CBSE Class 12 Engineering Graphics 2004 - Set 68

Question Paper

Conducted by the Central Board of Secondary Education (CBSE)

Time Allowed: 3 Hours **Maximum Marks: 70**

General Instructions

(i) Attempt all the questions.
(ii) Use both sides of the drawing sheet, if necessary.
(iii) All dimensions are in millimetres.
(iv) Missing or mismatching dimensions, if any, may be suitably assumed.
(v) Follow the SP 46:1988 codes, with first-angle method of projection.

Questions

1(a). Construct an isometric scale.

1(b). A regular hexagonal prism of base side 30 mm and length 72 mm, is resting on one of its rectangular faces on the HP, with its axis parallel to HP and VP. Draw its isometric projection and give dimensions.

1(c). A frustum of an equilateral triangular pyramid, base side 58 mm, top side 32 mm and height of frustum 65 mm, is having a base side parallel to VP and nearer the observer. It is centrally placed on the top of a cylindrical disc of base diameter 90 mm and height 48 mm, resting on its base on HP. Draw its isometric projection, keeping their common axis vertical. Give dimensions.

2(a). Draw to scale 1 : 1 the standard profile of a B.S.W. thread, assuming pitch = 50 mm. Give dimensions.

OR

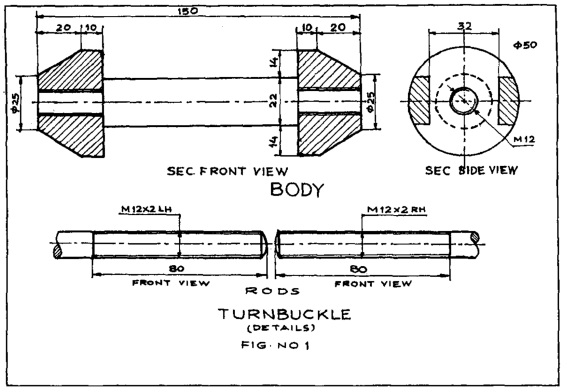
2(a). Draw to scale 1 : 1 the front view and side view of a Hook Bolt of size M 24, keeping its axis parallel to HP and VP. Give dimensions.

2(b). Sketch free-hand the front view of a cheese head machine screw of size M 12, keeping its axis vertical. Give dimensions.

OR

2(b). Sketch free-hand the front view and top view of a snap head rivet of diameter 30 mm, keeping its axis vertical. Give dimensions.

3. Figure 1 shows the details of the parts of a Turnbuckle. Assemble these parts correctly and then draw its following views to scale 1 : 1, inserting 50 mm threaded portion of each rod inside the body of Turnbuckle :



An enlarged drawing is provided in the drawing references at the end of this paper.

3(a). Front view, upper-half in section

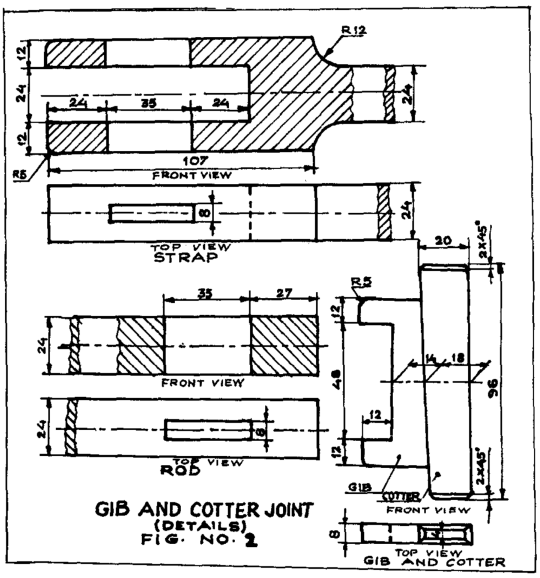
3(b). Top view

3(c). Side view as viewed from left

3(details). Write heading and scale used. Draw projection symbol. Give 8 important dimensions.

OR

3. Figure 2 shows the details of the parts of a Gib and Cotter Joint. Assemble these parts correctly and then draw to scale 1 : 1 its following views :



An enlarged drawing is provided in the drawing references at the end of this paper.

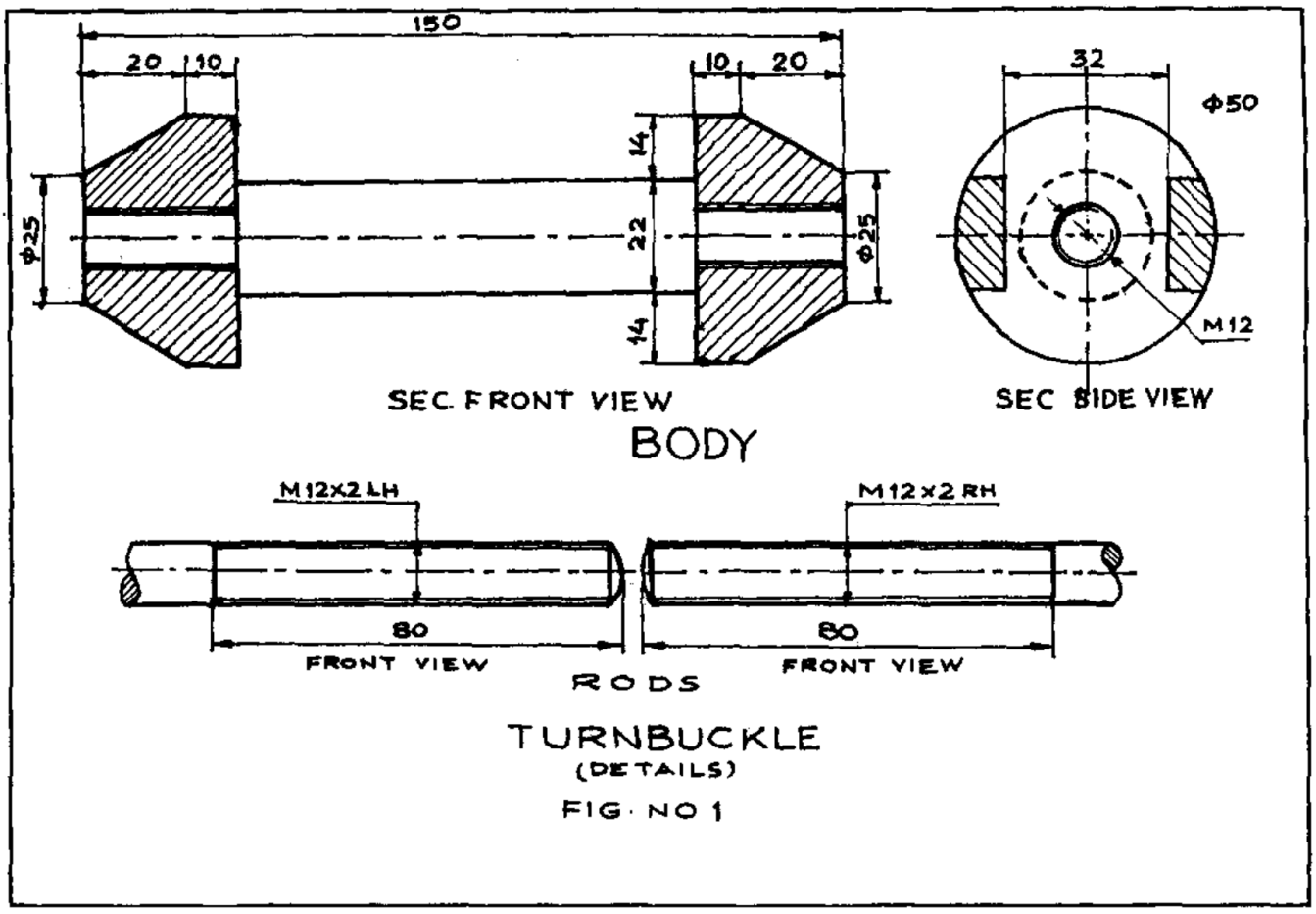
3(a). Front view, upper-half in section

3(b). Top view

3(details). Write heading and scale used. Draw projection symbol. Give 8 important dimensions.

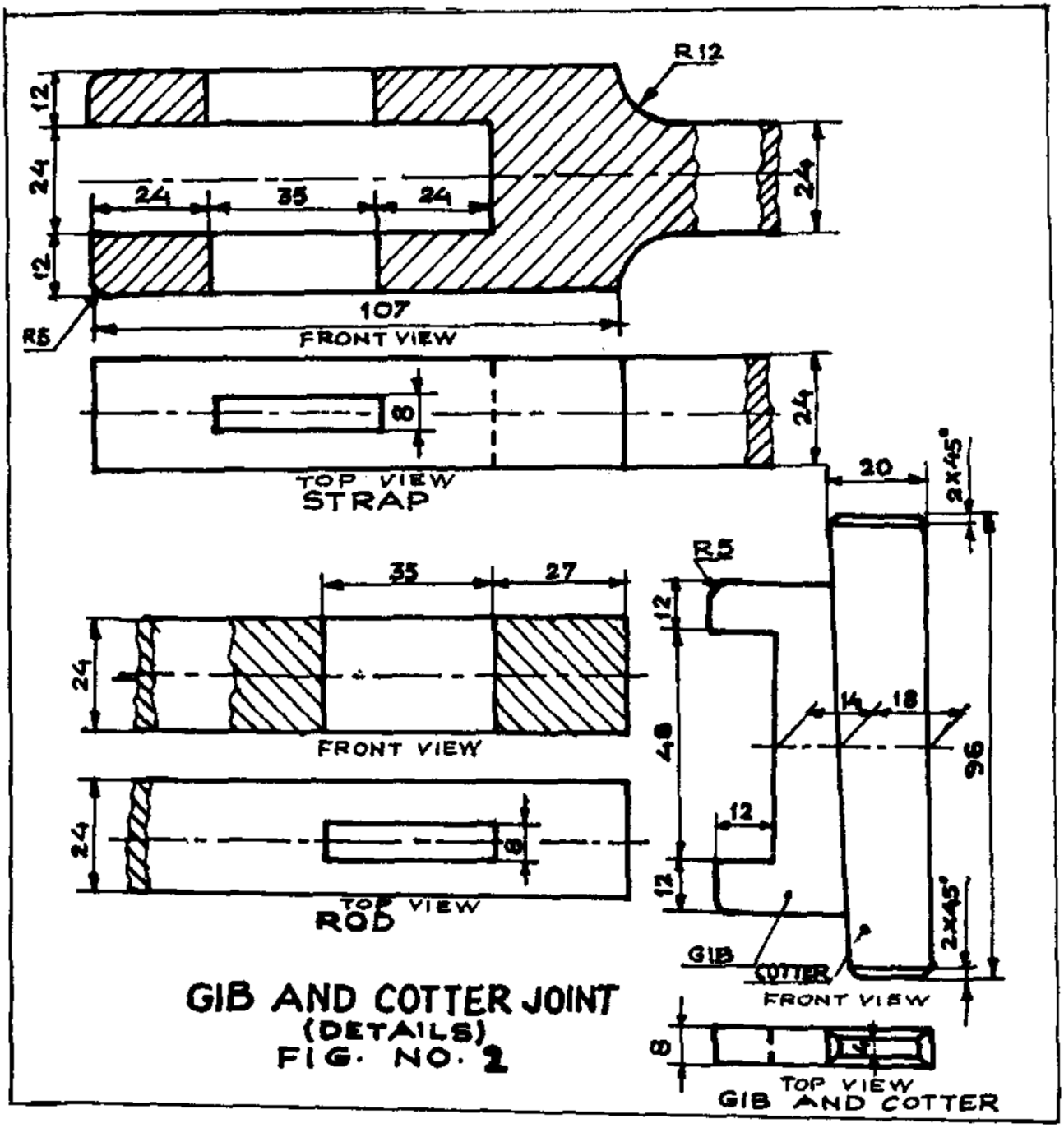
Drawing reference

Question 3 — Figure 1



Drawing reference

Question 3 — alternative — Figure 2



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