

St. Ursula Girls' High School & Jr. College Nagpur
Final Examination 2020

Time : 2.30 hr.)

Class : VIII Subject : Maths

(Marks : 50

Section : A, D, E, F

Q. 1 A) Choose the correct alternative answer for each of following Questions. (5)

- 1) The degree of polynomial $7 - 4x^2$ is
a) 0 b) 1 c) 2 d) 3
- 2) Mean of 1st 5 whole numbers is _____
a) 1 b) 2 c) 3 d) 4
- 3) If $\frac{2}{3} + 5q = 4$ then $q = \boxed{}$
a) $\frac{2}{3}$ b) $\frac{3}{2}$ c) 4 d) 5
- 4) _____ test of congruence does not exist.
a) S-S-A b) S-A-S c) A-S-A d) Hypotenuse-Side test
- 5) A diameter of a circle divides circle into two _____
a) Semicircles b) minor arcs c) Majorarcs d) Unequal parts

B) Attempt any five of the following (5)

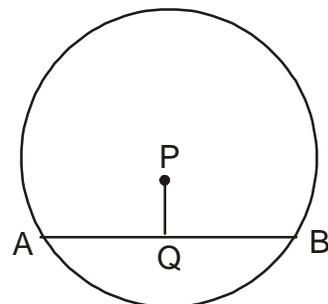
- 1) Divide : $40a^3 \div (-109)$
- 2) Solve the following equation
 $2m+7 = 9$
- 3) If the radius of the circle is 21 cm. Find the circumference.
- 4) Write the corresponding sides of $\triangle ABD$ and $\triangle PQR$ under the correspondence $ABC \leftrightarrow RQP$
- 5) If base of a parallelogram is 18 cm and its height is 11 cm find its area.
- 6) Find volume of a cube, if side is 6 cm.

Q. 2 Attempt any six of the following : (12)

1. Lengths of the diagonals of a rhombus are 15 cm and 24 cm, find its area.
2. Solve $13x - 5 = \frac{3}{2}$
3. Find the volume of a box if its length, breadth and height are 20 cm, 10.5 cm and 8 cm respectively.
4. If $P = 2000$, $R = 5$ P.C.P.A., $N = 2$ years, then find compound interest.

5. In a circle with centre P, chord AB is drawn of length 13 cm, Seg $PG \perp$ Chord AB, then find $l(QB)$

6. Divide : $(2y^3 + 4y^2 + 3) \div 2y^2$



Q. 2 Attempt any four of the following : (12)

- 1) The following table shows the number of saplings planted by 30 students. fill in the boxes and find the average number of saplings planted by each student.

No. of saplings (scores) x_i	No. of students (frequency) f_i	$f_i \times x_i$
1	4	4
2	6	<input type="text"/>
3	12	36
4	8	<input type="text"/>
	N = 30	$\sum f_i x_i =$ <input type="text"/>

$$\text{Mean } \bar{x} = \frac{\sum f_i x_i}{N}$$

$$= \frac{\text{}}{30}$$

$$= \text{$$

∴ The average number of trees planted

2. Mother is 25 year older than her son. Find Son's age if after 8 years ratio of Son's age to mother's age

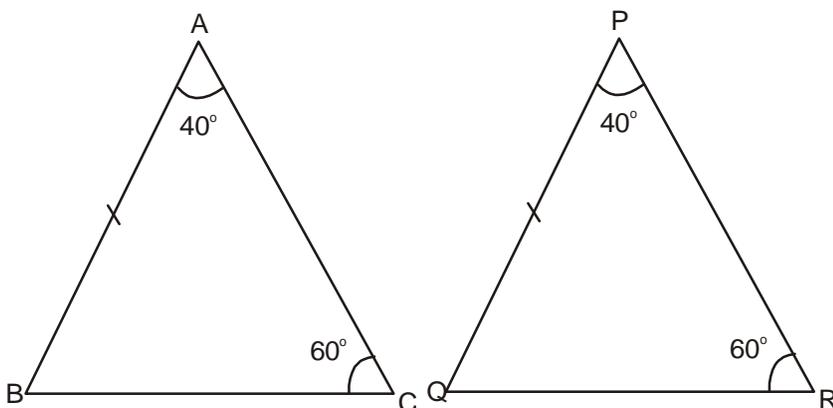
will be $\frac{4}{9}$

3. O is centre of the circle. Find the length of radius, if the chord of length 24 cm is at a distance of 9 cm from the centre of the circle.

4. Divide and write the quotient and the remainder.

$$(3x + 2x^2 + 4x^3) \div (x - 4)$$

5. Complete the following activity based on the diagram below. Similar marking indicate congruent Parts.



ΔABC

$$\angle A + \angle B + \angle C = \text{$$

$$\therefore 40^\circ + \angle B + 60^\circ = 180^\circ$$

$$\therefore \angle B = \text{} - 100 = 80^\circ$$

In ΔABC and ΔPQR

$$\angle A \cong \angle \text{$$

Side $AB \cong$ Side PQ

$$\angle \text{} \cong \angle R = 80^\circ$$

$$\therefore \Delta ABC = \Delta \text{} (\text{ Test})$$

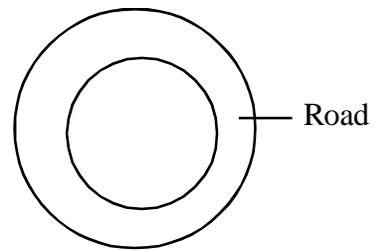
Q. 4 Attempt any four of the following : (16)

1. The cost price of a machine is 2,50,000. If the rate of depreciation is 10% per year find the depreciation in price of the machine after two years.

- Find the area of base and radius of a cylinder if its curved surface area is 660 sqcm and height is 21 cm.
- The following data is collected in a survey of some students of 10th standard from some schools. Draw the percentage bar graph of the data.

School	1st	2nd	3rd	4th
Inclination towards Sci. Stream	90	60	25	16
Inclination towards com. Stream	60	20	25	24

- Diameter of the circular garden is 42m. There is a 3.5m wide road around the garden. Find the area of the road.



- In a two digit number, digit at the ten's place is twice the digit at units place. If the number obtained by interchanging the digits is added to the original number, the Sum is 66. Find the number.

