SUMMATIVE ASSESSMENT - II - 2016 - 2017

MATHEMATICS

(English Version)

PART - A & B

Class : VIII (Max. Marks : 80) Time : 2-45 Hrs.

Marks : 60

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 2 marks. **4 x 2 = 8**

1. "There are '30' non perfect square numbers between 7^2 and 9^2". Is it true or false? Give reasons.

2. If $2^{-3} = \frac{1}{2^x}$, then find the value of x.

3. Write the formula for finding 'Mean' from deviations for ungrouped data and explain the terms.

4. Mention two pairs of congruent objects, you use in daily life.

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SECTION - II

Note : 1) Answer all the questions. **5 x 4 = 20**
2) Each question carries 4 marks.

5. Solve $\frac{6x-7}{3x+2}=\frac{5}{8}$.

6. If the diagonals of a parallelogram are equal, then what types of figures will form? Draw rough diagrams and give reasons.

7. 8 pumps to fill a tank in 1 hour 30 minutes. How long will it take if only 6 pumps of the same type are used?

8. Draw two squares of different sides. Can you say they are similar? Explain. Find the ratio of their perimeters and areas. What do you observe?

9. In the following grouped frequency distribution table class marks (Mid values) are given.

Class Marks	11	23	35	47	59	71
Frequency	6	11	15	22	9	7

Construct exclusive class intervals and also write less than and greater than cumulative frequencies.

SECTION - III

Note : 1) Answer all the questions.
2) Answer any one from Internal choice of each questions.
3) Each question carries 8 marks. **4 x 8 = 32**

10. a) A surveyor has noted the measurements of a field in his field book in metres as shown below. Find the area of that field.

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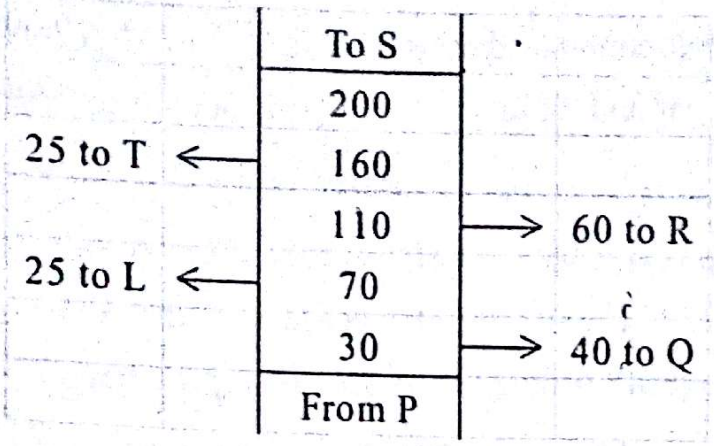

(OR)

b) A wire is bent into the form of a square of side 55 cm. Again the wire is straightened and bent into the form of a circle. What will be the radius and area of the circle so formed?

11. a) State whether the following statements are true or false. Explain with reason.

i) Two squares of side 5 cm each and one of them rotated 45^0 are congruent.

ii) Two circles of radii 6 cm and 7 cm are not similar.

iii) Any two right angled triangles with hypotenuse 5 cm are congruent.

iv) Two equilateral triangles ΔABC and ΔPQR of side 4 cm each are not congruent.

(OR)

b) Take a Pythagorean triplet. Write their three multiples. Check whether these triplets form Pythagorean triplets or not.

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12. a) Find compound interest paid when a sum of Rs.10,000 is invested for 1 year and 3 months at 8½% per annum compounded annually.

(OR)

b) A shop keeper sold two cell phones at Rs.1,980 each. He sold one at a profit of 10% and the other at a loss of 10%. On the whole whether he gets profit or loss. If so what is its percentage?

13. a) Construct a histogram for the marks obtained by 40 students in Summative Assessment-I of class VIII is given below.

Class Interval (Marks)	0-20	20-40	40-60	60-80	80-100
No. of Students	4	6	15	8	7

(OR)

b) Write the class intervals and the cumulative frequencies of the following data and draw less than cumulative frequency curve.

Marks Obtained	Less than 5	Less than 10	Less than 15	Less than 20	Less than 25
No. of Students	2	8	18	27	35

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Regd. No. : [ ] **48-A** Marks : [ ]

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(English Version)

PART - B

Class : VIII (Marks : 20)

Academic Standards	A.S. - 1					A.S. - 2				A.S. - 3			A.S. - 4			A.S. - 5		Total	Grade
Question No.	2	5	10	12	14 to 23	1	6	11	24 25	3	8	26 27	4	7	28 to 33	9	13		
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 1 mark. **20 x 1 = 20**

14. Rational numbers are not closed under which operation ( )

A) Addition B) Subtraction

C) Multiplication D) Division

15. If $3(t-3) = 5(2t+1)$, then $t =$ ( )

A) -2 B) 2 C) -3 D) 3

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16. The value of $(-2)^{-5}$ ( )

A) -32 B) $\frac{1}{(-2)^5}$ C) $-\frac{1}{32}$ D) B & C

17. The average of first 'n' natural numbers ( )

A) $\frac{n+1}{2}$ B) $\frac{n-1}{2}$ C) $\frac{n}{2}$ D) $\frac{n}{2}+1$

18. Area of a trapezium is 48 cm². If the lengths of the parallel sides are 9 cm and 7 cm, the perpendicular distance between them is ( )

A) 5 cm B) 6 cm C) 4 cm D) 9 cm

19. The formula for area of a sector ( )

A) $A = \frac{lr}{2}$ B) $A = \frac{x^0}{360^0} \times \pi r^2$

C) $A = \pi r^2$ D) A & B

20. The weight of 12 sheets of paper, having same thickness is 40 gms. How many sheets would weigh 1 kg? ( )

A) 480 B) 360 C) 300 D) 400

21. If the average of $(x+1), (x+3), (x+5), (x+7)$ and $(x+9)$ is 30, then x = ( )

A) 30 B) 20 C) 25 D) 35

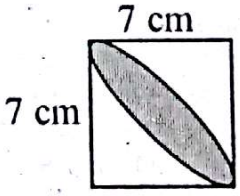
22. $\sqrt[3]{\frac{64}{343}}$ = ... ( )

A) $\frac{4}{9}$ B) $\frac{4}{7}$ C) $\frac{8}{11}$ D) $\frac{8}{7}$

23. In the adjacent figure, the area of the shaded region is (in sq. cms.) ( )

A) 49 B) 56

C) 77 D) 28



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24. Which of the following pair of number have their own reciprocals ( )

A) 2, $\frac{1}{2}$ B) 1, –1 C) 2, –2 D) 3, $\frac{1}{3}$

25. Which of the following is the square of an odd number? ( )

A) 2116 B) 3844 C) 1369 D) 2704

26. Which one decides the width of rectangle in the histogram. ( )

A) Class interval B) Frequency

C) Mid-value D) Cumulative frequency

27. The standard form of 0.0000345 is ( )

A) $34 \cdot 5 \times 10^{-6}$ B) 345×10^{-7}

C) $3 \cdot 45 \times 10^{-5}$ D) 3450×10^{-8}

28. $\frac{9}{11} \times (.....) = \frac{9}{11}$ ( )

A) 0 B) 1 C) –1 D) $\frac{9}{11}$

29. The English alphabet, having more lines of symmetry is ( )

A) H B) I C) O D) X

30. Three persons can construct a wall in four days, then how many days four persons can construct the same. ( )

A) 3 B) 4 C) 5 D) 6

31. The measure of central tendency, which decides the favourite uniform colour by the students of a class is ( )

A) Mean B) Median C) Mode D) Range

32. In a right angled triangle, the lengths of two sides are '2 mn' and '$m^2 - n^2$' respectively, then the length of hypotenuse is ( )

A) $4 m^2n^2$ B) $m^2 + n^2$ C) $2 m^2n^2$ D) $m^3 + n^3$

33. Which of the following are similar ( )

A) Right angled triangles B) Acute angled triangles

C) Rectangles D) Circles

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