FEDERAL UNIVERSITY OF TECHNOLOGY, OWERRI
SCHOOL OF ENGINEERING AND ENGINEERING TECHNOLOGY
DEPARTMENT OF MECHANICAL ENGINEERING

HARMATTAN SEMESTER EXAMINATION **2012/2013 SESSION**

COURSE: ENG 203 – ENGINEERING DRAWING III **TIME: 3 HOURS**

INSTRUCTION: *I PREPARE THE TITLE BLOCK FIRST* *DATE: 6TH MARCH, 2013*

II WRITE YOUR NAME, REG. NO AND DEPARTMENT IN INK

III ANSWER QUESTION ONE AND ANY OTHER TWO

1(a) Draw in the first angle projection, three views of the body of shaft bearing shown in fig 15-49

1(b) Complete the pictorial views of an assembly drawing of body (1) and cap (2) of the shaft bearing.

1(c) Complete a part list of the principle parts of the assembly drawing

1(d) Draw in third angle projection the following views of the drilling and tapping Jig (fig 15-48)

i. Front Elevation – F.E and

ii. End Elevation – E.E.

2(a) Draw the following architectural symbols as used in presentation drawings: Closed stairs (up and down), Screened Partition, Folding door, outside storage and Dressing room.

2(b) Make Drawings (symbols and weld) of the following fillet and groove welds.

i. With legs of equal length

ii. With different leg lengths

iii. V-groove welds (side and front views).

3 Two pieces of metallic materials each of 50mm thick are to be secured together by an M16 hexagonal bolt and nut. The nominal length of the bolt is to be 120mm and a plain washer is to be used under the nut. Draw the following views of this assembly in the first angle projection.

i. front view
ii. end view } Sectional
iii. plan

4(a) Make an instrumental drawing of how electricity can be brought into a house (identify the important features.

4(b) Make an instrumental drawing of a small stanchion that will be connected to a base plate using two equal angles. Identify the major parts of the joining (Use your own dimensions).

N.B: Adopt your dimensions in SI units.

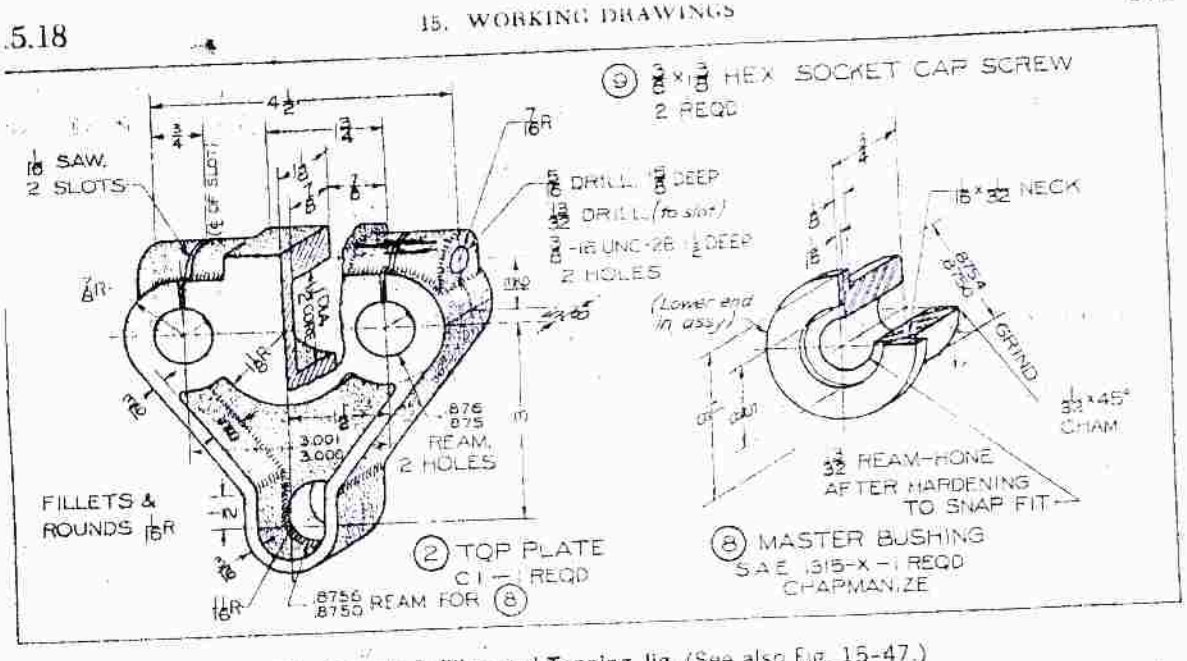

Fig. 15-48. Drilling and Tapping Jig. (See also Fig. 15-47.)

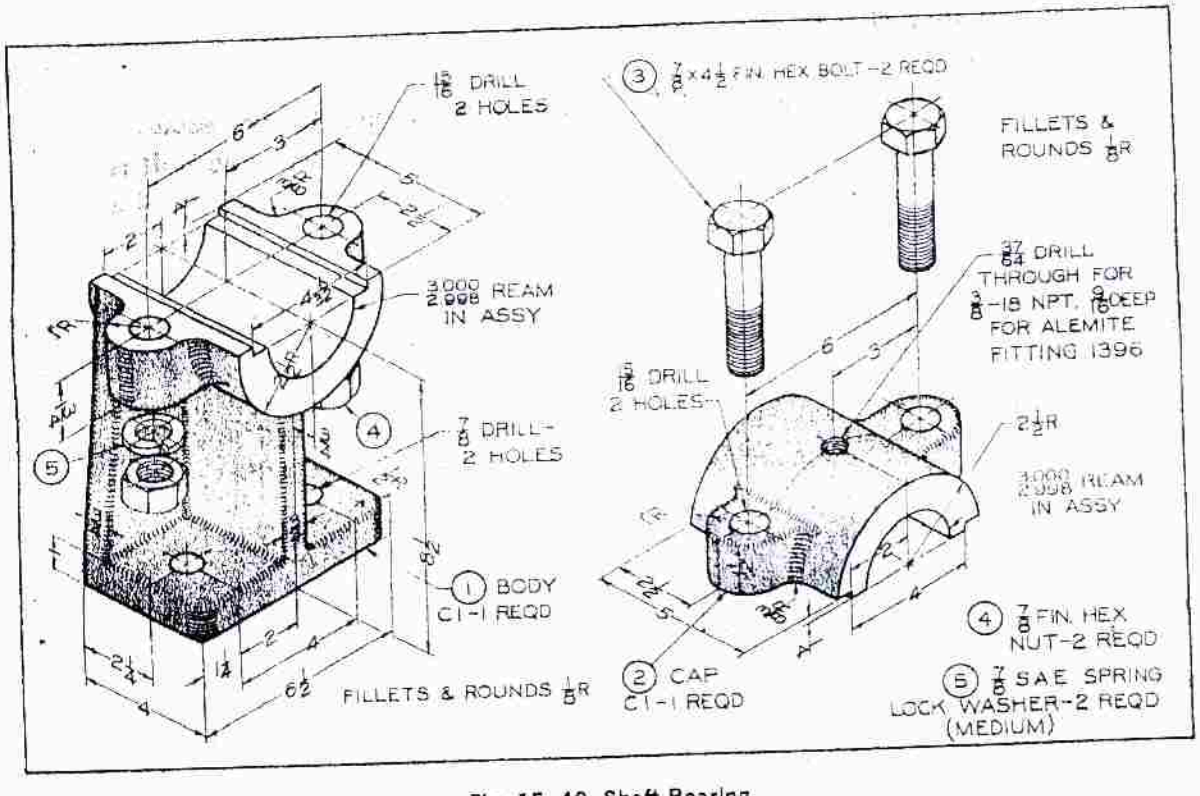

Fig. 15-49. Shaft Bearing.