Roll No.

LDA RECRUITMENT WRITTEN EXAMINATION, 2018 (MATHEMATICS)

SET

C

Duration : 3 hrs	Full Marks : 100

INSTRUCTIONS:

1. Immediately after the commencement of the examination, you should check that this question booklet does not have any unprinted or torn or missing pages. If so, get it replaced by a complete new question booklet.

2. Use of Calculator/Mobile Phone or any other electronics gadget inside the examination hall is strictly prohibited.

3. Use of unfair means in the Examination Hall, causing disturbance to others or indiscipline of any sort will lead to cancellation of candidature followed by legal action (if necessary).

4. Removing pages from the question booklet and handing over/taking of other's question paper is strictly prohibited and will be treated as use of unfair means.

5. Ensure that you have returned the answer sheets to the invigilator before leaving the examination hall.

6. You may take this question booklet along with you after the completion of the examination.

7. Blank pages provided at the end maybe use for Rough Work.

8. General Instruction for marking OMR sheet is given at the back (last page) of this Question Booklet.

LDA/LDC EXAMINATION, 2018 FOR SUBORDINATE COURTS OF MANIPUR

MATHEMATICS

Maximum Marks: 100   **Time allowed: 3 (Three) Hours**

> **CANDIDATES SHOULD ATTEMPT ALL QUESTIONS.**
> **EACH QUESTION CARRIES EQUAL MARK.**
> **THERE WILL BE NO NEGATIVE MARKING FOR WRONG ANSWER**

---

1. Two numbers are in the ratio 5 : 7. Diminishing each of them by 40, they became in the ratio 17 : 27. The difference of the numbers is

   (A) 18   (B) 52
   (C) 137   (D) 50

2. If Rs. 1000 is divided between A and B in the ratio 3 : 2, then A will receive

   (A) Rs. 400   (B) Rs. 500
   (C) Rs. 600   (D) Rs. 800

3. Two natural numbers are in the ratio 3 : 5 and their product is 2160. The smaller of the numbers is

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

4. The ratio of the sum of two numbers and their difference is 5 : 1. The ratio of the greater number to the smaller number is

   (A) 2 : 3   (B) 3 : 2
   (C) 5 : 1   (D) 1 : 5

5. The ratio of the income to the expenditure of a family is 10 : 7. If the family's expenses are Rs. 10500, then savings of the family is

   (A) Rs. 4500   (B) Rs. 10000
   (C) Rs. 4000   (D) Rs. 5000

6. A man travelled a distance of 61 km in 9 h partly on foot at the rate of 4 km/h and partly on bicycle at the rate of 9 km/h. The distance travelled on foot was

   (A) 12 km   (B) 16 km
   (C) 20 km   (D) 24 km

7. How much distance will a bus cover in 8 h, if it is moving with a uniform speed of 37 km/h ?

   (A) 246 km   (B) 289 km
   (C) 296 km   (D) 276 km

8. A man covered a distance of 96 km in 12 h on a bicycle. How much distance will he cover on a motorbike in 7 h, if he rides the motorbike at six times the speed of the bicycle ?

   (A) 448 km   (B) 326 km
   (C) 316 km   (D) None of these

9. The average speed of a bus is three-fifth of the average speed of a car which covers 3250 km in 65 h. What is the average speed of the bus ?

    (A) 30 km/h   (B) 20 km/h
    (C) 35 km/h   (D) 36 km/h

10. A man walking with 3/4 of his usual speed, reaches office 20 minute late. His usual time is

    (A) 50 min   (B) 80 min
    (C) 70 min   (D) 60 min

11. Sum of three consecutive even integers is 54. The least among them is

    (A) 18   (B) 15
    (C) 14   (D) 16

12. The sum of two numbers is 40 and their difference is 4. The ratio of the numbers is

    (A) 21 : 19   (B) 22 : 9
    (C) 11 : 9   (D) 11 : 18

13. The sum of the squares of two natural consecutive odd numbers is 394. The sum of the numbers is

    (A) 24   (B) 32
    (C) 40   (D) 28

14. The sum of twice a number and three times of 42 is 238. What is the sum of thrice the number and two times of 42?

    (A) 245   (B) 250
    (C) 264   (D) 252

15. A carton consists of 100 shirts, of which 84 are good, 10 have minor defects and 6 have major defects. Arun, a trader, will accept the shirts which are good but Kapoor, another trader, will reject the shirts which have major defects. One shirt is drawn at random from the carton. What is the pobability that it is acceptable to Kapoor ?

    (A) 0.76   (B) 0.98
    (C) 0.87   (D) None of these

16. If P(A) = 1/3, P(B) = 1/2 and P $(A \cup B)$ = 5/6, then events A and B are

    (A) mutually exclusive   (B) independent as well as mutually exhaustive
    (C) independent   (D) dependent only on A

17. Four boys and three girls stand in a queue for an interview, probability that they will be in alternate position, is

    (A) $\frac{1}{34}$ (B) $\frac{1}{35}$

    (C) $\frac{1}{17}$ (D) $\frac{1}{68}$

18. Two cards are drawn without replacement from a well shuffled pack. The probability that one of them is an ace of heart, is

    (A) $\frac{1}{25}$ (B) $\frac{1}{26}$

    (C) $\frac{1}{52}$ (D) None of these

19. If a dice is thrown twice, the probability of occurrence of 4 at least once, is

    (A) $\frac{11}{36}$ (B) $\frac{7}{12}$

    (C) $\frac{35}{36}$ (D) None of these

20. The ninth term of the sequence 0, 3, 8, 15, 24, 35, ... is

    (A) 63   (B) 70
    (C) 80   (D) 99

21. The next term of the sequence 2, 3, 6, 7, 14, ... is

    (A) 15   (B) 17
    (C) 18   (D) 20

22. What value should come in the place of question mark (?)

    15, 21, 39, 77, 143, ?

    (A) 243   (B) 240
    (C) 253   (D) 245

23. What value will come in the place of question mark (?)

    8, 10, 18, 44, 124, ?

    (A) 344   (B) 366
    (C) 354   (D) 356

24. What value will come in the place of the question mark (?)

    7, 11, 19, 35, 67, ?

    (A) 121   (B) 153
    (C) 141   (D) None of these

25. If the students of 9ᵗʰ class are arranged in rows of 6, 8, 12 or 16, no student is left behind. Then, the possible number of students in the class is

    (A) 60   (B) 72
    (C) 80   (D) 96

26. The greatest number, which when divided by 989 and 1327 leaves remainder 5 and 7 respectively, is

    (A) 8   (B) 16
    (C) 24   (D) 32

27. A milkman has 75 L milk in one can and 45 L in another. The maximum capacity of container which can measure milk of both containers exact number of times, is

    (A) 1 L   (B) 5 L
    (C) 15 L   (D) 25 L

28. The product of two numbers is 4107. If the HCF of the number is 37, the greatest number is

    (A) 185   (B) 111
    (C) 107   (D) 101

29. Two numbers are in the ratio 3 : 5 and their LCM is 225. The smaller number is

(A) 45   (B) 60
(C) 75   (D) 90

30. What will come in place of question mark (?)

$456 \div 24 \times 38 - 958 + 364 =$

(A) 112   (B) 154
(C) 128   (D) 136

31. What will come in place of question mark (?)

$(34.5 \times 14 \times 42) \div 2.8 =$

(A) 7150   (B) 7365
(C) 7245   (D) 7575

32. What value should come in place of question mark (?)

$8648 - 7652 = ? \times 40$

(A) 24.7   (B) 28.9
(C) 27.4   (D) None of these

33. If a, b and c are non-zero, $a + \frac{1}{b} = 1$ and $b + \frac{1}{c} = 1$, then the value of abc is

(A) −3   (B) 1
(C) −1   (D) 3

34. If $a^2 + b^2 + c^2 = 2(a - b - c) - 3$, then the value of $4a - 3b + 5c$ is

(A) 2   (B) 3
(C) 5   (D) 6

35. If the cost price of 15 books is equal to the selling price of 20 books, the loss per cent is

(A) 16%   (B) 20%
(C) 24%   (D) 25%

36. The cost price of a book is Rs. 150. At what price should it be sold to gain 20% ?

(A) Rs. 180   (B) Rs. 100
(C) Rs. 80   (D) Rs. 120

37. Dipankar sold an item for Rs. 6150 and incurred a loss of 25%. At what price should he have sold the item to have gained a profit of 25% ?

(A) Rs. 8200   (B) Rs. 9850
(C) Rs. 10250   (D) Cannot be determined

38. There is a loss of 4% on selling an article for Rs. 81.60. If that article is sold for Rs. 102, the actual result of this transaction is ?

(A) 20% loss   (B) 12% loss
(C) 12% profit   (D) 20% profit

39. Ram sold a cow to Raheem on a profit of 20% and Raheem sold it to Robert on a profit of 25%. If Robert paid Rs. 900 for cow, then what was the cost price of cow to Ram ?

    (A) Rs. 600
    (C) Rs. 750
    (B) Rs. 700
    (D) Rs. 800

40. The cost price of 18 articles is equal to the selling price of 15 articles. The gain is

    (A) 25%
    (C) 18%
    (B) 20%
    (D) 15%

41. The average of eleven results is 50. If the average of first six results is 49 and that of the last six is 52, the sixth result is

    (A) 48
    (C) 52
    (B) 50
    (D) 56

42. The average of odd numbers upto 100 is

    (A) 50.5
    (C) 49.5
    (B) 50
    (D) 49

43. The average of first 100 positive integers is

    (A) 100
    (C) 50.5
    (B) 51
    (D) 49.5

44. Average age of 5 boys is 16 yr, which that of 4 boys is 16 yr 3 months. The age of the 5th boy is

    (A) 15 yr
    (C) 15 yr 4 months
    (B) 15 yr 6 months
    (D) 15 yr 2 months

45. What will be the average of the following set of scores ?

    313, 252, 161, 727, 515, 818

    (A) 463
    (C) 456
    (B) 466
    (D) 476

46. The sum of the present ages of Varun and Kapil is 42 yr. The ratio of their ages after 5 yr will be 15 : 11. What is the present age of Kapil ?

    (A) 17 yr
    (C) 25 yr
    (B) 24 yr
    (D) 22 yr

47. The average of the present ages of Sachin and Saurabh is 36 yr. If Sachin is 8 yr older than Saurabh, what is the Saurabh's present age ?

    (A) 30 yr
    (C) 32 yr
    (B) 34 yr
    (D) 40 yr

48. I am three times as old as my son. 15 yr hence, I will be twice as old as my son. The sum of our ages is ?

    (A) 48 yr
    (C) 64 yr
    (B) 60 yr
    (D) 72 yr

49. The present ages of two persons are 36 and 50 yr respectively. If after n yr the ratio of their ages will be 3 : 4, then the value of n is

      (A) 3   (B) 4

      (C) 7   (D) 6

50. The age of a man after 15 yr is 4 times the age of that man 15 yr before. His present age is

      (A) 10 yr   (B) 15 yr

      (C) 20 yr   (D) 25 yr

****