

Sample Paper

(2020-21)

Total

Questions

28

12

7

3

50

1

2

2

Class 11

Unicus Mathematics Olympiad

Section - Class*

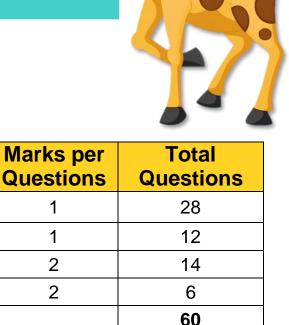
*Syllabus covered Classic Section – Class 10

Classic Section - Class 9

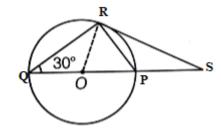
Scholar Section – Class 10

Scholar Section - Class 9

Grand Total



 Look at the image given below. O is the centre of the circle. POQ is the diameter of the circle.



- a) 15°
- c) 45°

- b) 30°
- d) 60°

Correct Answer: b 1 Mark

- 2. The production of computers in a company increases uniformly by a fixed number every year, it produced 8000 computers in 6th year & 1300 in 9th year find the production in 8th year.
 - a) 11,500

b) 9,800

c) 8,520

d) 10,200

Correct Answer: d

- **3.** Consider the following points:
 - I(0, 5)
- II. (2, -1)
- III. (3, -4)

which of the above lie on the line 3x + y = 5 and at a distance of $\sqrt{10}$ from point (1, 2)?

a) Only I

b) Only II

c) I and II

d) I, II and III

Correct Answer: c 1 Mark

1 Mark

4. The frequency distribution of a discrete variable X with one missing frequency f is given below:

X	1	2	3	4
Frequency	2	3	F	5

If the arithmetic mean of X is 29/8, then find the value of missing frequency:

- a) 5
- c) 8

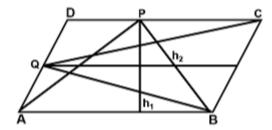
b) 6

d) 10

Correct Answer: b

1 Mark

5. Look at the image given below. There are two points P and Q on the sides DC and AD of the parallelogram ABCD. The area of triangle ABP is equal to:



- a) 1/2 of area of triangle BQC
- c) 1/3 of area of triangle BQC
- b) Area of triangle BQC
- d) Twice the area of triangle BQC

Correct Answer: b 1 Mark

- 6. In the family of four members, 20 years ago the average age of them was 60 years. Two children were born in this span of 20 years. But the present average age of the family remains the same. Among the two children who were born during the 20 years, if the older child at present is 8 years older than the younger one, what is the ratio of the present age of the older child to the present age of the younger child?
 - a) 4: 3

b) 7: 3

c) 3: 2

d) 7: 4

Correct Answer: c

1 Mark

7.	There are two points A and B indicated on a wall. Point A is at a height of 2 m above the ground and point B is 4 m vertically above point A. At a certain instant, the angles of elevation of a kite from these points are observed to be 60 and 30, respectively. Find the height of the kite above the ground:					
	a) 2 m c) 8 m	b) 4 m d) 16 m				
	Correct Answer: c	,	1 Mark			
Q	Look at the statements given below:					
J.	 Look at the statements given below: I. The quadrilateral formed by joining the mid-points of the sides of a quadrilateral, taken in order, is parallelogram. II. The line drawn through the mid-point of one side of a triangle, parallel to another side, intersects the third side at its mid-points. III. If two chords of a circle are equal, then their corresponding arcs are congruent and conversely, if two arcs are congruent, then their corresponding chords are equal. IV. Sector is the region between the chord and its corresponding arc. 					
	a) Only I and III c) I, II, III and IV	b) Only I and IV d) Only I, II and III				
	Correct Answer: d		1 Mark			
9.	On the occasion of Holi, Anvi bought choco and thrice the square root of the chocolates Find the total number of chocolates purchase	to her siblings. Still, she has				
	a) 81 c) 112	b) 98 d) 144				
	Correct Answer: a		2 Marks			
10	10. In the beginning, A works at the rate such that he can finish a piece of work in 24 hours, but he only works at this rate for 16 hours. After that, he works at a rate such that he can do the whole work in 18 hours. If A is to finish the work at a stretch, how many hours will he take to finish this work?					
	a) 12 hours c) 26 hours	b) 22 hours d) 18 hours				
	Correct Answer: b		2 Marks			