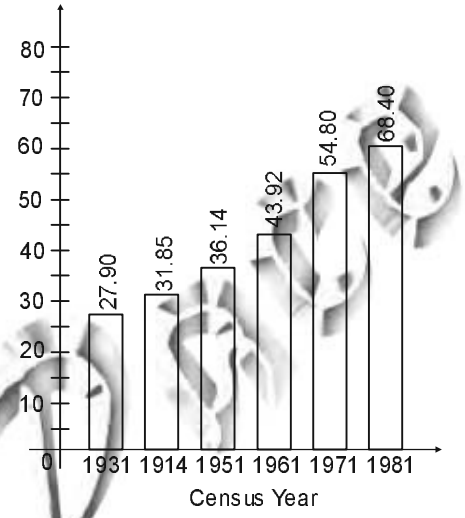
166. A solid metallic sphere of radii-; 3 decimetres is melted to form a circular sheet of I milimetre thickness. The diameter of the sheet so formed is
(a) 26 metres
(b) 24 metres
(c) 12 metres
(d) 6 metres

167. The height and the radius of the base of a right circular cone are 12 cm and 6cm respectively. The radius of the circular cross-section of the cone cut by a plane parallel to its base at a distance of 3 cm from the base is
(a) 4 cm (b) 5.5 cm
(c) 4.5 cm (d) 3.5 cm

168. Water flows through a cylindrical pipe, whose radius is 7 cm, at 5 metres per second. The time, it takes to fill an empty water tank, with height 1.54 metres and area of the base (3 x 5) square metres, is $\left(\text{take } \pi = \frac{22}{7}\right)$
(a) 6 minutes
(b) 5 minutes
(c) 10 minutes (d) 9 minutes

Directions (169-172): The Bar Graph given here shows the population (in crores) of India in various census years. Observe the graph and answer the question based on it.

Population of India



169. The per cent increase in populabtion from 1971 to 1981 is
(a) 24.8 (b) 20
(c) 16.7 (d) 22.9

170. In which census year, the per cent increase in population is highest as compared to that in the previous census year ?
(a) 1951 (b) 1961
(c) 1971 (d) 1981

171. In which census year, the per cent increase in population is least as compared to that in the previous census year ?
(a) 1961 (b) 1951
(c) 1971 (d) 1941

172. Per year increase in population from the year 1931 to 1981 is
(a) 8100000 (b) 7600000
(c) 8900000 (d) 6700000

173. $(0.04)^{-(1.5)}$ is equal to
(a) 25 (b) 125
(c) 60 (d) 5

174. Which team of the sequence 7, 10, 13...is 151?
(a) 29th (b) 19th
(c) 59th (d) 49th

175. The sum of all the 3-digit numbers, each of which on division by 5 leaves remainder 3, is
(a) 180 (b) 1550
(c) 6995 (d) 99090

176. The sum of the first 20 terms of the series
$\frac{1}{5\times6}+\frac{1}{6\times7}+\frac{1}{7\times8}+\ldots$ is
(a) 0.16 (b) 1.6
(c) 16 (d) 0.016

177. Given that $\sqrt{13}$ = 3.6 and $\sqrt{130}$ = 11.4, then the value of $\sqrt{1.3}+\sqrt{1300}+\sqrt{0.013}$ is equal to
(a) 36.164 (b) 37.254
(c) 36.254 (d) 37.154

178. The value of $\frac{0.125+0.027}{0.25-0.15+0.09}$ is
(a) 0.2 (b) 0.25
(c) 0.3 (d) 0.8

179. The value of $\sqrt[3]{1372}\times\sqrt[3]{1458}\div\sqrt[3]{343}$ is
(a) 18 (b) 15
(c) 13 (d) 12

180. The HCF and product of two numbers are 15 and 6300 re-spectively. The number of pos-sible pairs of the numbers is
(a) 4 (b) 3
(c) 2 (d) 1

181. The sum of all the 3-digit numbers is
(a) 98901 (b) 494550
(c) 8991 (d) 899

182. $\sqrt{2+\sqrt{2+\sqrt{2+\ldots}}}$ is equal to
(a) 1.42 (b) 4
(c) 2 (d) 2.414

183. Given that
$1+2+3+\ldots+x=\frac{x(x+1)}{2}$ then 1 + 3 + 5 + ... + 99 is equal to
(a) 2250 (b) 2500
(c) 2525 (d) 3775

184. The value of $999\frac{995}{999}\times999$ is
(a) 990809 (b) 998996
(c) 999824 (d) 998999

185. The simplified value of
$\left(1-\frac{1}{3}\right)\left(1-\frac{1}{4}\right)\left(1-\frac{1}{5}\right)\ldots\left(1-\frac{1}{99}\right)\left(1-\frac{1}{100}\right)$ is
(a) $\frac{2}{99}$ (b) $\frac{1}{25}$
(c) $\frac{1}{50}$ (d) $\frac{1}{100}$

186. The product of two numbers is 4107. If the HCF of the numbers is 3, the greater number is
(a) 185 (b) 111
(c) 107 (d) 101

187. $\frac{8(3.75)^3+1}{(7.5)^2-6.5}$ is equal to
(a) 2.75 (b) $\frac{9}{5}$
(c) 4.75 (d) 8.5

188. If p = 999, then the value of $\sqrt[3]{p\left(p^2+3p+3\right)+1}$ is
(a) 1000 (b) 999
(c) 998 (d) 1002

189. Which one of the following numbers is not a square of any natural number?
(a) 17956 (b) 18225
(c) 63592 (d) 53361

190. If $x=1+\sqrt{2}+\sqrt{3}$, then the value of $\left(x+\frac{1}{x-1}\right)$ is
(a) $1+2\sqrt{3}$ (b) $2+\sqrt{3}$
(c) $3+\sqrt{2}$ (d) $2\sqrt{3}-1$

191. What least number number must be subracted from 1936 so that the resulting number when divided by 9,10 and 15 will leave in each case the same remainder 7 ?
(a) 13 (b) 36
(c) 39 (d) 30

192. A boy was asked to find $\frac{3}{5}$ of a fraction. Instead, he divided the fraction by $\frac{3}{5}$ and got an anwer which exceeded the correct answer by $\frac{32}{75}$. The correct answer is

(a) $\frac{3}{25}$ (b) $\frac{6}{25}$ (c) $\frac{2}{25}$ (d) $\frac{2}{15}$

193. If $x = 3+\sqrt{8}$, then the value of $\left(x^2+\frac{1}{x^2}\right)$ is

(a) 34 (b) 24
(c) 38 (d) 36

194. The LCM of two numbers is 12 times their HCF. The sum of the HCF and the LCM is 403. If one of the numbers is 93, then the other number is

(a) 124 (b) 138 (c) 134 (d) 138

197. $\frac{1}{\sqrt{9}-\sqrt{8}}-\frac{1}{\sqrt{8}-\sqrt{7}}+\frac{1}{\sqrt{7}+\sqrt{6}}$

$$-\frac{1}{\sqrt{6}-\sqrt{5}}+\frac{1}{\sqrt{5}-\sqrt{4}}$$

(a) 5 (b) 1 (c) 3 (d) 0

198. The value of

$$\frac{(2.697-0.498)^2+(2.697+0.498)^2}{2.697\times 2.697+0.498\times 0.498}$$ is

(a) 4 (b) 1
(c) 2.199 (d) 3.195

199. How many 3-digit numbers, in all, are divisible by 6 ?

(a) 140 (b) 150 (c) 160 (d) 170

200. A number, when divided by 899, leaves remainder 63. What will be the reainder if the same number is divided by 29 ?

(a) 3 (b) 1 (c) 5 (d) 0

ANSWERS

1. (a)	2.(b)	3. (a)	4. (d)	5. (c)	6. (d)	7. (c)	8. (c)	9. (a)	10. (c)
11. (a)	12. (b)	13. (a)	14. (d)	15. (b)	16. (b)	17. (a)	18. (c)	19. (c)	20. (d)
21. (b)	22. (a)	23. (c)	24. (d)	25. (a)	26. (d)	27. (a)	28. (b)	29. (d)	30. (c)
31. (c)	32. (d)	33. (d)	34. (b)	35. (b)	36. (a)	37. (d)	38. (b)	39. (b)	40. (a)
41. (a)	42. (b)	43. (b)	44. (a)	45. (d)	46. (c)	47. (a)	48. (b)	49. (b)	50. (a)
51. (c)	52. (b)	53. (c)	54. (d)	55. (c)	56. (a)	57. (d)	58. (a)	59. (d)	60. (d)
61. (b)	62. (b)	63. (c)	64. (a)	65. (a)	66. (c)	67. (d)	68. (c)	69. (c)	70. (b)
71. (c)	72. (a)	73. (c)	74. (c)	75. (c)	76. (a)	77. (c)	78. (b)	79. (c)	80. (b)
81. (b)	82. (b)	83. (c)	84. (c)	85. (c)	86. (c)	87. (a)	88. (d)	89. (b)	90. (d)
91. (c)	92. (d)	93. (b)	94. (c)	95. (d)	96. (c)	97. (a)	98. (a)	99. (c)	100.(b)
101. (c)	102. (a)	103. (b)	104. (b)	105. (b)	106. (b)	107. (a)	108. (b)	109. (a)	110. (d)
111. (2)	112. (b)	113. (b)	114. (c)	115. (a)	116. (b)	117. (a)	118. (a)	119. (d)	120. (c)
121. (c)	122. (c)	123. (c)	124.(a)	125. (c)	126. (b)	127. (a)	128. (c)	129. (d)	130. (c)
131. (a)	132. (a)	133. (d)	134. (d)	135. (c)	136. (d)	137. (a)	138. (a)	139. (d)	140. (c)
141. (a)	142. (c)	143. (c)	144. (a)	145. (d)	146. (b)	147. (d)	148. (d)	149. (d)	150. (c)
151. (b)	152. (b)	153. (a)	154. (d)	155. (a)	156. (a)	157. (a)	158. (c)	159. (b)	160. (c)
161. (d)	162. (d)	163. (a)	164. (b)	165. (c)	166. (c)	167. (c)	168. (b)	169. (a)	170. (d)
171. (b)	172. (a)	173. (b)	174. (d)	175. (d)	176. (a)	177. (b)	178. (d)	179. (a)	180. (c)
181. (b)	182. (c)	183. (b)	184. (b)	185. (c)	186. (b)	187. (d)	188. (a)	189. (c)	190. (a)
191. (c)	192. (b)	193. (a)	194. (a)	195. (c)	196. (b)	197. (a)	198. (b)	199. (b)	200. (c)