

Shibangi Datta, Class - VII, Sec = Or, Roll = 34

SATISH CHANDRA MEMORIAL SCHOOL

PERIODIC TEST – II / POST MID TERM EXAMINATION, 2024-25

CLASS VII MATHEMATICS

Time allowed: 1 hr 30 mins

Maximum Marks: 40

General Instructions

1. All questions are compulsory.
2. The question paper consists of 34 questions divided into three sections A, B and C.
3. Section A (Q1-Q20) comprises of 20 MCQs of 1 mark each.
4. Section B (Q21-Q24) comprises of 3 SA questions of 2 marks and 1 LA question of 4 marks.
5. Section C (Q25-Q26) comprises of 2 Case Studies each of 5 marks.

SECTION A

1. $12391 \text{ mm}^2 = ? \text{ dcm}^2$
(a) 123.91 dcm^2 (b) 1.2391 dcm^2 (c) 12.391 dcm^2 (d) 0.12391 dcm^2
2. The area of a parallelogram is 72 cm^2 and its height is twice of its corresponding base. The length of the base is
(a) 6 cm (b) 8 cm (c) 10 cm (d) 12 cm
3. A wire is in the form of a semi – circle of 14 cm radius. The length of wire will be
(a) 40 cm (b) 72 cm (c) 44 cm (d) 54 cm
4. If the sides of a parallelogram are increased to twice its original lengths, how much will the perimeter of the new parallelogram?
(a) 1.5 times (b) 2 times (c) 3 times (d) 4 times
5. If the base of a triangle is doubled and its height is halved, then the area of resulting triangle
(a) decreases (b) increases (c) doubles (d) remains same
6. If the area of a triangle is 48 cm^2 and length of one of its side is 12 cm, the corresponding height to the side will be
(a) 4 cm (b) 12 cm (c) 6 cm (d) 8 cm
7. Bishal sold his watch for Rs. 187, bearing a loss of 15%. the cost price of the watch is
(a) Rs. 155.55 (b) Rs. 220 (c) Rs. 200 (d) Rs. 198

8. If 25% of a journey is 800 km, the total distance of the journey is

- (a) 1000 km (b) 3000 km (c) 3200 km (d) 2000 km

9. In what time will Rs. 12000 amount to Rs. 15900 at 6.5% rate per annum?

- (a) 5 years (b) $4\frac{1}{2}$ years (c) 3 years (d) $5\frac{2}{3}$ years

10. 0.025 when expressed as a percent is

- (a) 250% (b) 25% (c) 40% (d) 2.5%

11. 225% is equal to

- (a) 2:3 (b) 9:4 (c) 3:2 (d) 4:9

12. The population of a town decreases from 25000 to 24500. The decrease in percentage is

- (a) 20% (b) 25% (c) 2% (d) 20%

13. The co-efficient of 'y' in the expression $23x^2z + 15xyz^2 - 20z^3 + 14$ is

- (a) $23x^2$ (b) $15xz^2$ (c) $-20z^3$ (d) $-15xz^2$

Which of the following rational number is the greatest among the following:

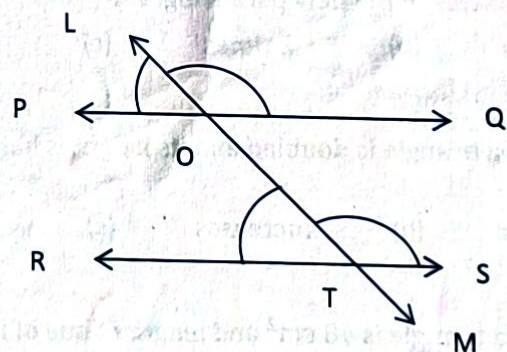
14. (a) $\frac{8}{-10}$ (b) $\frac{-3}{5}$ (c) $\frac{-3}{5}, \frac{-7}{10}, \frac{8}{-10}, \frac{-17}{15}$ (d) $\frac{-7}{10}$

15. In the adjoining figure,

PQ $\parallel$ RS and LM is

the transversal. Then which of the following pairs of angles are representing a pair of alternate exterior angles?

- (a) $\angle LOP, \angle POT$ (b) $\angle LOQ, \angle RTM$
(c) $\angle LOP, \angle OTR$ (d) $\angle QOT, \angle OTS$



16.

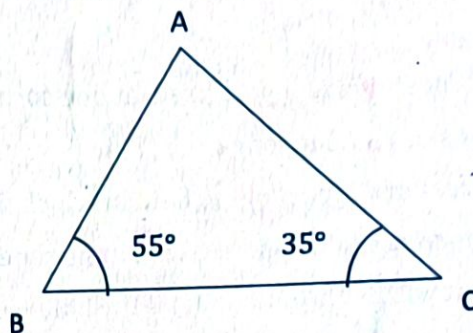
Out of 5 brands of chocolates in a shop, a boy has to purchase the brand which is most liked by children. What measure of central tendency would be most appropriate if the data is provided to him?

- (a) Mean (b) Mode (c) Median (d) Range

Which of the following is true for the triangle

$\triangle ABC$?

- (a) $AB^2 + BC^2 = AC^2$
- (b) $AC^2 + BC^2 = AB^2$
- (c) $AC^2 + BC^2 = BC^2$
- (d) $AC^2 + AB^2 = BC^2$



18. In a class of 40 students, 55% students are boys. How many girls are there?

- (a) 22
- (b) 20
- (c) 18
- (d) 28

Assertion: Area of a parallelogram is equal to the product of its base and height.

Reason: All rectangles are parallelogram but all parallelograms are not rectangle.

- (a) Assertion and Reason both are true and Reason is the correct explanation of Assertion.
- (b) Assertion and Reason both are true but Reason is not the correct explanation of Assertion.
- (c) Assertion is true but Reason is false.
- (d) Assertion is false but Reason is true.

Assertion: A shopkeeper sells a book at Rs. 172.50 to gain a profit of 15%. Therefore, Cost Price of the book is Rs. 150

Reason: $\text{Cost Price} = \frac{\text{Selling Price} \times 100}{(100 + \text{Profit percentage})}$

- (a) Assertion and Reason both are true and Reason is the correct explanation of Assertion.
- (b) Assertion and Reason both are true but Reason is not the correct explanation of Assertion.
- (c) Assertion is true but Reason is false.
- (d) Assertion is false but Reason is true.

SECTION B

21. The mean of five numbers is 32.5 . If one number is excluded, the mean becomes 26.75.

Determine the excluded number.

[2]

22. The dimensions of the rectangular garden of Shilpa's house are 32×24 m. If she wants to put a diagonal path from one corner to another corner across the garden, what will be the length of the diagonal path?

[2]

23. A student has to score 35% marks to pass an exam. Anjali scored 154 marks and failed by 21 marks. Find the maximum marks of the exam. [2]

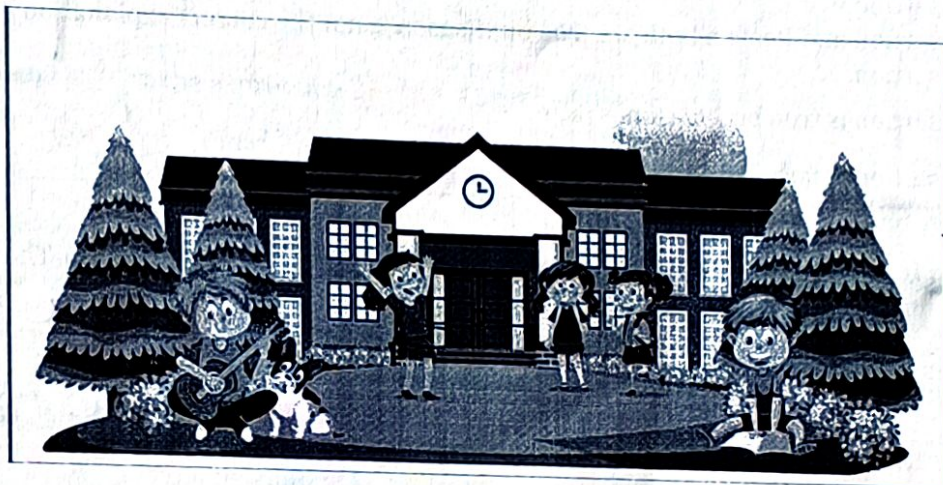
24. A horse is tied to a pole fixed at one corner of a $35\text{m} \times 35\text{m}$ square field of grass, by means of a 17.5 m long rope. Find

- (i) The area of the part of the field in which the horse can gaze. [1]
- (ii) the increase in the gazing area if the rope were 21 m long instead of 17.5 m. [1]
- (iii) What will be the area in (i) if the pole were fixed on a side, somewhere in the middle of the side? [2]

25. CASE STUDY 1

SECTION C

Mrs. Chowdhury is a social worker. She always works for the welfare of the villagers. In her village there was no school so she plans to construct a school in her village. The area of the school plot is 6075 sq.m. The length of the school plot is 3 times its breadth. She also planned to make a circular playground of diameter 14 m in front of the school and a square garden of dimension $5\text{m} \times 5\text{m}$ around it.



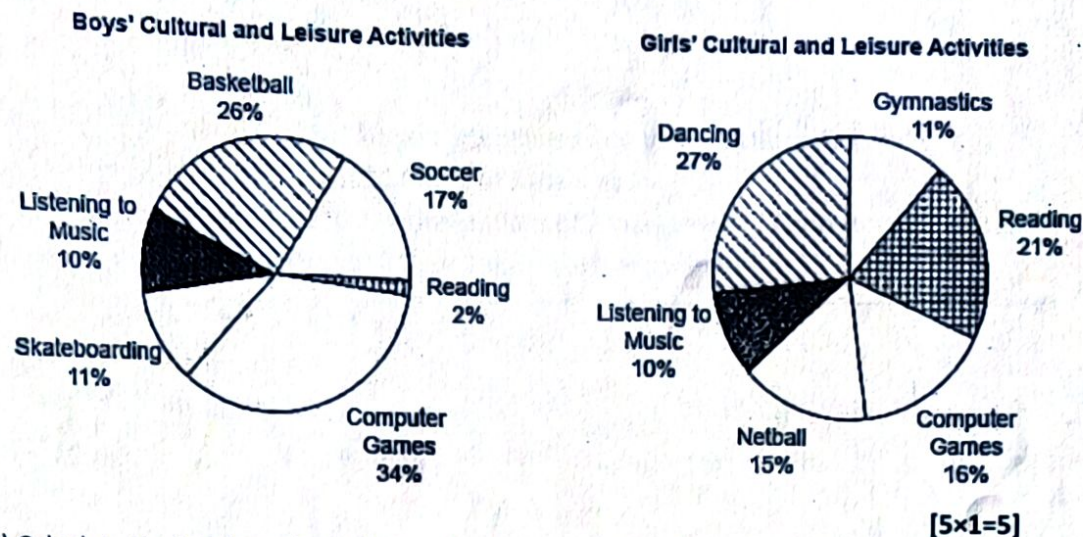
[5×1=5]

- (i) What is the perimeter of the school plot?
(a) 260 m (b) 360 m (c) 300 m (d) 240 m
- (ii) Find the breadth of the school plot.
(a) 135 m (b) 90 m (c) 45 m (d) 75 m
- (iii) Calculate the area of the circular playground. (Take $\pi = \frac{22}{7}$)
(a) 144 sq.m (b) 135 sq.m (c) 150 sq.m (d) 154 sq.m
- (iv) Find the cost of fencing the playground at the rate of Rs 15 per metre. (Take $\pi = \frac{22}{7}$)
(a) Rs 640 (b) Rs 760 (c) Rs 650 (d) Rs 660
- (v) If the gardener of the school waters the entire garden twice in a day, then how much sq. m has he to water in a day?
(a) 25 sq.m (b) 50 sq.m (c) 75 sq.m (d) 45 sq.m

26. CASE STUDY 2 :

Culture is made up of traditions, beliefs, way of life, from the most spiritual to the most material. It gives us meaning, a way of leading our lives. Human beings are creators of culture and at the same time, culture is what makes us human.

Like every year, a colourful and memorable Cultural and Leisure activity was organized in our school. This event was held in the stadium of our school premises. The events for the cultural and leisure activities for boys' are Basketball, Soccer, Reading, Computer Games, Skateboarding and Listening to Music and for girls' are Gymnastics, Reading, Computer Games, Netball, Listening to Music and Dancing. A total of 4,100 students have participated in the activity out of which 2,800 were boys.



- Calculate the total number of boys who have participated in skateboarding.
(a) 318 (b) 308 (c) 288 (d) 326
- What is the total number of participants participated in Computer Games?
(a) 1692 (b) 1096 (c) 1080 (d) 1160
- How many more boys than that of girls have participated in Listening to Music?
(a) 105 (b) 115 (c) 150 (d) 124
- Find the total Percentage of girls who have participated in Dancing and Reading.
(a) 29% (b) 38% (c) 48% (d) 42%
- Identify the pair where more than 40% girls participated.
(a) Dancing & Listening to Music (b) Reading & Computer Games
(c) Netball & Reading (d) Dancing & Netball