

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

HARMATTAN SEMESTER EXAMINATION 2010/2011

TIME: 3 HOURS

ENG 203: ENGINEERING DRAWING III

DATE: 06/04/2011

- INSTRUCTION: I. PREPARE THE TITLE BLOCK FIRST  
II. WRITE YOUR NAMES, REG. NOS. & DEPT. IN INK  
III. ANSWER QUESTION 1 AND ANY OTHER TWO

**Questions: 1**

- a. Draw in the First Angle Projection, three views of the body of Shaft Bearing shown in Fig 15 – 49.
  - b. Complete a pictorial view of an assembly drawing of body (1) and cap (2) of the Shaft Bearing.
  - c. Complete a part list of the principal part of the assembled parts.
  - d. Draw in the 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. Two pieces of metallic materials each 50mm thick are to be secured together by an M16 hexagon 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.
- i. Front View }  
ii. End View } Sectional  
iii. Plan View }
- 3(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.
- 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 view)
- 4(a) Make an instrument drawing of how electricity can be brought into a house (Identify the important fixtures)
- (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.

**NB:** Adopt your dimensions (in SI Units).

