(B)

GOVERNMENT OF MIZORAM

LOCAL ADMINISTRATION DEPARTMENT

EXAMINATION FOR RECRUITMENT
TO THE POST OF SA
2024

PAPER II

SIMPLE ARITHMETIC

FULL MARKS : 100
TIME ALLOWED : 3 HOURS

Candidate tana hriat tur

1. A dik zawnah "√" thai tur.

2. Thlan tur zingah hian answer dik pakhat chiah a awm

3. Question tinin mark hnih zel a pu.

4. **A kawmah hian i Roll No. chiah ziak ang che.**

Signature of Invigilator _____

CODE NO.	
(LAD Office dah khah tur)	_____

No. of correct answers	Marks carried by one question	Marks Obtained
	2	

Chhanna endiktu signature _____

Roll No. _____

1. Mawia and Rama can do a piece of work in 12 days and Mawia alone can do it in 18 days. In how many days can Rama alone do it?

    A) 32 days   ( )
    B) 24 days   ( )
    C) 36 days   ( )
    D) None of these   ( )

2. Zuala can do a piece of work in 10 days and Sanga can do the same work in 12 days. How long will they take to finish the work, if both work together?

    A) $5\frac{2}{3}$ days   ( )

    B) $5\frac{5}{11}$ days   ( )

    C) $7\frac{5}{11}$ days   ( )

    D) None of these   ( )

3. If 6 men or 8 women can reap a filed in 86 days, how long will 14 men and 10 women take to reap it?

    A) 18 days   ( )
    B) 36 days   ( )
    C) 24 days   ( )
    D) None of these   ( )

4. Express a speed of 30 m/s in km/h.

    A) 108 km/h   ( )
    B) 120 km/h   ( )
    C) 110 km/h   ( )
    D) None of these   ( )

5. Muanpuia drives his car at two different speeds to his office, resulting in different travel times. At a speed of 30 km/h, he arrives 8 minutes late, while at 45 km/h, he arrives 2 minutes early. Determine the distance between Muanpuia's home and his office.

    A) 15 km   ( )
    B) 20 km   ( )
    C) 12 km   ( )
    D) None of these   ( )

6. A man covers half of his journey at 6 km/h and the remaining half at 3 km/h. Find his average speed.

    A) 4.5 km/h   ( )
    B) 4 km/h   ( )
    C) 3.8 km/h   ( )
    D) None of these   ( )

7. Zonuni borrowed ₹ 50,000 from a moneylender. After 4 years, she repaid a total of ₹ 61,250. Calculate the rate of simple interest

    A) 7.5%   ( )
    B) 6.2%   ( )
    C) 5.6%   ( )
    D) None of these   ( )

8. A sum of money doubles itself in 8 years when invested at a certain rate of simple interest. How long will it take for the same amount to quadruple (4 times) at the same rate of interest?

    A) 36 years   ( )
    B) 24 years   ( )
    C) 12 years   ( )
    D) None of these   ( )

9. Find the compound interest on ₹ 8000 for 2 years compounded annually at 6%.

    A) ₹ 988.80   ( )
    B) ₹ 899.9   ( )
    C) ₹ 712.8   ( )
    D) None of these   ( )

10. Determine the area of a triangle with a base of 10 cm and a height of 12 cm.

    A) 120 cm^2 ( )
    B) 1200 cm^2 ( )
    C) 90 cm^2 ( )
    D) 60 cm^2 ( )

11. The length and breadth of a rectangular field are in the ratio 5:4, and its area is 720 square metres Calculate the cost of planting grass over the entire area at a rate of ₹ 12 per square meter.

    A) ₹ 7250   ( )
    B) ₹ 9680   ( )
    C) ₹ 8640   ( )
    D) None of these   ( )

12. Find the radius of a circle whose circumference is 396 cm.
- A) 63 cm ( )
- B) 198 cm ( )
- C) 99 cm ( )
- D) None of these ( )

13. The volume of a water tank is 4320 m³, with a length of 20 m and a breadth of 18 m. Calculate the depth of the tank.
- A) 15 m ( )
- B) 12 m ( )
- C) 10 m ( )
- D) 9 m ( )

14. The diameter and height of a cylindrical water tank are 3.5 m and 3 m, respectively. Calculate the volume of water it can hold.
- A) 27,580 litres ( )
- B) 31,250 litres ( )
- C) 28,875 litres ( )
- D) None of these ( )

15. In how many different ways can the letters BAWIHTEI be arranged?
- A) 18030 ( )
- B) 20160 ( )
- C) 34680 ( )
- D) None of these ( )

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47. Find the number of ways in which 6 different beads can be arranged to form a necklace?
- A) 60 ( )
- B) 120 ( )
- C) 180 ( )
- D) None of these ( )

17. Which of the following is a prime number?
- A) 189 ( )
- B) 346 ( )
- C) 101 ( )
- D) 672 ( )

18. What is the sum of the first 50 natural numbers?
- A) cannot be computed ( )
- B) 1575 ( )
- C) 725 ( )
- D) 1275 ( )

19. If a number is divided by 133, the remainder is 21. If this number is divided by 19, then the remainder will be _____
- A) 1 ( )
- B) 2 ( )
- C) 5 ( )
- D) 9 ( )

20. J. Lalrosanga's monthly income is three-fourth of Lalsangliana's income. Lalsangliana's income is ₹ 38000. What is J. Lalrosanga's annual income?
- A) ₹ 4.32 lakh ( )
- B) ₹ 2.52 lakh ( )
- C) ₹ 3.42 lakh ( )
- D) ₹ 5.62 lakh ( )

21. What is the difference between the sum of the cubes and that of the squares of first ten natural numbers?
- A) 1080 ( )
- B) 2640 ( )
- C) 2620 ( )
- D) 1980 ( )

22. Express $\frac{7}{50}$ as decimal number.
- A) 1.4 ( )
- B) 0.14 ( )
- C) 14 ( )
- D) 0.014 ( )

23. What should come in place of the question mark in the following number series?
6, 4, 5, 11, 39, ?
- A) 169 ( )
- B) 179 ( )
- C) 189 ( )
- D) 209 ( )

24. Simplify
$3[-2 - \{4 + 2(6 \times 2 \div 4 + \overline{7 - 3})\}]$
- A) -60 ( )
- B) $+60$ ( )
- C) $+30$ ( )
- D) -30 ( )

25. Simplify

$$\frac{\frac{2}{5} + \frac{4}{5} \, of + \frac{1}{2}}{\frac{2}{3} - \frac{2}{3} \div \frac{5}{3}}$$

    A) 4   ( )
    B) 3   ( )
    C) 7   ( )
    D) 11   ( )

26. Simplify

$$\sqrt{625} \times 2 + \sqrt{169} \div 39 \times 27$$

    A) 49   ( )
    B) 68   ( )
    C) 72   ( )
    D) 69   ( )

27. What is the value of

$$\sqrt[3]{157464}$$

    A) 74   ( )
    B) 44   ( )
    C) 54   ( )
    D) 66   ( )

28. Which of the following is a perfect square?

    A) 6241   ( )
    B) 5326   ( )
    C) 3248   ( )
    D) 3363   ( )

29. What is the least number to be multiplied with 294 to make it a perfect square?

    A) 4   ( )
    B) 6   ( )
    C) 18   ( )
    D) 21   ( )

30. Calculate the average of the cubes of first 9 natural numbers.

    A) 125   ( )
    B) 55   ( )
    C) 75   ( )
    D) 225   ( )

31. The average age of 25 boys in a class decreases by 6 months when a new boy replaces a 20-year-old boy. Determine the age of the new boy.

    A) 7.5 years   ( )
    B) 8.5 years   ( )
    C) 6.5 years   ( )
    D) Cannot be computed ( )

32. What will be the average of 3, 4, 5, …… 51, 52, 53?

    A) 26   ( )
    B) 27   ( )
    C) 28   ( )
    D) 29   ( )

33. A computer set with a marked price of ₹ 32,000 was sold for ₹ 28,000 during a Christmas sale. Calculate the discount rate offered.

    A) 6.5%   ( )
    B) 10.2%   ( )
    C) 12.5%   ( )
    D) 15%   ( )

34. The single discount equivalent to the discount series of 20%, 10% and 5% is

    A) 35%   ( )
    B) 31.6%   ( )
    C) 0.32%   ( )
    D) None of these   ( )

35. The marked price of an article is 50% higher than its cost price. If a 10% discount is offered on the marked price, what will be the profit percentage?

    A) 40%   ( )
    B) 45%   ( )
    C) 30%   ( )
    D) 35%   ( )

36. If the price of an LPG cylinder is increased by 12% today, by what per cent should it be reduced tomorrow to bring it to the previous level?

    A) 12%   ( )

    B) $10\frac{5}{7}\%$ ( )

    C) $12\frac{5}{7}\%$ ( )

    D) $8\frac{5}{7}\%$ ( )

37. What percentage of one quintal is 600 grams?

    A) 0.006%   ( )
    B) 0.06%   ( )
    C) 0.6%   ( )
    D) 6%   ( )

38. Sangzuala spends 60% of his income on household expenses, 20% of the remaining amount on personal necessities, and 20% of what is left on savings. If his monthly savings amount to ₹ 1,600, determine his total income.

A) ₹ 25000   ( )
B) ₹ 28000   ( )
C) ₹ 32000   ( )
D) ₹ 34000   ( )

39. An ipad is sold for ₹ 60000 thereby making a profit of 20% on the cost price. Determine the cost price.

A) ₹ 72000   ( )
B) ₹ 48000   ( )
C) ₹ 50000   ( )
D) None of these   ( )

40. Siama sold a mobile for ₹ 8,800, gaining a 10% profit. To achieve a 15% profit, at what price should he have sold it?

A) ₹ 7800   ( )
B) ₹ 9200   ( )
C) ₹ 9800   ( )
D) ₹ 10120   ( )

41. A man gains 10% by selling an article for a certain price. If he sells it at double the price, then the profit made is

A) 20%   ( )
B) 40%   ( )
C) 100%   ( )
D) 120%   ( )

42. Reduce $4\frac{2}{3} : 3\frac{1}{3}$ to the simplest form.

A) 7 : 4   ( )
B) 5 : 3   ( )
C) 7 : 5   ( )
D) 8 : 5   ( )

43. A dozen apples costs ₹ 756. What will be the cost of 864 apples?

A) ₹ 54432   ( )
B) ₹ 137142   ( )
C) ₹ 10500   ( )
D) None of these   ( )

44. Divide ₹ 96,000 among A, B, and C such that A's share is 3/4th of B's share, and the ratio of B's share to C's share is 4:5. What is the amount of C's share?

A) ₹ 24000   ( )
B) ₹ 32000   ( )
C) ₹ 40000   ( )
D) None of these   ( )

45. A and B invest in a partnership in the ratio of 2:3. After one year, the total profit is ₹ 30,000. How much will A receive as his share?

A) ₹ 15000   ( )
B) ₹ 18000   ( )
C) ₹ 10000   ( )
D) ₹ 12000   ( )

46. Khuma starts a business with ₹ 20000 and Mawia joins after 3 months with ₹ 80000. Find the ratio of their profit at the end of the year.
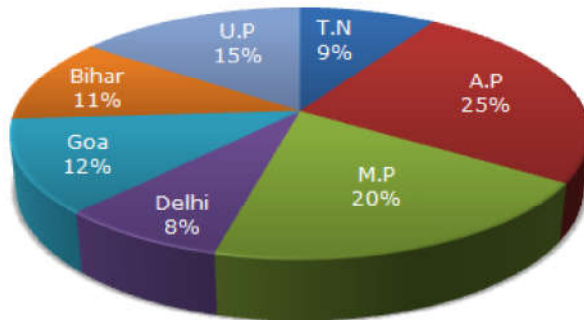
A) 2 : 3   ( )
B) 1 : 3   ( )
C) 3 : 5   ( )
D) 2 : 5   ( )

47. *A* and *B* started a joint business. *A's* investment was thrice the investment of *B* and the period of his investment was twice the period of investment of *B*. If *B* got ₹ 6000 as profit, then what will be the total profit?

A) ₹ 58000   ( )
B) ₹ 35000   ( )
C) ₹ 45000   ( )
D) ₹ 42000   ( )

Directions Q 48-50: Study the following graph and the table and answer questions nos. 48 – 50

Data of different states regarding population of states in the year 1998

Total population of the given States = 3276000.

States	Sex		Literacy	
	M	F	Literate	Illiterate
A.P	5	3	2	7
M.P	3	1	1	4
Delhi	2	3	2	1
Goa	3	5	3	2
Bihar	3	4	4	1
U.P.	3	2	7	2
T.N.	3	4	9	4

(Header: Sex and Literacy wise Population Ratio)

48. What will be the percentage of the male population in U.P to the total population of all the given states?
    A) 12%   ( )
    B) 9%   ( )
    C) 7.5%   ( )
    D) None of these   ( )

49. How many literate persons are there in Delhi?
    A) 87360   ( )
    B) 158730   ( )
    C) 174720   ( )
    D) None of these   ( )

50. What is the ratio of the number of females in T.N. to the number of females in Goa?
    A) 24 : 35   ( )
    B) 27 : 39   ( )
    C) 17 : 28   ( )
    D) None of these   ( )