

O. P. JINDAL SCHOOL, SAVITRI NAGAR
Annual Examination - (2022 – 2023)

Class / Section: VII
Subject: Mathematics

MM: 80
Time: 3 Hrs.

Name: _____

Roll No. : _____

(Fifteen Minutes Extra will be given for reading the Question Paper.)

General Instructions:

- (i) This question paper has 5 sections A-E.
(ii) Section A has 20 MCQs carrying 1 mark each.
(iii) Section B has 5 questions carrying 2 marks each.
(iv) Section C has 6 questions carrying 3 marks each.
(v) Section D has 4 questions carrying 5 marks each.
(vi) Section E has 3 case based integrated units of assessment (04 marks each) with sub-parts of the values of 1 mark each.
(vii) All the questions are compulsory. There is no overall choice. However an internal choice has been provided. You have to attempt only one of the alternatives in all questions.

SECTION – A

- Q1. In ΔABC , $\angle B = 45^\circ$, $\angle C = 85^\circ$, find the value of $\angle A$.
- a) 50° b) 23° c) 36° d) 26°
- Q2. Find the side included between $\angle A$ and $\angle B$ in ΔABC .
- a) BC b) AB c) AC d) None of these
- Q3. If 48° and x° are supplementary angles, then find x.
- a) 130° b) 138° c) 42° d) 132°
- Q4. Find the ratio of 1kg to 100 g.
- a) 1 : 100 b) 10 : 1 c) 1 : 10 d) 100 : 1
- Q5. Write equation for the statement "5 is added in twice of a number gives 15."
- a) $2x + 5 = 15$ b) $5x + 2 = 15$ c) $2x - 5 = 15$ d) $5x - 2 = 15$
- Q6. Find lines of symmetry in a scalene triangle.
- a) One line b) Two lines c) Three lines d) No line
- Q7. What is the median of first five whole numbers?
- a) 3 b) 4 c) 2 d) 0

Q8. Find number of faces in a cylinder.

- a) 1 b) 6 c) 2 d) 3

Q9. If the length of a rectangle is 20 cm and breadth is 15 cm, then find its perimeter.

- a) 35 cm b) 5 cm c) 70 cm d) 300 cm

Q10. Find order of rotation in English alphabet I.

- a) 1 b) 2 c) 3 d) 4

Q11. Find the value of: 20% of 1000

- a) 200 b) 20 c) 1000 d) 2000

Q12. Find the value of x in the given equation: $4x + 5 = 13$

- a) 4 b) 9 c) 18 d) 2

Q13. What is the radius of the circle, if its circumference is 132 cm?

- a) 132 cm b) 100 cm c) 21cm d) 42 cm

Q14. Find number of faces in a triangular prism.

- a) 4 b) 5 c) 6 d) 8

Q15. In which 3D shape all the faces are of square shape?

- a) cuboid b) cube c) cylinder d) cone

Q16. Find mode of the following data: 21, 34, 56, 22, 45, 56, 22, 21, 34, 22

- a) 21 b) 34 c) 56 d) 22

Q17. Which one is not a congruence rule?

- a) AAA b) SAS c) ASA d) RHS

Q18. In a right triangle, hypotenuse is 5 cm and perpendicular is 4 cm then find its base.

- a) 5 cm b) 4 cm c) 3 cm d) 9 cm

Q19. If $(x - 10)^\circ$ and 30° are vertically opposite angles, then find x .

- a) 30° b) 10° c) 50° d) 40°

Q20. Find the probability of getting a head on tossing a coin.

- a) $\frac{1}{6}$ b) $\frac{1}{2}$ c) $\frac{1}{5}$ d) none of these

SECTION – B

Q21. Form the equation and solve: “10 is subtracted from a number gives 20.”

OR

Solve the equation: $4p \div 5 = 8$

Q22. In a ΔPQR , S is the mid- point of QR . Write median of the triangle and draw it in the triangle.

Q23. Find area of a triangle whose base is 20 cm and height is 14 cm.

OR

Find measure of each side of square whose perimeter is 20.4 cm

Q24. Write number of lines of symmetry of an equilateral triangle and draw it.

Q25. Draw the net of square pyramid.

SECTION – C

Q26. The scores in mathematics test (out of 25) of 10 students are as follows:

19, 25, 20, 20, 15, 16, 25, 20, 24, 20

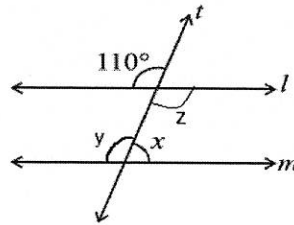
Find the mean, median and mode of this data.

OR

A die is thrown, find the probability of getting: (i) an even number (ii) a number 3.

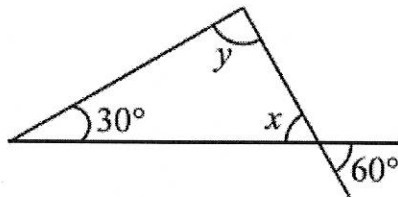
Q27. Suresh buy a T.V. for ₹10,000 and sell it at a profit of 20%. How much money does he get for it?

Q28. In the given figure, line $l \parallel m$ and t is transversal, then find the value of x , y and z .



Q29. Draw rotational symmetry in rectangle. Also write its angle of rotation.

Q30. Find the values of x and y .



OR

PQR is a triangle, right-angled at P. If $PQ = 10$ cm and $PR = 24$ cm, then find QR.

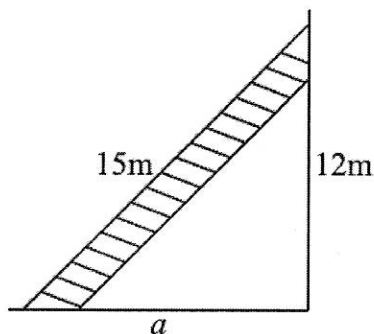
Q31. Construct a right angled triangle ABC where $\angle B = 90^\circ$, $BC = 8$ cm and $AC = 10$ cm

OR

Construct a ΔXYZ in which $XY = 4$ cm, $YZ = 3.5$ cm and $ZX = 4$ cm.

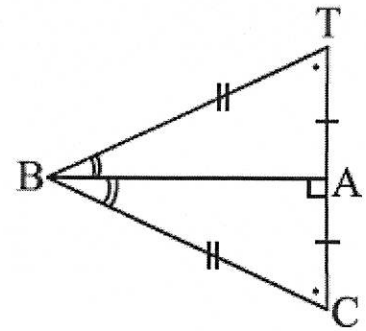
SECTION - D

Q32. A 15 m long ladder reached a window 12 m high from the ground on placing it against a wall at a distance a . Find the distance of the foot of the ladder from the wall.



Q33. Complete the congruence statement and specify another rule if applied.

Steps	Reason
(i) $BT = BC$	(i)
(ii) $AT = AC$	(ii)
(iii) $AB = AB$	(iii)
(iv) $\Delta TAB \cong \Delta CAB$	(iv)



Q34. Chalk contains calcium, carbon and oxygen in the ratio 10:3:12. Find the percentage of carbon, calcium and oxygen in chalk.

OR

A local cricket team played 20 matches in one season. It won 25% of them. How many matches did they win and how many they lost?

Q35. A gardener wants to fence a circular garden of diameter 21m. Find the length of the rope he needs to purchase, if he makes 2 rounds of the fence. Also, find the cost of the rope, if it costs ₹ 4 per meter.

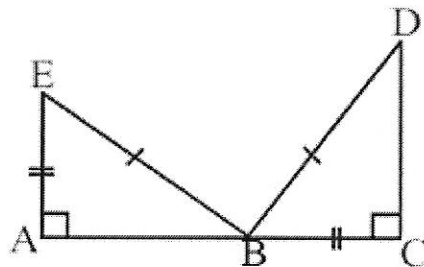
OR

A garden is 90 m long and 75 m broad. A path 5 m wide is to be built outside and around it. Find the area of the path. Also, find the area of the garden in hectares.

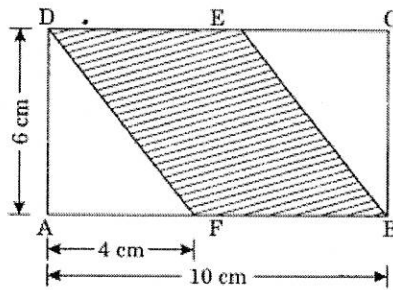
SECTION - E

Q36. Write the answer of the following questions from the given figure:

- (i) Side $EB =$ Side _____
- (ii) Side $AB =$ Side _____
- (iii) Angle C is equal to which angle?
- (iv) Triangle ABE is congruent to which triangle?

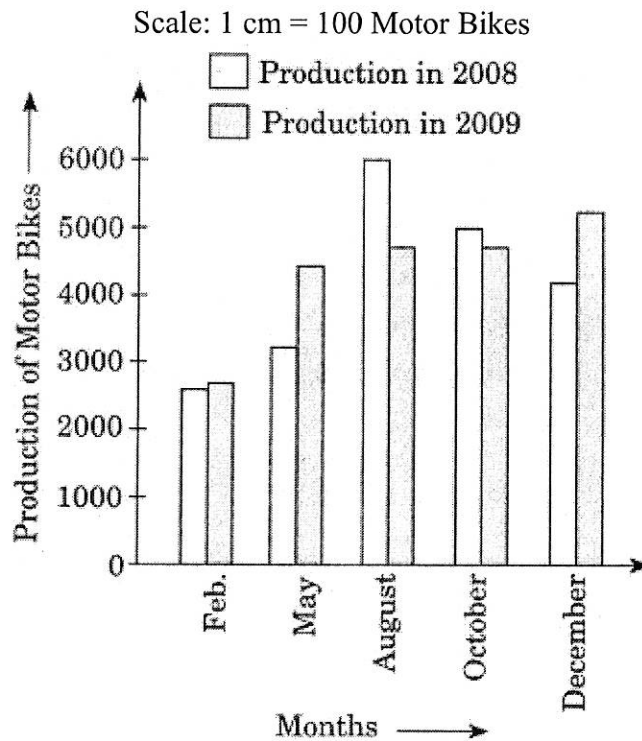


Q37. In the given figure, DEBF is a parallelogram. DAF and BCE are two right triangles.



- (i) Find area of $\triangle DAF$.
- (ii) Find area of the rectangle ABCD.
- (iii) Find area of the $\triangle BCE$.
- (iv) Find area of the shaded part.

Q38. Observe the graph and answer the following questions.



- (i) In which month of the year 2008, maximum production of bikes was there?
- (ii) In which month production was least for the year 2009?
- (iii) How many bikes were produced in the year 2008?
- (iv) Which information is shown in the graph?
