AFRICA UNIVERSITY

"Investing in Africa's Future"

FACULTY OF AGRICULTURE AND NATURAL RESOURCES

AAE306: ENGINEERING DRAWING

END OF FIRST SEMESTER EXAMINATIONS

NOVEMBER/DECEMBER 2016

LECTURER: MR. W. ZENDERA

DURATION: (3HRS)

INSTRUCTIONS

1. Do Not Write Your Name On The Answer Sheets.
2. Use Answer Sheets Provided.
3. Begin Your Answer For Each Question On A New Page.
4. Credit Is Given For Neat Presentation Of Answers.

AAE 306: Engineering drawing

Answer ALL questions

Question 1

Figure 1 was drawn in AUTOCAD. Write down the coordinates which were used to draw this diagram using the:

i. Relative rectangular coordinate system [10]
ii. Relative polar coordinate system. [10]

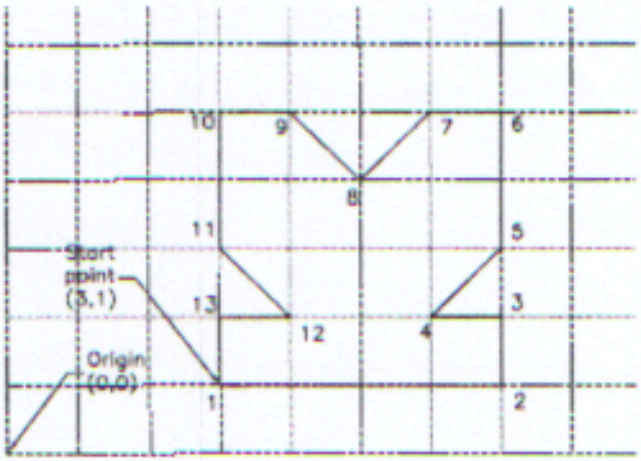

Figure 1

Question 2

State the correct conventional name for each number item in the sectional drawing in Figure 2. [20]

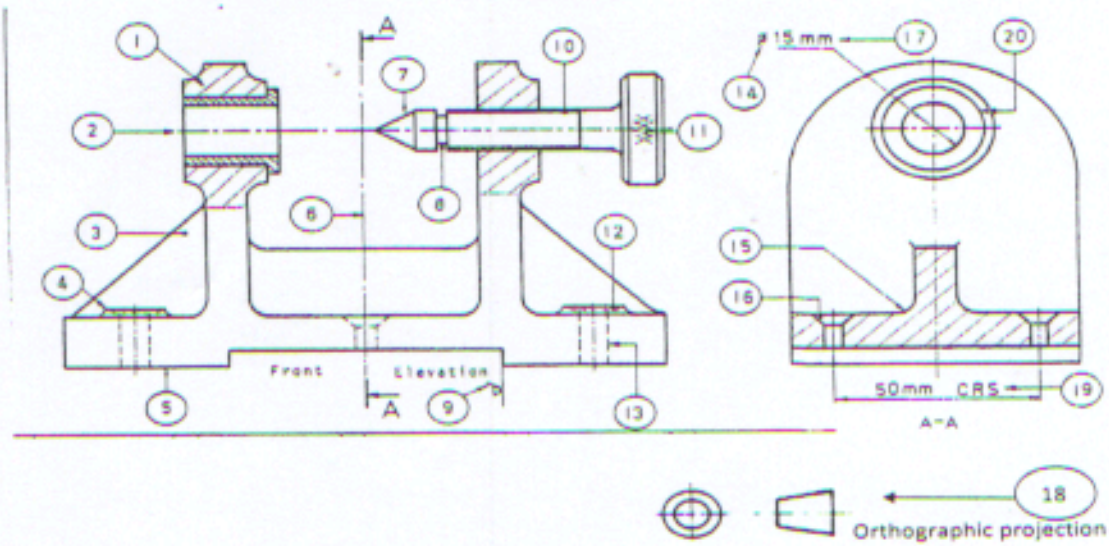

Figure 2

Question 3

a) Figure 3 shows the detailed drawings of a knuckle joint in first angle projection; draw the front view of the assembly. [14]

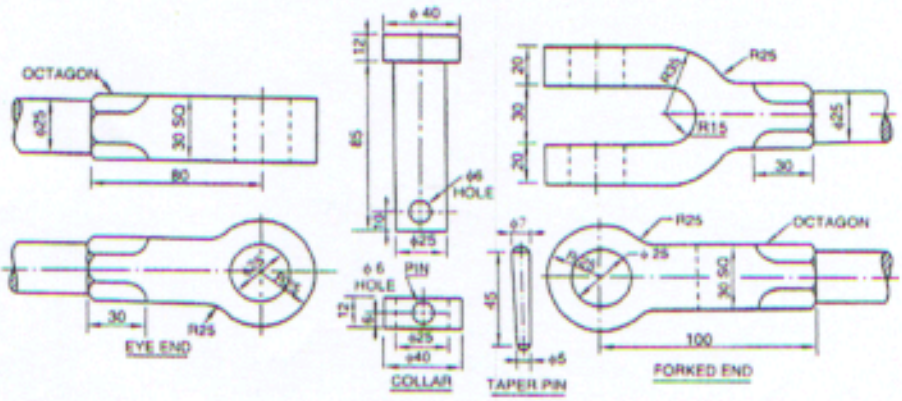

Figure 3

b) Drawings 1-6 (Figure 4) below shows two views of a component in first angle projection .on your answer sheet draw the third view. [6]

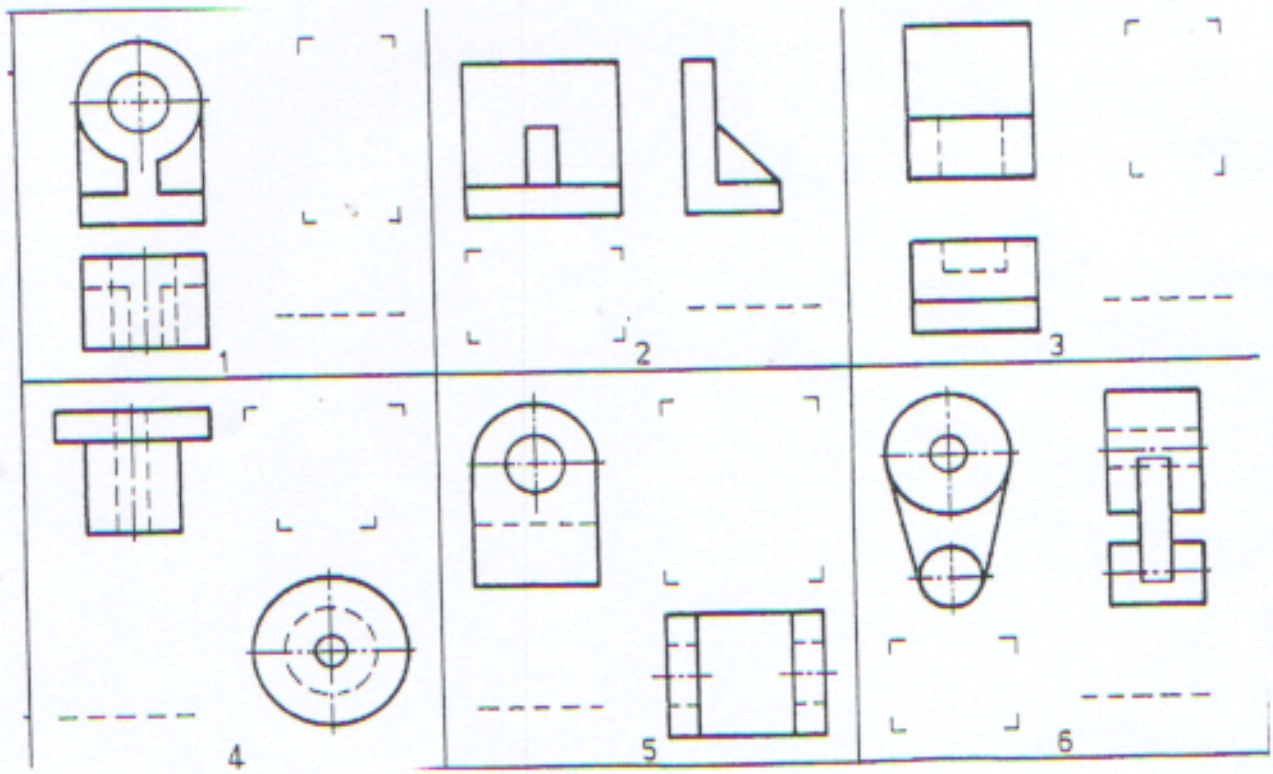

Figure 4

Question 4

Using 3rd angle projection and a scale of 1:1 redraw the given plan of the bearing housing in Figure 5 and replace the front elevation with the half sectional elevation x-x. The right hand half should be in section and show hidden edges in the outside view. Do not dimension the drawing but remember to insert the correct projection symbol, all labels and the title block.

[20]

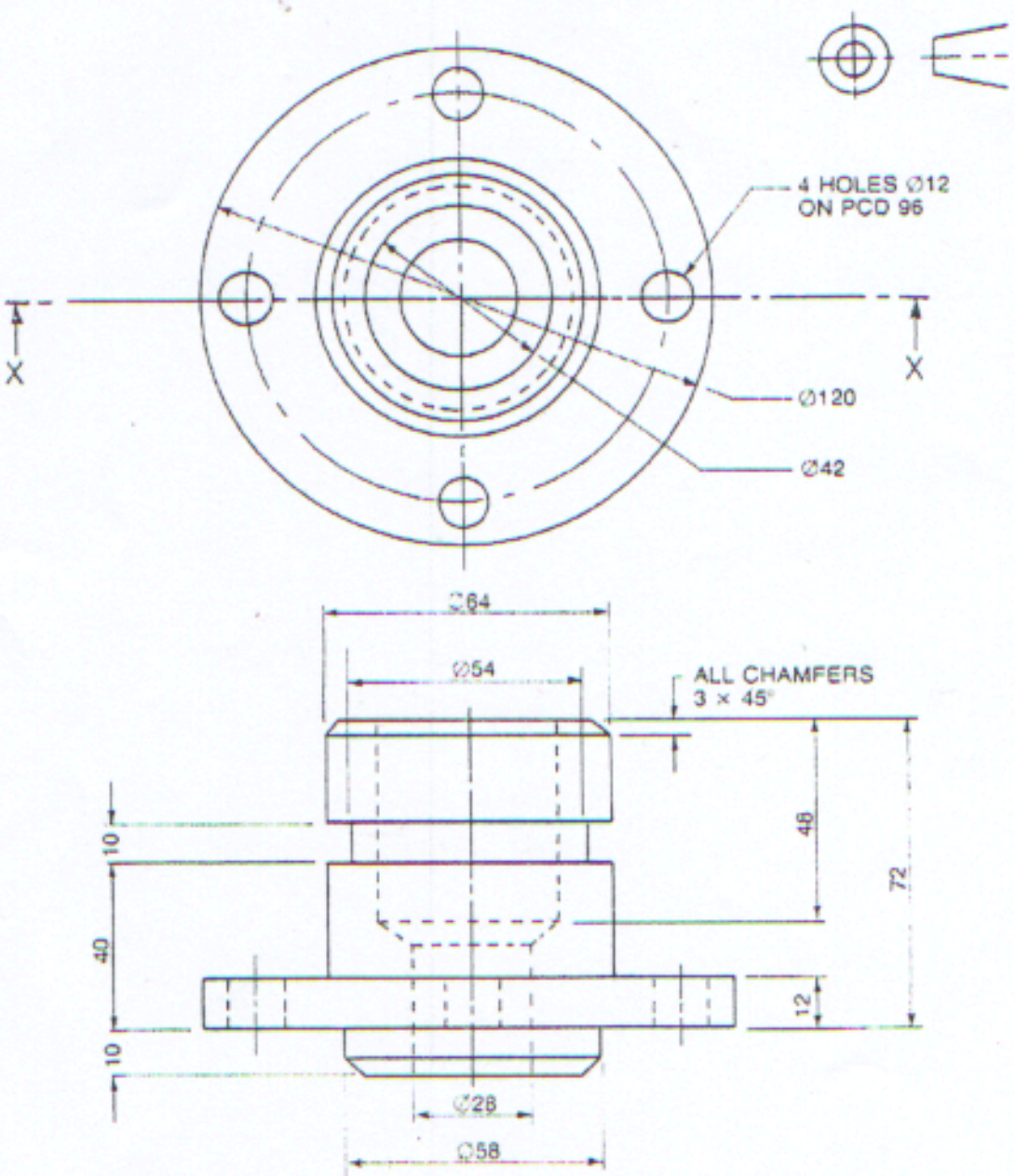

Figure 5.

Question 5

Figure 6 shows a 90⁰ TEE-PIECE formed with cylinders of unequal diameter

a) Copy and draw the curve of intersection at x-x. [8]
b) Develop the pattern for the branch marked T. [12]

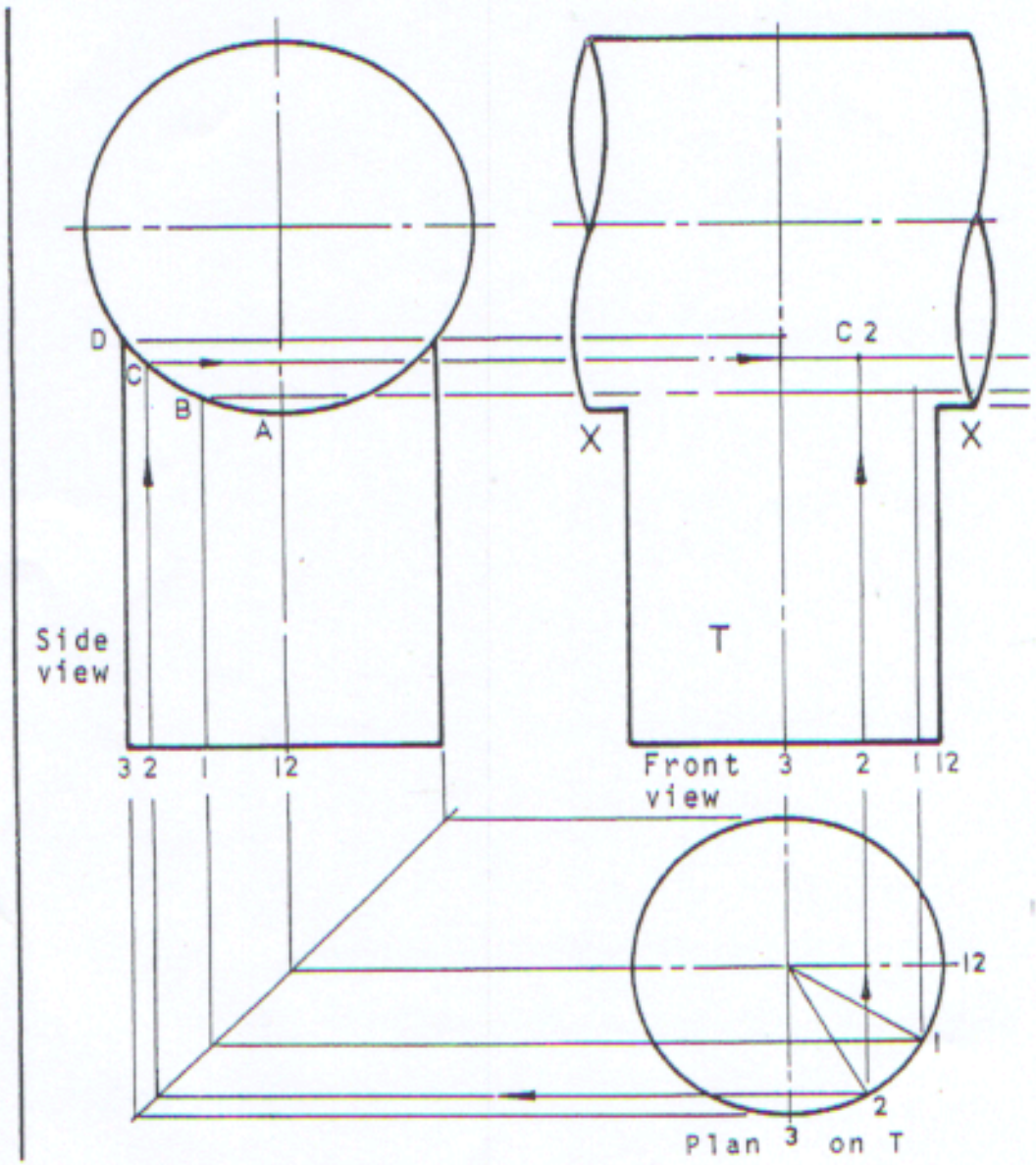

Figure 6.