53

SUMMATIVE ASSESSMENT - II - 2016 - 2017

MATHEMATICS - Paper - II

(English Version)

PART - A & B

Class : IX **(Max. Marks : 40)** **Time : 2-45 Hrs.**

Marks : 30 **PART - A**

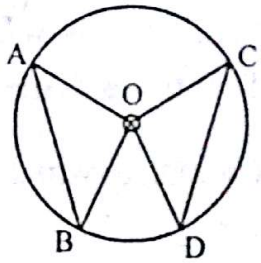
Instructions :

1) **In the time duration of 2 hrs 45 min. 15 minutes is exclusively allotted to read and understand the question paper.**
2) **The question paper comprises of Three Sections I, II, III.**
3) **All questions are compulsory.**
4) **There is no overall choice. However there is internal choice to the questions under Section - III.**

SECTION - I

Note : 1) Answer all the questions.
2) Each question carries 1 mark. **4 x 1 = 4**

1. In this figure if AB = CD and $\angle AOB = 90^0$ then find $\angle OCD$.



2. Convert inclusive classes into exclusive classes of the following classes: 10-19, 20-29, 30-39, 40-49

3. Fill in the following table with suitable units :

Sl.No.	Dimension	Area in Units
1.	mm	.....
2.	.....	Cm^2
3.	.....	m^2
4.	Km	.....

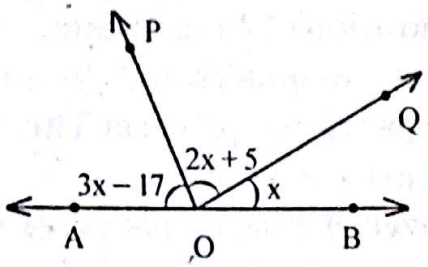
[Turn Over...

4. Draw two circles passing through two points A and B where AB = 6.2 cm.

SECTION - II

Note : 1) Answer all the questions.
2) Each question carries 2 marks. **5 x 2 = 10**

5. In the adjacent figure $\overline{AB}$ is a straight line. OP and OQ are two rays. Find the value of x and also find $\angle AOP$ and $\angle AOQ$.



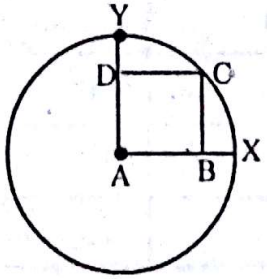
6. Find the Median and Mode to the given data

Marks	5	10	15	20	25	30
No. of Students	2	6	18	10	9	8

7. In a ΔABC, D and E are the mid points of BC and AD respectively. Prove that the area of ΔABC is four times to the area of ΔABE.

8. The following statements belong to which quadrilateral area and express them in symbolic form.
   i) Half of the product of base and height.
   ii) Half of the product of it's diagonals.

9. In this figure 'A' is the centre of circle and ABCD is a square. If BD = 4 cm then find the ratio of area of circle and area of square.



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SECTION - III

Note : 1) Answer all the questions.
2) Answer any one from Internal choice of each questions.
3) Each question carries 4 marks. **4 x 4 = 16**

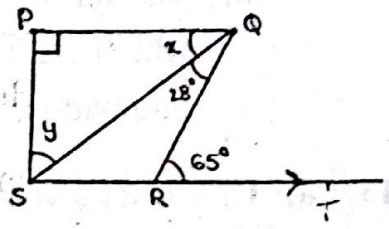
10. a) Centuries scored and some cricketers in the world are given below.

No. of Centuries	25	20	15	10	5
No. of Cricketers	10	22	18	24	46

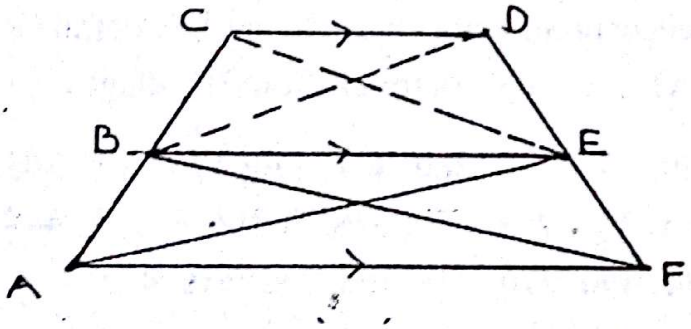
Find the Mean by using deviation method.

(OR)

b) In the given figure if PQ⊥PS.
PQ||SR, ∠ SQR = 28° and ∠ QRT=65°
then find the measures of x and y.



11. a) In the given figure CD || BE || AF.
Prove that ar (ΔAEC) = ar (ΔDBF).



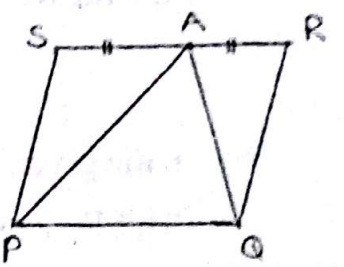
b) "The angle subtended by an arc at the centre is twice the angle subtended by it at any point on the remaining part of the circle". Prove it by taking "Minor Arc".

[Turn Over...

12. a) Sai, Raju, Latha and Sravani are studying 9th class. In SA-I, Sai got 60 marks out of 80. The average marks of all four studens is 48. If the average marks of Sai and Raju is 54 and the average marks of Sai, Raju and Latha is 42 then find the marks obtained by four students individually.

(OR)

b) A farmer has a field in the form of a parallelogram PQRS as shown in the figure. He took the mid-point as A on RS and joined it to two points P and Q.



i) In how many parts of field is divided?

ii) What are the shapes of these parts?

iii) The farmer wants to sow groundnuts which are equal to the sum of pulses and paddy. How should he sow?

13. a) Construct a circumcircle to ΔABC given with BC = 6 cm $\angle A = 52^0$ and $\angle B = 48^0$ write the steps of construction.

(OR)

b) An excellent programme organised by the Central Govt. "SWATCHA BHARAT". The data of toilets from 35 villages as shown below.

308, 420, 360, 450, 280, 451, 270, 316, 407, 363, 210, 441, 336, 417, 465, 383, 294, 245, 348, 283, 443, 295, 444, 273, 209, 316, 464, 341, 490, 276, 423, 368, 252, 336, 475.

Construct a frequency distribution table with a class size of 50.

Regd. No. : | | **53-A** | Marks : | |

SUMMATIVE ASSESSMENT - II - 2016 - 2017

MATHEMATICS - Paper - II

(English Version)

PART - B

Class : IX (Marks : 10)

Academic Standards	A.S. - 1						A.S. - 2			A.S. - 3			A.S. - 4		A.S. - 5			Total	Grade
Question No.	1	2	5	6	10	14 to 25	7	11	26 to 29	3	8	30 31	9	12	4	13	32 33		
Marks																			
Total																			

Name of the Student ..... Roll No. .....

Instructions :

1) **Each question carries equal marks.**
2) **Each question has 4 options. Write the capital letters indicating the answer in the given bracket.**
3) **Marks are not awarded for over writing answers.**

SECTION - IV

Note : 1) Answer all the questions.

2) Each question carries ½ mark. **20 x ½ = 10**

14. In a Rhombus the lengths of two diagonals are 10 cm and 13 cm then it's area is ..... ( )

A) 130 cm^2 B) 65 cm^2 C) 32.5 cm^2 D) 46 cm^2

15. An angle subtended by the arc in a semi circle is at centre is ( )

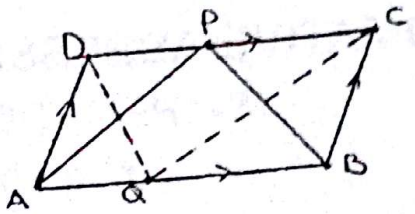
A) 90^0 B) 120^0 C) 360^0 D) 180^0

16. No. of circles drawn from a given point is ( )

A) 1 B) 2 C) 3 D) Infonate

[Turn Over...

17. In the given figure the ratio of ar (ΔAPB) and ar (ΔDQC) is ..... ( )



A) 1 : 2 B) 2 : 1
C) 1 : 1 D) 1 : 3

18. If the length of the longest chord in a circle is 24 cms then it's radius is ..... ( )

A) 12 cm B) 24 cm C) 6 cm D) 4 cm

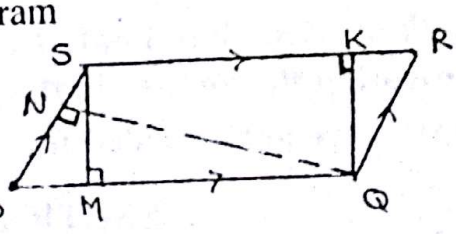
19. The average weight of 5 packets is 24 kgs and the average weight of another 10 packets is 12 kgs, then average weight of 15 packets is ..... ( )

A) 6 Kgs B) 16 Kgs C) 10 Kgs D) 36 Kgs

20. Two circles having radii 12 cm and 5 cm touches externally then the distance between the centres of two circles is ..... ( )

A) 7 cm B) 12 cm C) 5 cm D) 17 cm

21. In this figure Area of the parallegram PQRS is ..... ( )



A) PQ × SM B) RS × KQ
C) PS × QN D) All

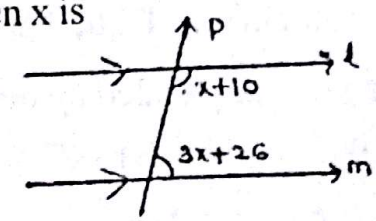
22. Mode of the scores 7, 8, 5, 6, 3, 6, 7, 6, 1 is ..... ( )

A) 7 B) 5 C) 6, 7 D) 6

23. Sum of the exterior angles of an equilateral triangle ( )

A) 360^0 B) 180^0 C) 120^0 D) 90^0

24. In this figure $l \parallel m$ and p is transversal then x is ( )



A) 8^0 B) 36^0
C) 81^0 D) 180^0

25. No. of volumes in "Elements" written by Euclid's is ..... ( )

A) 23 B) 13 C) 103 D) 24

[Contd...3

( )

26. Which is not Pythagorean triplet in the following

A) (3, 4, 5) B) (1, 2, 3)

C) (6, 8, 10) D) (5, 12, 13)

( )

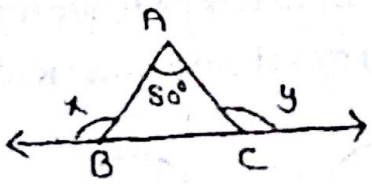
27. 12.5 is the class mark of the class interval

A) 10 – 15 B) 0 – 25

C) Both A and B D) None

( )

28. In this figure $\angle x + \angle y =$ .....



A) 80^0 B) 260^0

C) 180^0 D) 160^0

( )

29. Let 'O' be the centre of circle and AB and CD are chords. The distance of chord AB from 'O' is longer than the distance of chord CD from 'O' then one of the following is true

A) AB = CD B) AB > CD

C) AB < CD D) AB + CD = 0

( )

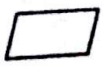
30. Opposite angles of a cyclic quadrilateral are .....

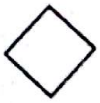
A) Complimentary B) Supplementary

C) Conjugate D) Reflective

( )

31. Match the following

K)  1) Rectangle

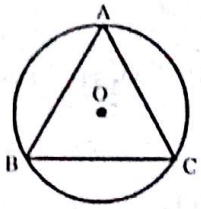
L)  2) Rhombus

M)  3) Parallelogram

A) (K, 1) (L, 2) (M, 3) B) (K, 3) (L, 1) (M, 2)

C) (K, 2) (L, 1) (M, 3) D) (K, 3) (L, 2) (M, 1)

32. The circumcentre 'O' shown in the figure is formed by the concurrance of ( )



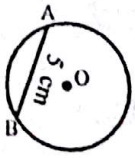
A) Perpendicular bisectors

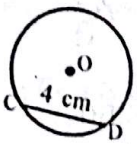
B) Angular bisectors

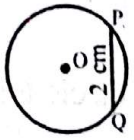
C) Medians

D) Altitudes

33. Which of the following figure represents largest angle at centre subtended by a chord. (Note : Radii are equal) ( )

A) 

B) 

C) 

D)