DELHI PUBLIC SCHOOL, CHANDIGARH

Summative Assessment-II, Session 2012-13

Class : VII, Subject : Maths (Sample Paper)

Time : 3 hours MM : 90

General Instructions:

1) All questions are compulsory.

2) Section A carries 6 marks, one mark for each part.

3) Section B carries 10 marks, one mark for each part.

4) Section C carries 12 marks, two marks for each question.

5) Section D carries 32 marks, four marks for each question.

6) Section E carries 30 marks, five marks for each question.

Section A

Q.1 Choose the most appropriate option for the following:

a) The order of rotational symmetry of English alphabet O is

i) 1 ii) 2

iii) 0 iv) 3

b) The constant term in the expression $7xy^3 - 5x - 4$ is

i) –4 ii) 2

iii) 4 iv) –3

c) If the length of rectangle is 'l' metres and its breadth is 'b' metres, then its area is

i) l^2b^2 sq metres ii) 2lb sq. metres

iii) lb sq. metres iv) lb metres

d) 10% of 365 days is

i) 3.65 days ii) 365 days

iii) 36.5 days iv) none of these.

e) Which has the greater unit of area out of the following?

i) mm^2 ii) cm^2

iii) dm^2 iv) hm^2

f) If the perimeter of a square is 28cm, then its side is

i) 102cm ii) 4cm

iii) 7cm iv) 14cm

Section B

Q.2 Fill in the blanks:

i) Parallelogram has _____ lines of symmetry.

ii) If m=2, then the value of 9 – 5m is _____.

iii) A square has _____ order of rotational symmetry.

iv) _____ is a like term of $3x^2y^3$.

v) $\Delta ABC \cong \Delta XYZ$, if $\angle XYZ = 65°$, the measure of $\angle ABC$ is ____.

vi) Two line segments are congruent, if they have same _____.

vii) 1 hm^2 = ____ Km^2

viii) The circumference of circle with radius 1 cm is ___

ix) The ratio of 300 cm to 3 m is ____

x) Which is greater? 2:5 or 3:7 _____

Section C

Q.3 Evaluate:

$3x^2y + 5xy^4 + 2xyz^2$ when x = -2 , y = 1 and z = -3

Q4 Add: 8a – 6ab + 5b, - 6a – 8b – ab and 3b – 4a + 2ab.

Q5 9 chairs cost ₹ 720. How much will 7 chairs cost?

Q6 A machine is bought for Rs 3200 and sold for Rs 3600. Find the gain or loss percent?

Q7 Find the radius of a circular field whose circumference is 2.2 Km.

Q8 Give two examples of geometrical figure which has one line of symmetry but no rotational symmetry.

Section D

Q.9 Simplify:

$(x – 2y)(2x + 3y + 4) – (x + y)(3 – 2x – 5y)$

Q10 Rahul earns Rs 4550 every month and spends Rs 3640. Find his savings as a percent.

Q11. A man borrowed Rs 7200 from a bank for 3 years at 18% p.a. Find the interest and the amount he will have to pay after the stipulated time.

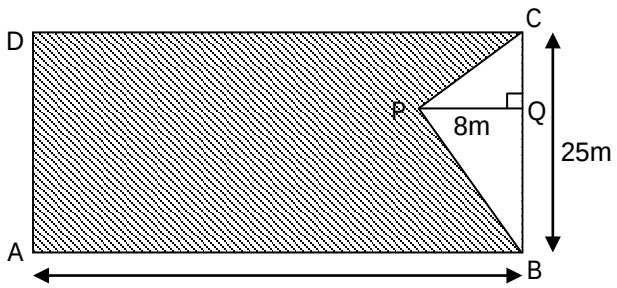
Q12 Prove that a diagonal of a parallelogram divides the parallelogram into two congruent triangles.

Q13 Draw a triangle PQR with QR=4.2 cm, PQ=5.8 cm and $\angle B = 75°$.

Q14 The area of a triangular field is equal to that of a square field whose each side measures 70 m. Find the side of a triangle whose corresponding altitude is 98m.

Q15 Give two examples of geometrical figures which have 4 lines of symmetry.

Q16 Calculate the area of the shaded region in the given rectangle ABCD with length 60 m and width 25 m. PQ = 8m and PQ $\perp$ BC.



Section E

Q17 Add $x^2 + 2xy + y^2$ to the difference of $x^2 - 3y^2$ and $2x^2 + 5y^2$

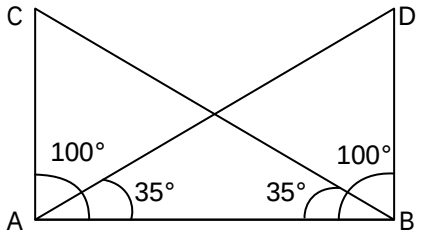
Q18 A man sold his scooter for ₹8000 and lost 20%. For what amount he should have sold it to gain 20%?

Q19 In the given figure,

i) Is $\Delta ABC \cong \Delta BAD$? Why?

ii) Is $\angle C = \angle D$?

iii) What is $m\angle C$ and $m\angle D$?



Q20 Construct a right angled triangle whose hypotenuse is 4.5 cm and the other angle is 30°. Also with steps of construction.

Q21 A piece of land is 240 m long and 120 m wide, has two roads in its centre of equal width 2.5 m. One road is parallel to length and other is parallel to its width. Find the area of roads and also find the cost planting the grass at the rate of ₹10 per sq m.

Q22 A sum of money doubles itself in 8 years. What is the rate of interest?