INDIAN SCHOOL SOHAR
PERIODIC TEST II (2022-2023)
MATHEMATICS

CLASS: VII
DATE: 17/01/2023

MAX. MARKS: $\mathbf{2 0}$
TIME: 40 MINUTES

## General Instructions:

1. This Question Paper has 3 Sections A-C.
2. Section $\mathbf{A}$ has 5 MCQs carrying 1 mark each.
3. Section B has 3 questions carrying 2 marks each.
4. Section $\mathbf{C}$ has 3 questions carrying 3 marks each.
5. All Questions are compulsory. However, an internal choice in one question of 1 mark, one question of 2 marks and one question of 3 marks has been provided.
6. Draw neat figures wherever required.

## SECTION A

1. Find the value of $x$ in the given figure.
(A) $80^{\circ}$
(B) $30^{\circ}$
(C) $50^{\circ}$
(D) $110^{\circ}$

OR


Find the value of $x$ in the given figure.
(A) $180^{\circ}$
(B) $100^{\circ}$
(C) $\quad 80^{\circ}$
(D) $40^{\circ}$

2. If the two interior opposite angles of the exterior angle of a triangle measure $50^{\circ}$ and $60^{\circ}$, find the measure of the exterior angle.
(A) $110^{\circ}$
(B) $130^{\circ}$
(C) $120^{\circ}$
(D) $70^{\circ}$
3. If $\triangle C A B \cong \triangle F E D$, which among the following is true?
(A) $\angle C=\angle E$
(B) $\mathrm{AB}=\mathrm{ED}$
(C) $A B=F E$
(D) $\angle B=\angle F$
4. What is the angle included between the sides $P N$ and $P M$ of $\triangle M N P$ ?
(A) $\angle \mathrm{N}$
(B) $\quad \angle \mathrm{M}$
(C) $\angle P$
(D) $\quad \mathrm{NM}$
5. Which of the following could be the possible measures of the angles of a triangle?
(A) $50^{\circ}, 60^{\circ}, 70^{\circ}$
(B) $50^{\circ}, 50^{\circ}, 60^{\circ}$
(C) $45^{\circ}, 45^{\circ}, 80^{\circ}$
(D) $60^{\circ}, 30^{\circ}, 95^{\circ}$

## SECTION B

6. Determine whether $17 \mathrm{~cm}, 8 \mathrm{~cm}$ amd 15 cm can be the sides of a right-angled triangle.
7. One of the angles of a triangle is $40^{\circ}$ and the other two angles are equal in measure. Find the measure of each of the equal angles.

## OR

The three angles of a triangle are in the ratio 2:3:5. Find the measure of all the angles of the triangle.
8. In the given figure $A B=A C$ and $A D$ is the bisector of $\angle B A C$.

Prove that $\triangle A D B \cong \triangle A D C$. Give reasons.


## SECTION C

(3 Marks)
9. Find the area of the rectangle whose length is 15 cm and diagonal is 17 cm .
10. In the given figure prove that $\triangle A O C \cong \triangle B O D$. Give reasons. Is $A C=B D$ ? Give reason.
11. Find the value of $x$ and $y$ in the figure given below.


OR
In the given figure $B C=C A$ and $\angle A=40^{\circ}$. Find the measure of $\angle A C D$.


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6. Draw neat figures wherever required.

## SECTION A

1. What is the angle included between the sides $P N$ and $M N$ of $\triangle M N P$ ?
(A) $\angle \mathrm{N}$
(B) $\quad \angle \mathrm{M}$
(C) $\angle P$
(D) $\quad \mathrm{NM}$
2. Which of the following could be the possible measures of the angles of a triangle?
(A) $60^{\circ}, 30^{\circ}, 95^{\circ}$
(B) $50^{\circ}, 50^{\circ}, 60^{\circ}$
(C) $45^{\circ}, 45^{\circ}, 80^{\circ}$
(D) $50^{\circ}, 60^{\circ}, 70^{\circ}$
3. If $\triangle \mathrm{FED} \cong \triangle \mathrm{CAB}$, which among the following is true?
(A) $\angle E=\angle C$
(B) $\mathrm{ED}=\mathrm{AB}$
(C) $\mathrm{FE}=\mathrm{AB}$
(D) $\angle \mathrm{F}=\angle \mathrm{B}$
4. Find the value of $x$ in the given figure.
(A) $30^{\circ}$
(B) $80^{\circ}$
(C) $50^{\circ}$
(D) $110^{\circ}$

OR


Find the value of $x$ in the given figure.
(A) $180^{\circ}$
(B) $100^{\circ}$
(C) $80^{\circ}$
(D) $40^{\circ}$

5. If the two interior opposite angles of the exterior angle of a triangle measure $50^{\circ}$ and $60^{\circ}$, find the measure of the exterior angle.
(A) $120^{\circ}$
(B) $130^{\circ}$
(C) $110^{\circ}$
(D) $\quad 70^{\circ}$

## SECTION B

6. Determine whether $12 \mathrm{~cm}, 5 \mathrm{~cm}$ amd 13 cm can be the sides of a right-angled triangle.
7. In the given figure $A B=A C$ and $A D$ is the bisector of $\angle B A C$. Prove that $\triangle A D B \cong \triangle A D C$. Give reasons.

8. The three angles of a triangle are in the ratio 3:2:5. Find the measure of all the angles of the triangle.

## OR

One of the angles of a triangle is $80^{\circ}$ and the other two angles are equal in measure. Find the measure of each of the equal angles.

## SECTION C

9. Find the area of the rectangle whose length is 15 cm and diagonal is 17 cm .
10. In the given figure prove that $\triangle \mathrm{AOC} \cong \triangle \mathrm{BOD}$. Give reasons. Is $A C=B D$ ? Give reason.
11. Find the value of $x$ and $y$ in the figure given below.


OR
In the given figure $B C=C A$ and $\angle A=40^{\circ}$. Find the measure of $\angle A C D$.


