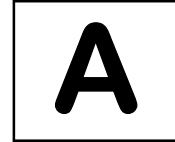


MIZORAM SUBORDINATE SERVICES SELECTION BOARD



COMPETITIVE EXAMINATION FOR RECRUITMENT TO THE POST OF ASSISTANT ACCOUNTS OFFICER (TREASURY) UNDER FINANCE DEPARTMENT, GOVERNMENT OF MIZORAM SEPTEMBER - 2022

Question Booklet Series



ARITHMETIC

Time Allowed : 3 Hours

Maximum Marks : 100

INSTRUCTIONS

1. This paper consists of one hundred (100) multiple-choice type of questions.
2. Immediately after the commencement of the examination, you should check that this question booklet does not have any unprinted or missing pages or items, etc. If so, get it replaced by a complete booklet from the invigilator.
3. Please note that it is the candidate's responsibility to fill in all necessary details such as Roll Number, etc. and the Question Booklet Series A, B, C or D carefully and without any omission or discrepancy at the appropriate places in the OMR Answer Sheet. Any omission/discrepancy will render the Answer Sheet liable for rejection.
4. Each question comprises four responses (answers). You will select the response which you want to mark on the Answer Sheet.
5. You have to mark your responses **ONLY** on the separate OMR Answer Sheet provided.
Read instructions given in the OMR sheet carefully.
6. All questions carry equal marks.
7. Rough work is to be done in the spaces available in the question booklet.
8. You have to submit your Answer Sheet to the invigilators at the end of the examination compulsorily and must not carry it with you outside the Examination Hall. You are permitted to take away with you the question booklet on conclusion of examination.
9. There are no negative marks for incorrect answer.

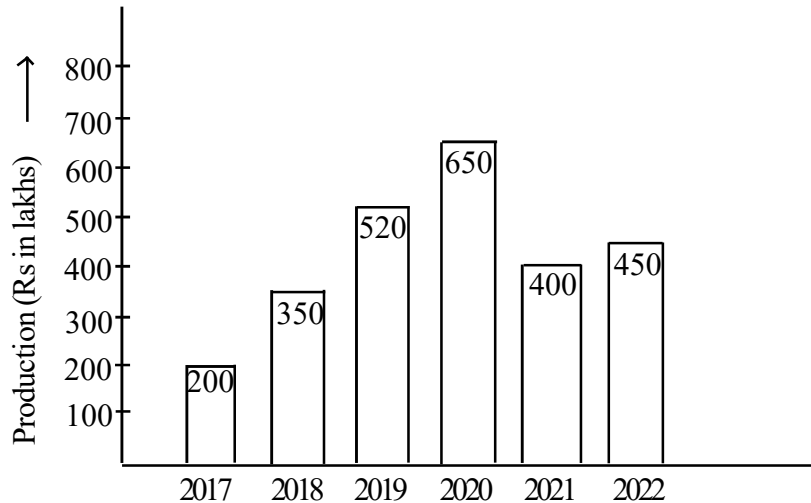
1. The next number of the sequence $\frac{1}{3}, \frac{4}{9}, \frac{7}{27}, \frac{10}{81}, \dots$ is
- (A) $\frac{13}{108}$ (B) $\frac{13}{243}$
(C) $\frac{14}{108}$ (D) $\frac{15}{243}$
2. The value of $(6 + \sqrt{5})(6 - \sqrt{5})$ is
- (A) 11 (B) 12
(C) 31 (D) 61
3. $24.\overline{75}$ is equal to
- (A) $\frac{817}{33}$ (B) $\frac{825}{36}$
(C) $\frac{915}{42}$ (D) $\frac{918}{47}$
4. If the quotient in a division is 8, the divisor is 7 and the remainder 2, then the dividend is
- (A) 17 (B) 18
(C) 54 (D) 58
5. The least number which must be added to 398 so as to get a number exactly divisible by 12 is
- (A) 12 (B) 10
(C) 8 (D) 2
6. Pari, Lawmi and Te-i invest Rs. 2,000, Rs. 3,000 and Rs. 4,000 respectively. What will be the share of Lawmi when they divide a profit of Rs. 2,700?
- (A) Rs. 600 (B) Rs. 800
(C) Rs. 900 (D) Rs. 1,200
7. Sanga enters into a partnership with Rs. 4,200 and later on Rema joins him with Rs. 7,200. After one year, the profits are divided equally. How long did Rema invested money before they got the profit?
- (A) 12 months (B) 6 months
(C) 5 months (D) 7 months
8. A and B start a business. A invests Rs. 1,000 for 8 months and B invests Rs. 1,200 for 7 months. If they receive a profit of Rs. 8,200 after one year, what will be the share of profit for A?
- (A) Rs. 4,000 (B) Rs. 4,200
(C) Rs. 4,300 (D) Rs. 4,400
9. How much copper should be mixed to 63 kg of zinc in order to make an alloy containing 45% of zinc and 55% of copper?
- (A) 68 kg (B) 70 kg
(C) 77 kg (D) 80 kg

10. If $A : B = 3 : 4$ and $B : C = 8 : 9$, then $A : B : C$ is
(A) $3 : 4 : 5$ (B) $6 : 8 : 9$
(C) $1 : 2 : 3$ (D) $7 : 12 : 17$
11. If the wages of 12 men for 30 days are Rs. 4,200, then the wages of 18 men for 24 days are
(A) Rs. 5,000 (B) Rs. 5,020
(C) Rs. 5,040 (D) Rs. 5,060
12. 8 men or 12 women can do a piece of work in 40 days. In how many days can the work be done by 6 men and 6 women working together?
(A) 25 days (B) 28 days
(C) 30 days (D) 32 days
13. In a study camp, food is available for 45 days for 50 students. For how many days will this food be sufficient for 90 students?
(A) 15 days (B) 25 days
(C) 30 days (D) 35 days
14. If 30 men working 9 hours per day can reap a field in 16 days, how many men will be required to reap the field in 15 days, working 8 hours per day?
(A) 36 men (B) 25 men
(C) 24 men (D) 15 men
15. Siama and his son starting from the same place, and at the same time, walk at the rate of 7 km/hr and 4 km/hr respectively in opposite directions. The time taken by them to be 22 km apart is
(A) 2 hours (B) 3 hours
(C) 4 hours (D) 7 hours
16. A sum of Rs. 10,000 was deposited in a bank for 27 months at the rate of 20% p.a. on compound interest. What will be the total interest received?
(A) Rs. 4,380 (B) Rs. 4,594
(C) Rs. 5,120 (D) Rs. 5,980
17. Puia took a loan of Rs. 1,25,000 from State Bank of India. The bank charges compound interest at 8% p.a. compounded annually. What amount will he have to pay after 2 years to clear the debt?
(A) Rs. 1,39,800 (B) Rs. 1,45,800
(C) Rs. 1,49,000 (D) Rs. 1,52,000
18. If the circumference of a circle is 264 cm, then diameter of the circle is
(A) 42 cm (B) 64 cm
(C) 84 cm (D) 86 cm
19. A wire is looped in the form of a circle of radius 14 cm. The same wire is bent into a square form. What must be the length of the side of the square?
(A) 44 cm (B) 66 cm
(C) 33 cm (D) 22 cm

20. The length of the longest pole that can be put in a room of dimensions $12\text{m} \times 9\text{m} \times 8\text{m}$ is
- (A) 14 m (B) 15 m
(C) 16 m (D) 17 m
21. Of the three numbers, the first number is twice the second and the second is thrice the third. If the average of the three numbers is 50, the first number is
- (A) 80 (B) 90
(C) 92 (D) 95
22. The mean of 40 observations was found to be 65. But later on, it was found that 86 was misread as 68 at one place. The correct mean is
- (A) 66.5 (B) 65.5
(C) 65.45 (D) 65.25
23. The average of four consecutive even numbers is 27. What is the least number?
- (A) 30 (B) 28
(C) 26 (D) 24
24. The value that comes in the place of ? in the expression $60\% \text{ of } 725 = 29 \times ?$ is
- (A) 17 (B) 16
(C) 15 (D) 14
25. A student has to score 35% marks to pass in an examination. He gets 650 marks and fails by 50 marks. What are the full marks?
- (A) 1000 (B) 1500
(C) 2000 (D) 2500
26. Two trains 400m and 350m long are running on parallel tracks at the rate of 180 km/hr and 120 km/hr respectively. If they are running in opposite directions, the time taken to cross each other is
- (A) 5 secs. (B) 9 secs.
(C) 12 secs. (D) 15 secs.
27. A question paper has two parts, part A and part B, each containing 10 questions. If a student has to choose 8 questions from part A and 5 questions from part B, in how many ways can he choose the questions?
- (A) 11,000 (B) 11,340
(C) 11,350 (D) 11,365
28. Mawia has ten friends and he wants to invite 6 of them to a party. How many times will 3 particular friends never attend the party?
- (A) 7 (B) 8
(C) 35 (D) 72
29. In how many ways can 7 boys be seated at a round table so that two particular boys are always together?
- (A) 220 (B) 420
(C) 320 (D) 240

30. In how many ways can the word 'LETTER' be arranged?
(A) 180 (B) 185
(C) 190 (D) 196

Directions (Question 31-33): The bar graph shows the production of Betel nut by Hachhek Constituency of Mizoram over 6 years. Study the bar graph and answer the questions that follow.



31. In how many of the given years was the production of betel nut more than the average production of the given years?
(A) 2 (B) 3
(C) 4 (D) 5
32. What was the percentage increase in the production of betel nut from 2019 to 2020?
(A) 15% (B) 18%
(C) 20% (D) 25%
33. In which year was the percentage increase in production as compared to the previous year, the maximum?
(A) 2018 (B) 2019
(C) 2020 (D) 2022
34. Kunga bought an article marked at Rs. 1,500 after a discount of 20% on the marked price. What additional discount rate must be offered to Kunga to bring the net price to Rs. 1,080?
(A) 15% (B) 12%
(C) 11% (D) 10%
35. The marked price of an article is 10% higher than the cost price. A discount of 10% is given on the marked price. By this type of sale, there is
(A) no loss nor gain (B) 1% gain
(C) 1% loss (D) 4% loss
36. Thanga purchased a washing machine for Rs. 7,660. He allows to sell it at a discount of 12% on its marked price and still gains 10%. The marked price of the machine is
(A) Rs. 9,560 (B) Rs. 9,575
(C) Rs. 9,780 (D) Rs. 9,875

37. By selling 60 metres of cloth, a shopkeeper gains the cost price of 15 metres of cloth. What is his profit percent?
(A) 25% (B) 20%
(C) 30% (D) 50%
38. A shopkeeper buys 200 eggs at Rs. 6 each. On the way 20 eggs are broken and he sells the remaining eggs at Rs. 8 each. His gain is
(A) 20% (B) 18%
(C) 15% (D) 10%

Directions (Questions 39-40): The given table represents data regarding number of employees in 6 automobile companies for the month of March, 2022. Study the table and answer the questions that follow.

Company	Total number of employees	Number of female employees
MAHINDRA	2500	1220
HYUNDAI	3200	1860
MARUTI	2000	1600
TATA	5550	2410
TOYATA	4240	2600
NISSAN	3560	1240

39. The number of male employees in Mahindra is what percent less than that of the female employees in Maruti Company?
(A) 12% (B) 15%
(C) 18% (D) 20%
40. In May 2022, the number of female employees in Toyota Company increased by 10% and the total number of employees in the company remained the same. What was the number of male employees?
(A) 1,420 (B) 1,410
(C) 1,380 (D) 1,360
41. In a poultry farm having hens and pigs, Mawia can see 84 heads and 282 legs. How many hens are there in the farm?
(A) 27 (B) 37
(C) 47 (D) 57
42. If $\sqrt{18 \times 14 \times x} = 168$, then the value of x is
(A) 111 (B) 112
(C) 113 (D) 114
43. In an auditorium, the number of rows is equal to the number of chairs in each row. If the capacity of the auditorium is 2025, the number of chairs in each row is
(A) 45 (B) 55
(C) 65 (D) 75

44. The least number by which 1125 must be multiplied so as to obtain a perfect cube is
(A) 25 (B) 9
(C) 5 (D) 3
45. The value of $\cos 54^\circ + \cos 63^\circ + \cos 117^\circ + \cos 120^\circ + \cos 126^\circ$ is equal to
(A) 0 (B) 1
(C) $-\frac{1}{2}$ (D) $\frac{1}{2}$
46. Two pipes can fill an empty tank in 10 hours and 12 hours respectively, while a third pipe can empty the full tank in 20 hours. If all the three pipes operate simultaneously, in how much time will the tank be full?
(A) 7 hrs. 15 mins. (B) 7 hrs. 30 mins.
(C) 7 hrs. 45 mins. (D) 7 hrs. 50 mins.
47. A and B can finish a piece of work in 20 days and 12 days respectively. A started the work alone and then after 4 days, B joined till the completion of the work. Time taken to finish the remaining work is
(A) 4 days (B) 5 days
(C) 6 days (D) 8 days
48. Tea and Para can together do a work in 8 days. Tea alone can do it in 12 days. In how many days will Para alone finish the work?
(A) 24 days (B) 15 days
(C) 12 days (D) 10 days
49. A can do as much of work in 2 days as B in 3 days, and B as much in 4 days as C in 5 days. In how many days can A, B and C together finish the work if A alone can do it in 22 days?
(A) 17 days (B) 15 days
(C) 12 days (D) 10 days
50. 3 pumps, working 8 hours a day can empty a tank in 2 days. How many hours a day must 4 pumps work to empty the tank in 1 day?
(A) 9 hours (B) 10 hours
(C) 11 hours (D) 12 hours
51. In how many ways can the word 'OPTICAL' be arranged so that the vowels always come together?
(A) 650 (B) 720
(C) 780 (D) 800
52. In how many ways can 5 persons occupy 3 seats?
(A) 20 (B) 30
(C) 60 (D) 80
53. A building is 50m high. What is the angle of elevation of the top of the building from a point on the ground which is $50\sqrt{3}$ m from the foot of the building?
(A) 30° (B) 45°
(C) 60° (D) 90°

54. A ladder leaning against a wall makes an angle of 60° with the ground. If the foot of the ladder is 3m from the wall, then the length of the ladder is
(A) 5 m (B) 6 m
(C) 9 m (D) 12 m
55. The angle of elevation of the top of a hill at the foot of a tower is 60° and the angle of elevation of the top of the tower from the foot of the hill is 30° . If the tower is 55 m high, the height of the hill is
(A) 110 m (B) 150 m
(C) 165 m (D) 170 m
56. By selling an umbrella for Rs. 360, a man loses 10%. At what price should he sell it to gain 12%?
(A) Rs. 420 (B) Rs. 448
(C) Rs. 452 (D) Rs. 455
57. The difference between the selling price and the cost price of an article is Rs. 240. If the profit is 20%, the selling price is
(A) Rs. 1,430 (B) Rs. 1,435
(C) Rs. 1,440 (D) Rs. 1,450
58. Mawia buys a shirt for Rs. 720 and sells it at a loss of $6\frac{2}{3}\%$. For how much did he sell it?
(A) Rs. 660 (B) Rs. 665
(C) Rs. 670 (D) Rs. 672
59. P and Q invested in a business. The profit earned was divided in the ratio 2:3. If P invested Rs. 40,000, the amount invested by Q was
(A) Rs. 45,000 (B) Rs. 50,000
(C) Rs. 60,000 (D) Rs. 70,000
60. Peter starts a business with Rs. 2,000 and John joins him 4 months later with an investment of Rs. 4,000. After a year they earn a profit of Rs. 58,100. John's share in the profit is
(A) Rs. 24,900 (B) Rs. 33,200
(C) Rs. 36,000 (D) Rs. 23,300
61. Lala and Thanga walked to each other at 6 a.m. at the speed of 4 km/hr and 5 km/hr respectively. If they were initially 22.5 km apart, at what time do they meet?
(A) 7:30 a.m. (B) 8:00 a.m.
(C) 8:30 a.m. (D) 9:00 a.m.
62. A boy goes to school with a speed of 3 km/hr and returns with a speed of 2 km/hr. If he takes 5 hours in all, the distance between his house and the school is
(A) 5 km (B) 6 km
(C) 7 km (D) 8 km
63. A man walking at the rate of 5 km/hr crosses a bridge in 15 minutes. The length of the bridge is
(A) 1,180 m (B) 1,230 m
(C) 1,250 m (D) 1,300 m

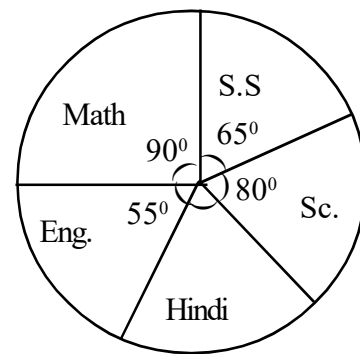
64. Walking at $\frac{6}{7}$ th of his usual speed, a man is 14 mins. late. The usual time taken by him to cover that distance is
(A) 1 hr. 24 mins. (B) 1 hr. 30 mins.
(C) 1 hr. 40 mins. (D) 1 hr. 45 mins.
65. Thanga runs 20 km in 2.5 hours. How long will he take to run 80 km at double the previous speed?
(A) 7 hr.20 mins. (B) 7 hours
(C) 6 hr. 30 mins. (D) 5 hours
66. $\frac{2x}{x^2-9} - \frac{1}{x+3} - \frac{2}{x-3}$ in its simplest term is
(A) $\frac{1}{x-3}$ (B) $\frac{-1}{x+3}$
(C) $\frac{1}{x+3}$ (D) $\frac{-1}{x-3}$
67. The factored form of $6x^2 - 13x + 6$ is
(A) $(2x - 3)(3x - 2)$ (B) $(2x + 3)(3x - 2)$
(C) $(2x - 3)(3x + 2)$ (D) $(2x + 3)(3x + 2)$
68. If $x = 3 + \sqrt{8}$, the value of $x^2 + \frac{1}{x^2}$ is
(A) 98 (B) 64
(C) 36 (D) 34
69. A has double the money of B and B has 50% more than C. If the average money of A, B and C is Rs.14,300, how much money does A have?
(A) Rs. 7,800 (B) Rs. 11,700
(C) Rs. 23,400 (D) Rs. 24,300
70. The mean weight of 34 students of a school is 42 kg. If the weight of a teacher be included, the mean weight rises by 400g. What is the weight of the teacher?
(A) 56 kg (B) 57 kg
(C) 58 kg (D) 59 kg
71. A kite is attached to a string and the other end of the string is fixed on the plane ground. If the kite is flying at a height of 50m above the ground and the string makes an angle of 30° with the ground, then the length of the string is
(A) 60 m (B) 90 m
(C) 100 m (D) 120 m
72. The shadow of a tower is 21m when the sun's altitude is 30° . What is the length of the shadow when the sun's altitude is 60° ?
(A) 7 m (B) 5 m
(C) 4 m (D) 3 m

73. The simple interest on a sum of money for 2 years at 5% p.a. is Rs. 800. The compound interest on that sum at the same rate and for the same period is
(A) Rs. 780 (B) Rs. 800
(C) Rs. 810 (D) Rs. 820
74. A sum of money invested at compound interest amounts to Rs. 3,200 in 3 years and Rs. 3,528 in 5 years. The rate of interest is
(A) 5% p.a. (B) 5.2% p.a.
(C) 6.5% p.a. (D) 7% p.a.
75. Lala took a loan from a bank for 2 years at 5% p.a. simple interest. After 2 years he gave back Rs. 15,950 to the bank and completed the payment of the loan. The interest paid by Lala was
(A) Rs. 1,350 (B) Rs. 1,385
(C) Rs. 1,420 (D) Rs. 1,450
76. If Rs. 4,840 are divided into three parts in the ratio 2:3:6, the second part is
(A) Rs. 2,640 (B) Rs. 440
(C) Rs. 880 (D) Rs. 1,320
77. A sum of Rs. 7,000 is divided among A, B and C in such a way that the shares of A and B are in the ratio 2:3 and those of B and C are in the ratio 4:5. The share of C is
(A) Rs. 3,000 (B) Rs. 2,400
(C) Rs. 2,000 (D) Rs. 1,600
78. If $\frac{1}{3}$ of A's share = $\frac{1}{2}$ of B's share = $\frac{3}{4}$ of C's share and C gets Rs. 3,400, then the total sum of money distributed is
(A) Rs. 11,050 (B) Rs. 16,050
(C) Rs. 16,150 (D) Rs. 17,150
79. A can do a work in 15 days and B in 20 days. They worked together for 6 days and then A left the work, and B finished the remaining work. How many days did B do the work?
(A) 20 days (B) 12 days
(C) 14 days (D) 25 days
80. A can complete a piece of work in 6 days which B can complete it in 12 days. If they work together and complete it, the portion of the work done by A is
(A) $\frac{1}{4}$ (B) $\frac{4}{7}$
(C) $\frac{2}{5}$ (D) $\frac{2}{3}$
81. $11\frac{1}{9}\%$ of 1818 is
(A) 202 (B) 22
(C) 200 (D) 20

82. In an election two candidates Mawia and Fela contested. Mawia got 35% of votes but was defeated by Fela by 750 votes. What was the total number of votes polled in the election?
(A) 2000 (B) 2500
(C) 2800 (D) 3000
83. Rova spends 30% of his monthly salary on food items and donates 10% to a Trust. He spends Rs. 25,000 on these two items. The total monthly salary is
(A) Rs. 70,000 (B) Rs. 65,000
(C) Rs. 62,500 (D) Rs. 60,000
84. The marked price of a ceiling fan is Rs. 1,250 and the shopkeeper allows a discount of 10% on it. The selling price of the fan is
(A) Rs. 1,225 (B) Rs. 1,200
(C) Rs. 1,175 (D) Rs. 1,125
85. The marked price of a hair-dryer is Rs. 5,500. It is sold for Rs. 4,950 after a discount. What is the rate of discount?
(A) 8% (B) 10%
(C) 12.5% (D) 15%

Directions (Questions 86-88): The given pie chart depicts the marks scored by a student in 5 different subjects, namely Maths, Social Science, Science, English and Hindi. The total marks obtained by a student is 540. Study the pie chart and answer the questions that follow.

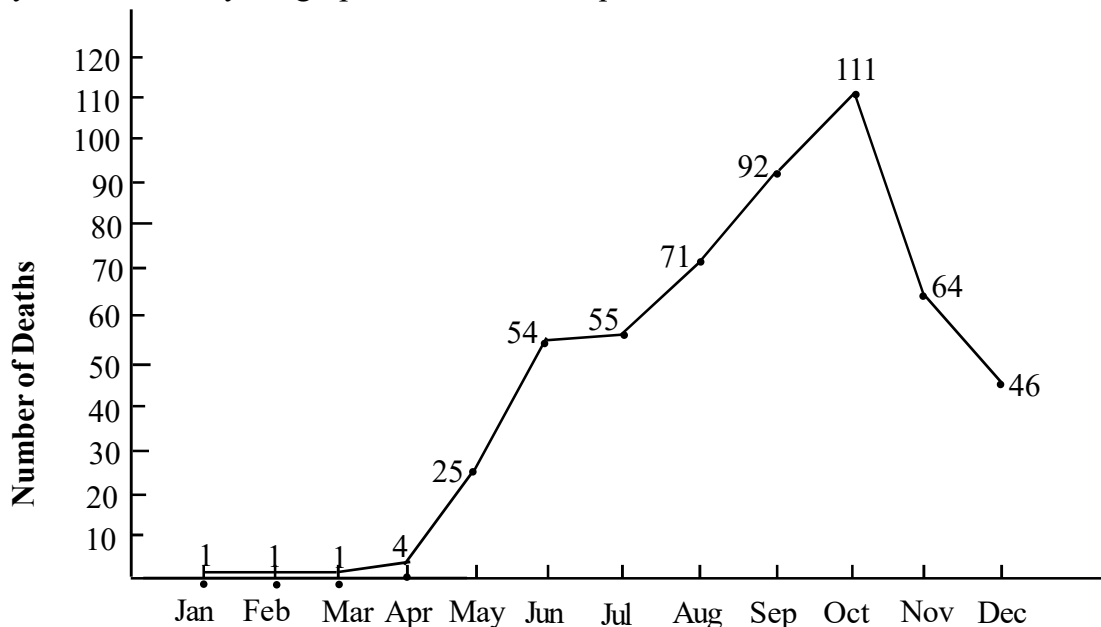
86. What is the central angle for Hindi?
(A) 60°
(B) 70°
(C) 75°
(D) 80°
87. In which subject does the student score 120 marks?
(A) Science
(B) Social Science
(C) English
(D) Hindi



88. How much marks does the student score in Maths?
(A) 97.5 (B) 105
(C) 120 (D) 135
89. The minute hand of a clock is 12cm long. The area of the face of the clock described by the minute hand during the period of 35 minutes is
(A) 240 cm^2 (B) 258 cm^2
(C) 264 cm^2 (D) 270 cm^2
90. The diameter of a wheel of a bus is 140cm. The distance covered by the wheel in 8 revolutions is
(A) 35.2 m (B) 38 m
(C) 39.5 m (D) 40 m

91. The area of a rectangular field is 2304 m^2 . The ratio of length to breadth is 16:9. What is its perimeter?
(A) 100 m (B) 120 m
(C) 200 m (D) 240 m
92. What is the cost of fencing a semicircular field of radius 42 metres at the rate of Rs. 2 per metre?
(A) Rs. 240 (B) Rs. 254
(C) Rs. 420 (D) Rs. 432

Directions (Questions 93-95): The following graph shows death due to Covid-19 in Mizoram in the year 2021. Study the graph and answer the questions that follow.



93. In which quarter of the year was the number of deaths the highest?
(A) Jan – Mar (B) Apr – Jun
(C) Jul – Sep (D) Oct – Dec
94. What was the average number of deaths in a month during the year 2021?
(A) 43.75 (B) 43.15
(C) 42.75 (D) 40.75
95. In which month was the rise in deaths maximum over the previous month?
(A) May (B) June
(C) September (D) October
96. The diagonal and one side of a rectangle are 10cm and 6cm respectively. What is the length of the other side of the rectangle?
(A) 9 cm (B) 8 cm
(C) 7 cm (D) 6 cm
97. If $5^{3x-5} = 625$, the value of x is
(A) 3 (B) 4
(C) 5 (D) 6

98. $\frac{x^2+x-6}{x^2-4x+4}$ in its simplest form is

(A) $\frac{x-2}{x+3}$

(B) $\frac{x+3}{x-2}$

(C) $\frac{x-1}{x+2}$

(D) $\frac{x-3}{x+2}$

99. The value of $[(3 \times 3 \times 3 \times 3 \times 3 \times 3)^6 \div (3 \times 3 \times 3 \times 3)^7 \times 3^4]$ is

(A) 3^8

(B) 3^{10}

(C) 3^{12}

(D) 3^{14}

100. The value of $1 + \frac{1}{1 + \frac{1}{1 + \frac{1}{5}}}$ is

(A) $\frac{17}{11}$

(B) $\frac{15}{11}$

(C) $\frac{17}{6}$

(D) $\frac{6}{11}$

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK

SPACE FOR ROUGH WORK