INDIAN SCHOOL MUSCAT
HALF YEARLY EXAMINATION
ENGINEERING GRAPHICS

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

26.09.2019   Max. Marks: 70

General Instructions:

1. Attempt all questions.

2. Use both the sides of the drawing sheet if necessary.

3. All dimensions are in millimeters.

4. Missing and mismatching dimensions if any should be assumed suitably.

5. Follow SP: 46 2003 revised codes. (With first angle projection method).

6. In no view of question 2, are hidden edges or lines required.

7. In question 4, hidden lines or edges are to be shown in the views without section.

8. Number your answer figures according to the questions.

Q1   Answer the following Multiple Choice Questions. Print the correct choice on your   5
      drawing   sheet.

1   A square lamina in isometric projection appears as _____

            (a) Rhombus

            (b) Rectangle

            (c) Trapezium

            (d) Parallelogram

2   The width of a key "w" (as per standard dimensions) for a shaft of diameter d = 60mm is

            (a) 10mm

            (b) 15mm

            (c) 20mm

            (d) 30mm

3   In first angle projection the order of object, plane and observer, as viewed from the front is _____

          (a) Object, Plane and Observer

          (b) Object, Observer and Plane

          (c) Plane, Observer and Object

          (d) Observer, Object and Plane

4   What is the thread angle in degrees of a BSW thread?

          (a) 55°

          (b) 60°

          (c) 65°

          (d) 75°

5   What is the thread angle in degrees of a BSW thread?

          (a) 55°

          (b) 60°

          (c) 65°

          (d) 75°

Q2. **(a)** Construct an isometric scale.   3

(b) Draw the isometric projection of an inverted frustum of triangular pyramid (base   7
triangular edge = 30mm, top triangular edge = 50mm, height=80mm) with one base edge
perpendicular to V.P. and its axis perpendicular to the H.P. Give all the dimensions and
indicate the direction of viewing

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

Q3. **(a)** Draw to scale 1:1, the standard profile of a Metric Screw Thread (external), taking   8
enlarged pitch 50 mm. Give standard dimensions

(b) Sketch free hand the front view, top view and side view of a Feather Key with Gib   5
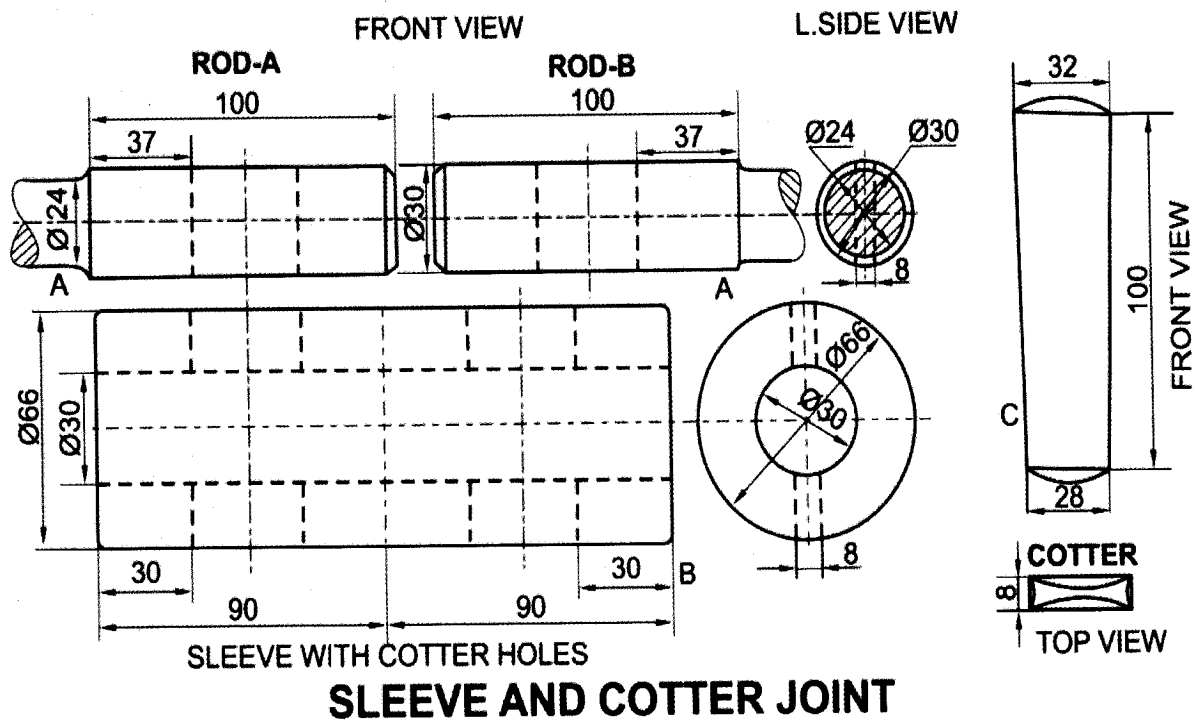head at both ends for a shaft of 50mm diameter. Give standard dimensions.

Q4. The Fig-1 shows details of the parts of a **SLEEVE AND COTTER ROD JOINT**. 28
Assemble the parts and draw the following orthographic views to scale 1:1:

(a) Front View, upper half in section.

(b) Side view looking from the right end.

(c) Top view

Print Title and scale used. Draw Projection symbol. Give 6 important dimensions

SLEEVE AND COTTER JOINT

End of the Question Paper