Roll No.
Total No. of Pages : 04
Total No. of Questions: 09
B.Tech. (AE) (2012 to 2017) (Sem.-3)
MACHINE DRAWING
Subject Code : BTAE-306
M.Code : 54114

Time: 3 Hrs.
Max. Marks : 60

## INSTRUCTIONS 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 have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and student has to attempt any TWO questions.
4. Assume any missing data suitably.

## SECTION-A

1. Answer briefly :
(a) What do you understand by principal planes of projections?
(b) What is fullering in the context of rivets?
(c) What is the use of Gib in "Gib and Cotter joint"?
(d) Mention any two means for prevention of rotation of bushes in a Plummer Block.
(e) Explain the terms unilateraland bilateral tolerance.
(f) What are temporary fastenings?
(g) What is the difference between lap and butt joints?
(h) What is the difference between right hand and left hand threads?
(i) What is meant by progressive dimensioning?
(j) What is the advantage of providing protective flanges in a coupling?

## SECTION-B

2. Draw two views of a hexagonal nut of size M 18. Mark the various proportions in terms of its diameter.
3. Draw free hand the proportionate sectional front view of a spigot and socket joint.
4. Name the different forms of square threads and draw the detailed sketch of any one of them.
5. Draw free hand the sectional front view and side view of a knuckle joint.
6. Draw free hand the plan and sectional elevation of a double riveted lap joint (chain type). Take the diameter of the rivet as 12 mm .

## SECTION-C

7. Figure below shows the pictorial view of an insulator bracket. Draw the front view as seen from direction ' A ' and the right side view.


FIG. 1
8. Figure below shows the details of a tool post. Assemble the parts and draw the full sectional front view.


FIG. 2
9. Figure below shows the details of universal coupling. Assemble the parts and draw the full sectional front view.


FIG. 3

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.

