

GREENLAWNS SCHOOL, WORLI
FINAL EXAMINATION - 2020
MATHEMATICS

STD: VIII
DATE: 10/02/2020

MARKS: 80
TIME: 2½ hrs

Answers to this Paper must be written on the paper provided separately. You will not be allowed to write during the first 15 minutes. This time is to be spent in reading the question paper. The time given at the head of this Paper is the time allowed for writing the answers. Attempt all questions from Section A and any four questions from Section B. All working, including rough work, must be clearly shown and must be done on the same sheet as the rest of the answer. Omission of essential working will result in loss of marks.

The intended marks for questions or parts of questions are given in brackets [].

Section A

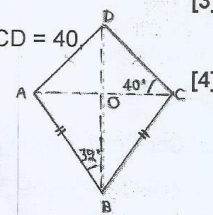
(Attempt all questions of this section)

Question 1

- Can a polyhedron have 14 faces, 24 edges and 33 vertices? [2]
- Draw one net of a triangular prism [2]
- Solve $3(y - 7) - 2(3y - 4) = (2 - 5y)$ [3]
- Two angles of quadrilateral are 72 and 56 respectively and the remaining two angles are in the ratio 3 : 5. Find the measure of each angle of the quadrilateral. [3]

Question 2

- Find the solution set for $15 + 6x > 0$, where $x \in \text{Integers}$. Represent the solution set on the number line [3]
- The diameter of cylinder is 7 cm and its height is 16 cm. Find the volume and lateral surface area of the cylinder. [3]
- In the adjoining kite, diagonals intersect at O. If $\angle AOB = 32^\circ$ and $\angle OCD = 40^\circ$ find i. $\angle ABC$ ii. $\angle ADC$ iii. $\angle BAD$. [4]



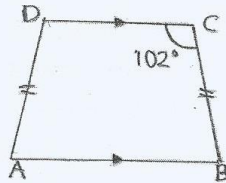
Question 3

- In a parallelogram ABCD, if $\angle A = 115^\circ$, find $\angle B$, $\angle C$, $\angle D$. [3]
- Construct a parallelogram ABCD in which $AB = 5.2$ cm $BC = 3.4$ cm, $\angle B = 120^\circ$. [3]

- c. Find the area of a parallelogram whose base is 3.5 m and height 80 cm. [2]
 d. Find the area of the rhombus, the lengths of whose diagonals are 25 cm and 16.8 cm. [2]

Question 4

- a. In the adjoining isosceles trapezium ABCD, $\angle C = 102^\circ$. Find all the remaining angles of trapezium. [3]



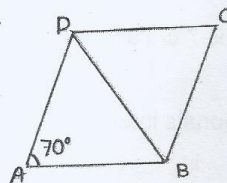
- b. A die is thrown once. What is the probability of getting:
 i. A prime number? ii. A number greater than two?
 iii. A number other than 2 and 5 [3]
- c. The weight (in KG) of 30 students of class VIII of Greenlawns school, Worli are given below:
 36, 38, 42, 46, 37, 49, 44, 37, 41, 46, 44, 33, 32, 40, 42, 41, 39, 33, 38, 42, 47, 49, 34, 34, 38,
 43, 36, 35, 43, 44. Construct a grouped frequency distribution table taking class interval 30 –
 35, 35 - 40 - - - - [4]

Section B

(Attempt any four questions)

Question 5

- a. In the adjoining figure, ABCD is a rhombus.
 If $\angle A = 70^\circ$, find $\angle CDB$. [3]

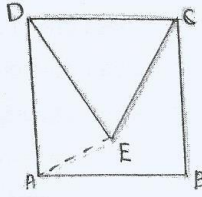


- b. Construct a quadrilateral ABCD in which $AB = 5$ cm, $BC = 4.5$ cm, $CD = 3.7$ cm, $AD = 4.6$ cm and diagonal $AC = 6$ cm [3]
- c. A man is 56 years old and his son is 24 years old. In how many years the father will be twice as old as his son at that time. [4]

Question 6

- a. In the adjoining figure, ABCD is a square and CDE is equilateral triangle.

- Find
- i. $\angle AED$
 - ii. $\angle EAB$
 - iii. Reflex $\angle AEC$



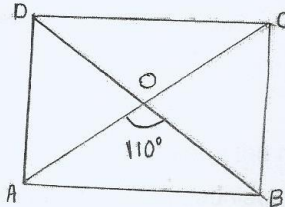
[3]

- b. Construct a square, one of whose diagonals measure 6 cm. [3]
- c. Rectangular grassy plot is 125 m long and 74 m broad. It has a path 2.5 m wide all around it on the inside. Find the cost of leveling the path at Rs. 6.80 per m^2 [4]

Question 7

- a. Construct a rhombus ABCD in which $AB = 4.2$ cm and diagonal $AC = 6.5$ cm. [3]
- b. In the adjoining figure, ABCD is rectangle whose diagonals AC and BD intersect at O. If $\angle AOB = 110^\circ$, find the measure of :

- i. $\angle ODA$
- ii. $\angle OCD$



[3]

- c. The lengths of the parallel sides of a trapezium are in the ratio 5 : 3 and the distance between them is 12.5 cm. If the area of trapezium is 450 cm^2 , find the lengths of its parallel sides. [4]

Question 8

- a. Surface area of a cube is 1176 cm^2 . Find its volume. [3]
- b. The following data represents the number of students got admission in different streams of college. Prepare a pie chart for the given data. [3]

Stream	Science	Arts	Commerce
Number of Students	400	300	500

- c. Find the capacity of a rectangular cistern whose length is 6 m, breadth 2.5 m and depth 1.4 m. Also find the area of iron sheet required to make the cistern. [4]

Question 9

- a. A copper wire when bent in the form of a square encloses an area of 121 cm^2 . If the same wire is bent into the form of circle, find the area of the circle. [3]
- b. Find the solution set for $5 - 4x < x - 15$, where $x \in$ rational numbers. Represent the solution set on the number line. [3]
- c. Given below is the data of school going students (boys and girls)

Mode of transport	School bus	Walking	Bicycle	Other vehicles
Number of boys	75	120	240	150
Number of girls	135	60	180	90

Draw a bar graph to represent the data.

[4]
