

**DIPLOMA IN MECHANICAL ENGINEERING (DME) / ADVANCED LEVEL
CERTIFICATE COURSE IN MECHANICAL ENGINEERING
(DMEVI / ACMEVI)**

Term-End Examination

June, 2016

00600

BME-034 : MACHINE DRAWING

Time : 2 hours

Maximum Marks : 70

Note : Answer *all* the questions.

1. Answer any **seven** questions : 7×2=14
- (a) Size of standard drawing sheet designated A₄ size is _____ mm × _____ mm and A₃ size is _____ mm × _____ mm.
 - (b) The rivet diameter as per Unwin's formula is _____, when 't' mm is the thickness of riveting plate.
 - (c) In a given thread size "D" mm, the dimension across the corners for a hexagonal nut is _____ mm, and height of the nut is _____ mm.
 - (d) Thread angle for the following threads :
 - (i) Metric threads
 - (ii) British Whitworth
 - (e) Name the commonly used materials for rivets. (at least two)
 - (f) Name three types of key ways.
 - (g) For drawing smooth curves we use
 - (i) Mini drafter
 - (ii) Compass
 - (iii) French curves
 - (h) In metric threads, the metric thread size indicates the _____ diameter of the thread.
 - (i) Name the parts in the knuckle joint.

2. Draw sectional front view and top view for double rivet chain type lap joint. Take plate thickness as 9 mm. Indicate (a) pitch distance between two rows, (b) margin; for diameter of rivet. Use Unwin's formula. 26

OR

Draw hexagonal screw, nut with washer for M30 and length of the screw is 60 mm. Draw two views.

3. Socket and spigot joint is shown in Figure 1.

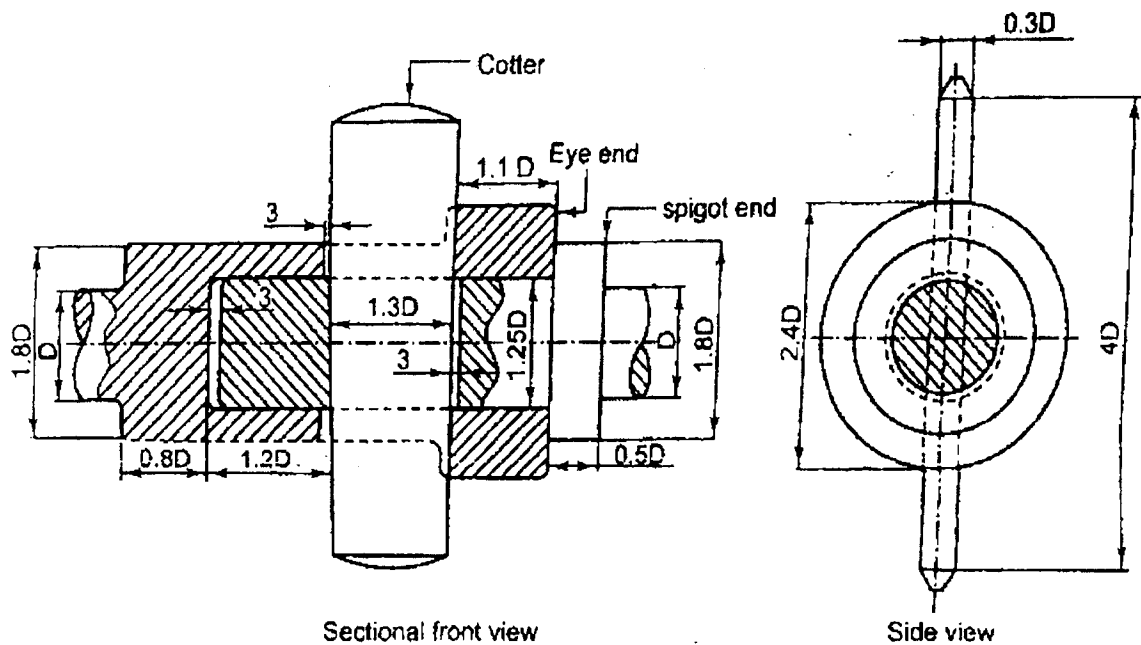
Draw :

30

(a) Front view (sectional view)

(b) Side view

Consider $D = 30$ mm.

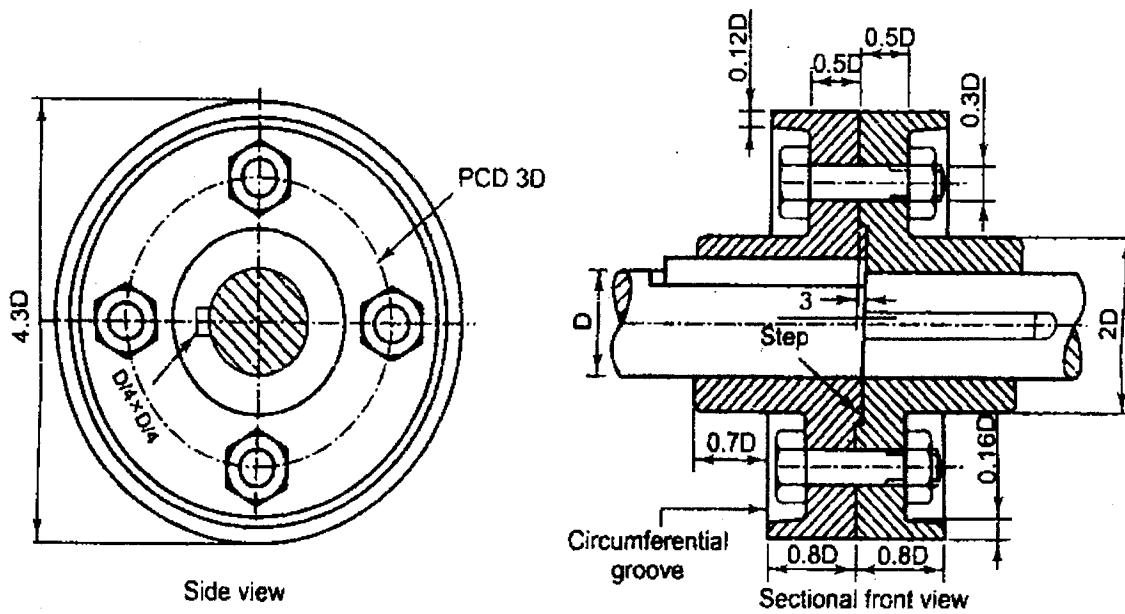


Socket and Spigot Joint

Figure 1

OR

Draw (i) Sectional front view, and (ii) Side view for the protected flange coupling shown in Figure 2.



Protected Flange Coupling

Figure 2