



INDIAN SCHOOL MUSCAT FIRST PRE-BOARD EXAMINATION

ENGINEERING GRAPHICS

CLASS: XII

Sub. Code: 046

Time Allotted: 3 HRS

14.03.2021

Max. Marks: 70

GENERAL INSTRUCTIONS:

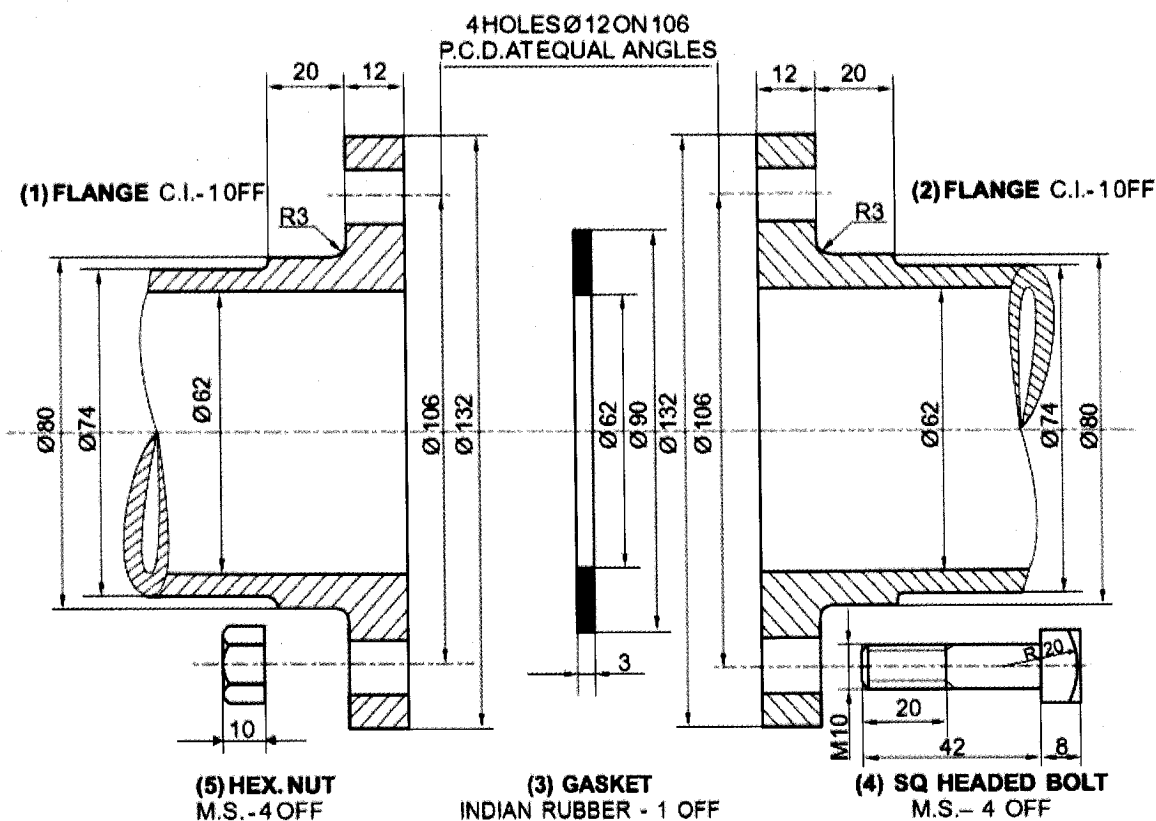
- i) Attempt all the questions.
- ii) Follow the SP: 46-2003 codes. (with first angle method)
- iii) Missing and mismatching dimension if any may be assumed suitably.
- iv) All dimensions are in millimeters.
- v) Use both side of the drawing sheet, if necessary.

1.
 - I. Construct an Isometric scale of length 90 mm. 3
 - II. Draw the frustum of a pentagonal pyramid of base edges = 30 mm and top edges = 20 mm. The height of the pyramid is 70 mm with its axis perpendicular to H.P. and parallel to V.P. One base side is being parallel to V.P and nearer the observer. 7
 - III. A Cylinder of 27 mm base diameter and 50 mm height, with its axis perpendicular to H.P is resting centrally over a hexagonal slab of 27 mm base edges and 20 mm height, having two of its rectangular faces parallel to VP. Draw an isometric projection of the combination. Keep their common axis vertical. 14
2. Draw to scale 1:1 the standard profiles of a square thread and a knuckle thread, taking pitch = 40 mm for each. Give all dimensions. 8
3. Sketch freehand the front view and top view of a pan head rivet of diameter 20mm, keeping its axis vertical. Give standard dimensions. 5
4. Answer the following Multiple Choice Questions. 1
 - i. AB and AC are two straight lines making 90° with one another. AB is parallel to H.P and V.P., while AC is perpendicular to H.P. This angle CAB in isometric projection will be equal to:
 - a) 30°
 - b) 60°
 - c) 90°
 - d) 120°
 - ii. A continuous and projecting helical ridge of uniform section on a cylindrical surface is called
 - a) Lead
 - b) Screw thread
 - c) Pitch
 - d) Flank

4. iii. How much is the head diameter of a snap head rivet when its diameter is 'd' 3
- 1.6d
 - 2d
 - 2.4d
 - 1.4d
- iv. In an open bearing, the sole of the bearing is recessed for
- Making it leak proof
 - Joining the shafts
 - Fitting the bush
 - Better stability on the surface
- v. A numerical value expressed in appropriate units of measures and indicated graphically on technical drawings with lines, symbols and notes is called:
- Leader line
 - Dimension
 - Extension line
 - None of these

5. The figure shows the details of the parts of a pipe joint. Assemble these parts correctly and then draw its following views to a scale 1:1:
- Front view, upper half in section.
 - Side view, viewing from the left.

Print title and scale used. Draw the projection symbol. Give all dimensions.



End of the Question Paper