INDIAN SCHOOL MUSCAT
SENIOR SECTION
DEPARTMENT OF ENGINEERING GRAPHICS
CLASS XII

UNIT-2 : MACHINE PARTS

1. Draw to scale 1:1, the front view, top view and side view of a **hexagonal nut** of size M30, keeping the axis perpendicular to H.P. Give standard dimensions

2. Draw to scale 1:1, standard profile of **B.S.W. thread**, taking pitch = 40 mm. Give standard dimensions

3. Draw to scale 1:1, the standard profile of **metric screw thread** (external) taking enlarged pitch as 50mm. Give standard dimensions

4. Draw to scale 1:1, the standard profile of **metric screw thread** (internal) taking enlarged pitch as 50mm. Give standard dimensions

5. Draw to scale, 1:1, the standard profile of a **Knuckle thread** (internal and external), taking enlarged pitch as 40mm

6. Draw to scale, 1:1, the standard profile of a **square thread** internal and external), taking enlarged pitch as 40mm.

7. Draw to scale 1:1, the front view and side view of a **hexagonal headed bolt** of diameter 30mm, keeping the axis parallel to H.P and V.P. The length of the bolt is 120mm.

8. Draw to scale 1:1 the Front view and Plan of a **square head bolt** when it axis is perpendicular to H.P. Take the diameter of the bolt as 24mm, and length as 110 mm.

9. Draw to scale 1:1, the Front elevation and Plan of a **square nut** of diameter 25mm, keeping its axis vertical and two of the opposite edges of the square face parallel to V.P.

10. Draw to scale full size the Front View and Top View of a **square nut** of diameter 25mm, keeping its axis vertical with the diagonal on the square face parallel to V.P.

11. Draw to scale 1:1, the front view and top view of a **washer,** taking the nominal diameter of the bolt on which the washer is used = 25mm. Keep the circular face of the washer parallel to V.P

12. Draw to scale 1:1, the Front View, Top View and side view of a **hexagonal headed bolt** of diameter 25mm with **hexagonal nut and washer**, keeping the axis parallel to V.P and H.P

13. Draw to scale 1:1, the Front View and Side View of an **assembly of hexagonal bolt** of diameter 24mm bolt length = 90mm and a **hexagonal nut**, keeping the axis parallel to H.P and V.P

14. Draw to scale 1:1, the Front View and Side View of an **assembly of a square bolt** of diameter 25 mm and a **square nut**, keeping the axis parallel to V.P and H.P. Take length of the bolt as 100 mm.