Part – I
GENERAL INTELLIGENCE

Directions : In Question Nos. **1** to **3**, select the missing number from the given responses.

1.

9	30	21
6	?	14
12	40	28

(A) 20 (B) 33 (C) 37 (D) 70

2.

28	4	25	5	?	3
7	11	5	10	8	11

(A) 22 (B) 24 (C) 25 (D) 28

3.

5	4	3	8	9	4
20	9	24	11	?	13

(A) 36 (B) 117 (C) 52 (D) 26

4. Ram and Shyam started from a fixed place. Ram moves 3 km to the North and turns right, then walks 4 km. Shyam moves towards West and walks 5 km, then turns to right and walks 3 km. How far Ram is from Shyam ?

(A) 13 km (B) 16 km
(C) 9 km (D) 10 km

5. Which one is true ?
1. All players are not tall.
2. All basketball players are tall.
3. All tall people are players.
4. Some players are tall.

(A) 4 (B) 3
(C) 2 (D) 1

6. One Statement is given followed by two Assumptions, 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 assumptions can definitely be drawn from the given statement. Indicate your answer.

Statement : All the people in Kerala are literate.
Assumption I : People of Kerala are well educated and cultured.
Assumption II : People of Kerala are hard working and sincere.

(A) Only I is implicit.
(B) Only II is implicit.
(C) Both I and II are implicit.
(D) Neither I nor II is implicit.

7. A student walked out from the Classroom towards the Library. She went first to the Canteen on the left side, 24 ft away. After a cup of tea, took a right turn and went to the Laboratory 13 ft away. She then went to the Physics Block, 15 ft to the left. she talked to a friend, in the garden 3 ft on the left and continued walking in the same direction to the Library, 10 ft more. What was the actual distance between the Library and the Classroom ?

(A) 42 ft (B) 65 ft
(C) 39 ft (D) 34 ft

Directions : In Question Nos. **8** to **14**, select the related letter/word/number from the given alternatives.

8. India : Mango : : New Zealand : ?
(A) Apples (B) Kiwi
(C) Grapes (D) Bananas

9. Put the correct words in the blanks :
Christmas : ? : : ? : Biryani
(A) Christian, Muslim
(B) Cashew, Rice
(C) Jesus, Ramzan
(D) Cake, Id-ul-Fitre

10. VZS : EAH : : ? : JFM
(A) QSM (B) NUQ
(C) QUN (D) QNU

11. HJLN : PRTV : : BDFH : ?
(A) JMOR (B) JLNP
(C) KLOR (D) JKOR

12. DLOC : ECI : : TOH : ?
(A) EET (B) EAT
(C) AET (D) ETA

13. 42 : 20 : : 64 : ?
(A) 31 (B) 32 (C) 40 (D) 42

14. Ravishankar : Sitar : : Bismillah Khan : ?
(A) Sarod (B) Santoor
(C) Shehnai (D) Flute

Directions : In Question Nos. **15** & **16**, choose the numbers similar to the group of numbers given.

15. 536, 428, 365
(A) 358 (B) 435 (C) 624 (D) 266

16. 580, 265, 373
(A) 366 (B) 490 (C) 428 (D) 383

Directions : In Question Nos. **17** to **23**, find the odd number/letters/number pair from the given alternatives.

17. (A) NOTA (B) NATO
(C) NASA (D) NAM

18. (A) Diamond (B) Gold
(C) Silver (D) Platinum

19. (A) GHI (B) PRS
(C) UVW (D) ABC

20. (A) 45, 6, 7 (B) 15, 3, 4
(C) 35, 5, 6 (D) 23, 4, 5

21. (A) 725 (B) 840 (C) 632 (D) 475

22. (A) 64 – 36 (B) 75 – 35
(C) 57 – 43 (D) 39 – 61

23. (A) Orange (B) Apple
(C) Lemon (D) Grapes

24. Which one of the given responses would be a meaningful order of the following words ?
1. Type 2. Print
3. Open 4. Save
5. Close
(A) 3, 4, 1, 2, 5 (B) 3, 5, 4, 2, 1
(C) 3, 1, 4, 2, 5 (D) 3, 2, 1, 4, 5

25. Which one of the given responses would be a meaningful order of the following words ?
1. Evaluation
2. Presentation
3. Recap
4. Aim announcement
5. Motivation
(A) 1, 2, 5, 3, 4 (B) 5, 2, 1, 4, 3
(C) 5, 4, 2, 3, 1 (D) 2, 1, 3, 4, 5

26. In the following question letters are skipped between by following a particular rule. Which of the following series observes the rule ?
(A) BDFIJ (B) DGJLM
(C) BDHPF (D) ACEHJ

27. Which one is different from the rest three ?
(A) Polar Bear (B) Penguin
(C) Seal (D) Tiger

28. Which one set of letters when sequentially placed at the gaps in the given letter series shall complete it ?
_ ab _ b _ bc _ ca _
(A) accbb (B) abcca
(C) cacab (D) abacb

29. Select the odd word :
(A) Compress (B) Condense
(C) Concise (D) Convert

Directions : In Question Nos. **30** to **34**, choose the correct alternative from the given ones that will complete the series.

30. KKMLLNMMONNPOOQP ?
(A) PQ (B) ST
(C) QV (D) PR

31. 30, 24, 19, 15, 12, ?
(A) 6 (B) 8
(C) 10 (D) 11

32. 2, 7, 17, 32, 52, 77, ?
(A) 107 (B) 91
(C) 101 (D) 92

33. 30, 28, 23, 21, ?
(A) 15 (B) 16
(C) 18 (D) 20

34. 1. A, C, E 2. B, D, F
3. G, I, K 4. ?
(A) L, J, H (B) Z, Y, X
(C) K, L, M (D) K, J, M

35. In a zoo, there are Rabbits and Pigeons. If heads are counted, there are 200 and if legs are counted, there are 580. How many pigeons are there ?
(A) 90 (B) 100 (C) 110 (D) 120

36. From the given alternatives, select the word which cannot be formed using the letters of the given word :
FRAGMENT
(A) RAGE (B) TEAR
(C) MEAN (D) RACE

37. If DEVELOPMENT is written as 45853106572, how ENVELOPE can be written in that code ?
(A) 57851305 (B) 57853105
(C) 57835105 (D) 57850135

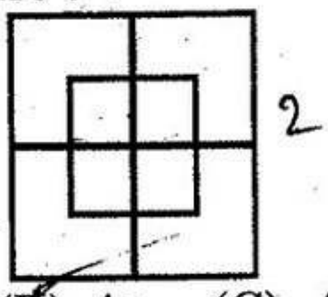
38. If MARCH is coded as PXUZK, what will be the code of APRIL ?
(A) DMUFO (B) DSULO
(C) ZKIRO (D) ZKRIO

39. If A denotes +, B denotes – and C denotes ×, then
(10 C 4) A (4 C 4) B 6 = ?
(A) 46 (B) 50 (C) 55 (D) 58

40. What sign should be changed to make the equation 5 + 6, 3 – 12 × 2 = 17 correct ?
(A) + (B) + ×
(C) – + (D) None of these

41. If 10 boys walk 10 km in 10 days, then how many days it will take for 3 boys to walk 10 km ?
(A) 1 (B) 3 (C) 6 (D) 10

42. How many rectangles are there in the given figure ?



(A) 6 (B) 43 (C) 8 (D) 10

43. From the answer figures, select the one which can be formed from the components given in the question figure.

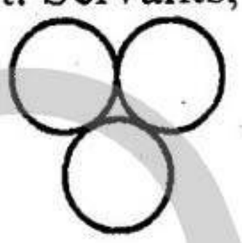
Question Figure :

Answer Figures :

(A) (B) (C) (D)

Directions : In Question Nos. **44** and **45**, identify the diagram that best represents the relationship among classes given below :

44. Govt. Servants, Lecturers, Doctors

(A)  (B) 

(C)  (D) 

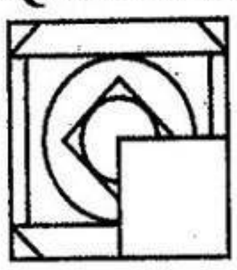
45. M.K. Gandhi, Umesh Chandra Bandhopadhyay, Jatin Das and Surya Sen

(A) (B)

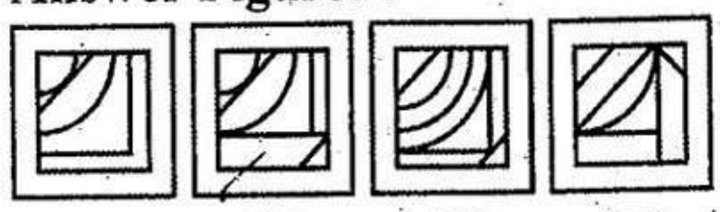
(C)  (D)

46. Which answer figure will complete the pattern in the question figure ?

Question Figure :



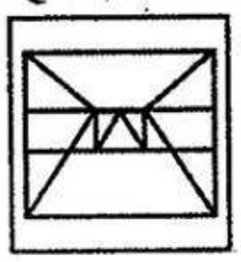
Answer Figures :



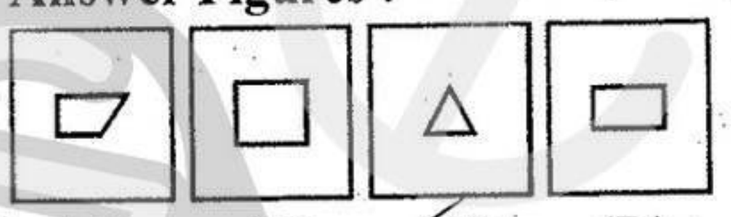
(A) (B) (C) (D)

47. Which of the answer figures is embedded in the question figure ?

Question Figure :



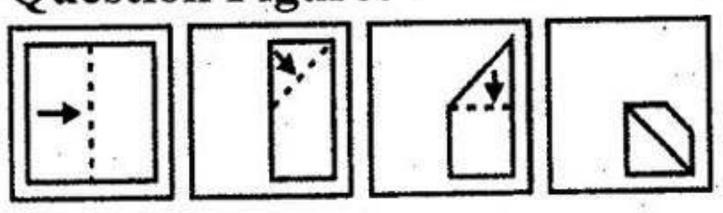
Answer Figures :



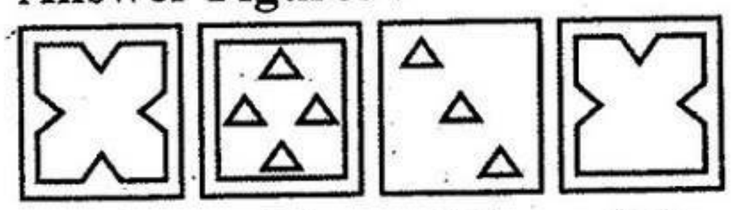
(A) (B) (C) (D)

48. A piece of paper is folded and cut as shown below in the question figures. From the given answer figures, indicate how it will appear when opened.

Question Figures :



Answer Figures :



(A) (B) (C) (D)

SPACE FOR ROUGH WORK

49. Identify the alternative which resemble the mirror-image of the given word.

SECRETARY

(A) YЯATƎЯƆƎS
(B) YЯATƎЯƆƎS
(C) YЯATƎЯƆƎS
(D) YЯATƎЯƆƎS

50. A word is represented by only one set of numbers as given in any one of the alternatives. The sets of numbers given in the alternatives are represented by two classes of alphabets as in two matrices given below. The columns and rows of Matrix I are numbered from 0 to 4 and that of Matrix II are numbered from 5 to 9. A letter from these matrices can be represented *first by its row* and *next by its column* e.g., 'A' can be represented by 00, 11, 20 etc. and 'P' can be represented by 59, 68, 75, etc. Similarly, you have to identify the set for the word '**LOAD**'.

Matrix I

	0	1	2	3	4
0	A	B	C	D	E
1	B	A	E	D	C
2	A	C	D	B	E
3	E	A	D	C	B
4	C	E	A	D	B

Matrix II

	5	6	7	8	9
5	L	M	N	O	P
6	M	L	N	P	O
7	P	L	M	N	O
8	P	O	M	N	L
9	O	M	P	L	N

(A) 55, 42, 86, 03
(B) 66, 40, 31, 13
(C) 89, 86, 11, 99
(D) 76, 95, 20, 32

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

Directions : In Question Nos. **42** and **43,** select the related word/number from the given alternatives.

42. 12 : 7 : : 16 : ?
(A) 10 (B) 9 (C) 7 (D) 8

43. Monsoon : Flood : : Summer : ?
(A) Rain (B) Hot
(C) Drought (D) Cold

Directions : In Question Nos. **44** to **48,** find the odd number/letters/number pair from the given alternatives.

44. (A) 2 : 20 (B) 4 : 50
(C) 3 : 30 (D) 1 : 10

45. (A) 399 (B) 448
(C) 449 (D) 497

46. (A) 1473 (B) 7134
(C) 3472 (D) 7413

47. (A) 2 – 7 (B) 4 – 5
(C) 6 – 3 (D) 8 – 2

48. (A) 5 – 26 (B) 8 – 65
(C) 6 – 36 (D) 9 – 82

49. Choose the correct alternative from the given ones that will complete the series.

E, J, O, ?, Y
(A) T (B) L (C) Q (D) A

50. If 2 * 8 * 1 = 81
3 * 2 * 1 = 27
then 4 * 1 * 4 = ?
(A) 225 (B) 125
(C) 625 (D) 64

SPACE FOR ROUGH WORK

Part – II
ENGLISH LANGUAGE

Directions : In Question Nos. **51** to **55**, four alternatives are given for the Idiom\Phrase underlined in the sentence. Choose the alternative which best expresses the meaning of the Idiom\Phrase and mark it in the Answer Sheet.

51. Through the reporter's efforts, many unknown facts have <u>come to light</u>.
(A) ignited
(B) flared up
(C) brightened
(D) been revealed

52. I do not <u>see eye to eye with</u> you in this matter.
(A) to give a correct decision
(B) to obtain suitable punishment
(C) to have the same eyesight
(D) to have the same opinion

53. The boy was <u>in Dutch</u> with his friends.
(A) in love
(B) in good terms
(C) in awe
(D) in trouble

54. Their attempt to get back the stolen necklace became a <u>wild goose chase</u>.
(A) wise decision
(B) useless search
(C) timely action
(D) delayed action

55. The departmental store is open <u>around the clock</u>.
(A) at different timings
(B) early morning
(C) day and night
(D) throughout the afternoon

Directions : In Question Nos. **56** to **60**, a part of the sentence is underlined. Below are given alternatives to the underlined part at (A), (B), (C) which may improve the sentence. Choose the correct alternative. In case no improvement is needed, your answer is (D). Mark your answer in the Answer Sheet.

56. Have you ever been <u>in</u> New York ?
(A) at
(B) to
(C) with
(D) No improvement

57. Wave after wave <u>surrounded</u> the tower.
(A) engulfed
(B) circled
(C) encircled
(D) No improvement

58. It is quite tough to <u>declare</u> which candidate will win the presidential election.
(A) predict
(B) augur
(C) portend
(D) No improvement

59. Transcoding <u>has one of the items</u> in the new syllabus.
(A) is one of the items
(B) has one of the item
(C) is one of the item
(D) No improvement

60. She does not tell lies, <u>doesn't she ?</u>
(A) isn't she ?
(B) does she ?
(C) didn't she ?
(D) No improvement

Directions : In Question Nos. **61** to **65**, out of the four alternatives, choose the one which can be substituted for the given words/sentence.

61. The headmaster brought back to mind the outstanding achievements of the school.
(A) remembered (B) reminded
(C) reminisced (D) recalled

62. Lack of feeling
(A) Empathy (B) Apathy
(C) Sympathy (D) Pity

63. Accidental good fortune
(A) Serendipity (B) Good luck
(C) Chance (D) Fluke

64. Short speech or poem given at the end of a play or a book
(A) Epilogue (B) Epigram
(C) Epitaph (D) Epicure

65. A person who drive our motor cars
(A) Driver (B) Chauffeur
(C) Conductor (D) Lift-operator

Directions : In Question Nos. **66** to **70**, four words are given in each question, out of which only one word is correctly spelt. Find the correctly spelt word and mark your answer in the Answer Sheet.

66. (A) Narsicissism (B) Narcicicism
(C) Narcissism (D) Narcisism

67. (A) Seige (B) Pharoah
(C) Laison (D) Portuguese

68. (A) Acoustics (B) Accoustics
(C) Acusticts (D) Accuoustics

69. (A) Repertoire (B) Repartoire
(C) Repertwah (D) Repertiore

70. (A) Necesary (B) Neccesarry
(C) Necesarry (D) Necessary

Directions : In Question Nos. **71** to **80**, in the following passage some of the words have been left out. Read the passage carefully and choose the correct answer to each question out of the four alternatives and fill in the blanks.

The other day I visited a refugee **71** where the victims **72** the Gujarat Earthquake **73** in very **74** conditions. I was particularly **75** by an old woman who was determined to give **76** grandchildren a better future. She **77** a strong and **78** woman who even after the **79** of her own children undertook such a journey through life and never felt weak or broken but was an **80** for all.

71. (A) house (B) camp
(C) home (D) nest

72. (A) of (B) to
(C) in (D) at

73. (A) was living (B) are living
(C) were living (D) have lived

74. (A) apathetic (B) sympathetic
(C) pathetic (D) empathetic

75. (A) cornered (B) collected
(C) worked (D) moved

76. (A) his (B) her
(C) its (D) their

77. (A) were (B) had
(C) was (D) is

78. (A) courageous (B) continuous
(C) ruinous (D) careful

79. (A) life (B) death
(C) motionless (D) captivated

80. (A) happiness (B) determination
(C) motivation (D) inspiration

Directions : In Question Nos. **81** to **85**, some parts of the sentences have errors and some are correct. Find out which part of a sentence has an error and blacken the oval [●] corresponding to the appropriate letter (A, B, C). If a sentence is free from errors, blacken the oval corresponding to (D) in the Answer Sheet.

81. Ghana, Nigeria and Gambia (A) / each have parts to play (B) / in the development of Africa. (C) / No error (D)

82. In these days of inflation (A) / a ten rupees note will not buy you (B) / even an ordinary meal. (C) / No error (D)

83. Most of my friends (A) / heard the earthquake (B) / but I was totally unaware of it. (C) / No error (D)

84. He walks (A) / as if the earth (B) / belonged to him. (C) / No error (D)

85. The United Nations (A) / enquired for (B) / a cease fire. (C) / No error (D)

Directions : In Question Nos. **86** to **90**, sentences are given with blanks to be filled in with an appropriate word(s). Four alternatives are suggested for each question. Choose the correct alternative out of the four and indicate it by blackening the appropriate oval [●] in the Answer Sheet.

86. Communism and Socialism have always _____ the sermons of economic equality.

(A) said (B) instructed
(C) preached (D) obeyed

87. Robert _____ Ali of his support.

(A) assure (B) ensured
(C) insured (D) assured

88. The students are told to _____ these words in the dictionary.

(A) look down (B) look up
(C) look into (D) look after

89. Rama took his _____ for the wrong done to him.

(A) avenge (B) vengeance
(C) revenge (D) ravage

90. Students are not prepared _____ that kind of question.

(A) to (B) with
(C) for (D) on

Directions : In Question Nos. **91** to **95**, out of the four alternatives, choose the one which best expresses the meaning of the given word and mark it in the Answer Sheet.

91. Guile

(A) Cunning

(B) Careful

(C) Careless

(D) Greedy

92. Futility

(A) Uselessness

(B) Insignificance

(C) Irrelevance

(D) Unimportance

93. Sham

(A) Real

(B) Genuine

(C) Authentic

(D) Fake

94. Arduous

(A) Troublesome

(B) Gloomy

(C) Difficult

(D) Perilous

95. Jealous

(A) Interested

(B) Hatred

(C) Envied

(D) Admired

Directions : In Question Nos. **96** to **100**, choose the word opposite in meaning to the given word and mark it in the Answer Sheet.

96. Traditional

(A) Avant-garde

(B) Present

(C) Unusual

(D) Fresh

97. Turbulent

(A) Harmony

(B) Gusty

(C) Calm

(D) Windy

98. Profuse

(A) Sparse

(B) Miserly

(C) Brief

(D) Immoderate

99. Mitigate

(A) Appease

(B) Enhance

(C) Allay

(D) Relieve

100. Prudent

(A) Dunce

(B) Silly

(C) Foolish

(D) Careless

Part – III
QUANTITATIVE APTITUDE

101. Two equal maximum sized circular plates are cut off from a circular paper sheet of circumference 352 cm. Then the circumference of each circular plate is
(A) 176 cm (B) 150 cm
(C) 165 cm (D) 180 cm

102. If $a + b + c = 0$, then the value of $(a + b - c)^2 + (b + c - a)^2 + (c + a - b)$ is
(A) 0 (B) 8 abc
(C) $4(a^2 + b^2 + c^2)$ (D) $4(ab + bc + ca)$

103. If $P^3 + 3P^2 + 3P = 7$, then the value of $P^2 + 2P$ is
(A) 4 (B) 3 (C) 5 (D) 6

104. If $x = 2015$, $y = 2014$ and $z = 2013$, then value of $x^2 + y^2 + z^2 - xy - yz - zx$ is
(A) 3 (B) 4 (C) 6 (D) 2

105. If $3a^2 = b^2 \neq 0$, then the value of $\frac{(a+b)^3 - (a-b)^3}{(a+b)^2 + (a-b)^2}$ is
(A) $\frac{3}{2}b$ (B) b
(C) $\frac{1}{2}b$ (D) $\frac{2}{3}b$

106. A hemispherical bowl of internal radius 15 cm contains a liquid. The liquid is to be filled into a cylindrical-shaped bottles of diameter 5 cm and height 6 cm. The number of bottles required to empty the bowl is

107. AD is the median of a triangle ABC and O is the centroid such that AO = 10 cm. Length of OD (in cm) is
(A) 2 (B) 4. (C) 5 (D) 7

108. The measure of the angle between the internal and external bisector of an angle is
(A) 60° (B) 70° (C) 80° (D) 90°

109. Two circles C_1 and C_2 touch each other internally at P. Two lines PCA and PDB meet the circles C_1 in C, D and C_2 in A, B respectively. If $\angle BDC = 120°$, then the value of $\angle ABP$ is equal to
(A) 60° (B) 80° (C) 100° (D) 120°

110. DE is a tangent to the circumcircle of ΔABC at the vertex A such that DE ∥ BC. If AB = 17 cm, then the length of AC is equal to
(A) 16.0 cm (B) 16.8 cm
(C) 17.3 cm (D) 17 cm

111. The distance between the centres of two circles with radii 9 cm and 16 cm is 25 cm. The length of the segment of the tangent between them is
(A) 24 cm (B) 25 cm
(C) $\frac{50}{3}$ cm (D) 12 cm

112. If $x > 1$ and $x + \frac{1}{x} = 2\frac{1}{12}$, then the value of $x^4 - \frac{1}{x^4}$ is
(A) $\frac{58975}{20736}$ (B) $\frac{59825}{20736}$
(C) $\frac{57985}{}$ (D) $\frac{57895}{}$

113. If $\tan\theta = \frac{3}{4}$, then the value of

$$\frac{4\sin^2\theta - 2\cos^2\theta}{4\sin^2\theta + 3\cos^2\theta}$$ is equal to

(A) $\frac{1}{21}$ (B) $\frac{2}{21}$

(C) $\frac{4}{21}$ (D) $\frac{8}{21}$

114. If $\frac{\cos\alpha}{\cos\beta} = a$, $\frac{\sin\alpha}{\sin\beta} = b$, then $\sin^2\beta$ is equal to

(A) $\frac{a^2-1}{a^2+b^2}$ (B) $\frac{a^2+1}{a^2-b^2}$

(C) $\frac{a^2-1}{a^2-b^2}$ (D) $\frac{a^2+1}{a^2+b^2}$

115. Let A, B, C, D be the angles of a quadrilateral. If they are concyclic, then the value of

$\cos A + \cos B + \cos C + \cos D$ is

(A) 0 (B) 1 (C) -1 (D) 2

116. If a pole of 12 m high casts a shadow of $4\sqrt{3}$ m long on the ground, then the sun's angle of elevation at that instant is

(A) 30° (B) 60° (C) 45° (D) 90°

117. If $\sin(\theta + 18°) = \cos 60°$ $(0 < \theta < 90°)$, then the value of $\cos 5\theta$ is

(A) $\frac{1}{2}$ (B) 0

(C) $\frac{1}{\sqrt{2}}$ (D) 1

118. The digit in unit's place of the product

$49237 \times 3995 \times 738 \times 83 \times 9$ is

(A) 0 (B) 7 (C) 5 (D) 6

119. If $x : y$ be the ratio of two whole numbers and z be their h.c.f., then the l.c.m. of those two numbers is

(A) yz (B) $\frac{xz}{y}$

(C) $\frac{xy}{z}$ (D) xyz

120. If the Universal Set

$U = \{1, 2, 3, 4, 5, 6, 7, 8\}$ and

$A = \{1, 2, 3, 4\}$, then A^C is equal to

(A) $\{5, 6, 7, 8\}$ (B) $\{5, 6, 1, 2\}$

(C) $\{5, 6, 2, 3\}$ (D) $\{5, 6, 3, 4\}$

121. Find the n^{th} term of the following sequence :

$5 + 55 + 555 + ... T_n$

(A) $5(10^n - 1)$ (B) $5^n(10^n - 1)$

(C) $\frac{5}{9}(10^n - 1)$ (D) $\left(\frac{5}{9}\right)^n (10^n - 1)$

122. If 12 men or 24 boys can do a work in 66 days, the number of days in which 15 men and 6 boys can do it is

(A) 44 (B) 33 (C) 55 (D) 66

123. The 30^{th} term of the series $30, 25\frac{1}{2}, 21, 16\frac{1}{2}, ...$ is

(A) 0 (B) $-100\frac{1}{2}$

(C) -183 (D) $-133\frac{1}{2}$

124. If diagonals of a rhombus are 24 cm and 32 cm, then perimeter of that rhombus is

(A) 80 cm (B) 84 cm
(C) 76 cm (D) 72 cm

125. The inradius of an equilateral triangle is $\sqrt{3}$ cm, then the perimeter of that triangle is

(A) 18 cm (B) 15 cm
(C) 12 cm (D) 6 cm

126. A double bed is marked at ₹ 7,500. The shopkeeper allows successive discounts of 8%, 5% and 2% on it. What is the Net selling price ?

(A) ₹ 6,500 (B) ₹ 6,000
(C) ₹ 6,423.90 (D) ₹ 6,500.50

127. X purchased an item at a discount of 10% and sold it to Y at 10% profit. The marked price and the price for which Y purchased the item are in ratio.

(A) 1 : 1 (B) 10 : 99
(C) 20 : 99 (D) 100 : 99

128. A man engaged a servant on the condition that he would pay him ₹ 90 and a turban after service of one year. He served only for nine months and received the turban and an amount of ₹ 65. The price of turban is

(A) ₹ 25 (B) ₹ 18.75
(C) ₹ 10 (D) ₹ 2.50

129. Tom is chasing Jerry. In the same interval of time Tom jumps 8 times while Jerry jumps 6 times. But the distance covered by Tom in 7 jumps is equal to the distance covered by Jerry in 5 jumps. The ratio of speed of Tom and Jerry is

(A) 48 : 35 (B) 28 : 15
(C) 24 : 20 (D) 20 : 21

130. Three years ago the average age of a family of 5 members was 17 years. A baby having been born, the average age of the family remains the same today. The age of the baby today is

(A) 3 years (B) 2 years
(C) 1 year (D) 1.5 years

131. The average marks secured by 36 students was 52. But it was discovered that an item 64 was misread as 46. What is the correct mean of marks ?

(A) 54 (B) 53.5 (C) 53 (D) 52.5

132. A shoe company sold 50 pairs of shoes on a day costing ₹ 189.50 each for ₹ 10,000. Then the profit obtained in ₹ is

(A) 522 (B) 525 (C) 573 (D) 612

133. Kamala bought a bicycle for ₹ 1,650. She had to sell it at a loss of 8%. She sold it for

(A) ₹ 1,581 (B) ₹ 1,518
(C) ₹ 1,510 (D) ₹ 1,508

134. A got twice as many marks in English as in Science. His total marks in English, Science and Mathematics is 180. If the ratio of his marks in English and Mathematics is 2 : 3, what is his marks in Science ?

135. In a village 30% of the population is literate. If the total population of the village is 6,600, then the number of illiterate is

(A) 1980 (B) 4620
(C) 2200 (D) 3280

136. Two trains start from stations A and B and travel towards each other at speeds of 50 kmph and 60 kmph respectively. At the time of their meeting, the second train has travelled 120 km more than the first. The distance between A and B is

(A) 1200 km (B) 1440 km
(C) 1320 km (D) 990 km

137. Find the difference between the compound interest and the simple interest on ₹ 32,000 at 10% p.a. for 4 years.

(A) 2051.20 (B) 2052.50
(C) 2025.20 (D) 2501.20

138. The whole surface of a cube is 150 sq.cm. Then the volume of the cube is

(A) 125 cm^3 (B) 216 cm^3
(C) 343 cm^3 (D) 512 cm^3

139. If each edge of a square be doubled, then the increase percentage of its area is

(A) 200% (B) 250%
(C) 280% (D) 300%

140. A solid metallic spherical ball of diameter 6 cm is melted and recast into a cone with diameter of the base as 12 cm. The height of the cone is

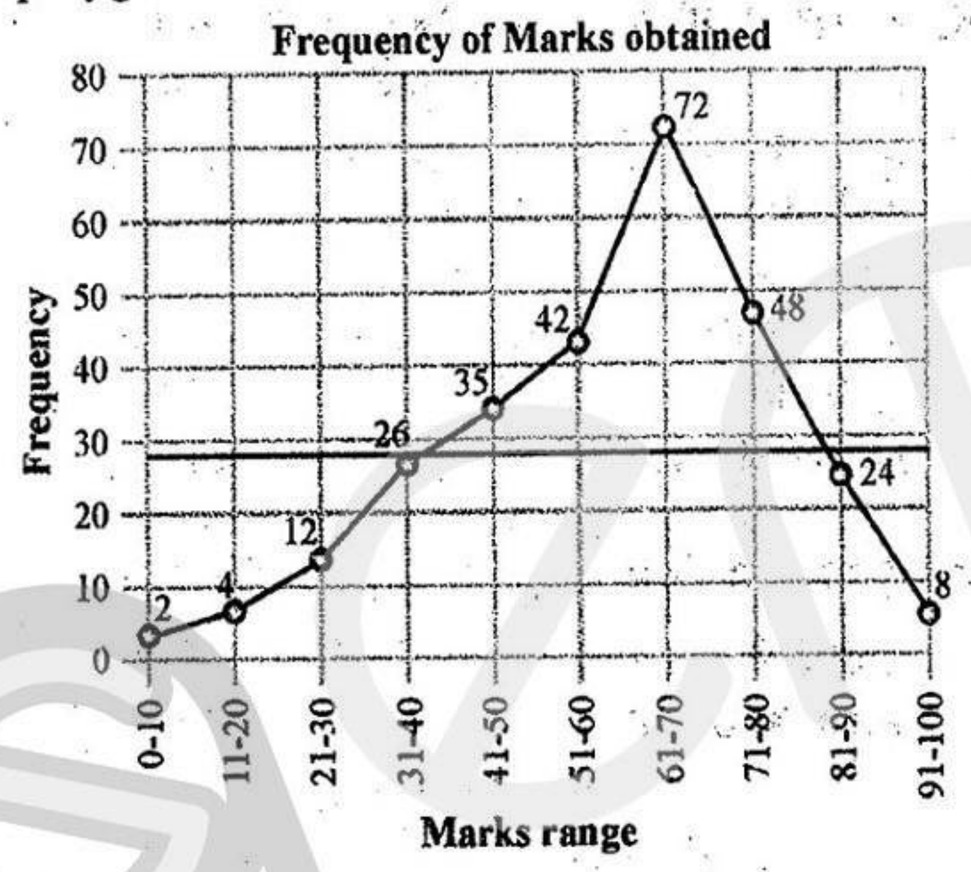
(A) 2 cm (B) 3 cm
(C) 4 cm (D) 6 cm

141. Subtracting x% of y from y means multiplying y by

(A) $\frac{x}{100}$ (B) $\frac{x}{100} - 1$

(C) $1 - \frac{x}{100}$ (D) $x\left(1 - \frac{x}{100}\right)$

The marks obtained by 273 examinees is shown by the frequency polygon. Given that mean marks is 59.5. Study the frequency polygon and answer Q. Nos. **142** to **145**.



142. The number of examinees getting more than average marks is

(A) 72 (B) 105 (C) 152 (D) 164

143. Percentage of the students who got above 80% marks is

(A) 9.81 (B) 10.53 (C) 11.28 (D) 11.72

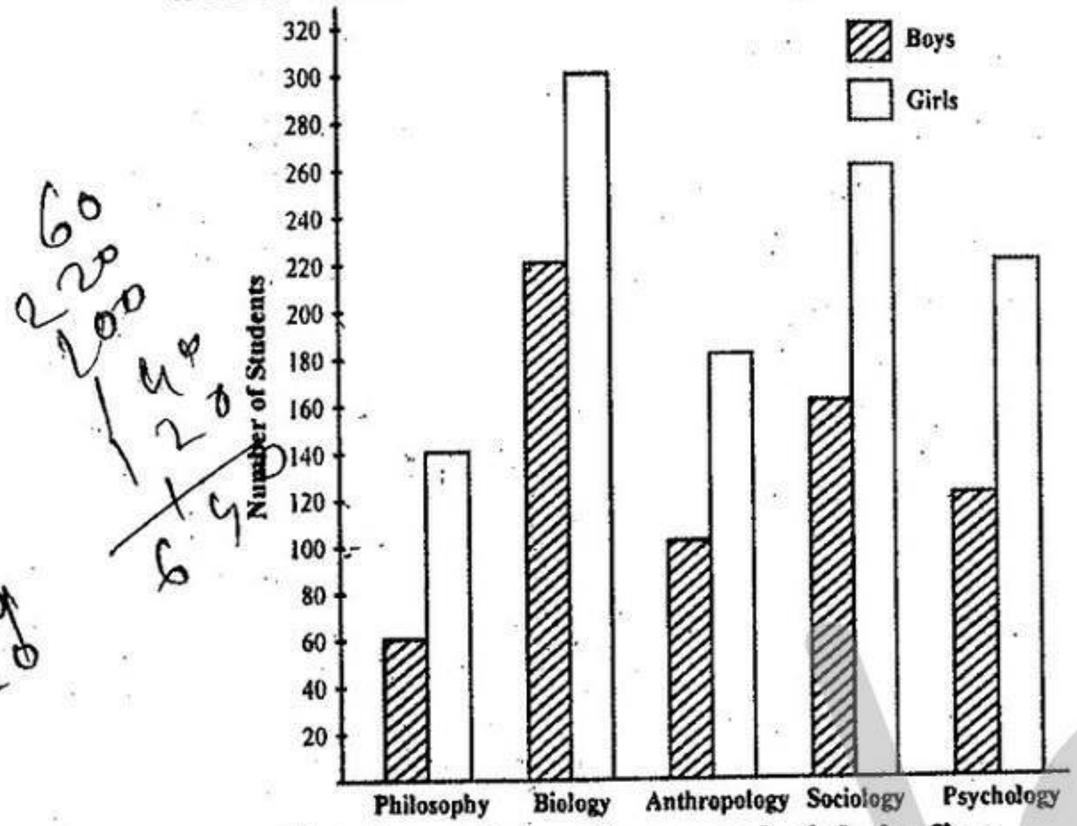
144. Percentage of the students got marks above 60% and below 80% is

(A) 43.95 (B) 48.39
(C) 51.06 (D) 56.84

145. If 40 is the pass marks, percentage of students failed is _____.

(A) 14.56 (B) 15.84
(C) 16.11 (D) 17.25

Study the bar diagram and answer Q. Nos. **146** to **150**.



Total number of boys and girls in five different departments of a college

146. The percentage of the girls from Biology Department comparing to the total number of girls from all the other Departments together is

(A) $37\frac{1}{2}$ (B) 37 (C) $36\frac{1}{2}$ (D) $35\frac{1}{2}$

147. The difference between the total number of boys and the total number of girls from all the Departments together is

(A) 540 (B) 520 (C) 460 (D) 440

148. The average number of boys from all the departments together is

(A) 123 (B) 132 (C) 134 (D) 142

149. The percentage of the boys from Biology Department comparing to the total number of boys from all the Departments together is

(A) $33\frac{1}{2}$ (B) 50 (C) $33\frac{1}{3}$ (D) 30

150. The respective ratio of number of girls from Philosophy Department to the number of girls from Psychology Department is

FOR VISUALLY HANDICAPPED CANDIDATES ONLY

142. Which one of the following numbers is a multiple of 11 ?

(A) 978626 (B) 447355
(C) 112144 (D) 869756

143. ₹ 782 is divided into 3 parts proportional to the fractions 1/2, 2/3 & 3/4. Then the 1st part is

(A) ₹ 182 (B) ₹ 190 (C) ₹ 196 (D) ₹ 204

144. The total interest in 4 years becomes $\frac{8}{25}^{th}$ of the principal at some simple interest per annum. The rate of interest per annum is

(A) 8% (B) 16% (C) $3\frac{2}{25}\%$ (D) 4%

145. If 15% of the students in a school are boys and the girl's number is 340, then the number of the boys is

(A) 30 (B) 60 (C) 80 (D) 85

146. The value of

$$\frac{6.4 \times 6.4 \times 6.4 - 4.6 \times 4.6 \times 4.6}{6.4 \times 6.4 + 6.4 \times 4.6 + 4.6 \times 4.6}$$ is

(A) 11 (B) 5.4 (C) 3.6 (D) 1.8

147. If $P^2 + \frac{1}{P^2} = 1$ (P > 0), then the value of $P^3 + \frac{1}{P^3}$ is

(A) 1 (B) 2 (C) 3 (D) 0

148. Each interior angle of a regular octagon is

(A) 120° (B) 108° (C) 135° (D) 45°

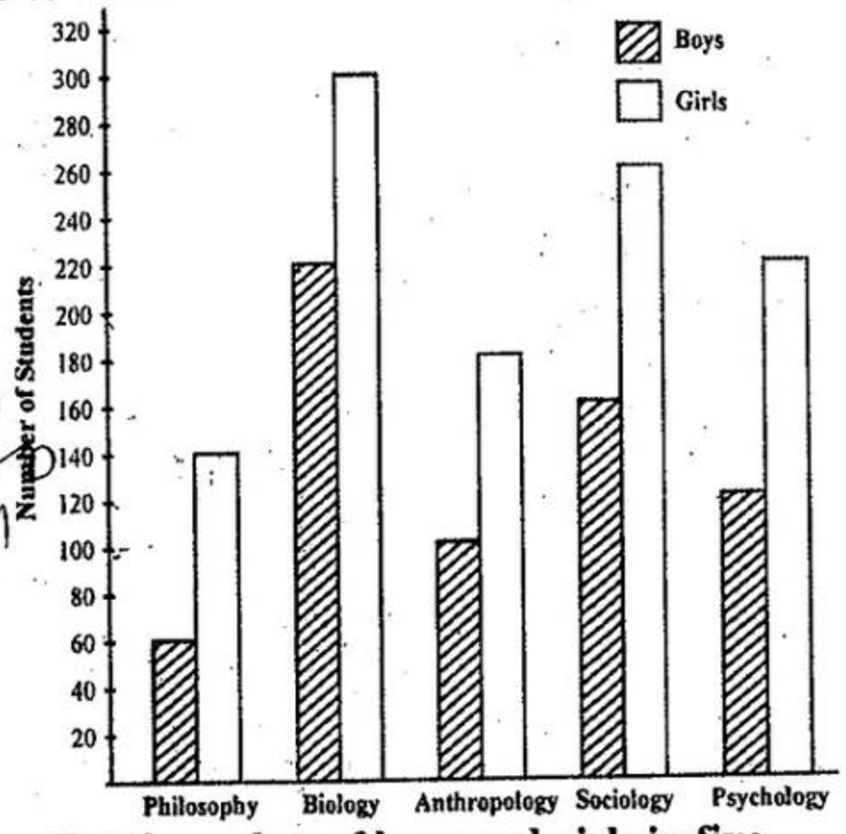
149. The value of

$$\frac{12 \sin^2 61° + 8 + 12 \sin^2 29°}{9 \cos^2 13° + 1 + 9 \cos^2 77°}$$ is

(A) 1 (B) 2 (C) 4 (D) 3

150. If $\tan(\theta + 15°) = \sqrt{3}$, where θ is acute, then the value of $\sin\theta$ is

Study the bar diagram and answer Q. Nos. **146** to **150**.



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(A) 7 : 11 (B) 11 : 7
(C) 7 : 10 (D) 6 : 11

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(A) 1 (B) 2 (C) 4 (D) 3

150. If $\tan(\theta + 15°) = \sqrt{3}$, where θ is acute, then the value of $\sin\theta$ is

(A) $\sqrt{2}$ (B) $\frac{1}{\sqrt{3}}$ (C) $\frac{\sqrt{3}}{2}$ (D) $\frac{1}{\sqrt{2}}$

SPACE FOR ROUGH WORK

Part – IV
GENERAL AWARENESS

151. If the equilibrium constants for the systems $H_2 + I_2 \rightleftarrows 2HI$ and $2HI \rightleftarrows H_2 + I_2$ are K_1 and K_2 respectively, the relationship between K_1 and K_2 is :
(A) $K_1 = K_2$ (B) $K_1 = 2K_2$
(C) $K_1 = K_2/2$ (D) $K_1 = 1/K_2$

152. Water has maximum density at
(A) 100 °C (B) 0 °C
(C) 4 °C (D) 273 °C

153. Concentration of a material which is lethal to 50% animal is called as
(A) LD_{50} (B) LC_{50}
(C) NOAEL (D) ADI

154. Neap tides are
(A) Strong (B) Weak
(C) Medium (D) Very strong

155. Sahara is located in which part of Africa ?
(A) Eastern (B) Western
(C) Northern (D) Southern

156. The Ocean with the largest surface area is
(A) Arctic Ocean
(B) Atlantic Ocean
(C) Indian Ocean
(D) Pacific Ocean

157. About how many Indians cannot meet their essential needs as per a report by McKinsey Global Institute (MGI) released on 19th February, 2014 ?
(A) 66% (B) 56%
(C) 46% (D) 36%

158. When a bond is formed between two atoms, the energy of the system will
(A) increase
(B) decrease
(C) remain the same
(D) may increase or decrease

159. Telephone was invented by
(A) Alexander Graham Bell
(B) Baird
(C) Stevenson
(D) Newton

160. Which was the first country to host the Asian Games ?
(A) Korea (B) India
(C) Japan (D) China

161. Who is the founder of Jainism in India ?
(A) Gautama (B) Mahavira
(C) Chandragupta (D) Ashoka

162. Who compiled the tales of "The Panchatantra" ?
(A) Valmiki
(B) Veda Vyasa
(C) Vishnu Sharma
(D) Tulsidas

163. Rajiv Gandhi Khel Ratna award for 2012-13 was awarded to
(A) Sachin Tendulkar
(B) Sania Mirza
(C) Major RVS Rathore
(D) Ronjan Sodhi

164. Human Rights Day is observed on
(A) 10th March (B) 10th July
(C) 10th September (D) 10th December

165. Ajanta Caves were built during period of
(A) Gupta (B) Kushana
(C) Maurya (D) Chalukya

166. Who was the painter of the famous painting called – 'Bharatmata' ?
(A) Gaganendranath Tagore
(B) Abanindranath Tagore
(C) Nandalal Bose
(D) Jamini Roy

167. Who discovered Cape of Good Hope in 1488 ?
(A) Magellan
(B) Columbus
(C) Bartholomew Dias
(D) Vasco da gama

168. Taxes are as certain as the death, because
(A) They constitute the major source of government revenue.
(B) Government have no other source of revenue.
(C) Most PSUs are run inefficiently.
(D) Government has its own budget constraints.

169. Which is NOT a measure undertaken by government to check inflation ?
(A) Increase in consumption
(B) Increase in production
(C) Reduction in Deficit financing
(D) Taxation measures

170. The 'Slack Season' in the Indian Economy is
(A) March-April
(B) September-December
(C) January-June
(D) February-April

171. The relationship between the rate of interest and level of consumption was first visualized by
(A) Amartya K. Sen
(B) Milton Friedman
(C) Irving Fisher
(D) James Duesenberry

172. Which one of the Constitutional amendment has established Panchayati Raj Institution ?
(A) 72nd Amendment Act
(B) 71st Amendment Act
(C) 73rd Amendment Act
(D) 78th Amendment Act

173. 'Take-off stage' in an economy means
(A) Steady growth begins.
(B) Economy is stagnant.
(C) Economy is about to collapse.
(D) All controls are removed.

174. In the year 1977, an official committee was appointed to examine Panchayat Raj under the Chairmanship of
(A) Ashok Mehta
(B) Shri Ram Mehta
(C) Balwant Rai Mehta
(D) Manohar Lal Mehta

175. How many countries are the members of U.N. General Assembly ?
(A) 190 (B) 191
(C) 192 (D) 193

176. Which among the following States, first introduced the Panchayat Raj System ?
(A) Rajasthan (B) Haryana
(C) Uttar Pradesh (D) Maharashtra

177. Which was the backbone of Indus Economy ?
(A) Agriculture
(B) Trade
(C) Wheel Made Pottery
(D) Carpentry

178. Which Mughal Emperor transferred the Mughal Capital from Agra to Delhi ?
(A) Jahangir (B) Aurangzeb
(C) Shahjahan (D) Bahadur Shah

179. Who said, "A living thing is born" after the League of Nation's Covenant was drafted ?
(A) Lord Robert Cecil
(B) Woodrow Wilson
(C) Orlando
(D) Neville Chamberlain

180. The author of 'Arthashastra' was a contemporary of _____.
(A) Ashoka
(B) Chandragupta Maurya
(C) Samudragupta
(D) Chandragupta Vikramaditya

181. The Taj-Mahal was built by _____.
(A) Jahangir (B) Shahjahan
(C) Sher Shah (D) Nadir Shah

182. The Election Commission is established under the Article
(A) Article-355 (B) Article-256
(C) Article-324 (D) Article-320

183. The percentage of India's total population employed in agriculture is nearly
(A) 60% (B) 50%
(C) 70% (D) 80%

184. The temperature increases rapidly above
(A) Ionosphere (B) Exosphere
(C) Stratosphere (D) Troposphere

185. Which one of the following continents lies in Northern-Southern and Eastern-Western hemispheres of the earth ?
(A) Australia (B) Africa
(C) Europe (D) South America

186. Which Committee/Commission examined the Centre and State relationship ?
(A) Ashok Mehta Committee
(B) Indrajit Gupta Committee
(C) Sarkaria Commission
(D) N.N. Vohra Committee

187. Which one of the following is not a photosynthetic pigment ?
(A) Chlorophyll (B) Phycobilin
(C) Carotenoid (D) Anthocyanin

188. National Fruit of India is
(A) Mango (B) Pineapple
(C) Apple (D) Grapes

189. Which of the following is a fibrous protein ?
(A) Haemoglobin (B) Albumin
(C) Keratin (D) Enzymes

190. Typhoid fever is caused by
(A) Bacteria (B) Virus
(C) Protozoa (D) Fungi

191. The International Commission on Zoological Nomenclature was established in
(A) 1898 (B) 1988
(C) 2001 (D) 1664

192. Which one of the following is the world's largest desert ?
(A) Arabian (B) Kalahari
(C) Sahara (D) Thar

193. A man standing at the top of a tower has two spheres A and B. He drops sphere A downwards and throws sphere B horizontally at the same time. Which of the following is correct ?
(A) Both the spheres will reach the ground simultaneously.
(B) A will reach the ground first.
(C) B will reach the ground first.
(D) The question is incomplete because the masses of the spheres are not given.

194. The dimensional formula $ML^{-1}T^{-2}$ corresponds to
(A) Modulus of elasticity
(B) Viscosity
(C) Moment of a force
(D) Thrust

195. 1 Micron is equal to
(A) 10^{-9} m (B) 10^{-12} m
(C) 10^{-6} m (D) 10^{-15} m

196. A wavelength of 0.3 m is produced in air and it travels at a speed of 300 m/s. Then it will be an
(A) Audible wave
(B) Infrasonic wave
(C) Ultrasonic wave
(D) Microwave

197. The time between program input and output is called
(A) Turn around time
(B) Waiting time
(C) Execution time
(D) Delay time

198. The Indian National Grid Computing Initiative for Scientific Engineering and Academic Community is named
(A) Ganga (B) SAGA
(C) Garuda (D) PARAM

199. Sodium Carbonate is commonly known as
(A) Baking Soda (B) Washing Soda
(C) Caustic Soda (D) Caustic Potash

200. Carolus Linnaeus System of classification is
(A) Natural (B) Artificial
(C) Binomial (D) Phylogenetic