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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 _____

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Roll No. _____

1. 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 ( )

2. 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 ( )

3. Find the radius of a circle whose circumference is 396 cm.

A) 63 cm ( )
B) 198 cm ( )
C) 99 cm ( )
D) None of these ( )

4. The volume of a water tank is 4320 m^3, 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 ( )

5. 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 ( )

6. In how many different ways can the letters BAWIHTEI be arranged?

A) 18030 ( )
B) 20160 ( )
C) 34680 ( )
D) None of these ( )

7. 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 ( )

8. 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 ( )

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

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

10. Divide ₹ 96,000 among A, B, and C such that A's share is $3/4^{th}$ 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 ( )

11. 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 ( )

12. 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 ( )

13. *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 ( )

14. 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 ( )

15. 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 ( )

16. 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 ( )

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. 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 ( )

43. 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 ( )

44. 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 ( )

45. 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 ( )

46. 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?

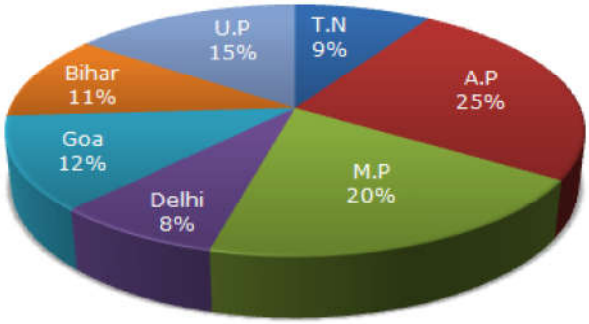
A) 36 years ( )
B) 24 years ( )
C) 12 years ( )
D) None of these ( )

47. 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 ( )

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 and Literacy wise Population Ratio			
	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

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 ( )