

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--

Total No. of Pages : 04

Total No. of Questions : 09

B.Tech.(AE/ANE/IE/ME) (Sem.-3rd)

MACHINE DRAWING

Subject Code : ME-207

Paper ID : [A0804]

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.

SECTION-A

1. Write briefly :

- (a) Mention various types of bearings.
- (b) Name two head forms of rivets.
- (c) What is Pitch?
- (d) Draw the symbol of third angle projections.
- (e) Draw the free hand sketch of hexagonal bolt.
- (f) What are the functions of connecting rod in IC engines?
- (g) Sketch the convention of a round section.
- (h) The root angles in BIS metric thread and BSW threads are respectively and
- (i) What is Lead?
- (j) What is the specific use of an expansion pipe joint?

SECTION-B

2. Draw by a conventional method a right handed square thread. Take outside diameter = 64 mm, threaded length = 65 mm, and pitch = 15 mm.
3. Two steel plates, each 15 mm thick are jointed by a single riveted lap joint. Draw two views to full size. Show 4 rivets and section line in plan.
4. Discuss the use of following commands available in Auto-CAD :
 - (a) Explode
 - (b) Offset
 - (c) Mirror.
5. Draw free hand upper half sectional-front elevation of a protected type flange coupling on proportionate scale.
6. Represent two views of hexagonal nut and square nut with proportions and dia of bolt as 30mm.

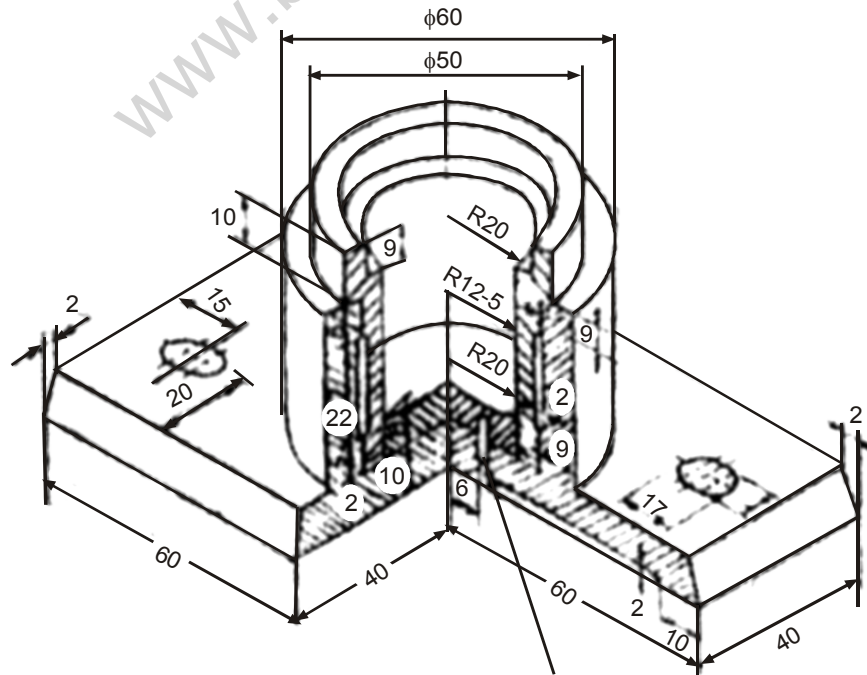
SECTION-C

7. Draw the sectional top view and front view of the petrol engine connecting rod from the given figure 2 and part list :

Part list

Part No	Name	Material	Qty.
1	Rod	Forged steel	1
2	Cap	Forged steel	1
3	Bearing brass	Gun metal	2
4	Bearing bush	Phosphor bronze	1
5	Bolt	Medium carbon steel	2
6	Nut	Medium carbon steel	2

8. Figure below shows the pictorial view of a FOOT STEP BEARING. Draw to a conventional scale the following:
- Full sectional front view.
 - Top View.



9. Figure below shows flanges, keys and shafts to be connected in a flange coupling, Assemble and draw elevation and side view in full. Note that nuts and bolts are to be added.

