

Time: 3 Hours

Max. Marks: 80

**Instructions:**

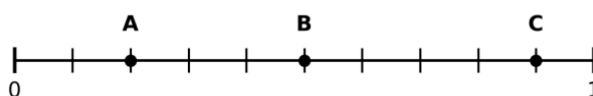
1. The question paper has 4 sections and 33 questions. Answer all the questions.
2. Section A: 20 multiple choice questions of 1 mark each. Write the letter of the correct answer.
3. Section B: 4 questions of 2 marks each. Section C: 5 questions of 4 marks each.
4. Section D: 4 questions of 8 marks each. Each question in Section D has an internal choice.
5. Draw figures neatly wherever necessary and show all the steps.

**SECTION – A**

**20 × 1 = 20**

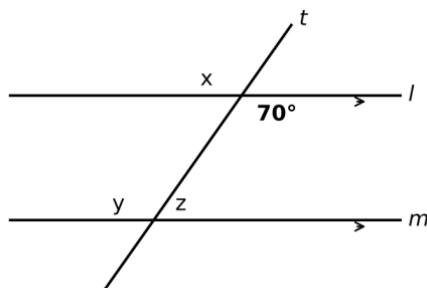
Choose the correct answer and write its letter.

1. 1 crore = \_\_\_\_\_ lakh  
A) 10    B) 100    C) 1000    D) 10000
2. One million in the Indian system is  
A) 1 lakh    B) 10 lakh    C) 1 crore    D) 10 crore
3. Seven crore five lakh is written as  
A) 7,05,00,000    B) 7,50,00,000    C) 70,50,000    D) 7,00,50,000
4. 7,865 rounded off to the nearest hundred is  
A) 7,800    B) 7,860    C) 7,900    D) 8,000
5. The value of  $6 + 18 \div 3$  is  
A) 8    B) 12    C) 24    D) 9
6. The value of  $(7 + 5) \times 2$  is  
A) 17    B) 19    C) 24    D) 14
7. Which expression has the value 10?  
A)  $2 + 3 \times 2$     B)  $(2 + 3) \times 2$     C)  $2 \times 3 + 2$     D)  $12 - 2 \times 2$
8. 0.25 written as a fraction in lowest terms is  
A)  $\frac{1}{4}$     B)  $\frac{2}{5}$     C)  $\frac{1}{25}$     D)  $\frac{5}{2}$
9. Which of the following is the smallest?  
A) 0.3    B) 0.03    C) 0.33    D) 0.303
10. 125 paise is equal to  
A) ₹12.5    B) ₹1.25    C) ₹0.125    D) ₹125
11. On the number line shown, the point B stands for

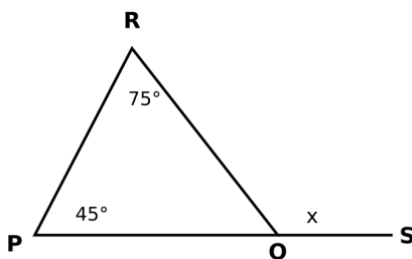


- A) 0.2    B) 0.5    C) 0.9    D) 5
12. '5 less than a number n' is written as  
A)  $5 - n$     B)  $n - 5$     C)  $5n$     D)  $n + 5$

13. The value of  $4a - 3$  when  $a = 5$  is  
 A) 12    B) 23    C) 17    D) 20
14. The perimeter of a rectangle of length  $l$  and breadth  $b$  is  
 A)  $2(l + b)$     B)  $l \times b$     C)  $l + b$     D)  $4l$
15. In the figure,  $l \parallel m$  and  $t$  is a transversal. The value of  $z$  is



- A)  $70^\circ$     B)  $110^\circ$     C)  $20^\circ$     D)  $90^\circ$
16. Vertically opposite angles are always  
 A) equal    B) supplementary    C) complementary    D)  $90^\circ$
17. The complement of  $35^\circ$  is  
 A)  $145^\circ$     B)  $65^\circ$     C)  $55^\circ$     D)  $35^\circ$
18. In the figure, side PQ of triangle PQR is extended to S. The value of  $x$  is



- A)  $120^\circ$     B)  $60^\circ$     C)  $105^\circ$     D)  $45^\circ$
19. A triangle with all three sides equal is called  
 A) isosceles    B) scalene    C) equilateral    D) right-angled
20. The sum of three odd numbers is always  
 A) even    B) odd    C) zero    D) prime

## SECTION – B

**$4 \times 2 = 8$**

21. Write 75,000,000 (international system) in the Indian system with commas and in words.
22. Find the value of  $36 - 4 \times (3 + 2)$ .
23. Look at the matchstick pattern of triangles.



Figure 1



Figure 2

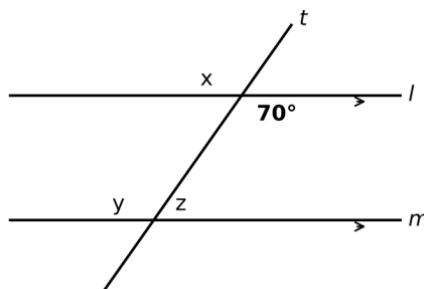


Figure 3

- (i) Write an expression for the number of matchsticks needed for  $n$  triangles. (ii) How many matchsticks are needed for 10 triangles?
24. One of two complementary angles is  $40^\circ$ . Find the other angle. Also find the supplement of  $40^\circ$ .

**SECTION – C****5 × 4 = 20**

25. (i) Estimate  $38,256 + 49,815$  by rounding each number to the nearest thousand. Then find the exact sum.  
(ii) The average distance between the Earth and the Moon is 3,84,400 km. Write it in the international system and in words.
26. (i) Add:  $7.08 + 12.9$       (ii) Subtract:  $25 - 7.65$   
(iii) Which is greater, 0.8 or 0.75? Why?      (iv) Write as a decimal: 4 tenths and 6 hundredths.
27. In the figure,  $l \parallel m$  and  $t$  is a transversal. Find  $x$ ,  $y$  and  $z$ , giving a reason for each.



28. (i) Check whether 2,346 is divisible by 2, by 3 and by 6. Give reasons.  
(ii) Explain why the sum of two consecutive numbers is always odd.
29. (i) A notebook costs ₹ $x$  and a pen costs ₹ $y$ . Write an expression for the cost of 4 notebooks and 3 pens.  
Find its value when  $x = 30$  and  $y = 10$ .  
(ii) Simplify:  $7m - 3m + 2n + 5n$

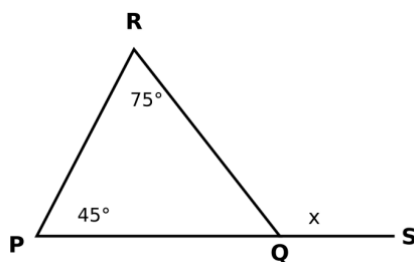
**SECTION – D****4 × 8 = 32**

Each question has an internal choice. Answer either (a) or (b).

30. a) (i) Draw the Indian and international place value charts up to 8 digits.  
(ii) Arrange in ascending order: 5,08,742; 5,80,247; 50,87,420; 5,08,247  
(iii) Round off 6,74,583 to the nearest ten thousand and to the nearest lakh.
- (OR)**
- b) (i) A shopkeeper had 250 eggs. 18 eggs broke and he sold 12 trays of 15 eggs each. Write one expression for the eggs left and find its value.  
(ii) Find the values of  $20 - 8 \div 4$  and  $(20 - 8) \div 4$ . Why are they different?  
(iii) Find the value of  $100 - (35 + 15) \div 5 \times 2$ .
31. a) (i) Write 5 m 7 cm in metres and 3 kg 450 g in kilograms.  
(ii) From a ribbon 10 m long, pieces of 3.75 m and 2.4 m were cut. How much ribbon is left?  
(iii) Arrange in ascending order: 1.2, 1.02, 1.22, 1.202  
(iv) Write the decimals shown by A, B and C on the number line in Question 11.
- (OR)**
- b) (i) Write an expression for the perimeter of an equilateral triangle of side  $a$ . Find it when  $a = 6.5$  cm.  
(ii) Simplify:  $4(2x + 1) - 3x$   
(iii) Find the value of  $x^2 + 2x$  when  $x = 3$ .  
(iv) Write an expression: 'Ramu has  $n$  marbles; Somu has 5 fewer than three times Ramu's marbles.'
32. a) (i) Two angles forming a linear pair are  $(2x + 10)^\circ$  and  $(3x - 5)^\circ$ . Find  $x$  and both angles.  
(ii) Two angles are supplementary and one of them is  $30^\circ$  more than the other. Find both angles.

**(OR)**

- b) (i) What is a transversal? Draw two parallel lines cut by a transversal and mark one pair each of corresponding angles, alternate interior angles and vertically opposite angles.
- (ii) If two lines are perpendicular, what is the angle between them? Give two examples from daily life.
33. a) In the figure, side PQ of triangle PQR is extended to S.



- (i) Find  $\angle PQR$  and  $x$ . (ii) Show that  $x$  is equal to the sum of the two interior opposite angles.
- (iii) In a right-angled triangle one acute angle is  $35^\circ$ . Find the other acute angle.

**(OR)**

- b) (i) Construct a triangle PQR with  $PQ = 5.5$  cm,  $QR = 4.5$  cm and  $RP = 6$  cm. Write the steps.
- (ii) Can a triangle be drawn with sides 2 cm, 3 cm and 6 cm? Give a reason.

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