



### Class 10 (Syllabus)

There will be 45 multiple choice questions from the below mentioned syllabus.  
The time duration will be 1 hour.

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|--------------------------------------|---------------------------------|
| 1. Real Numbers                      | 2. Polynomials                  |
| 3. Linear Equations in Two Variables | 4. Quadratic Equations          |
| 5. Arithmetic Progression            | 6. Triangles                    |
| 7. Coordinate Geometry               | 8. Introduction to Trigonometry |
| 9. Some Applications of Trigonometry | 10. Circles                     |
| 11. Constructions                    | 12. Area Related to Circles     |
| 13. Surface Areas and Volumes        | 14. Statistics                  |

### Sample Paper

- When Vaishali divides a number  $Z$  by 5 her answer is 6 R b, and when she divides  $Z$  by b, her answer becomes 3R0. Find the number  $Z$ .  
A. 28                      B. 35                      C. 33                      D. 30
- Find the point where the graph intersects x-axis for the quadratic equation,  
 $x^2 - 2x - 8 = 0$   
A. (4,1) and (-2,0)                      B. (4,0) and (-2,0)  
C. (4,4) and (-2,0)                      D. (4,0) and (-2,2)
- Rohan can row downstream 20km in 2 hours, and upstream 4km in 2 hours. His speed of rowing in still water and the speed of the current is:

- A. 4 km/h and 7 km/h                      B. 6 km/h and 4 km/h  
 C. 5 km/h and 4 km/h                      D. 6 km/h and 7 km/h

4. The base of the right triangle is 2cm more than its altitude. If the longest side of the triangle is 10cm, find the other two sides?

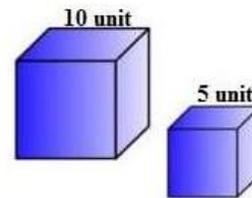
- A. 6cm, 8cm                      B. 7cm, 9cm  
 C. 5cm, 13cm                      D. None of these

5. Find the twenty-third term of the A.P 31,25,19,13.....

- A. 127                      B. 135                      C. 159                      D. - 101

6. These are two cubes with given edges. What is the ratio of total surface area of smaller cube to bigger cube?

- A. 4:1                      B. 1:4  
 C. 1:2                      D. 2:3



7. What type of triangle is formed from the points (1,-3), (2,3) and (-2,0)?

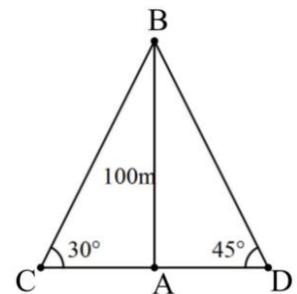
- A. right angled triangle                      B. isosceles triangle  
 C. equilateral triangle                      D. scalene triangle

8. If a pole 6m high casts a shadow  $2\sqrt{3}$  m long on the ground, then the sun's elevation is

- A.  $30^\circ$                       B.  $40^\circ$                       C.  $90^\circ$                       D.  $60^\circ$

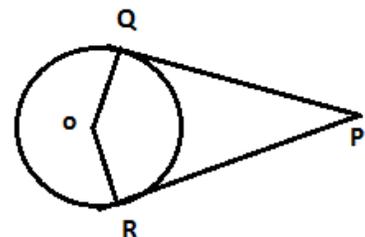
9. Two boats C and D are on opposite sides of a pole AB. What is the distance between the boats in the corresponding picture?

- A.  $100(1+\sqrt{3})$ m                      B.  $100(1-\sqrt{3})$ m  
 C.  $100(2+\sqrt{3})$ m                      D.  $50(1+\sqrt{3})$ m

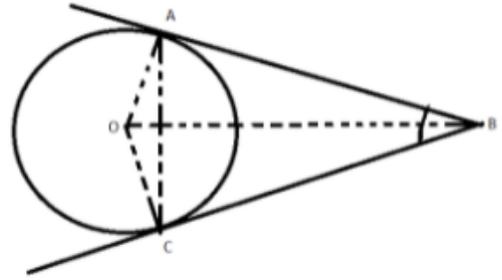


10. If PQ and PR are the two tangents to a circle with center O so that  $\angle QOR=120^\circ$  then Find  $\angle QPR$ .

- A.  $60^\circ$                       B.  $30^\circ$   
 C.  $90^\circ$                       D. None of these



11. In the above figure,  $\angle OCA = 20^\circ$ . CB and AB are the tangents of the circle. Find out  $\angle CBA$ .
- A.  $\angle 80^\circ$                       B.  $\angle 40^\circ$   
 C.  $\angle 30^\circ$                       D.  $\angle 50^\circ$



12. Find the area of the figure if length of straight line is 78.96m.

- A.  $4898.84\text{m}^2$   
 B.  $4898.67\text{m}^2$   
 C.  $4898.6784^2$   
 D.  $4898.6784\text{m}^2$



13. Calculate the volume of a water cylinder with a total height of 1m, the diameter of 40cm, and whose top section is semi-spherical.

- A.  $117,286.12\text{cm}^3$                       B.  $117,290\text{cm}^3$   
 C.  $118,000\text{cm}^3$                       D.  $119,086\text{cm}^3$

14. The mean of 10 numbers is 16. If a number is excluded then their mean becomes 15. The number excluded is:

- A. 30                      B. 35                      C. 20                      D. 25