COURSE CODE : 142

Time : 2 Hours                         Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.

2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.

3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.

4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.

5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.

6. Do not open the question paper until the start signal is given.

7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.

8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.

9. Use of Calculators, Tables, etc. are prohibited.
Section A: English Comprehension

In the following questions choose the word, which is most similar to the word written in italics:

1. Selvam has never been an *out going* type.
   (A) A courageous  (B) A frank
   (C) An out spoken  (D) A sociable

2. *Propitious*
   (A) Favourable  (B) Similar
   (C) Humble  (D) Versatile

3. *Macabre*
   (A) Innocent  (B) Tarried
   (C) Gruesome  (D) Pleasing

4. *Grandeur*
   (A) Magnificence  (B) Admiration
   (C) Happiness  (D) Awe

5. *Exasperating*
   (A) Irritating  (B) Amusing
   (C) Disappointing  (D) Boring

In the following questions choose the word, which is opposite in the meaning to the word written in italics:

6. *Digress*
   (A) Belittle  (B) Confuse
   (C) Facilitate  (D) Focus

7. *Deploy*
   (A) Relinquish  (B) Convert
   (C) Deceive  (D) Concentrate

8. *Precocious*
   (A) Stunned  (B) Insensitive
   (C) Capricious  (D) Ignorant
9. *Flush*
   (A) Meager                  (B) Accurately portrayed
   (C) Lacking motion        (D) Undeveloped

10. *Disinclined*
    (A) Notable          (B) Gentle
    (C) Willing           (D) Versatile

Read the following passage and answer questions from 11-15:

The arrival of the train did not disturb Sir Mohan Lal's sang-froid. He continued to sip his scotch and order the bearer to tell him when he had moved the luggage to a first-class compartment. Excitement, bustle and hurry were exhibitions of bad breeding, and Sir Mohan was eminently well-bred. He wanted everything 'tickety-boo' and orderly. In his five years abroad Sir Mohan had acquired the manners and attitude of the upper classes. He rarely spoke Hindustani, when he did, it was like an Englishmen's — only the very necessary words and properly anglicized. But he fancied his English, finished and refined at no less a place than the University of Oxford. He was fond of conversation and like a cultured Englishman he could talk on almost any subject — books, politics, people. How frequently had he heard English people say that he spoke like an Englishman!

11. Sir Mohan is portrayed as
    (A) An Indophile            (B) A true Englishman
    (C) A Hindu                 (D) An Anglophile

12. When Sir Mohan Lal spoke Hindustani it was
    (A) Colloquial Hindi         (B) Literary Hindi
    (C) Indian English           (D) Anglicized Hindi

13. According to Sir Mohan Lal, a well-bred person would
    (A) Remain aloof from the crowd (B) Like to drink only Scotch in public
    (C) Always be calm and orderly   (D) Speak like an Englishman

14. From his description in this passage Sir Mohan Lal appears to be
    (A) A man of culture          (B) An aristocrat
    (C) A snob                     (D) A scholar

15. According to the passage, a cultured Englishman is able to talk effortlessly on
    (A) Art and culture       (B) Human civilization
    (C) Modern science        (D) Almost any subject
Fill in the blanks from alternatives given below the questions. (Q 16-20):

16. The great scientist _________ himself with ability and moderation all _________ the conference.
   (A) Presented; though                   (B) Conducted; through
   (C) Displayed; in                        (D) Disclosed; besides

17. The new principal _________ stress on routine administration _________ Than on academic matters and examination reforms.
   (A) Laid; rather                       (B) Began; even
   (C) Started; further                   (D) Released; only

18. Traders and businessmen from Japan have _________ the world markets of electronics goods by adopting low cost strategy.
   (A) Exhausted                              (B) Captured
   (C) Arranged                                (D) Grasped

19. Too many skyscrapers _________ the view along the beach.
   (A) Obstruct                              (B) Reveal
   (C) Clear                                 (D) Connect

20. I became alert because I _________ trouble around me.
   (A) Saw                                   (B) Transcended
   (C) Comprehended                          (D) Sensed

In the following questions, some of the sentences have errors and some have none. Find out which part of the sentence has an error. If there is no error, choose, ‘D’ as your answer. (Q 21-30):

21. Don’t think you can say unpleasant things / about someone behind his back / and not found out? /No error.
   (A) (B) (C) (D)

22. When the police approached he / he held up his both hands / to show that he was surrendering/No error.
   (A) (B) (C) (D)
23. The led me to think / that inspiration gradually faded / because the mind is (A) overworked and undernourished. / No error. (B) (C) (D)

24. She insisted to go there / though her husband cautioned her / against it. / No error. (A) (B) (C) (D)

25. As he dived from the spring board / he was terrified to see / that the water was (A) drained from the pool the previous night. / No error. (B) (C) (D)

26. Kapildev is one of the finest batsmen / that India have produced / over the decades. / (A) No error. (B) (C) (D)

27. Nanthini’s fountain pen / is as expensive as / Kathir. / No error. (A) (B) (C) (D)

28. After the humiliating exposure / he hanged his head / in shame. / No error. (A) (B) (C) (D)

29. Though senior in age / his father is junior than / my father in services. / No error. (A) (B) (C) (D)

30. An Indian ship / laden with merchandise / got drowned in Pacific. / No error. (A) (B) (C) (D)

Section B : Arithmetic Ability

31. How many positive integers are there which are not greater than 100, and are not divisible by 2, 3, or 5?
   (A) 26  (B) 29
   (C) 21 (D) None of these

32. Ramesh and seven times as many as Rs. 2 coins as Re. 1 coins. If the total value of money with him is Rs. 15, how many coins does he have with him?
   (A) 15  (B) 7
   (C) 14 (D) 8
33. 5 apples and 3 bananas cost Rs. 13. 1 apple, 1 banana and 2 coconuts cost Rs. 7. 1 apple, 3 bananas and 5 coconuts cost Rs. 15. What is the cost of 1 apple, 1 banana and 1 coconut?
   (A) Rs. 7  
   (B) Rs. 6  
   (C) Rs. 5  
   (D) Insufficient data

34. The sum of the ages of three brothers (two of whom are twins) is 25. If the elder brother was twice the age of the younger brother 3 years back, what is the age of the twins?
   (A) 5 years  
   (B) 6 years  
   (C) 7 years  
   (D) 8 years

35. If 7A45B X 98B = 702B8299, where A and B are distinct digits, then what is the value of A + B?
   (A) 3  
   (B) 2  
   (C) 4  
   (D) 7

36. The smallest number which when increased by 3 will be divisible by 9, 12, 27 and 36 is
   (A) 100  
   (B) 103  
   (C) 105  
   (D) 108

37. A library has 138 books on English, 184 books on Hindi, and 253 on Telugu. If they have to be arranged in shelves each of which can accommodate equal number of books, how many shelves are required so that the books do not get mixed up? How many books does each shelf contain?
   (A) 25, 23  
   (B) 2, 13  
   (C) 11, 23  
   (D) 11, 13

38. Six bells commence ringing together and ring at intervals of 2, 4, 6, 8, 10 and 12 seconds respectively. In 30 minutes how many times do they ring together?
   (A) 13  
   (B) 16  
   (C) 10  
   (D) 5

39. The product of the two-digit numbers is 2160 and their HCF is 12. The numbers are
   (A) 72, 30  
   (B) 96, 25  
   (C) 48, 24  
   (D) 36, 60

40. HCF of 1/2, 2/3, 3/4 and 4/5 is
   (A) 1  
   (B) 1/15  
   (C) 4/5  
   (D) 1/60
41. The sum of two numbers is 72. The product of numbers is 1280. What is the sum of the inverse of the two numbers?
   (A) 18/57 (B) 9/80
   (C) 9/320 (D) 9/160

42. In a cricket match, team A scored a total of 630 runs in both the innings, while team B scored a total of 840 runs in both the innings. If team B scored 90 more runs than team A did in the first innings, how much more did team B score over team A in the second innings?
   (A) 210 runs (B) 90 runs
   (C) 120 runs (D) None of these

43. The cost of two note books and one pen is the same as the cost of one register. If the cost of a pen is Rs. 2 and 3 registers and two note books are available for Rs.14, what is the cost of one note book?
   (A) Re. 1 (B) Rs. 1.5
   (C) Rs. 2 (D) Rs. 2.5

44. The sum of three consecutive integers is 24 and the sum of three consecutive odd integers is 69. What is the sum of squares of the smallest even integer and the smallest odd integer?
   (A) 484 (B) 477
   (C) 447 (D) 520

45. In a country election between two candidates, the winner polled twice as much as the loser and won by a margin of 50 votes. If only two-thirds of electorate had voted, what is the total strength of the electorate?
   (A) 150 (B) 200
   (C) 125 (D) 225

46. Ten monkeys eat 10 bananas in 10 minutes. How long will it take for 20 monkeys to eat 20 bananas?
   (A) 5 minutes (B) 10 minutes
   (C) 15 minutes (D) 20 minutes

47. Thirty assistants can complete a sorting job in four weeks, working three hours a week. How long will forty assistants working four hours a week take to complete the job?
   (A) 2 \( \frac{1}{4} \) weeks (B) 3 \( \frac{1}{2} \) weeks
   (C) 4 weeks (D) 6 \( \frac{1}{4} \) weeks
48. If 4/5 of a tank is filled in two minutes, how much more time will be required to fill the rest of it?

(A) $\frac{1}{4}$ min  
(B) $\frac{1}{2}$ min  
(C) $\frac{2}{3}$ min  
(D) $\frac{3}{4}$ min

49. There are 6 inlet taps to a swimming pool. If all are opened it takes 8 hours to fill the bath. How long it will take to fill the bath if two of the taps are blocked?

(A) 12  
(B) 18  
(C) 24  
(D) 36

50. A and B start a business with capitals of Rs. 7500 and Rs. 4500. Sometimes later A withdrew and at the end of one year A gets Rs. 5500 out of a total profit of Rs. 10450. After how many months did he withdraw?

(A) 9  
(B) 8  
(C) 6  
(D) 10

51. If A’s salary is 50% more than B’s, then how much percent is B’s salary less than A’s?

(A) 33 1/3%  
(B) 50%  
(C) 42 2/3%  
(D) 66 2/3%

52. There are 120 girls and 55 boys in a school. If 5% of the girls leave and no new students are admitted, what percentage of whole school will be boys?

(A) 42.52%  
(B) 36.74%  
(C) 32.54%  
(D) 30.72%

53. An alcohol solution contains 5% alcohol by weight. How many kg of water must be added to 40 kg of the solution for the concentration of the solution to be 2%?

(A) 50 kg  
(B) 60 kg  
(C) 64 kg  
(D) 48 kg

54. By selling 90 chairs, a trader gains the cost of 15 chairs. His gain percentage is

(A) 22.5%  
(B) 16.66%  
(C) 33.33%  
(D) 27.5%

55. A monkey climbing up a pole ascends 10m and slips down 2m in alternate minutes. If the pole is 57m high, how long will it take to reach the top of the pole?

(A) 14 min 6 sec  
(B) 12 min 54 sec  
(C) 14 min 10 sec  
(D) 13 min 10 sec
Section C: Logical Reasoning

Directions (Qs 56 to 59): In the following questions there are four groups of letters in which three are alike in some way. Find out the group which is different.

56. (A) IBCD    (B) UFGH    (C) ORQP    (D) EKLM
57. (A) KLLM    (B) XXXZ    (C) TUUV    (D) OPPQ
58. (A) ALERTED (B) REPEAT  (C) CREATE  (D) CHEAT
59. (A) ACEGI   (B) BDFHJ   (C) SUWYA   (D) LINPR

Directions (Qs 60 to 64): Find the number that comes next in the sequence:

60. 10, 4, 14, 18, 32, ....................
    (A) 40                          (B) 50
    (C) 48                          (D) 52

61. 7, 9, 13, 19, ....................
    (A) 27                          (B) 21
    (C) 31                          (D) 23

62. 32, 27, 30, 29, 28, 31 ............... 
    (A) 34                          (B) 38
    (C) 26                          (D) 40

63. 6, 18, 3, 21, 7, 56 ...................
    (A) 8                           (B) 64
    (C) 9                           (D) 63

64. 165, 195, 255, 285 ...................
    (A) 310                         (B) 25
    (C) 345                         (D) 225

65. Pointing to a boy in a photograph Akhil says, “He is the only son of my mother’s son’s only son”. How is Akhil related to that boy?
    (A) Uncle                       (B) Brother
    (C) Father                      (D) Cousin
66. Three of the following are alike in a certain way and so form a group. Which is the one that does not belong to the group?
   (A) LISTEN  (B) FEEL  (C) THINK  (D) SING

67. In a certain code language GEO-PHYSICS is written as IOPDHZRJBT. How is ALTIMETERS written in that code?
   (A) NHULBFSDQQT  (B) NJUKBFSDQQT  (C) NHUKCFSDQQT  (D) NHUKBFSEQQT

68. How many such pairs of words are there in CREDIBILITY each of which have as many letters between them in the word as also in the alphabet?
   (A) One  (B) Two  (C) Three  (D) More than three

69. Bullet is to Rifle as Arrow is to
   (A) Archer  (B) Bow  (C) Target  (D) Cord

70. Museum is related to ‘Curator’ in the same way as ‘Prison’ is related to
   (A) Warden  (B) Monitor  (C) Manager  (D) Jailor

Directions (Qs 71 to 75): Find the missing term in the series:

71. B, D, G, K, P,?
   (A) S  (B) V  (C) T  (D) W

72. ADG, HKN,?
   (A) ORU  (B) VXZ  (C) JLN  (D) BEG

73. C4X, F9U, 116R,?
   (A) L25P  (B) L25O  (C) L27P  (D) None of these

74. EJOT, DHLP, CFIL,?
   (A) BDFH  (B) HLM  (C) DEIJ  (D) DGKL

75. AZ, CX, EU,?
   (A) KP  (B) JQ  (C) IR  (D) IV
Read the following paragraph and answer the questions given below it.
There are four friends Anil, Sushil, Raju and Harish. One of them is a cricketer and
studies Chemistry and Biology. Anil and Sushil play Football. Anil studies Commerce.
Both the Football players study Mathematics. Harish is a boxer. One Football player
also studies Physics. The Boxer studies Mathematics and Accountancy. All the friends
study two subjects each and play one game each.

76. Who is a cricketer?
   (A) Anil  (B) Raj
   (C) Sushil (D) Harish

77. Who does not study Mathematics?
   (A) Raj  (B) Harish
   (C) Both Raj and Harish (D) Anil

78. Who studies Physics?
   (A) Anil (B) Sushil
   (C) Raj  (D) Harish

79. Who studies Commerce and play Football?
   (A) Anil (B) Sushil
   (C) Raj  (D) Harish

80. Name the person who is not Boxer, but studies both Chemistry and Biology
   (A) Anil (B) Sushil
   (C) Raj  (D) Harish

Section D: Research Methodology

81. What is the order of executing a survey?
    (a) Setting up an administrative organization
    (b) Design of forms
    (c) Selection, training and supervision of the field organization
    (d) Control over the quality of the field work and field edit
    (e) Processing of data
    (f) Preparation of report
    (A) bcdeadf (B) abcdef
    (C) cbfeda (D) bcdeadf
82. Which amongst these is not a method of collecting primary data?
   (A) Direct personal interviews
   (B) Indirect oral interviews
   (C) Information from correspondents
   (D) Information collected from manuscripts

83. Which amongst the following statement is true?
   (A) Chi-square test is usually a two-tail test.
   (B) The value of Chi-square can be positive as well as negative
   (C) In a Chi-square distribution, as the number of degrees of freedom decreases the curve becomes more and more symmetric
   (D) The Chi-square test is a non-parametric test.

84. A bag contains 10 balls of which 4 are black and 6 are red. Four balls are drawn at a random. Find the probability of drawing exactly two red balls.
   (A) 3/73
   (B) 2/240
   (C) 4/40
   (D) 4/121

85. The classical school of thought on probability assumes that all possible outcomes of an experiment are
   (A) Equally likely
   (B) Independent
   (C) Mutually exclusive
   (D) Mutually exclusive and equally likely

86. Which statement about regression analysis is wrong?
   (A) It reveals average relationship between two variables
   (B) Regression line cuts cut each other at the point of average of X and Y.
   (C) Regression coefficients are independent of change of scale and origin
   (D) If standard error of estimate is zero, there is no variation about the regression line a correlation will be perfect.
87. Indicate which among the following statements is true?
   (A) There are no limits to the value of r
   (B) The rank correlation coefficient was developed by Spearman
   (C) If r is negative, both the variables are decreasing
   (D) Pearsonian coefficient is the best in all situations

88. In a symmetrical distribution
   (A) Mean > Median > Mode
   (B) Mode > Median > Mean
   (C) Mean = Median = Mode
   (D) It varies with cases

89. Which statement among the following statements is correct?
   (A) In a skewed distribution quartiles are equidistant from the median
   (B) Skewness cannot be calculated in a bimodal distribution
   (C) Moments about an arbitrary origin are called central moments
   (D) The odd moments in a symmetrical distribution are zero.

90. In a moderately asymmetrical distribution
   (A) A.M > G.M. > H.M.
   (B) A.M < G.M. < H.M.
   (C) G.M < H.M. < A.M.
   (D) H.M < G.M. < A.M.

91. The sum of deviations of individual observations is zero from
   (A) Arithmetic Mean
   (B) Median
   (C) Mode
   (D) None of these

92. Which average is affected most by extreme observations?
   (A) Mode
   (B) Median
   (C) Arithmetic Mean
   (D) Geometric Mean

93. Which of the following is the most unstable average?
   (A) Mode
   (B) Median
   (C) Arithmetic Mean
   (D) Geometric mean
94. For dealing with qualitative data the best average is
   (A) Arithmetic Mean  (B) Geometric mean
   (C) Harmonic mean   (D) Median

95. The positional measure of central tendency is
   (A) Median          (B) Arithmetic Mean
   (C) Geometric mean  (D) None of these

96. Diagrams and graphs are tools of
   (A) Collection of data (B) Analysis of data
   (C) Presentation of data (D) None of these

97. In a two dimensional diagram
   (A) Only height is considered
   (B) Only width is considered
   (C) Height, width and thickness are considered
   (D) Both height and width are considered

98. Which of the following should be avoided as methods of presenting data?
   (A) Spheres and cubes  (B) Bars
   (C) Pie diagrams       (D) Pictograms

99. When population under investigation is infinite we should use the
   (A) Sample method     (B) Census method
   (C) Either sample or census method (D) None of the above

100. Sampling errors are present only in
     (A) Complete enumeration survey
     (B) Sample survey
     (C) Both census or sample survey
     (D) Neither census nor sample survey