INDIAN SCHOOL MUSCAT
FIRST TERM EXAMINATION
ENGINEERING GRAPHICS

CLASS: XII   Sub. Code: 046   Time Allotted: 3 Hrs

09.05.2018   Max. Marks: 70

General Instructions:
1. Attempt all the questions.
2. Use both sides of the drawing sheet, if necessary.
3. All dimensions are in millimeters.
4. Missing and mismatching dimensions, if any, may be suitably assumed.
5. Number your answers according to questions.
6. Neatness will be duly rewarded

1. Construct an isometric scale of length 120 mm.   3

2. An upright cone (diameter = 50 mm and height 70 mm) is placed centrally on the top   14
    rectangular face of a pentagonal prism (base side = 50 mm and axis = 80 mm). The axis of
    the pentagonal prism is parallel to both H.P and V.P. Draw the isometric projection of
    this combination of solids. Give the dimensions and indicate the direction of viewing.

3. A horizontal square prism (side of square 40 mm, length of the prism 70 mm), having its   14
    square faces parallel to VP. It is resting centrally with one of its rectangular faces on the
    top circular face of a cylindrical disc (base diameter 90 mm, thickness 25 mm). Draw the
    isometric projection of the combination of solids. Show the axis of solid. Indicate the
    direction of viewing. Give all dimensions.

4. Draw the isometric projection of a frustum of a cone of a diameter 30 mm at smaller end,   07
    diameter 50 mm at bigger end and the axial height is 70 mm. It is resting on its bigger
    end on H.P. keeping its axis vertical.

5. Draw an isometric projection of an equilateral triangular prism, keeping two triangular   07
    faces parallel to VP. Side of an equilateral triangle = 50 mm, length of the prism = 70 mm.

6. Draw to scale 1:1, the front view and side view of a hexagonal headed bolt of diameter 24   10
    mm, keeping the axis parallel to VP and HP. Two opposite sides of the hexagonal head is
    perpendicular to VP. Take Length of the bolt = 120 mm

7. Draw to scale 1:1, the front view and plan of a square nut, taking d = 30 mm, keeping the   10

axis perpendicular to H.P and the diagonal of the square face parallel to VP. Give standard dimensions.

8. A square lamina in isometric projection appear as   01

    a) Rhombus

    b) Rectangle

    c) Trapezium

    d) Parallelogram

9. Which one among the following represents a permanent fastener?   01

    a) Nut

    b) Rivet

    c) Screw

    d) Bolt

10. The inner diameter of washer is   01

    a) Equal to nut size.

    b) More than the nut size.

    c) Less than the nut size.

    d) Independent of the nut size.

11. In first angle projection the order of the object, plane and observer, as viewed from front   01
    is

    a) Object, plane and observer.

    b) Object observer and plane.

    c) Plane, observer and object.

    d) Observer, object and plane

12. Chamfering angle of the nut and bolt is   01

    a) 10°

    b) 20°

    c) 30°

    d) 40°

End of the Question Paper