Roll No. | | | | | | | | | | | |

Total No. of Pages : 04

Total No. of Questions : 09

B.Tech.(Marine Engineering) (2013 Batch)

B.Tech.(ME) (2011 Onwards) (Sem.–3)

MACHINE DRAWING

Subject Code : BTME-303

Paper ID : [A1140]

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) Draw the symbol of first angle projection.

   (b) Explain with simple sketch the aligned system of dimensioning.

   (c) Draw a machining symbol giving all the details it provides.

   (d) State the difference between a right hand and a left hand threads.

   (e) Draw any two types of rivets.

   (f) Draw the free hand sketch of sawn nut.

   (g) Explain the unilateral and bilateral tolerance.

   (h) What is the function of a drilling jig ?

   (i) What are cotters and where are they used ?

   (j) Which type of pipe joint is used for underground sewerage pipeline ?

SECTION-B

2. Draw the two views of a hexagonal nut for a bolt of diameter 30 mm.

3. Sketch the following welding joints neatly

   (a) Butt joint

(b) Lap joint

(c) Tee Joint

(d) Corner joint

(e) Edge joint

4. Draw the sectional front view and top view of the single riveted butt joint, take thickness of plate 13 mm and diameter of rivet 18 mm.

5. Neatly sketch a split muff coupling for a shaft.

6. Make a proportionate free hand sketch of a screw jack.

SECTION-C

7. Figure 1 shows the detail of protected type flange coupling. Assemble the given components and draw the front view (upper half in section) of assembly.

8. Figure 2 shows the detail of knuckle joint. Assemble the given components and draw the front view and top view of assembly.

9. Figure 3 shows the detail of steam stop valve. Assemble the given components and draw the full sectional front view of assembly.

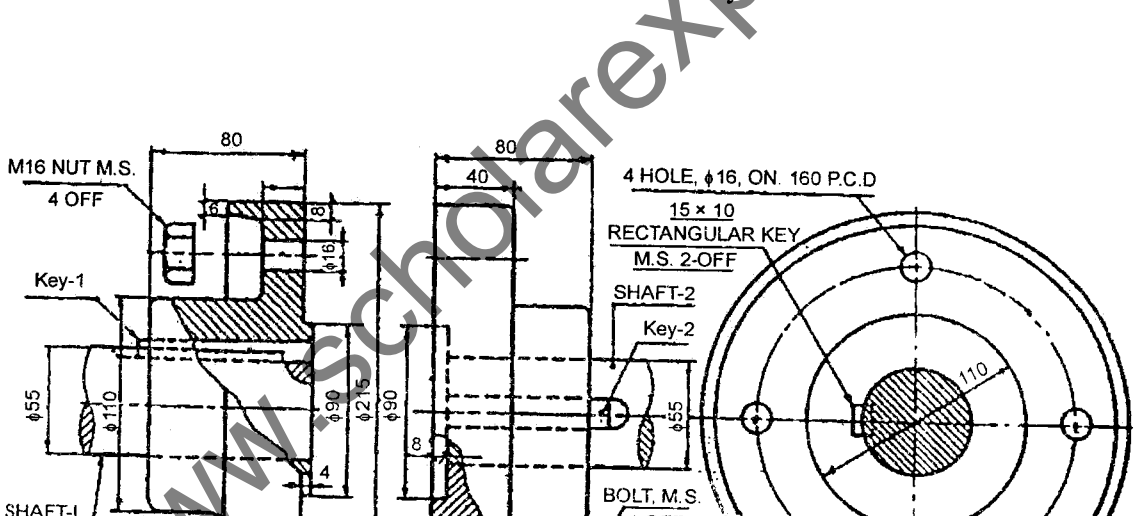

Fig. 1

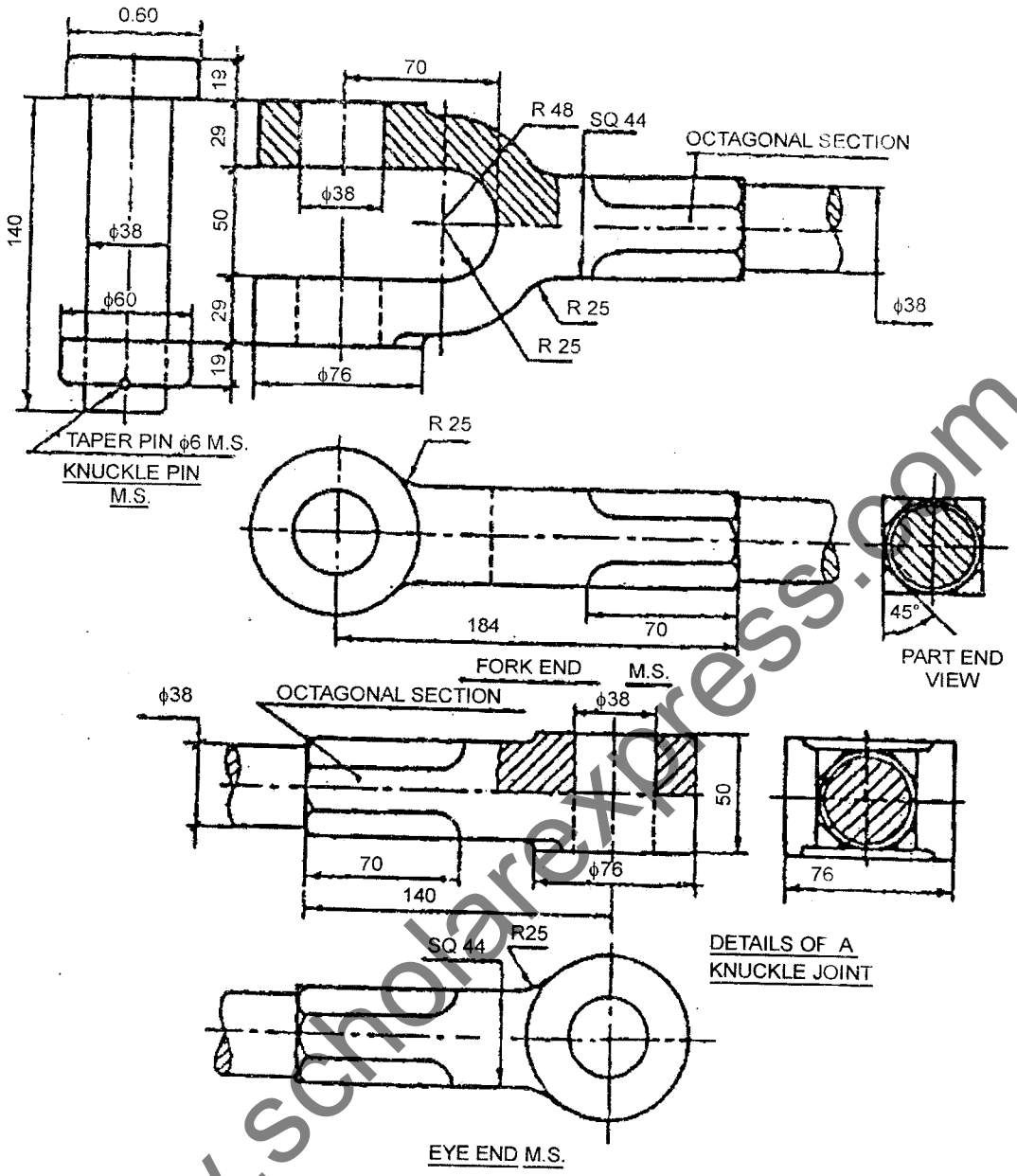

Fig. 2

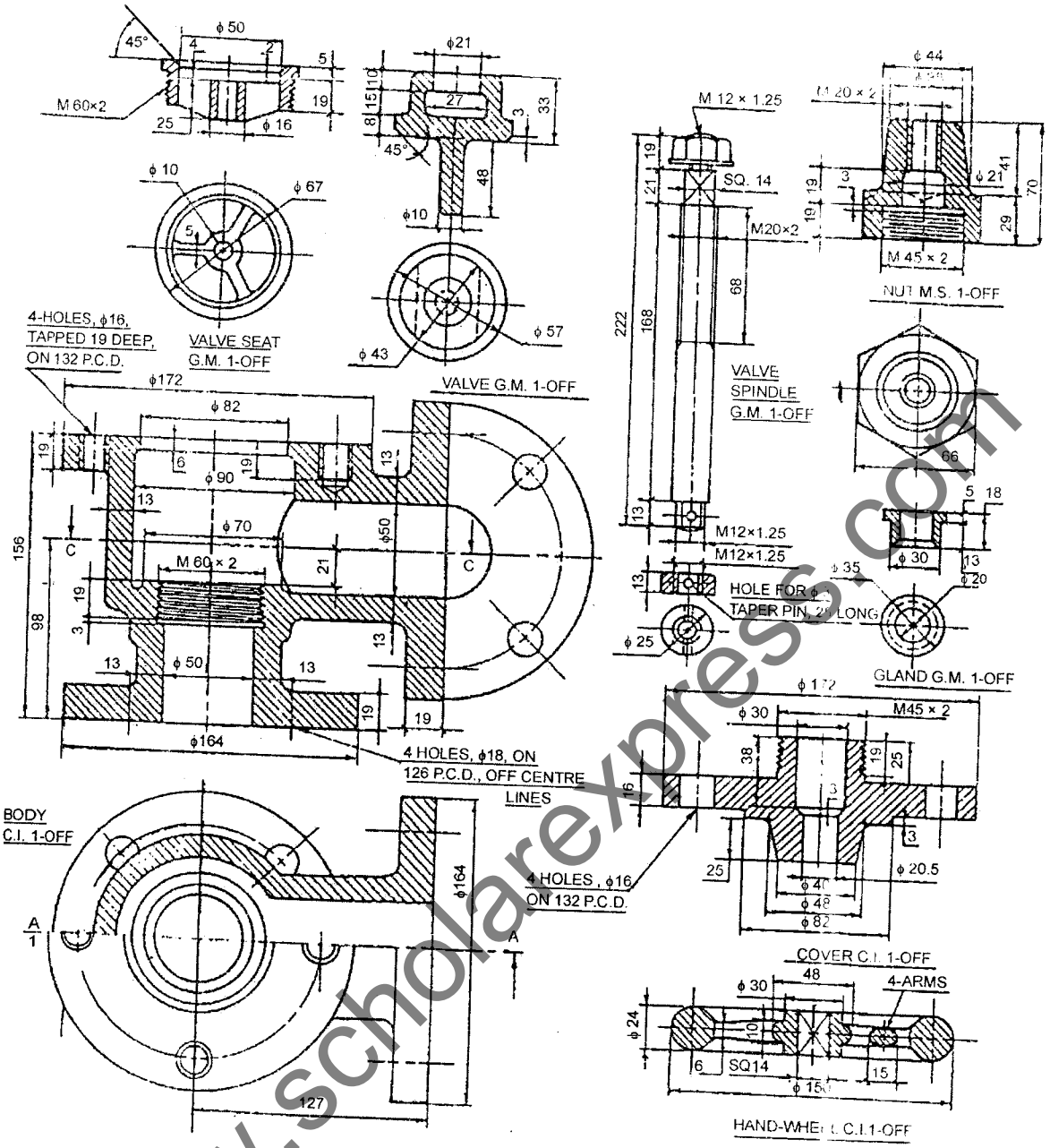

Fig. 3