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**SINDHI HIGH SCHOOL, BENGALURU**

**II PERIODIC TEST [2023-24]**

**SUBJECT: MATHEMATICS**

**Class: VII Max Marks: 50**

**Date:18.12.2023 Reading Time: 8:30 – 8:45 am**

**No of Sides: 3 Writing Time: 8:45 – 10:45 am**

**GENERAL INSTRUCTIONS:**

* This Question Paper has 5 Sections A-E.
* Section A has 8 MCQs carrying 1 mark each
* Section B has 6 questions carrying 02 marks each.
* Section C has 4 questions carrying 03 marks each.
* Section D has 2question carrying 05 marks..
* Section E has 2 case based integrated units of assessment carrying 4 marks

sub-parts of the values of 2, 1 and 1 marks each.

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|  | **Section A** |  |
|  | **Section A consists of 8 questions of 1 mark each.** |  |
| 1 | The number of line symmetry in a regular pentagon is  a)3 b) 4 c) 5 d) 6 | 1 |
| 2 | The standard form of is  a) b) c) d) | 1 |
| 3 | A triangle whose angles measure 30˚, 30˚ and 120˚ is  a) right angled b) equilateral c) scalene d) obtuse angled | 1 |
| 4 | Which of the following letter has rotational symmetry of order more than one ?  a) C b) H c) E d) J | 1 |
| 5 | The negative rational number is  a) b) 0 c) d) | 1 |
| 6 | A triangle can be constructed with sides (in cm)  a) 6, 12, 3 b) 5, 10, 4 c) 3, 4, 5 d) 6, 3, 2 | 1 |
| 7 | The angle of rotation of the figure is    a) 45˚ b) 90˚ c) 180˚ d) 360˚ | 1 |
| 8 | **Assertion:** Two sides of a triangle are of lengths 5cm and 1.5cm. The length of the third side of the triangle cannot be 3.4cm.  **Reason:** The difference between the two sides of a triangle should be less than the third side.  a) Both Assertion and Reason are correct and Reason is the correct explanation of Assertion.  b) Both Assertion and Reason are correct but Reason is not the correct explanation of Assertion.  c) Assertion is correct, but Reason is incorrect.  d) Assertion is incorrect, but Reason is correct. | 1 |
|  | **Section B** |  |
|  | **Section B consists of 6 questions of 2 marks each.** |  |
| 9 | Find the value of *x* in the figure | 2 |
| 10 | Draw rough sketches for the following:  i) In PQR, RS is a median  ii) In DEF, DE and EF are altitudes of the triangle. | 2 |
| 11 | Find 2 rational numbers between -4 and -3 | 2 |
| 12 | Angles X and Y of XYZ are 550 and 350 respectively. Write which of the following is true ?  i) ZX 2=YZ2XY2  ii) XY2=YZ2+ZX2  iii) YZ 2=XY2+ZX2 | 2 |
| 13 | Fill in the blanks:  i) A quarter turn means rotation by \_\_\_\_\_ degrees.  ii) The other name to the line of symmetry of an isosceles triangle  is \_\_\_\_\_\_\_ | 2 |
| 14 | After rotating by 72˚ about a centre, a figure looks exactly the same as its original position. At what other angles will this happen for the figure? | 2 |
|  | **Section C** |  |
|  | **Section C consists of 4 questions of 3 marks each.** |  |
| 15 | a) Fill in the boxes: = = =  b) Write three more rational numbers in the following pattern:  \_\_\_\_\_, \_\_\_\_, \_\_\_\_\_ | 3 |
| 16 | In ABC, E is the midpoint of BC.  Name the line segments AE and AD. Is BE=EC ? | 3 |
| 17 | Find the values of the unknown x and y in the following diagrams: | 3 |
| 18 | Show the rotational symmetry of the figure given below with the help of diagrams. Also mention the angle in each diagram. | 3 |
|  | **SECTION D** |  |
|  | **Section C consists of 2 questions of 5 mark** |  |
| 19 | The points A, B, C, D, E, F, G, H, I and J on the number line are such that ED= DC= CB= BA and FG= GH= HI=IJ.  Name the rational numbers represented by the points B, C, D, H and I | 5 |
| 20 | a) Find the unknown length ‘a’ in the figure      b) Find the perimeter of the rectangle whose breadth is 15m and a diagonal is 25m. | 5 |
|  | **Section E** |  |
|  | **Section E consists of two Case base study questions of 4 mark** |  |
| 21 | Observe the following symmetrical figures drawn by Raghav of class VII and help him to answer the questions.      i) ii) iii) iv)  a) Which of the figures given above have multiple lines of symmetry ?  b) A circular wheel has eight spikes. What is its angle of rotation and the order of rotational symmetry?  c) Which figure has only rotational symmetry but not a line of symmetry? | 4 |
| 22 | There is a big park near Lakshmi’s house, the park has different trees and flower plants. One day due to heavy rain and storm one of the trees broke. The height of the unbroken part is 8m and the top of the broken part touches the ground at a distance of 15m away from the base of the tree.  a) Find the height of the broken part of the tree.  b) What was the height of the tree before it broke?  c) If the height of unbroken part of the tree is 12m, then find the distance between the top and the base of the tree. | 4 |

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