## BLUE PRINT FOR HALF YEARLY EXAM: CLASS VII

<table>
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<tr>
<th>Chapter</th>
<th>MCQ (1 mark)</th>
<th>VSA (1 mark)</th>
<th>SA – I (2 marks)</th>
<th>SA – II (3 marks)</th>
<th>LA (4 marks)</th>
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<td>24(8)</td>
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### MARKING SCHEME FOR PERIODIC TEST - II

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<th>SECTION</th>
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SECTION – A
Questions 1 to 20 carry 1 mark each.

1. In a DABC, \( \angle A = 35^0 \) and \( \angle B = 65^0 \), then the measure of \( \angle C \) is
   (a) 50\(^0\)  (b) 80\(^0\)  (c) 30\(^0\)  (d) 60\(^0\)

2. In triangles DEF and PQR, \( \angle E = 80^\circ \), \( \angle F = 30^\circ \), EF = 5 cm, \( \angle P = 80^\circ \), PQ = 5 cm, \( \angle R = 30^\circ \). By which congruence rule the triangles are congruent?
   (a) SAS  (b) RHS  (c) ASS  (d) none of these

3. Out of 15,000 voters in a constituency, 60% voted. Find the number of voters who did not vote.
   (a) 9000  (b) 6000  (c) 3000  (d) none of these

4. Meeta saves Rs 400 from her salary. If this is 10% of her salary. What is her salary?
   (a) 4000  (b) 6000  (c) 3000  (d) none of these

5. Identify which of the following pairs of angles are complementary
   (a) 65°, 115°  (b) 63°, 27°  (c) 112°, 68°  (d) 130°, 50°

6. If two angles are complementary, then the sum of their measures is ________.
   (a) 45\(^0\)  (b) 180\(^0\)  (c) 90\(^0\)  (d) 360\(^0\)

7. Which is a solution of the equation \( 2x = 12 \)
   (a) \( x = 2 \)  (b) \( x = 3 \)  (c) \( x = 4 \)  (d) \( x = 6 \)

8. The median of the first ten natural number is _______.
   (a) 2.5  (b) 5.5  (c) 3.5  (d) 4.5

9. The value of 43.07 x 100 is
   (a) 4.307  (b) 4307  (c) 43.07  (d) 430.7

10. Which of the following statement is true
    (a) \( 7 - 4 = 4 - 7 \)  (b) \( 7 - 4 > 4 - 7 \)  (c) \( 7 - 4 < 4 - 7 \)  (d) \( 7 - 4 = -3 \)

11. Solve: \( y + 4 = -4 \)

12. Find the median of the data: 24, 36, 46, 17, 18, 25, 35
13. Evaluate: \(-31 \div [(-30) + (-1)]\)

14. Find \(12 \div \frac{3}{4}\)

15. Find the ratio of 15 kg to 210 g

16. Out of 25 children in a class, 15 are girls. What is the percentage of girls?

17. It is to be established by RHS congruence rule that \(\triangle ABC \cong \triangle RPQ\). What additional information is needed, if it is given that \(\angle B = \angle P = 90^\circ\) and \(AB = RP\)?

18. Express 7 rupees 7 paise as rupees using decimals.

19. Find the angle, which is equal to its complement.

20. Find angle \(x\) in the adjoining figure:

![Diagram](image)

SECTION – B

Questions 21 to 26 carry 2 marks each.

21. Solve: \(12p - 5 = 25\)

**OR**

Solve: \(\frac{3p}{4} = 6\)

22. Find the values of the angles \(x\), \(y\), and \(z\) in the given figure:

![Diagram](image)

23. How many \(\frac{2}{3}\) kg pieces can be cut from a cake of weight 4 kg?

24. Find: (a) \((-36) \div (-4)\) (b) \((-201) \div (-3)\)

**OR**

Find the product, using suitable properties: \(26 \times (-48) + (-48) \times (-36)\)

25. If \(\triangle ABC \cong \triangle FED\) under the correspondence \(ABC \leftrightarrow FED\), write all the corresponding congruent parts of the triangles.

26. \(\triangle ABC\) is right-angled at \(C\). If \(AC = 5\) cm and \(BC = 12\) cm find the length of \(AB\).
SECTION – C
Questions 27 to 34 carry 3 marks each.

27. The runs scored in a cricket match by 11 players is as follows:
   6, 15, 120, 50, 100, 80, 10, 15, 8, 10, 15
   Find the mean, mode and median of this data.

28. In the adjoining figure, identify:
   (i) Five pairs of adjacent angles. (ii) Three linear pairs.
   (iii) Two pairs of vertically opposite angles.

OR

In the adjoining figure, \( p \parallel q \). Find the unknown angles.

29. In the below figure, \( AB = AC \) and \( D \) is the mid-point of \( BC \). Prove that
   (i) \( \triangle ADB \cong \triangle ADC \)
   (ii) \( \angle B = \angle C \)

30. In the below figure, ray \( AZ \) bisects \( \angle DAB \) as well as \( \angle DCB \).
   (i) State the three pairs of equal parts in triangles \( \triangle BAC \) and \( \triangle DAC \).
   (ii) Is \( \triangle BAC \cong \triangle DAC \)? Give reasons.
   (iii) Is \( AB = AD \)? Justify your answer.
In the below figure, ABC is an isosceles triangle with AB = AC and AD is one of its altitudes.

(i) State the three pairs of equal parts in ΔADB and ΔADC.
(ii) Is ΔADB ≅ ΔADC? Why or why not?
(iii) Is ∠B = ∠C? Why or why not?

OR

31. Find $\frac{3}{4}$ of (i) 36 (ii) 64 (iii) 120

32. An article was sold for Rs 250 with a profit of 5%. What was its cost price?

33. People of Sundargram planted a total of 102 trees in the village garden. Some of the trees were fruit trees. The number of non-fruit trees were two more than three times the number of fruit trees. What was the number of fruit trees planted?

34. A certain freezing process requires that room temperature be lowered from 40°C at the rate of 5°C every hour. What will be the room temperature 10 hours after the process begins?

SECTION – D

Questions 35 to 40 carry 4 marks each.

35. A tree is broken at a height of 5 m from the ground and its top touches the ground at a distance of 12 m from the base of the tree. Find the original height of the tree.

OR

ABCD is a quadrilateral in which AC and BD are the diagonals (see below figure).
Prove that AB + BC + CD + DA > AC + BD

36. The performance of students in 1st Term and 2nd Term is given. Draw a double bar graph choosing appropriate scale and answer the following:

<table>
<thead>
<tr>
<th>Subject</th>
<th>English</th>
<th>Hindi</th>
<th>Maths</th>
<th>Science</th>
<th>S.Science</th>
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</thead>
<tbody>
<tr>
<td>1st Term (M.M. 100)</td>
<td>62</td>
<td>72</td>
<td>88</td>
<td>81</td>
<td>73</td>
</tr>
<tr>
<td>2nd Term (M.M. 100)</td>
<td>70</td>
<td>65</td>
<td>95</td>
<td>85</td>
<td>75</td>
</tr>
</tbody>
</table>

(i) In which subject, has the child improved his performance the most?
(ii) In which subject is the improvement the least?
(iii) Has the performance gone down in any subject?
37. In a test (+5) marks are given for every correct answer and (−2) marks are given for every incorrect answer. (i) Radhika answered all the questions and scored 30 marks though she got 10 correct answers. (ii) Jay also answered all the questions and scored (−12) marks though he got 4 correct answers. How many incorrect answers had they attempted?

38. Anita takes a loan of Rs 5,000 for donating books to the poor, at 15% per year as rate of interest. Find the interest she has to pay at end of three years.

39. In the below figure, l, m and n are parallel lines, and the lines p and q are also parallel. Find the values of a, b and c.

40. A man travelled two fifth of his journey by train, one-third by bus, one-fourth by car and the remaining 3 km on foot. What is the length of his total journey?

OR

A square and an equilateral triangle have a side in common. If side of triangle is \( \frac{4}{3} \) cm long, find the perimeter of figure formed.