SUMMATIVE ASSESSMENT 2 (MARCH 2013)
MATHEMATICS
CLASS 7

Max. Marks: 90   Time: 2½ hours

Instructions:
1. This paper consists of four sections.
2. Section A has 15 Multiple Choice Questions and each carries 1 mark.
3. Section B has 11 questions, each question carries 2 marks.
4. Section C has 11 questions, each question carries 3 marks.
5. Section D has 5 questions, each question carries 4 marks.
6. Use of calculators in not permitted.

SECTION- A
### (Multiple choice questions i to xv carry 1 mark each)

i. The standard form of $\dfrac{36}{-24}$ is

   a) $\dfrac{3}{2}$ b) $\dfrac{-3}{2}$ c) $\dfrac{2}{3}$ d) $\dfrac{-2}{3}$

ii. The product of $\dfrac{9}{2} \times \left(\dfrac{-7}{4} \right) =$

   a) $\dfrac{-63}{2}$ b) $\dfrac{-8}{63}$ c) $\dfrac{-18}{7}$ d) $\dfrac{-63}{8}$

iii. The circumference of a circle with diameter 7 cm is

   a) 22 cm   b) 44 cm   c) 154 cm   d) 37.5 cm

iv. One hectare is equal to_____ m^2

   a) 100 m^2 b) 1000 m^2 c) 10000 m^2 d) 100000 m^2

v. If m = 2 then, 3m – 5 =

   a) 0   b) 1   c) -1   d) 11

vi. $2^0 + 3^0 + 4^0 =$

   a) 1   b) 0   c) 3   d) 24

vii. A regular pentagon has _____ lines of symmetry

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

viii. The angle of rotation of an equilateral triangle is

   a) 60^0 b) 120^0 c) 360^0 d) 90^0

ix. 15% of 600 =

   a) 15   b) 900   c) 90   d) 9000

x. If P is principal, R is rate percent, T is time period and I is simple interest then formula for finding R = _____

   a) $\dfrac{100\ I}{PT}$ b) $\dfrac{PT}{100\ I}$ c) $\dfrac{100T}{P\ I}$ d) $\dfrac{100P}{IT}$

xi. The English alphabet F has

a) Horizontal symmetry   b) Vertical symmetry

c) both horizontal and vertical symmetry   d) None of them.

xii. The centre of rotation of symmetry for a square is

a) mid point of its base   b) any of its corner

c) point of intersection of its diagonals   c) None of the above.

xiii. $(- 1)^{13} =$

a) $(- 1)$ b) 1   c) 0   d) infinite

xiv. The expanded form of $2.357 \times 10^4 =$

a) 2357   b) 23570   c) 0.02357   d) 0.002357

xv.   The coefficient of 'x ' in 5xyz is

a) 5   b) xyz   c) 5yz   d) yz

SECTION-B
(Questions 2 to 12 carry 2 marks each)

2**.** Represent $\dfrac{5}{9}$ on number line.

3. The diameter of a wheel is 70cm. Find the distance (in meters), it covers in 300 rotations.

4. Juhi sells a washing machine for Rs.14,400. She loses 20% in this bargain. What was the price at which she bought it ?

5. Draw a line AB and take a point C outside it. Through C draw a line parallel to AB using ruler   and compasses only.

6. Express the following numbers in standard form :

i) 1,27,00,000   ii) 3908.78

7. Give the order of rotation of the following figures.

a)   b)
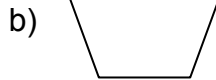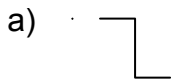
8. The two sides of a parallelogram ABCD are AB = 6cm and AD = 4cm. The height corresponding to base CD is 3cm. Find height corresponding to base AD.
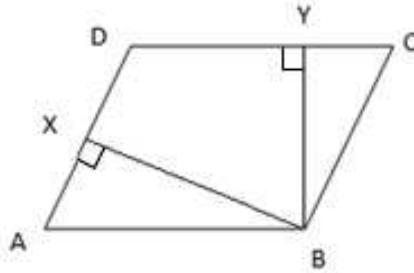
9. Simplify the expression and find its value at x = 1.

x + 7 + 4 (x – 5)

10. Express 768 as the product of prime factors in exponential form.

11. State the number of lines of symmetry for the following figures.

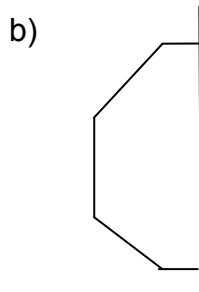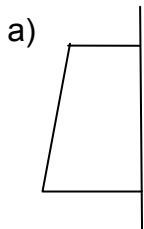a) Isosceles triangle.   b) Circle.

12. Add : 5a + 6b – 2c , 3c – 5a + 2b and -7c + 2a.

SECTION – C
(Questions 13 to 23 carry 3 marks each)

13. Give nets for the following shapes : a) Cube   b) Cylinder   c) Tetrahedron

14. Complete the following figures using the line of symmetry.

a)   b)   c)

15. Simplify and express the result in exponential form.

a) $\dfrac{2^3 \times 3^4 \times 4}{3 \times 32}$

b) $\dfrac{3^7}{3^4 \times 3^3}$

16. What should be the value of 'a' if the value of $2x^2 + x - a$ equals to 5 when x = 1?

17. Classify into monomials, Binomials and Trinomials

   a) 4y – z   b) 100   c) $z^2 - 3z + 8$ d) 7mn   e) 2a – a + b   f) x + 3y – 4z

18. A circular flower bed is surrounded by a path 4m wide. The diameter of the flower bed is   66m. What is the area of this path? ($\pi = \dfrac{22}{7}$).

19. Find the value of   a) $\dfrac{7}{12} - \dfrac{13}{24}$ b) $(\dfrac{-3}{5}) \div 2$

20. Find five rational numbers between $\dfrac{1}{2}$ and $\dfrac{2}{3}$

21. The population of a city decreased from 25,000 to 24,500. Find the percentage decrease.

22. Find the fraction of shaded portion in the given figures and write in percentage.
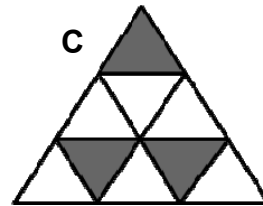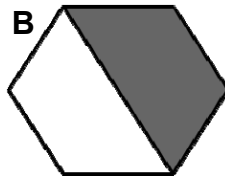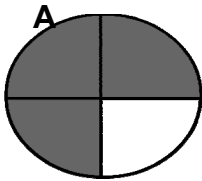
23. Construct an equilateral triangle of side 5.5cm. Measure each of its angles.

Section – D
(Questions 24 to 28 carry 4 marks each)

24. Find the amount to be paid at the end of 2 ½ years if a sum of Rs 7,600 is borrowed at the rate of 5% per annum.

25. Simplify: a) $4\dfrac{3}{5} - 2\dfrac{1}{3}$ b) $(-2\dfrac{1}{9}) \div 3\dfrac{2}{9}$ **4 | P a g e**

26. Construct a right triangle ABC right angled at B. Given AC = 7cm and AB = 3cm. Measure the length of the other side.

27. A path 5m wide runs along inside a square park of side 100 m. Find the area of the path. Also find the cost of cementing it at the rate of Rs 250 per $10m^2$.

28. From the sum of 3x – y + 11 and (–y) – 11 subtract 3x – y – 11.