# KENDRIYA VIDYALAYA GACHIBOWLI, GPRA CAMPUS, HYD-32
SAMPLE PAPER 01 FOR HALF YEARLY EXAM (2019-20)

**SUBJECT: MATHEMATICS**

## BLUE PRINT FOR HALF YEARLY EXAM: CLASS VI

<table>
<thead>
<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>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowing our Numbers</td>
<td>1(1)</td>
<td>1(1)</td>
<td>2(1)*</td>
<td>3(1)</td>
<td>4(1)</td>
<td>11(5)</td>
</tr>
<tr>
<td>Whole Numbers</td>
<td>2(2)</td>
<td>2(2)</td>
<td>--</td>
<td>3(1)</td>
<td>4(1)</td>
<td>11(6)</td>
</tr>
<tr>
<td>Playing with numbers</td>
<td>2(2)</td>
<td>1(1)</td>
<td>2(1)*</td>
<td>3(1)</td>
<td>4(1)*</td>
<td>12(6)</td>
</tr>
<tr>
<td>Basic Geometric Ideas</td>
<td>1(1)</td>
<td>1(1)</td>
<td>2(1)</td>
<td>3(1)</td>
<td>4(1)</td>
<td>11(5)</td>
</tr>
<tr>
<td>Understanding Elementary ideas</td>
<td>2(2)</td>
<td>1(1)</td>
<td>2(1)</td>
<td>3(1)*</td>
<td>--</td>
<td>11(6)</td>
</tr>
<tr>
<td>Integers</td>
<td>1(1)</td>
<td>2(2)</td>
<td>2(1)</td>
<td>3(1)</td>
<td>4(1)*</td>
<td>12(6)</td>
</tr>
<tr>
<td>Fractions</td>
<td>1(1)</td>
<td>2(2)</td>
<td>2(1)</td>
<td>3(1)*</td>
<td>4(1)</td>
<td>12(6)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10(10)</strong></td>
<td><strong>10(10)</strong></td>
<td><strong>12(6)</strong></td>
<td><strong>24(8)</strong></td>
<td><strong>24(6)</strong></td>
<td><strong>80(40)</strong></td>
</tr>
</tbody>
</table>

## MARKING SCHEME FOR PERIODIC TEST - II

<table>
<thead>
<tr>
<th>SECTION</th>
<th>MARKS</th>
<th>NO. OF QUESTIONS</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCQ</td>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>VSA</td>
<td>1</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>SA – I</td>
<td>2</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>SA – II</td>
<td>3</td>
<td>8</td>
<td>24</td>
</tr>
<tr>
<td>LA</td>
<td>4</td>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td><strong>GRAND TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>80</strong></td>
</tr>
</tbody>
</table>
General Instructions:
(i). All questions are compulsory.
(ii). This question paper contains 40 questions divided into four Sections A, B, C and D.
(iii). Section A comprises of 20 questions of 1 mark each. Section B comprises of 6 questions of 2 marks each. Section C comprises of 8 questions of 3 marks each and Section D comprises of 6 questions of 4 marks each.
(iv). There is no overall choice. However, an internal choice has been provided in two questions of 2 marks each, two questions of 3 marks each and two questions of 4 marks each. You have to attempt only one of the alternatives in all such questions.
(v). Use of Calculators is not permitted.

SECTION – A
Questions 1 to 20 carry 1 mark each.

1. Using digits 4, 5, 6 & 0 without repetition make the greatest four digit number
   (a) 4560  (b) 5640  (c) 6540  (d) 6504

2. Which natural number has no predecessor
   (a) 0  (b) 1  (c) 10  (d) 100

3. Whole numbers are closed under which operation
   (a) Addition  (b) Subtraction  (c) Division  (d) None of these

4. If a number is divisible by 2 and 3 both then it is divisible by
   (a) 5  (b) 6  (c) 8  (d) 10

5. The smallest composite number is
   (a) 1  (b) 2  (c) 3  (d) 4

6. Number of lines which can be drawn from one point:
   (a) one  (b) infinite  (c) two  (d) zero

7. Where will the hand of a clock stop if it starts at 2 and makes $\frac{1}{2}$ of a revolution, clockwise?
   (a) 5  (b) 8  (c) 11  (d) none of these

8. What fraction of an hour is 45 minutes?
   (a) $\frac{1}{8}$  (b) $\frac{8}{1}$  (c) $\frac{3}{1}$  (d) $\frac{1}{3}$
11. Write the names of number 87595762 according to Indian System of Numeration.

12. Find $8 \times 1769 \times 125$

13. Simplify: $126 \times 55 + 126 \times 45$

14. Find the common factors of 20 and 28

15. What does the angle made by the hour hand of the clock look like when it moves from 5 to 7.

16. Write the natural numbers from 2 to 12. What fraction of them are prime numbers?

17. What fraction of a day is 8 hours?

18. Find the sum of 137 and – 354

19. Write the following numbers with appropriate signs : (a) 100 m below sea level. (b) 25°C above 0°C temperature.

20. Find the product of successor and predecessor of 999.

SECTION – B
Questions 21 to 26 carry 2 marks each.

21. What fraction of a clockwise revolution does the hour hand of a clock turn through, when it goes from (a) 3 to 9 (b) 4 to 7?

22. Find the HCF of 15, 25 and 30

OR
Write the smallest 5-digit number and express it in the form of its prime factors.

23. Arya, Abhimanyu, and Vivek shared lunch. Arya has brought two sandwiches, one made of vegetable and one of jam. The other two boys forgot to bring their lunch. Arya agreed to share his sandwiches so that each person will have an equal share of each sandwich.
(a) How can Arya divide his sandwiches so that each person has an equal share?
(b) What part of a sandwich will each boy receive?

24. Estimate the product 5981 × 4428 by rounding off each number to the nearest hundreds

OR
Give a rough estimate (by rounding off to nearest hundreds) : 439 + 334 + 4,317

25. Name the line given in all possible (twelve) ways, choosing only two letters at a time from the four given.

26. Represent the following numbers on a number line : (a) + 5 (b) – 10

SECTION – C
Questions 27 to 34 carry 3 marks each.

27. Write in Roman Numerals (a) 69 (b) 98 (c) 55
28. Find the product using suitable properties.
   (a) $738 \times 103$  (b) $854 \times 102$

29. Arrange the fractions $\frac{2}{3}, \frac{3}{4}, \frac{1}{2}$ and $\frac{5}{6}$ in ascending order.

OR

Jaidev takes $2\frac{1}{5}$ minutes to walk across the school ground. Rahul takes $\frac{7}{4}$ minutes to do the same. Who takes less time and by what fraction?

30. (a) Identify three triangles in the figure.
    (b) Write the names of seven angles.
    (c) Write the names of six line segments.

31. Using divisibility tests, determine which of following two numbers are divisible by 6: (a) 297144
    (b) 1258

32. Consider the number of stairs going up to the terrace as positive integer, the number of stairs going down to the godown as negative integer, and the number representing ground level as zero.

   Do the following and write down the answer as integer :
   (a) Go 6 steps down from the ground floor and then go down further 2 steps from there.
   (b) Go down 5 steps from the ground floor and then move up 12 steps from there.
   (c) Go 8 steps down from the ground floor and then go up 5 steps from there.

33. Name the types of following triangles :
    (a) Triangle with lengths of sides 7 cm, 8 cm and 9 cm.
    (b) $\triangle ABC$ with $AB = 8.7$ cm, $AC = 7$ cm and $BC = 6$ cm.
    (c) $\triangle PQR$ such that $PQ = QR = PR = 5$ cm.

34. Draw a rough sketch of a regular hexagon. Connecting any three of its vertices, draw a triangle. Identify the type of the triangle you have drawn.

   OR

   How many right angles do you make if you start facing
   (a) south and turn clockwise to west?      (b) north and turn anti-clockwise to east?
   (c) west and turn to west?
35. The number of sheets of paper available for making notebooks is 75,000. Each sheet makes 8 pages of a notebook. Each notebook contains 200 pages. How many notebooks can be made from the paper available?

36. Draw a rough sketch of a quadrilateral PQRS. State,
(a) two pairs of opposite sides,
(b) two pairs of opposite angles,
(c) two pairs of adjacent sides,
(d) two pairs of adjacent angles.

37. Running improves the health and it can raise the level of good cholesterol while also helping in increasing the lungs function which also boost the immune system and lower the risk of developing blood clots. Three friends A, B and C are doing running daily. They started running at the same time and at the same point in the same direction in a circular stadium. A completes a round in 252 seconds, B in 308 seconds and C in 198 seconds. After what time will they meet again at the starting point?

OR

The traffic lights (traffic signals) are lights used to control the movement of traffic. They are placed on roads at intersection and crossings. The different colours of lights tell drivers what to do.

Red light on: This tells the driver to stop.
Green light on: This tells the driver to go.
Yellow light on: This tells the driver to wait for the next light.

The traffic lights at three different road crossings change after 24 seconds, 36 seconds and 54 seconds respectively. If they all change simultaneously at 10 : 15 : 00 AM, then at what time will they again change simultaneously?

38. A taxidriver filled his car petrol tank with 40 litres of petrol on Monday. The next day, he filled the tank with 50 litres of petrol. If the petrol costs Rs 44 per litre, how much did he spend in all on petrol?

39. Energy content of different foods are as follows:

<table>
<thead>
<tr>
<th>Food</th>
<th>Energy Content per kg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat</td>
<td>3.2 Joules</td>
</tr>
<tr>
<td>Rice</td>
<td>5.3 Joules</td>
</tr>
<tr>
<td>Potatoes (Cooked)</td>
<td>3.7 Joules</td>
</tr>
<tr>
<td>Milk</td>
<td>3.0 Joules</td>
</tr>
</tbody>
</table>

Which food provides the least energy and which provides the maximum? Express the least energy as a fraction of the maximum energy.

40. Using the number line write the integer which is:
(a) 3 more than 5
(b) 5 more than –5

OR

Find the sum:
(a) \((- 7) + (- 9) + 4 + 16\)
(b) \((37) + (- 2) + (- 65) + (- 8)\)