INDIAN SCHOOL SOHAR
SUMMATIVE ASSESSMENT II- 2014-15
MATHEMATICS

Date: 15.03.15   Marks: 60
Class: VII   Time: 2 hours

General Instructions:

- *All questions are compulsory. The question paper consists of 24 questions divided into Sections A, B, C & D. Section A comprises 6 questions each carries 1 mark, Section B comprises 6 questions each carries 2 marks, Section C comprises 6 questions each carries 3 marks, Section D comprises 6 questions each carries 4 marks.*

- *Do the calculations in the working column. Give necessary formulae and steps wherever required.*

SECTION-A

Choose the most appropriate answer from the options given.

1. AB and CD bisect each other at O. which statement is true?

    i) $\Delta AOC \cong \Delta DOB$

    ii) $\Delta AOC \cong \Delta BOD$

    iii) $\Delta AOC \cong \Delta OBD$

    iv) $\Delta AOC \cong \Delta ODB$
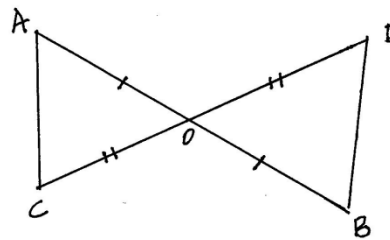
2. 90% of y is 315 km, then the value of y is

    i)   325km   ii) 350km   iii) 405km   iv) 340km

3. If $\frac{5}{8} = \frac{20}{p}$, then the value of *P* is

    i)   23   ii) -23   iii) 32   iv) 2

4. The perimeter of a square is 20 m, then its area is

    i)   25 sq.m   ii) 80 sq.m   iii) 100 sq,m   iv) 400 sq.m

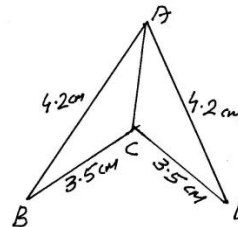5. The sum of $3x^2y$ and $-2x^2y$ is

    i) $-6x^4y^3$ ii) x^2y iii) $-6x^2y$ iv) $-x^2y$

6. The value of $3x^2 - 6x + 7$ if $x = 2$ is

   i) 322-62+7 ii) 32^2-12+7 iii) -7 iv) 7

SECTION-B

7. Write three pairs of congruent parts in the given figure and then prove that $\Delta ABC \cong \Delta ADC$. Which congruency condition is used?

8. Find the simple interest if Principal = Rs 800, Rate = 6% per annum and Time = 4 years.

9. Find the area of a field in hectares whose length is 2400m and breadth 11m

10. Simplify combining like terms; $p - (p - q) - q - (q - p)$

11. Subtract; $-x^2 + 10x - 5$ $from$ $5x - 10$

12. Express 15625in exponential notation.

SECTION-C

13. Find the loss percent if a cupboard was bought for Rs 12000 and sold for Rs 8400.

14. Find four rational numbers between $\dfrac{-5}{7}$ and $\dfrac{-3}{8}$

15. Construct a triangle ABC, if AB = 6.7cm, BC = 7.5cm and $\angle B = 60^0$.

16. PQRS is a parallelogram. QM is the height from Q to SR and QN is the height from Q to PS. If SR = 15cm, PS = 10cm and   QM = 8.5cm, find the area of parallelogram PQRS and also find the length of QN.
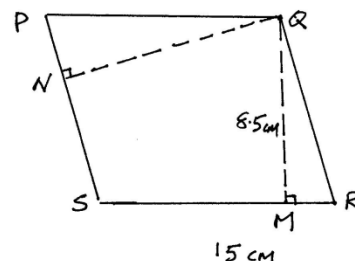
17. From the sum of $7x^2 - 2x + 5$ $and - 2x^2 - 2x - 4$ $subtract$ $2x^2 - 2x - 4$.

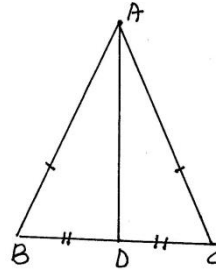18. Express the numbers in each of the following statements in standard form

   a)   Mass of Uranus = 86,800,000,000,000,000,000,000,000kg

   b)   The surface area of earth is 510,200,000 sq.km.

   c)   The distance between earth and moon = 382,000km.

SECTION-D

19. In the given figure, AB = AC

   and BD = DC. Prove that;

   a) $\triangle ABD \cong \triangle ACD$

   b) $\angle ABD = \angle ACD$

   c) $\angle BAD = \angle CAD$

   d) $\angle BDA = \angle CDA$.

20. Rs 6050 is borrowed at 6.5% rate of interest p.a.. Find the interest and amount
    to be paid at the end of 3 years.

21. a) Find the sum; $\frac{-11}{27} + \left(\frac{-55}{18}\right)$

    b) The sum of two numbers is $\frac{13}{16}$. If one of the numbers is $\frac{7}{8}$, find the other.

22. Construct triangle PQR, if PQ = 6.8cm, $\angle P = 30^0$ and $\angle Q = 105^0$. Measure and
    write lengths of PR and QR.

23. From a rectangular piece of metal sheet of length and breadth 1.6m and 0.8m
    respectively, 3 circular sheets of radius 20cm are cut out. What is the area of
    metal sheet left? ($\pi = 3.14$)

(OR)

A circus tent has radius 30m. The ring at the centre for performance for artists is
10m in radius. Find the area left for the audience. ($\pi = 3.14$)

24. Simplify and find the value; $\dfrac{12^4 \times 9^3 \times 4}{6^3 \times 8^2 \times 27}$

(OR)

Simplify and find the value; $\dfrac{3^5 \times 10^5 \times 125}{5^7 \times 6^5}$

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