SOLVED PAPER
## SSC COMBINED GRADUATE LEVEL PRELIM EXAM
### Held on: 04.02.2007

GENERAL INTELLIGENCE

Directions (1-10): Select the related letters/word/ number/figure from the given alternatives.

1. Soldier : Regiment : : Horse : ?
   (a) Navy
   (b) Fleet
   (c) Cavalry
   (d) Herd

2. Philatelist : Stamps Numismatist : ?
   (a) Coins
   (b) Maps
   (c) Jewels
   (d) Samples

3. PHOTO : FILM : : PHOTOSTAT:?
   (a) Photographic paper
   (b) Voltage controller
   (c) Electricity
   (d) Paper

4. IKKL : JLLM :: SUUV : ?
   (a) FFGH
   (b) CEFE
   (c) WXXZ
   (d) TVVW

5. FIGUR : FGIRU :: STRES : ?
   (a) STERS
   (b) TRSES
   (c) SRSET
   (d) SRTSE

6. 122:145 :: 226: ?
   (a) 250
   (b) 256
   (c) 257
   (d) 290

7. 2:4:8 : 10:20:40 :: 3:6:9 : ?
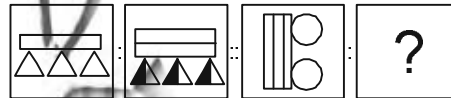   (a) 18:27:54
   (b) 5:10:17
   (c) 6:24:56
   (d) 15:30:45

8. **Question Figures**

Answer Figures

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

9. **Question Figures**

Answer Figures

(a)   (b)   (c)   (d)
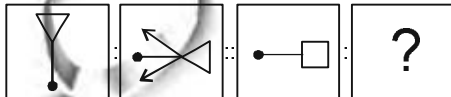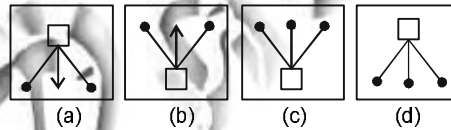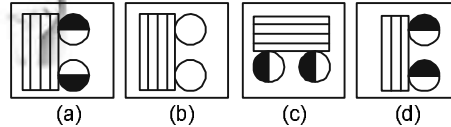
10. **Question Figures**

Answer Figures

(a)   (b)   (c)   (d)
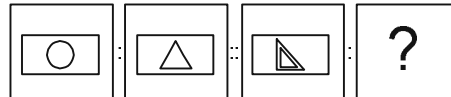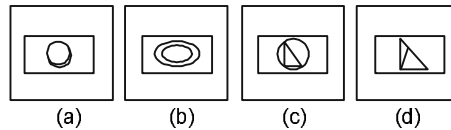
Directions (11-19): Selec the odd word/letters/ number/figure/ from the given responses.

11. (a) DICTAPHONE
    (b) GRAMAPHONE
    (c) MICROPHONE
    (d) TELEPHONE

12. (a) Running   (b) Swimming
    (c) Dancing   (d) Breathing
13. (a) Quiet - Calm   (b) Seldom - Never
    (c) Peace - Tranquil   (d) Rapid - Slow
14. (a) ZXVT   (b) USQO
    (c) DEFG   (d) PNLJ
15. (a) AFCG   (b) DIGL
    (c) INLQ   (d) OTRW
16. (a) 6 : 34   (b) 12:64
    (c) 20: 96   (d) 09: 49
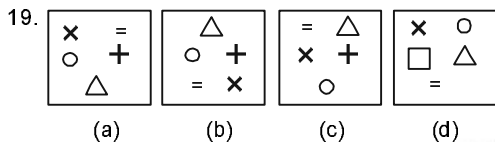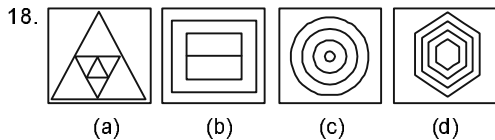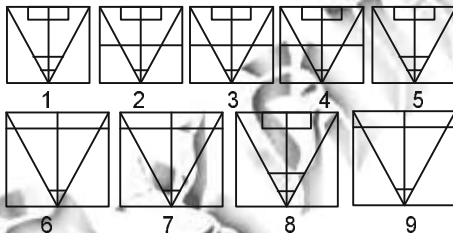17. (a) 124   (b) 169
    (c) 225   (d) 289

18.

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

19.

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

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

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

21. Which one would be a meaningful order of the following ?
    (a) Electricity   (b) Dam
    (c) Lights   (d) River
    (e) Power House
    (a) d, b, a, c, e   (b) d, b, e, c, a
    (c) d, b, c, a, e   (d) d, b, e, a, c

22. Arrange the following words according to the Dictionary
    (a) Trinity   (b) Tool
    (c) Town   (d) Twist
    (e) Type
    (a) b, c, a, d, e   (b) c, a, d, b, e
    (c) b, c, a, e, d   (d) d, c, b, a, e

Directions (23-29): Find the missing number/letters/ figure from the given responses.

23. AGM, BHN, CIO, ?
    (a) COU   (b) FQK
    (c) DJP   (d) QXD
24. 2, 7, 27, 107, ?
    (a) 327   (b) 427
    (c) 227   (d) 127
25. 5, 7, 11, 2, 35, 67
    (a) 23   (b) 28
    (c) 30   (d) 19
26. 242,393,4164,?
    (a) 5525   (b) 5255
    (c) 5235   (d) 5325

27. **Question Figures**
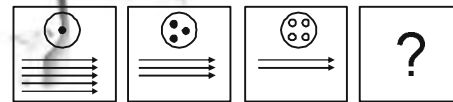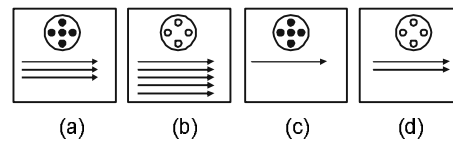
Answer Figues

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

28. **Questions Figure**

Answer Figures

    (a)   (b)   (c)   (d)   www.examrace.com
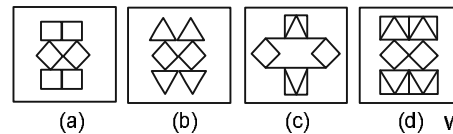
29. Question Figures
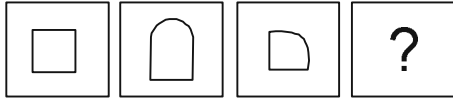
Answer Figures

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

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

aba_baca_ba_bacaabac_aca

(a) cacb   (b) ccab
(c) cabc   (d) abcc

31. In a certain code the following numbers are coded in a certain way by assigning signs:

1	2	3	4	5	6	7	8	9
+	□	×	D	#	÷	≡	∧∨	>

Which number can be decoded from the following ?

≡   >   ×   ∧∨   □

(a) 79328   (b) 79832
(c) 79382   (d) 79882

Directions (32-34): Find the missing number from the given responses.

32.

12	6	8
3	2	?
9	10	5
13	13	13

(a) 01   (b) 0
(c) 10   (d) 11

33. 42 37   11 84   74 93

    17   13   ?

(a) 40   (b) 42
(c) 44   (d) 46

34.
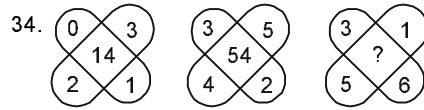
(a) 35   (b) 72
(c) 94   (d) 71

35. In the following question you have to identify the correct response from the given premises stated according to following symbols.

If + means ÷, − means ×, means ÷ and × means −, then 63 × 24 + 8 ÷ 4 + 2 − 3 = ?

(a) 54   (b) 66   (c) 186   (d) 48

36. A word is given in capital letters. It is followed by. four words. Out of these four words, three cannot be form from the letters of the word in capital letters. Point out the word which can be formed from the letters of the given word in capital letters.

RECOMMENDATION

(a) MEDIATE   (b) MEDICINE
(c) COMMUNICATE   (d) REMINDER

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

REHABILITATION

(a) RELATION   (b) BRITTLE
(c) BRITAIN   (d) BROACH

38. When decoded, OPTRRE reads as PORTER. In the same way, what does the following read as ?

EROPTR

(a) ROPE   (b) PROPER
(c) PORT   (d) REPORT

39. Out the six members panel sitting in a row 'U' is to the left of 'V' but on the right of 'W' who is to the right of 'X' and 'Y' is at the right of 'Z' who is to the left of 'X'. Find the members sitting right in the middle.

(a) ZY   (b) XW   (c) UV   (d) WV

40. The average age of 30 students is 15 years. If the teacher's age is also included then the average age increases by 1 year. The age of the teacher is

(a) 56 years   (b) 46 years
(c) 35 years   (d) 45 years

41. **Statements**
   (I) Science has brought the gadgets gets of happiness, prosperity and wealth.
   (II) Science has not solved the problems of over-population.

   Conclusions
   (a) Overpopulation is due to un-scientific thinking.
   (b) Science has not helped world peace.
   (a) 1 follows   (b) 2 follows
   (c) 1 and 2 both follow
   (d) 1 and 2 both do not follow

42. **Statement:** Some men wear spectacles.
   Assumptions:
   (I) They want to look handsome.
   (II) The spectacles help them to see properly.
   (a) Only I is implicit
   (b) Only II is implicit
   (c) Both I and II are implicit
   (d) Neither I nor II is implicit

43. How far Kiran is from his starting point ?
   (a) 25 m   (b) 15 m   (c) 45 m   (d) 30 m
44. Which direction is Kiran facing now ?
   (a) East   (b) West
   (c) North   (d) South

45. How the following statement can be represented ? Solid common salt is hygro-scopic, crystalline and non-electrolytic substance.

   (a)   (b)   (c)   (d)
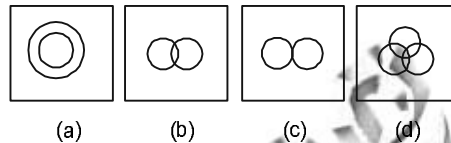
46. Which one of the following figures represents the relationship among Zebra, Grass eating animals, Lions ?
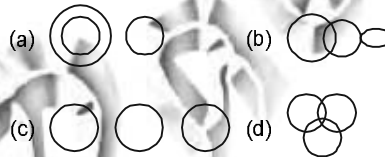
47. Four views of one cube are given below. Each of the six faces of cube is numbered. In figure 3 which number will be opposite to the face with number 3 ?
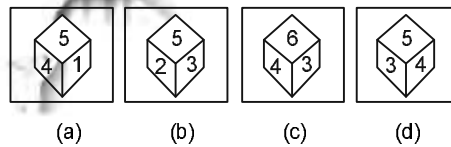
   (a)   (b)   (c)   (d)
   (a) 1   (b) 2
   (c) 5   (d) 6

48. A piece of paper is folded and punched as shown below.

   From the given responses indicate how it will appear when opened.

   Question Figures:

   Answer Figures:

   (a)   (b)   (c)   (d)   www.examrace.com
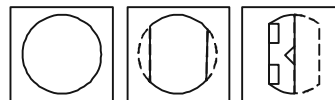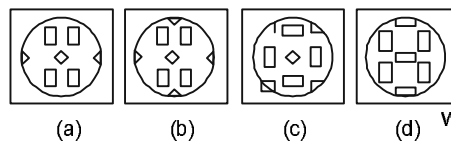
49. Which one of the answer figures shall complete the given question figure ?

Question Figures:

Answer Figures:

(a)　　(b)　　(c)　　(d)
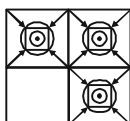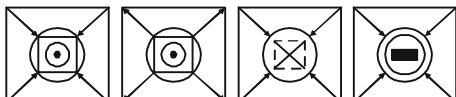
50. In which answer figure is the given figure embedded ?

Question Figures:

Answer Figures:

(a)　　(b)　　(c)　　(d)
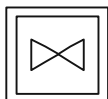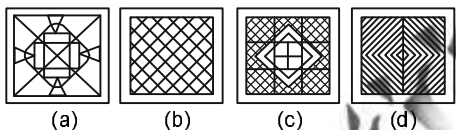
GENERAL AWARENESS

51. Suppose if we measure the time lapse between the two Sunsets by sitting in the beach, from this we can estimate
    (a) The distance between the sun and the earth
    (b) The depth of the ocean
    (c) The radius of the earth
    (d) The radius of the sun

52. Radioimmunoassay (RIA) is a therapy used
    (a) to cure lung cancer
    (b) to, cure AIDS
    (c) to cure fractures in bones
    (d) to detect ant bodies and hormones present in the blood samples

53. In a Laser (say neon laser) all the atoms emit the light waves of
    (a) Same frequency　　(b) Same amplitude
    (c) Same phase　　(d) All of the above

54. Which of the following has got more heat capacity ?
    (a) Iron piece　　(b) Water
    (c) Gold piece　　(d) Benzene

55. When conc. H_2SO_4 is added to dry KNO_3, brown fumes are evolved. These fumes are due to
    (a) SO_3　　(b) O_2
    (c) NO_2　　(d) N_2O

56. The polymer used in making plastic crockery is
    (a) Decron　　(b) Nylon
    (c) Bakelite　　(d) Melamine

57. Vulcanization of rubber is carried out by adding
    (a) Sulphur　　(b) Carbon
    (c) Ozone　　(d) Phosphorus

58. Which of the following is used in dating archaeological findings ?
    (a) $^{235}_{92}U$　　(b) $^{14}_{6}C$
    (c) $^{3}_{1}H$　　(d) $^{18}_{8}O$

59. Which one of the following is not a true snake ?
    (a) Glass snake　　(b) Sea snake
    (c) Tree snake　　(d) Blind snake

60. Which one of the following set belongs to the class Mammalia ?
    (a) Lion, Hippopotamus, Penguin, Bat.
    (b) Lion, Bat, Whale, Ostrich
    (c) Hippopotamus, Penguin, Whale, Kangaroo
    (d) Whale, Bat, Kangaroo, Hippopotamus

61. Where was wildlife institute of India established in 1982 for research and training programmes?
    (a) Bhubaneshwar　　(b) Delhi
    (c) Dehradun　　(d) Nilgiri

62. Which one of the following pairs belongs to cartilaginous fish ?
    (a) Shark and Tuna　　(b) Shark and Ray
    (c) Skates and Hilsa　　(d) Ray and Eel

63. Which one of the following is not a true fish ?
    (a) Silver fish　　(b) Saw fish
    (c) Hammer fish　　(d) Sucker fish

64. Johann Gregor Mendel is famous for propounding
    (a) Theory of mutation
    (b) Laws of heredity
    (c) Cell theory
    (d) Theory of acquired characters

65. Which of the following has no skeleton at all ?
    (a) Star fish   (b) Sponge
    (c) Jelly fish   (d) Silver fish
66. World Health Day is observed on
    (a) June 5   (b) April 7
    (c) June 7   (d) July 11
67. Who said "The Simon Commission Report should be thrown on a heap of rubbish"
    (a) Mahatma Gandhi
    (b) Shivaswami Ayyar
    (c) Mohammad Ali Jinnah
    (d) Jawaharlal Nehru
68. The Marathas were defeated at Panipat because
    (a) The Marathas did not fight bravely
    (b) The Marathas were not equal to Afghans in strength
    (c) The Martha army was short of food supplies
    (d) The Marathas were considered alien by the local population
69. Which day was declared as the 'Direct Action Day' by the Muslim League ?
    (a) 3rd September 1946
    (b) 16th August 1946
    (c) 16th May 1946
    (d) 4th December 1946
70. When was Mahatma Gandhi arrested during the 'Quit India Movement' of 1942 ?
    (a) 7th August 1942   (b) 30th April 1942
    (c) 9th August 1942   (d) 5th July 1942
71. Name the continent where 'Tundra' type of climate is not found
    (a) Europe   (b) Asia
    (c) Africa   (d) North America
72. If the temperature of a place increases suddenly, the relative humidity
    (a) Increases   (b) Decreases
    (c) Remains constant (d) Fluctuates
73. Which one of the following is not the example of planetary winds ?
    (a) Monsoon   (b) Trade wind
    (c) Land and sea breezes
    (d) Chinook
74. The climate of North America is influenced during winter by the
    (a) Polar air masses
    (b) Warm air masses
    (c) Continental air masses
    (d) Tropical air masses
75. Efficient allocation of resources is achieved to greatest extent under
    (a) Monopoly
    (b) Perfect competition
    (c) Monopolistic competition
    (d) Oligopoly
76. "Supply creates its own demand" - Who said this?
    (a) J. B. Say   (b) J. S. Mill
    (c) J. M. Keynes   (d) Senior
77. The number of females per 1000 males in India's population (Census 2001) is
    (a) 900   (b) 929
    (c) 933   (d) 945
78. The total number of nationalised banks in India is
    (a) 14   (b) 19
    (c) 21   (d) 30
79. In which plan was self-reliance first emphasised
    (a) Second Plan   (b) Third Plan
    (c) Fourth Plan   (d) Fifth Plan
80. The full form of IRDA is
    (a) Insurance Regulatory and Development Authority
    (b) International Reconstruction and Development Association
    (c) India Road Development Agency
    (d) International Refinance and Development Association
81. International Monetary Fund helps India with
    (a) short term capital to hide over any temporary difficulty in Balance of Payments
    (b) long term capital for purposes of reconstruction and development
    (c) medium term capital to build up infrastructure
    (d) grants at subsidised rates to stimulate private investment
82. The demand curve for a Giffen good is
    (a) upward rising
    (b) downward falling
    (c) parallel to the quantity axis
    (d) parallel to the price axis
83. The articles 17 and 18 of constitution provide
    (a) social equality   (b) economic equality
    (c) political equality   (d) religious equality

84. The constitution of India descr bes India as
    (a) A Union of States
    (b) Quasi-federal
    (c) A federation of state and union territories
    (d) A Unitary State

85. Being the non-member, who among the following can participate in the proceedings of either house of the Parliament without having right to vote ?
    (a) Chief Justice of India
    (b) President of India
    (c) Comptroller and Auditor General
    (d) Attorney General

86. By which of the following modes can citizenship be acquired ?
    i. By Birth   ii. Hereditary
    iii. By Registration iv. By Request
    (a) i and ii   (b) i, ii and iii
    (c) ii and iii   (d) iv, ii and iii

87. How many languages are contained in the VIIIth schedule of the Indian Constitution ?
    (a) 18   (b) 22
    (c) 16   (d) 12

88. Dr. Rajendra Prasad was elected as the first President of India by
    (a) Electoral College
    (b) People of India
    (c) Constituent Assembly
    (d) Parliament

89. In which of the following cases, the Supreme Court held that fundamental rights are unamendable ?
    (a) A. K. Gopalan's case
    (b) Keshvananda Bharti's case
    (c) M. C. Mehta's case
    (d) Golak Nath's case

90. Gandh ji believed that
    (a) End justifies means
    (b) Means justify end
    (c) Neither end justifies means nor means justify end
    (d) End and Means both should be justified

91. Match the personalities mentioned below, with the Activity(ies) they are associated with
    List-I
    1. Pankaj Adwani
    2. Kiran Majumdar Shaw
    3. Mallika Sarabhai
    4. Anjolie Ela Menon
    List-II
    a. Dancing   b. Painting
    c. Snooker   d. Biotechnology

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

92. The book 'The Inheritance of Loss' has been written by
    (a) Salman Rushdie
    (b) Arundhati Roy
    (c) Anita Desai   (d) Kiran Desai

93. STTP stands for
    (a) Special Thermal Power Project
    (b) Semi Thermal Power Plant
    (c) Super Thermal Power Plant
    (d) Super Thermal Power Production

94. Thomas Cup is associated with
    (a) Hockey   (b) Football
    (c) Badminton   (d) Basket Ball

95. Who is the C.E.O. of Infosys Technologies ?
    (a) Narayan Murthy
    (b) Azim Premji
    (c) Nandan M. Nilekani
    (d) E. Shreedharan

96. Find the odd one
    (a) George W Bush   (b) Bill Clinton
    (c) Jimmy Carter   (d) Tony Blair

97. TRAI stands for
    (a) Trans-Roadways Authority of India
    (b) Telephone Regulatory Authority of India
    (c) Transport & Roads Authority of India
    (d) Telecom Regulatory Authority of India

98. With which 'Movement' the following were/are associated?
    List-I
    a. Vinoba Bhave
    b. Medha Patkar
    c. Sunderlal Bahuguna
    d. Jaya Prakash Narayan
    List-II
    1. 'Chipko'
    2. 'Sampurna Kranti'

3. 'Narmada Bachao'
4. 'Bhoodan'
(a) a - 4, c - 1, b - 2, d - 3
(b) a - 4, b - 3, c - 1, d - 2
(c) b - 3, c - 1, a - 2, d - 4
(d) d - 2, a - 4, b - 1, c - 2

99. Which country was the runner-up in the World Cup (Football) 2006 ?
(a) Brazil   (b) Germany
(c) France   (d) Italy

100. The Catch-line "The Joy of Flying" is associated with
(a) Jet Airways   (b) Sahara Airlines.
(c) Indian   (d) Air India

NUMERICAL APTITUDE

101. In a question on division, the divisor is 7 times the quotient and 3 times the remainder. If the remainder is 28, then the dividend is
(a) 588   (b) 784
(c) 823   (d) 1036

102. A labourer was appointed by a contractor on the condition that he would be paid Rs. 75 for each day of his work but would be fined at the rate of Rs. 15 per day for his absence, apart from losing his wages, After 20 days, the contractor paid the labourer Rs. 1140. The number of days the labourer ab-stained from work was
(a) 3   (b) 5
(c) 4   (d) 2

103. The largest number, which divides 25, 73 and 97 to leave the same remainder in each case, is
(a) 24   (b) 23
(c) 21   (d) 6

104. 0.393939.............is equal to
(a) $\dfrac{39}{100}$ (b) $\dfrac{13}{33}$ (c) $\dfrac{93}{100}$ (d) $\dfrac{93}{990}$

105. Given that $3.718 = \dfrac{1}{0.2689}$; then $\dfrac{1}{0.0003718}$ is equal to
(a) 2689   (b) 2.689
(c) 26890   (d) 0.2689

106. Greatest among the numbers
$\sqrt[3]{9}, \sqrt{3}, \sqrt[4]{16}, \sqrt[6]{80}$ is

(a) $\sqrt[3]{9}$ (b) $\sqrt{3}$
(c) $\sqrt[4]{16}$ (d) $\sqrt[6]{80}$

107. The least number, by which 1944 must be multiplied so as to make the result a perfect cube, is
(a) 2   (b) 3
(c) 6   (d) 13

108. $\left(3 + \dfrac{1}{\sqrt{3}} + \dfrac{1}{3+\sqrt{3}} + \dfrac{1}{\sqrt{3}-3}\right)$ is equal to
(a) 1   (b) 3
(c) $3+\sqrt{3}$ (d) $3-\sqrt{3}$

109. If $x = \sqrt{3} + \sqrt{2}$, then the value of
(a) $6\sqrt{3}$ (b) $12\sqrt{3}$
(c) $18\sqrt{3}$ (d) $24\sqrt{3}$

110. The value of x in the sequence 1, 2, 6, 24, x is
(a) 46   (b) 56
(c) 96   (d) 120

111. Three numbers are in the ratio 2 : 3 : 4 and their H.C.F. is 12. The L.C.M. of the numbers is
(a) 144   (b) 192
(c) 96   (d) 72

112. If $p = 99$, then value of $p(p^2 + 3p + 3)$ is
(a) 999   (b) 9999
(c) 99999   (d) 999999

113. If x is real, then the minimum value of $(x^2 - x + 1)$ is
(a) $\dfrac{3}{4}$ (b) 0   (c) 1   (d) $\dfrac{1}{4}$

114. If $x + y = 7$, then the value of $x^3 + y^3 + 21xy$ is
(a) 243   (b) 143
(c) 343   (d) 443

115. The smallest number which should be added to the number 8958 so that the result is a perfect square is
(a) 69   (b) 67
(c) 77   (d) 79

116. $\dfrac{137 \times 137 + 133 \times 133 + 18221}{137 \times 137 \times 137 - 133 \times 133 \times 133}$ equal to

(a) 4   (b) 270   (c) 4   (d) $\dfrac{1}{270}$

117. The sum of the squares of 2 numbers is 146 and the square root of one of them is, $\sqrt{5}$. The cube of the other number is
    (a) 1111
    (b) 1221
    (c) 1331
    (d) 1441

118. A person started his journey in the morning. At 11 a.m. he covered $\frac{3}{8}$ of the journey and on the same day at 4.30 p.m. he covered $\frac{5}{6}$ of the journey. He started his journey at
    (a) 6.00 a.m.
    (b) 3.30 a.m.
    (c) 7.00 a.m.
    (d) 6.30 a.m.

119. The sum of the H.C.F. and L.C.M. of two numbers is 680 and their L.C.M. is 84 times their H.C.F. If one of the numbers is 56, then the other number is
    (a) 64
    (b) 72
    (c) 96
    (d) 80

120. The greatest whole number, by which the expression $n^4 + 6n^3 + 11n^2 + 6n + 24$ is divisble for every natural number n, is
    (a) 6
    (b) 24
    (c) 12
    (d) 48

121. $\dfrac{3\sqrt{2}}{\sqrt{6}+\sqrt{3}} - \dfrac{2\sqrt{6}}{\sqrt{3}+1} + \dfrac{2\sqrt{3}}{\sqrt{6}+2}$ is equal to
    (a) 3
    (b) 2
    (c) 0
    (d) $\sqrt{3}$

122. $\left(\dfrac{1}{3.5} + \dfrac{1}{5.7} + \dfrac{1}{7.9} + \dfrac{1}{9.11} + \dfrac{1}{11.13} + \dfrac{1}{13.15} \right)$ is equal to
    (a)
    (b)
    (c)
    (d) 5

123. The missing term of the sequence 9, 12, 11, 14, 13, _, 15 is
    (a) 12
    (b) 16
    (c) 10
    (d) 17

124. If two numbers are each divided by the same divisor, the remainders are respectively 3 and 4. If the sum of the two numbers be divided by the same divisor, the remainder is 2. The divisor is

    (a) 9
    (b) 7
    (c) 5
    (d) 3

125. Given that $\sqrt{1225}$ = 35; then
    $\sqrt{12.25} + \sqrt{0.1225} + \sqrt{0.001225}$ is equal to
    (a) 0.3885
    (b) 388.5
    (c) 38.85
    (d) 3.885

126. If $\dfrac{a}{b} + \dfrac{b}{a} = 11$, then the value
    (a) 0
    (b) 1
    (c) 2
    (d) 3

127. (1 + 3 + 5 + 7 + 9 +...+ 99) is equal to
    (a) 2050
    (b) 2500
    (c) 2005
    (d) 2002

128. (53 × 87 ÷ 159 × 21 + 106 × 25) is equal to
    (a) 16000
    (b) 1060
    (c) 10600
    (d) 60100

129. The missing digit (.) in 1276, so that the number is a perfect square, is
    (a) 1
    (b) 4
    (c) 8
    (d) 9

130. Dina can type 30 words in 1 minute and Dodo 25 words in 1 minute. 1st Dina typed for 1 minute, then Dodo typed for 1 minute and so on. In this way, typing alternately they typed 600 words. The time taken by them in typing these 600 words was'
    (a) 22 minutes
    (b) 21 minutes 48 seconds
    (c) 21 minutes
    (d) 21 minutes 25 seconds

131. A certain distance is covered by a vehicle at a certain speed. If half of this distance is covered by another vehicle in double the time, the ratio of the speeds of the two vehicles is
    (a) 1 : 4
    (b) 1 : 2
    (c) 2 : 1
    (d) 4 : 1

132. The ratio of lengths of two trains is 5 : 3 and the ratio of their speeds is 6 : 5. The ratio of times taken by them to cross a pole is
    (a) 5 : 6
    (b) 11 : 8
    (c) 25 : 18
    (d) 27 : 16

133. The average of 10 numbers is 7. If each number is multiplied by 12, then the average of the new set of numbers will be
    (a) 7
    (b) 19
    (c) 82
    (d) 84

134. X has twice as much money as that of Y and Y has u0% more money than that of Z. If the average money of all of them is Rs. 110, then the money, which X has, is
(a) Rs. 55   (b) Rs. 60
(c) Rs. 90   (d) Rs. 180

135. The average age of 30 students is 9 years. If the age of their teacher is included, the average age becomes 10 years. The age of the teacher (in years) is
(a) 27   (b) 31
(c) 35   (d) 40

136. If the average weight of 6 students is 50 kg; that of 2 students is 51 kg; and that of 2 students is 55 kg; then the average weight of all students is
(a) 61 kg   (b) 51.5 kg
(c) 52 kg   (d) 51.2 kg

137. From a class of 24 boys, a boy, aged 10 years, leaves the class and in his place a new boy is admitted. As a result, the average age of the class is increased by 2 months. What is the age of the new boy ?
(a) 12 years   (b) 15 years
(c) 14 years   (d) 13 years

138. If the radius of a right circular cylinder is decreased by 50% and its height is increased by 60%, its volume will be decreased by
(a) 10%   (b) 60%
(c) 40%   (d) 20%

139. In an examination, 65% of the students passed in Mathematics, 48% passed in Physics and 30% passed in both. How much per cent of stu-dents failed in both the subjects ?
(a) 17%   (b) 43%
(c) 13%   (d) 47%

140. The difference of two numbers is 15% of their sum. The ratio of the larger number to the smaller number is
(a) 23 : 17   (b) 11 : 9
(c) 17 : 11   (d) 23: 11

141. In a village, each of the 60% of families has a cow; each of the 30% of families has a buffalo and each of the 15% of families has both a cow and buffalo. In all there are 96 families in the village. How many families do not have a cow or a buffalo ?
(a) 20   (b) 24   (c) 26   (d) 28

142. p is six times as large as q. The per cent that q is less than p, is
(a) $88\frac{1}{3}$ (b) 70   (c) $63\frac{1}{3}$ (d) 50

143. The price of sugar is increased by 20%. As a result, a family has decreased its consump-tion by 20%. The expendi-ture of the family on sugar is decreased by
(a) 0%   (b) 2.5%
(c) 4%   (d) 5%

144. If the income tax is increased by 19%, the net income is reduced by 1%. The rate of income tax is
(a) 6%   (b) 4%
(c) 5%   (d) 7:20%

145. The population of a village was 9800. In a year, with the increase An population of males by 8% and that of females by 5%, the population of the village became 10458.
What was the number of males in the village before increase ?
(a) 4200   (b) 4410
(c) 5600   (d) 6048

146. a : b = c : d, then $\dfrac{ma+nc}{mb+nd}$ is not equal to
(a) $\dfrac{a}{b}$ (b) $\dfrac{c}{d}$ (c) $\dfrac{a+c}{b+d}$ (d) $\dfrac{c-a}{b-d}$

147. The ratio of the present ages of Rahul and Rashmi is 2 : 1. The ratio of their ages after 30 years will be 7 : 6. What is the present age of Rahul ?
(a) 6 years   (b) 10 years
(c) 12 years   (d) 20 years

148. In an examination, the number of those who passed and the number of those who failed were in the ratio 25 4. If five more had appeared and the number of failures was 2 less than earlier, the ratio of passers to failures would have been 22: 3. The number who appeared at the examination, is
(a) 145   (b) 150
(c) 155   (d) 180

149. The income of A and B are in the ratio 5 : 3. The expenses of A, B and C are in the ratio 8 : 5 : 2.

If C spends Rs. 2000 and B saves Rs. 700, then A saves
(a) Rs. 1500   (b) Rs. 1000
(c) Rs. 500   (d) Rs. 250

150. The ratio of A' to B is 4 : 5 and that of B to C is 2 : 3. If A equals 800, C equals
(a) 1000   (b) 1200
(c) 1500   (d) 2000

151. The length, breadth and height of a cuboid are in the ratio 1 : 2 : 3. If they are increased by 100%, 200% and 200% respectively, then, compared to the original volume the increase in the volume of the cuboid will be
(a) 5 times   (b) 18 times
(c) 12 times   (d) 17 times

152. The sum of three numbers is 68. If the ratio of the first to the second be 2 : 3 and that of the second to the third 5 3, then the second number is
(a) 30   (b) 58
(c) 20   (d) 48

153. The number of students in three classes are in the ratio 2 : 3 : 5. If the number of students in each class is increased by 20 the ratio becomes 4 : 5 : 7. The total number of students before the increase was
(a) 80   (b) 90
(c) 100   (d) 120

154. The price of sugar is increased by 20%. If the expenditure on sugar has to be kept the same as earlier, the ratio between the reduction in consumption and the original consumption is
(a) 1 : 3   (b) 1 : 4
(c) 1 : 6   (d) 1 : 5

155. If a : b : c = 7 : 3 : 5, then (a + b + c): (2a + b - c) is equal to
(a) 1 : 2   (b) 2 : 3
(c) 3 : 4   (d) 5 : 4

156. A person lends 40% of his sum of money at 15% per annum, 50% of rest at 10% per annum and the rest at 18% per annum rate of interest. What would be the annual rate of interest, if the interest is cal-culated on the whole sum ?
(a) 13.4%   (b) 14.33%
(c) 14.4%   (d) 13.33%

157. A man buys a scooter on making a cash down payment of Rs. 16224 and promises to pay two more yearly instalments of equivalent amount in next two years. It the rate of interest is 4% per annum, compounded yearly, the cash value of the scooter, is
(a) Rs. 40000   (b) Rs. 46824
(c) Rs. 46000   (d) Rs. 50000

158. Ramesh deposited Rs. 15600 in a fixed deposit at the rate of 10% per annum simple interest. After every second year, he adds his interest earnings to the principal. The interest at the end of fourth year is
(a) Rs. 1716   (b) Rs. 1560
(c) Rs. 3432   (d) Rs. 1872

159. A part of Rs. 1500 was lent at 10% per annum and the rest at 7% per annum simple interest. The total interest earned in three years was Rs. 396. The sum lent at 10% was
(a) Rs. 900   (b) Rs. 800
(c) Rs. 700   (d) Rs. 600

160. Manoj deposited Rs. 29400 for 6 years at a simple interest. He got Rs. 4200 as interest after 6 years. The annual rate of interest was
(a) $2\frac{8}{21}\%$ (b) $2\frac{7}{20}\%$ (c) $3\frac{8}{21}\%$ (d) $4\frac{8}{21}\%$

161. The compound interest on Rs. 2000 in 2 years if the rate of interest is 4% per annum for the first year and 3% per annum for the second year, will be
(a) Rs. 142.40   (b) Rs. 140.40
(c) Rs. 141.40   (d) Rs. 143.40

162. A sum of money, at simple interest, trebles of itself in 15 years. It will become 5 times of itself in
(a) 40 years   (b) 36 years
(c) 30 years   (d) 25 years

163. The marked price of a watch is Rs. 800. A customer gets two successive discounts on the marked price, the first being 10%. The second discount, if the customer pays Rs. 612 of it, is
(a) 12%   (b) 10%
(c) 15%   (d) 14%

164. At what rate per annum will Rs. 32000 yield a compound interest of Rs. 5044 in 9 months interest being compounded quarterly ?
(a) 20%   (b) 32%
(c) 50%   (d) 80%

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165. How much per cent more than the cost price should a shopkeeper mark his goods so that after allowing a discount of 20% on the marked price, he gains 10% ?
(a) 30%   (b) 10%
(c) 27.5%   (d) 37.5%

166. A dealer buys a car listed at Rs. 200000 at successive discounts of 5% and 10%. If he sells the car for Rs. 179550, then his profit is
(a) 10%   (b) 9%
(c) 5%   (d) 4%

167. A trader marked an article at 10% above its cost price. For selling, he allowed a certain discounts and suffered a loss of 1%. The discount was
(a) 9%   (b) 10%
(c) 11%   (d) 12%

168. An article listed at Rs. 800 is sold at successive discounts of 25% and 15%. The buyer desires to sell it off at a profit of 20% after allowing a 10% discount. What would be his list price ?
(a) Rs. 620   (b) Rs. 600
(c) Rs. 640   (d) Rs. 680

169. 60 men could complete a work in 250 days. They worked together for 200 days. After that the work had to be stopped for 10 days due to bad weather. How many more men should be engaged to complete the work in time ?
(a) 10   (b) 15   (c) 18   (d) 20

170. A alone can complete a work in 12 days. A and B together can complete it in 8 days. How long will B alone take to complete the work ?
(a) 24 days   (b) 18 days
(c) 16 days   (d) 20 days

171. 12 pumps working 6 hours a day can empty a completely filled reservoir in 15 days. How many such pumps working 9 hours a day will empty the same reservoir in 12 days ?
(a) 15   (b) 9   (c) 10   (d) 12

172. A tap takes 36 hours extra to fill a tank due to a leakage equivalent to half of its inflow. The inflow can fill the tank in how many hours ?
(a) 36   (b) 24   (c) 30   (d) 18

173. A contractor undertook to complete a project in 90 days and employed 60 men on it. After 60 days, he found that $\frac{3}{4}$ of the work has already been completed. How many men can he discharge so that the project may be complet-ed exactly on time ?
(a) 40   (b) 20
(c) 30   (d) 15

174. Two men undertook to do a job for Rs. 1400. One of them alone can do it alone in 7 days, and the other in 8 days. With the assistance of a boy they together completed the work in 3 days. How much money will the boy get ?
(a) Rs. 300   (b) Rs. 325
(c) Rs. 275   (d) Rs. 250

175. A man can row at a speed of $4\frac{1}{2}$ kms/hr in still water. If he takes 2 times as long to row a distance upstream as to row the same distance downstream, then, the speed of stream (in km/hr) is
(a) 1   (b) 1.5
(c) 2   (d) 2.5

176. Two trains travel in the same direction at the speeds of 56 km/h and 29 km/h respec-tively. The faster train pass-es a man in the slower train in 10 seconds. The length of the faster train (in metres) is
(a) 100   (b) 80
(c) 75   (d) 120

177. A train starts from *A* at 7 a.m. towards *B* with speed 50 km/h. Another train from *B* starts at 8 a.m. with speed 60 km/h towards *A*. Both of them meet at 10 a.m. at *C*. The ratio of the distance *AC* to *BC* is
(a) 5 : 6   (b) 5 : 4
(c) 6 : 5   (d) 4 : 5

178. Ram arrives at a Bank 15 minutes earlier than scheduled time if he drives his car at 42 km/h. If he drives car at 35 km/h he arrives 5 minutes late. The distance of the Bank, from his starting point is
(a) 70 km   (b) 210 km
(c) 72 km   (d) 60 km

179. A and B run a 5 km race on a round course of 400 m. If their speeds are in the ratio 5 : 4, the number of times. the winner passes the other. is
(a) 1   (b) 2   (c) 3   (d) 5

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180. If a train takes 6 seconds to cross a pole and if the length of train is 120 metres, then the speed of the train in km/ hr will be
(a) 60   (b) 72
(c) 70   (d) 80

181. The ratio of cost price and selling price of an article is 8 9. The profit per cent is
(a) 20   (b) 15
(c) 12.5   (d) 10

182. A man buys pencils at the rate of 6 for Rs. 5 and sells them at 5 for Rs. 6. His profit per cent is
(a) 30   (b) 35
(c) 40   (d) 44

183. A coconut merchant finds that the cost price of 2750 coconuts is the same as the selling price of 2500 coconuts. The loss or gain per cent is
(a) 5% loss   (b) 15% loss
(c) 20% gain   (d) 10% gain

184. A person buys 100 cups at Rs. 10 each. On the way 10 cups are broken. He sells the remaining cups at Rs. 11 each. His loss per cent is
(a) $\frac{1}{2}$ (b) 1   (c) $1\frac{1}{2}$ (d) 2

185. By selling 144 hens Mahesh suffered a loss equal to the selling price of 6 hens. His loss per cent is
(a) 4   (b) 3   (c) 9   (d) $4\frac{1}{2}$

186. A car and a jeep were sold for Rs. 121000 each. The car was sold at a loss of 20% while the jeep at a gain of 20%. The entire transaction resulted in
(a) neither loss nor gain
(b) gain of Rs. 1000
(c) loss of Rs. 1000
(d) gain of Rs. 500

187. If the sides of an equilateral triangle are increased by 20%, 30% and 50% respectively to form a new triangle, the increase in the perimeter of the equilateral triangle is
(a) 25%   (b) 333%
(c) 75%   (d) 100%

188. If the radius of a sphere is doubled, its volume becomes
(a) double   (b) four times
(c) six times   (d) eight times

189. If each side of a rectangle is increased by 50%, its area will be increased by
(a) 50%,   (b) 125%
(c) 100%   (d) 250%

190. The floor of a corridor is 100m long and 3 m wide. Cost of covering the floor with carpet 50 cm wide at the rate of Rs. 15 perm is
(a) Rs. 4500   (b) Rs. 9000
(c) Rs. 7500   (d) Rs. 1900

191. The areas of three adjacent faces of a cuboid are x, y, z square units respectively. If the volume of the cuboid be v cubic units, then the cor-rect relation between v, x, y, z is
(a) $v^2 = xyz$ (b) $v^3 = xyz$
(c) $v^2 = x^3 y^3 z^3$ (d) $v^3 = x^2 y^2 z^2$

192. A right circular cylinder is formed by rolling a rectangular paper 12 cm long and 3 cm wide along its length. The radius of the base of the cylinder will be
(a) $\frac{3}{2\pi}$ cm (b) $\frac{6}{2\pi}$ cm (c) $\frac{9}{2\pi}$ cm (d) 2π cm

193. The area of a triangular field, the lengths of whose sides are 50 m, 78 m and 112m, is
(a) 1600 m²   (b) 1480 m²
(c) 1680 M²   (d) 3360 m²

194. A cone of height 7 cm and base-radius l cm is carved out from a cuboidal block of wood of size 10 cm × 5 cm × 2 cm. In the process, the wood wasted will be   (Use is $\pi = \frac{22}{7}$)
(a) $92\frac{2}{3}$% (b) $46\frac{1}{3}$% (c) $53\frac{2}{3}$% (d) $7\frac{1}{3}$%

195. A rectangular tank of length 10 m, breadth 5 in and depth 6 in is full of water. How much water must be taken out of the tank to reduce the level of water in the tank by one metre ?
(a) 30 m³ (b) 60 m³ (c) 50 m³ (d) 100 m³

196. Some oil is filled in a right circular cylindrical vessel. The radius of the base of the vessel is 6 cm. Some iron balls, each of diameter 3 cm, are completely dipped into the oil. If the level of oil in the vessel rises by 2 cm, the number of iron balls dipped into the oil is
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(a) 16   (b) 8   (c) 32   (d) 4

Directions (197-200): Study the table and answer the questions The table given here shows the highest and average marks of a class in four subjects in four years. The maximum marks in each subject are 100.

Year					SUBJECTS			
	English		Maths		Science		Social Science	
	Highest	Average	Highest	Average	Highest	Average	Highest	Average
1993	80	70	94	60	89	70	65	55
1994	82	65	85	62	95	64	66	58
1995	71	56	92	68	97	68	68	48
1996	75	52	91	64	92	75	77	58

197. What is the overall average of marks in the four subjects in the year 1995 ?
(a) 63   (b) 64
(c) 65   (d) 60

198. Supposing that there were 40 students in science in the year 1995, how much total of marks did they receive combined together?
(a) 2800   (b) 2720
(c) 2560   (d) 3000

199. In which year, the difference between the highest and the average marks in Mathemat-ics was maximum ?
(a) 1995   (b) 1993
(c) 1994   (d) 1996

200. In which year, the difference between the highest and average marks in Social Science was the least ?
(a) 1996   (b) 1995
(c) 1994   (d) 1993

ANSWERS

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