03654

DIPLOMA IN ELECTRICAL AND MECHANICAL ENGINEERING

Term-End Examination

June, 2011

BME-034 : MACHINE DRAWING

Time : 2 hours *Maximum Marks : 70*

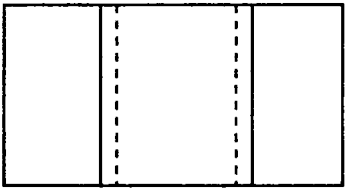
Note : *Answer **all** questions.*

1. Answer ***any seven*** of the following questions : 7x2=14

(a) Standard A_2 and A_3 drawing sheets are _____ and _____.

(b) Show sectional view of a cylinder in which a hole is drilled along half the length.

(c) Draw possible front view for following plan.



(d) Thickness of the thread is measured along the _____ line.

(e) A 2-start thread has a pitch of 1 mm. A nut is given one full rotation on the thread. What axial distance will the nut travel and what do you call this distance ?

(f) The washer to be used with a bolt of major diameter d has thickness of _____ and diameter of _____.

(g) The figure - 1 shows a rivet ready to be placed in the hole. Three regions are marked as 1, 2 and 3. Name them.

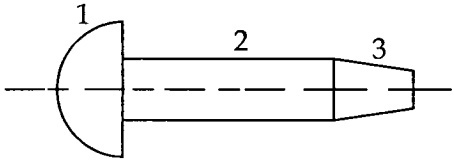


Fig. 1

(h) Name two keys that require keyway to be made in the shaft.

(i) Name the parts of a cotter joint.

2. A 300 mm outer diameter hub is fitted on 200 mm diameter shaft connected by a 50 mm diameter key. Draw two views of the assembly. 28

OR

Two 16 mm thick plates are joined in a double riveted lap joint. Find rivet hole diameter, margin, pitch and back pitch for chain riveting. Draw the front sectional view and the plan.

3. Fig. 2 shows a ball bearing. Draw side view and front view. There are eight balls of 12 mm diameter in the bearing. **28**

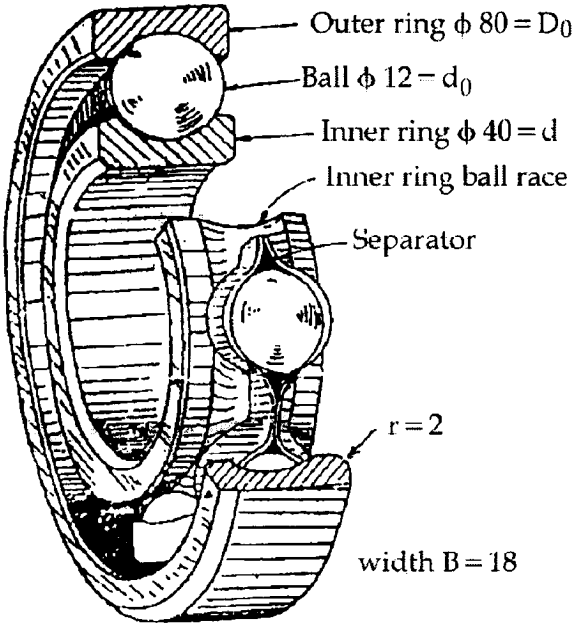


Fig. 2

Outside dia = 80 mm Bore dia = 40 mm width = 18 mm Ball dia = 12 mm No. of balls = 8

OR

Fig. 3 shows flange coupling between coaxial shafts. Draw front view upper half in section and side view full.

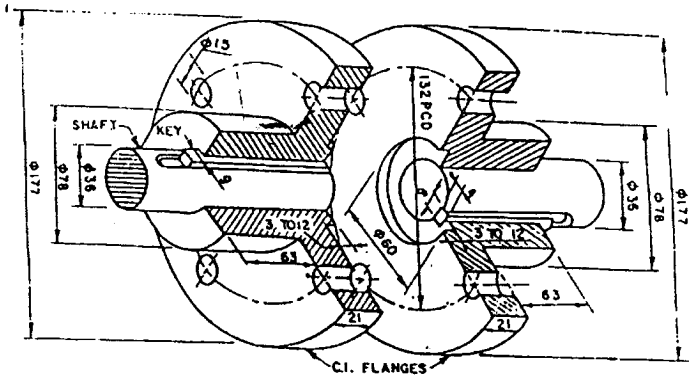


Fig. 3