SUMMATIVE ASSESSMENT - II - 2016 - 2017

MATHEMATICS - Paper - I

(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. If the surface area of sphere is 616 cm^2. Find it's radius?
2. The four angles of quadrilateral are in the ratio 2:4:5:7. Find it's angles?
3. State S.A.S. Congruence Rule.
4. Represent $\frac{-13}{5}$ on number line.

SECTION - II

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

5. The volume of a cylinder is 308 cm^3. It's height is 8 cm. Find it's total surface area?

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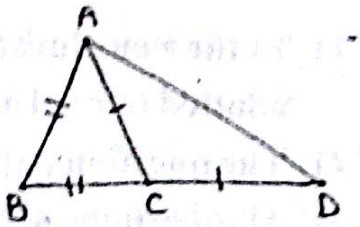
6. In ΔABC, the lines are drawn parallel to BC, CA and AB respectively through A, B, C intersecting at P, Q and R. Find the ratio of perimeter of ΔPQR and ΔABC.

7. "The sum of a two digit number and the number obtaining by reversing the order of it's digits is 165". Express the statement as a linear equation in two variables.

8. If $x + y + z = 0$, then prove that $x^3 + y^3 + z^3 = 3xyz$.

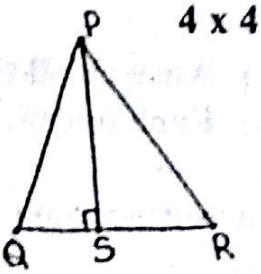
9. In the adjacent figure,
AB = BC and AC = CD.
Find their ratio of $\angle BAD$, $\angle ADB$.



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) In ΔPQR, $PS \perp QR$ and $\Delta PQS \cong \Delta PRS$.
$PQ = 2x+3$, $PR = 3y+1$, $QS = x$, $SR = y+1$.
Find the area of ΔPQR.



(OR)

b) The height of conical tent is 9 m. It's base diameter is 24 m. Find the cost of canvas cloth required if it costs ₹ 14 per sq.m.

11. a) If $\frac{1}{7-4\sqrt{3}} + \frac{1}{\sqrt{3}-2} = a + b\sqrt{3}$ then find the value of $a^3 + b^3$.

(OR)

b) Circular discs 5 mm thickness, are placed one above the other to form a regular cylinder of curved surface area 462 cm^2. Find the number of discs, if the radius is 3.5 cm.

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12. a) ABCD is a quadrilateral E, F, G, H are midpoints of AB, BC, CD and DA respectively. Prove that EFGH is a parallelogram.

(OR)

b) If both $(x-2)$ and $(x-\frac{1}{2})$ are factors of px^2+5x+r, show that $p = r$.

13. a) Draw the graph of the equation $2x+3y=12$. Find the solutions from the graph.

i) Whose y - coordinate is 2.

ii) Whose x - coordinate is -3.

(OR)

b) Visualize the value of $\sqrt{5}$ upto 3 decimals on a number line, using successive magnification.

Regd. No. : | **52-A** | Marks :

SUMMATIVE ASSESSMENT - II - 2016 - 2017

MATHEMATICS - Paper - I

(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	11	14 to 25	8	12	26 to 29	3	7	30 31	9	10	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 will not be awarded for over writing answers.**

SECTION - IV

Note : 1) Answer all the questions.
2) Each question carries ½ mark. **20 x ½ = 10**

14. $\sqrt{7} = 2.65$ (approximately) then the approximate value of $\sqrt{28}$ is ( )

A) 2.65 B) 5.3 C) 7.95 D) 10.6

15. Cube root of $\sqrt{4} + \sqrt{36}$ is ( )

A) $\sqrt[3]{144}$ B) 8 C) 2 D) $\sqrt[3]{40}$

16. If $2x^3 - 2x^2 - 2x - 5$ is divided by $x + 1$ then the remainder is ( )

A) 0 B) –7 C) 6 D) – 6

[Turn Over...

17. The factor of $a-b-a^2+b^2$ is ( )
A) $a-b$ B) a^2+b^2 C) $2ab$ D) $4ab$

18. If $x=-3, y=-2$ is a solution $5x-7y=k$ then the value of k ( )
A) 0 B) 1 C) -1 D) 2

19. If $x=1$ then the solution $\frac{x}{2}-\frac{y}{3}=3$ is ( )
A) $\left(1,\frac{-15}{2}\right)$ B) $\left(1,\frac{21}{2}\right)$ C) $\left(\frac{-15}{2},1\right)$ D) $\left(\frac{21}{2},1\right)$

20. A cone and cylinder have equal bases and heights. Their volumes in the ratio of ( )
A) 1 : 3 B) 3 : 1 C) 2 : 3 D) 3 : 2

21. Among the following a line passing through origin is $(x, y \neq 0)$ ( )
A) $x+y=6$ B) $\frac{x}{2}-\frac{y}{3}=3$ C) $y=3x$ D) $\sqrt{2}x+3y=9$

22. The angles of a quadrilateral are $x^0, x-10^0, x+30^0$ and $2x$, then the angles are ( )
A) $64^0, 74^0, 94^0, 128^0$ B) $102^0, 92^0, 132^0, 34^0$
C) $58^0, 98^0, 78^0, 126^0$ D) $68^0, 58^0, 98^0, 136^0$

23. Two adjacent sides of a parallelogram are 7.5 cm and 5 cm then its perimeter is ( )
A) 12.5 cm B) 25 cm C) 30 cm D) 20 cm

24. The total surface area of cube is 96 cm^2, then it's volume is ( )
A) 8 cm^3 B) 27 cm^3 C) 64 cm^3 D) 125 cm^3

25. If the radius of sphere is 14 cm then it's surface area is ( )
A) 1464 cm^2 B) 2464 cm^2
C) 3464 cm^2 D) 4464 cm^2

26. Statement - 1 : In a parallelogram, two adjacent angles are equal then it is called Rectangle.

[Contd...3

Statement - 2 : If one angle of Rhombus is right angle then it's square ( )

A) Both 1 & 2 are true B) Both 1 & 2 are false

C) 1 is true & 2 is false D) 1 is false & 2 is true

27. Among the following a true statement in ΔABC is ( )

A) $\overline{AB} + \overline{BC} < \overline{AC}$ B) $\overline{BC} + \overline{AC} < \overline{AB}$

C) $\overline{AC} + \overline{AB} > \overline{BC}$ D) $\overline{AB} + \overline{BC} = \overline{AC}$

28. In ΔABC, AB = 8 cm, BC = 5 cm, CA = 9 cm then the greatest angle is ( )

A) $\angle A$ B) $\angle B$ C) $\angle C$ D) $\angle B, \angle C$

29. In ΔABC, BC = 10 cm, CA = 15 cm then the measure of AB is ( )

A) Less than 25 cm B) Greater than 25 cm

C) Equal to 25 cm D) Less than 5 cm

30. The equation of line parallel to X - axis ( )

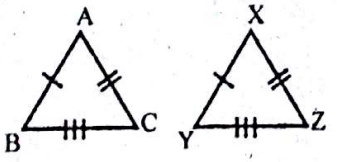
A) $x = 0$ B) $y = k$ C) $x = k$ D) $x = 9$

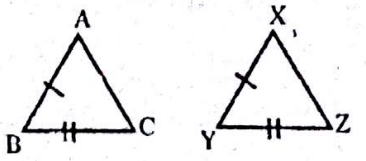
31. If the radius and height of a cylinder is x cm and y cm respectively then the curved surface area of cylinder. ( )

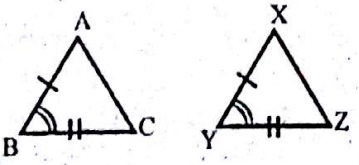
A) $2\pi x\,(x+y)\ cm^2$ B) $2\pi\,xy\ cm^2$

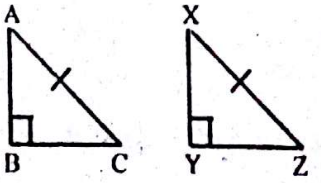
C) $\pi\,x^2y$ D) $2\pi\,x^2y\ cm^2$

32. In which figure represents $\Delta ABC \cong \Delta XYZ$ w.r.t. to the A.S.A. rule ( )

A) 

B) 

C) 

D) 

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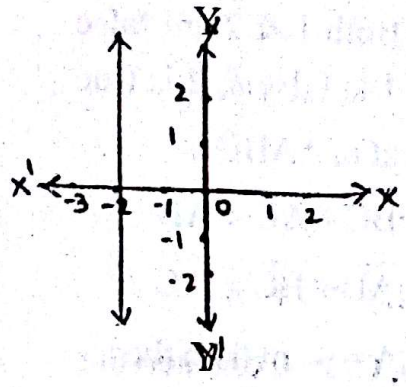
33. In this, which figure represents the $y = -2$ ( )

A)



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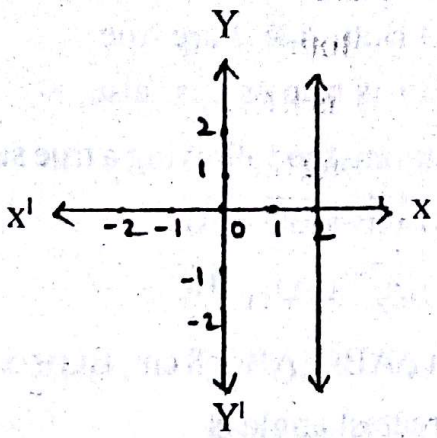

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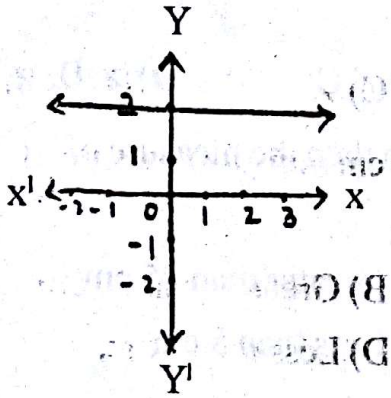

D)