

अनुक्रमांक

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APS-(910) Math (E)

Annual Exam. 2016 - 2017

Class — 9

Subject — Maths

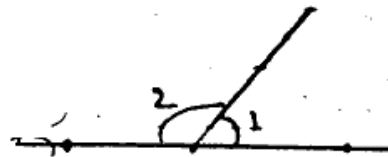
Time : 3 ¼ Hours

Marks : 100

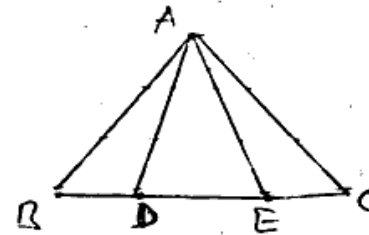
Note: 1. Draw a graph paper in Q. No. 26.

Q.No.	Marks per question
1-10	1
11-15	2
16-25	4
26-30	8

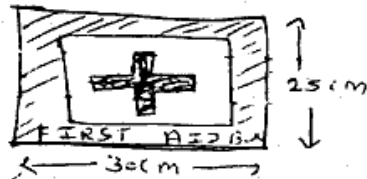
1. If  $\sin \theta = \frac{5}{13}$  Then find value of  $\cos \theta$ . 1
2. If three angle's of quadrilateral are  $75^\circ$ ,  $90^\circ$  &  $75^\circ$ . Then find fourth angle. 1
3. Write the value of each angle in equilateral triangle. 1
4. What coordinate of origin. 1
5. What is the definition of Trapezium. 1
6. In right angle triangle  $\Delta ABC$ ,  $\angle C = 90^\circ$ , then which side is the biggest of  $\Delta ABC$ . 1
7. If  $y = 2x + 5$  and  $x = 5$ , then find the value of  $y$ . 1
8. Write ratio of side & diagonal of square. 1
9. In  $\Delta ABC$ ,  $AB = 3$  cm,  $BC = 4$  cm and  $CA = 5$  cm, Write of perimeter of  $\Delta ABC$ . 1
10. In two digit no. unit digit is  $y$  & tenth digit is  $x$ , then write the number. 1
11. Multiply by sutra urdhva. Tiryaagbhyam.  $362 \times 143$  2
12. Factorise  $x^3 - 64$  by use identities. 2
13. In given figure  $\angle 1$  and  $\angle 2$  are linear. If  $\angle 2 - \angle 1 = 18^\circ$  then find value of  $\angle 1$  and  $\angle 2$ . 2



4. Prove that the angles are equal.
5. How much time will be needed to a minute arm of clock to make  $\frac{3\pi}{2}$  radian angle. 2
6. Locate  $\sqrt{2}$  on the number line. 4
7. The ratio of two numbers is 3 : 4. If 5 is subtracted from each of the number. The ratio becomes 5 : 7, find the numbers. 4
8. In given figure  $AB = AC$  and  $BE = CD$ , prove that  $AD = AE$ . 4



9. The line draw through the mid point of one side of a triangle, parallel to another side bisects the third side. 4
10. ABC and BDE are two equilateral triangles such that D is the mid point of side BC. Show that : ar (BDE) =  $\frac{1}{4}$  ar (ABC). 4
21. Find area of quadrilateral ABCD. given  $AC = 15$  cm side  $AB = 7$  cm,  $BC = 12$  cm,  $CD = 12$  cm and  $AD = 9$  cm. 4
22. A box 1 m long, 60 cm wide and 40 cm deep in to be made. Write cost of painting at the are of Rs. 20 per  $m^2$ . 4
23. Construct a  $\Delta ABC$  given side  $AB = 6$  cm, angle  $\angle ABC = 60^\circ$  and  $\angle ACB = 30^\circ$ . 4
24. Construct a grouped frequency distribution table with class size 5 for the date given— 13, 11, 8, 19, 0, 44, 27, 10, 8, 35, 13, 27, 30, 17, 43, 23, 19, 43, 17, 7. 4
25. Find the cost of making two rectangular board at the rate of Rs. 10 per square centimeter size of rectangular informational sign board is  $30^\circ \times 25^\circ$ . 4



(26)  $x + y = 3$

$3x - 2y = 4$

Solved eq<sup>n</sup> by graph method.

27. In given figure, O is internal point in a triangle then prove that  
 $(BC + AB + AC) < 2(AO + BO + CO)$



$BC + AB + AC < 2(AO + BO + CO)$

Or Divid by  
 Dhwanika  
 method

28. Construct a trapezium PQRS in which  $PQ \parallel RS$ ,  $PQ = 6$  cm,  $RS = 3$  cm,  $PS = 3$  cm and  $QR = 5$  cm.

29. If ABCD is a quadrilateral, then prove that—