



**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**FACULTY OF INDUSTRIAL TECHNOLOGY**

**DEPARTMENT OF CIVIL AND WATER ENGINEERING**

**ENGINEERING DRAWING**

**ECW 1102**

**First semester Examination Paper**

**November 2024**

**Time Allowed: 4 hours**

**Total Marks: 100**

**Examiner's Name: Ms S. Makombe**

**INSTRUCTIONS**

**Answer all Questions**

**All drawings to be fully labelled and dimensioned.**

**Notes: Title Block Should Have the Following Details**

Student Number	
Course Code	
Drawing Name	Isometric Drawing/ Ortho
Date	
Drawing Number	

**INDICATE SCALE USED**

**MARK ALLOCATION**

QUESTION	MARKS
1.	15
2.	15
3.	15
4	40

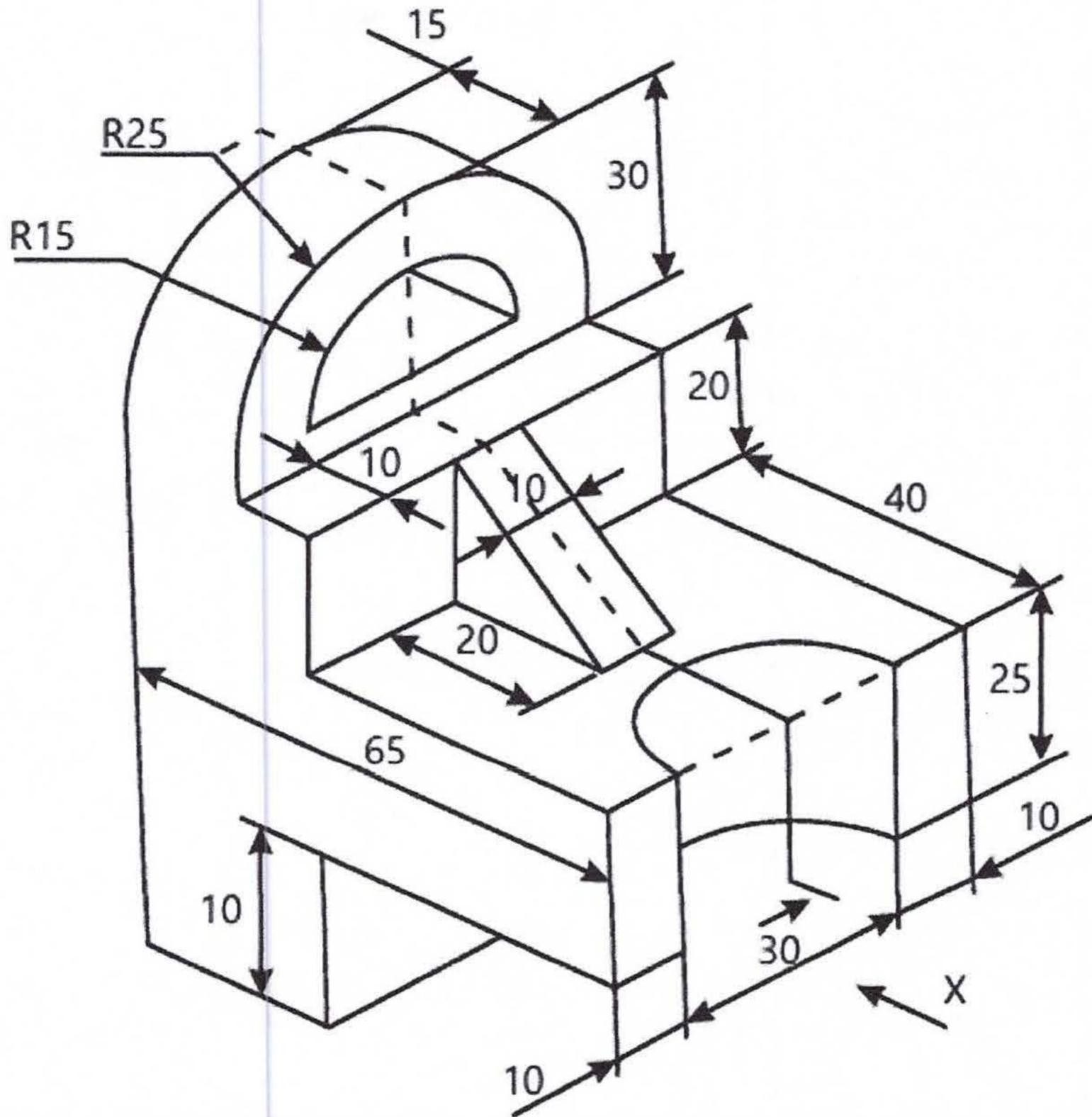
5

15

**QUESTION 1**

Reproduce the diagram shown below in Fig 1 1-41

[15 MARKS]



**QUESTION 2**

Produce an isometric view of the orthographic groups shown below. [15 MARKS]

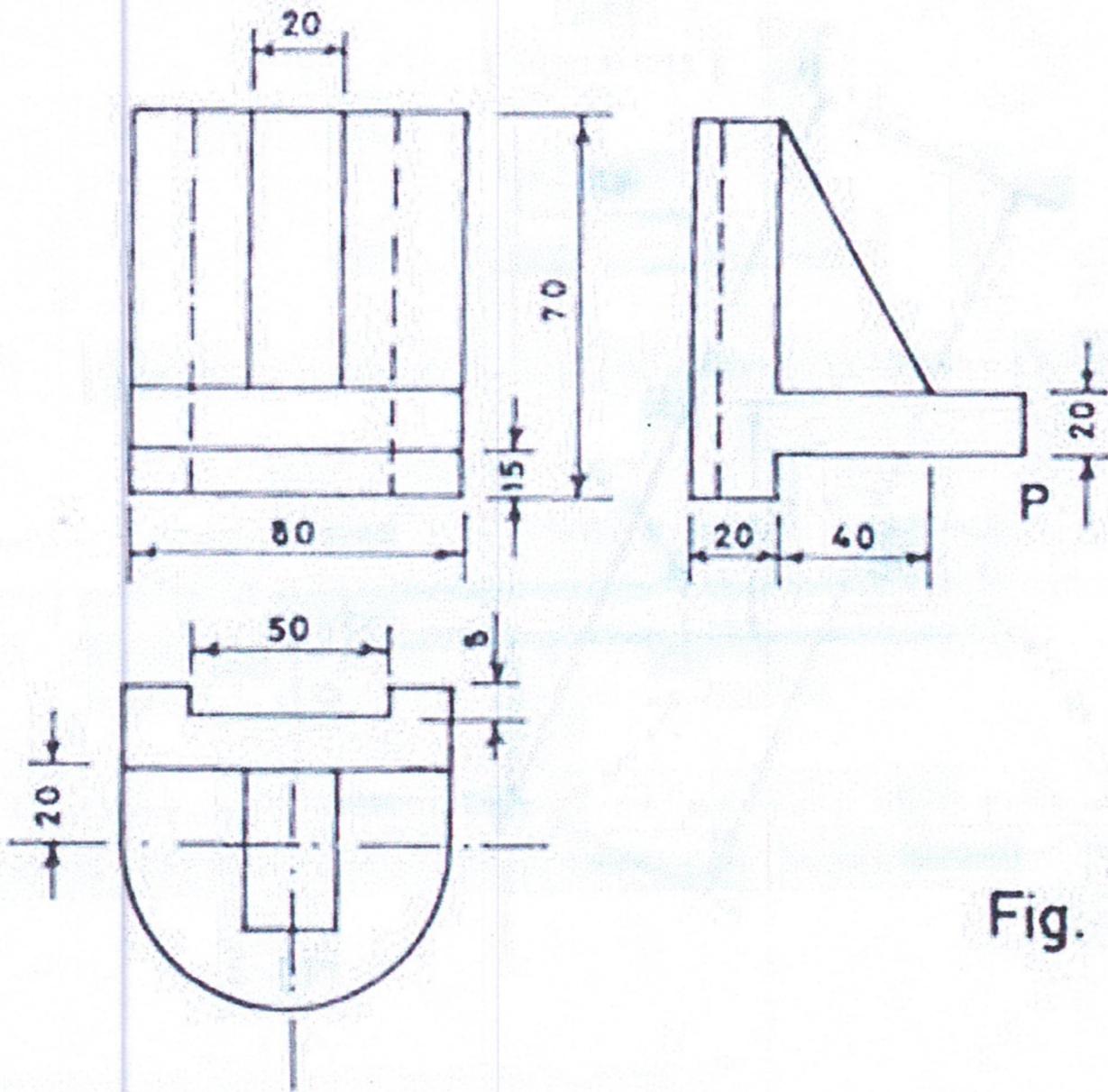
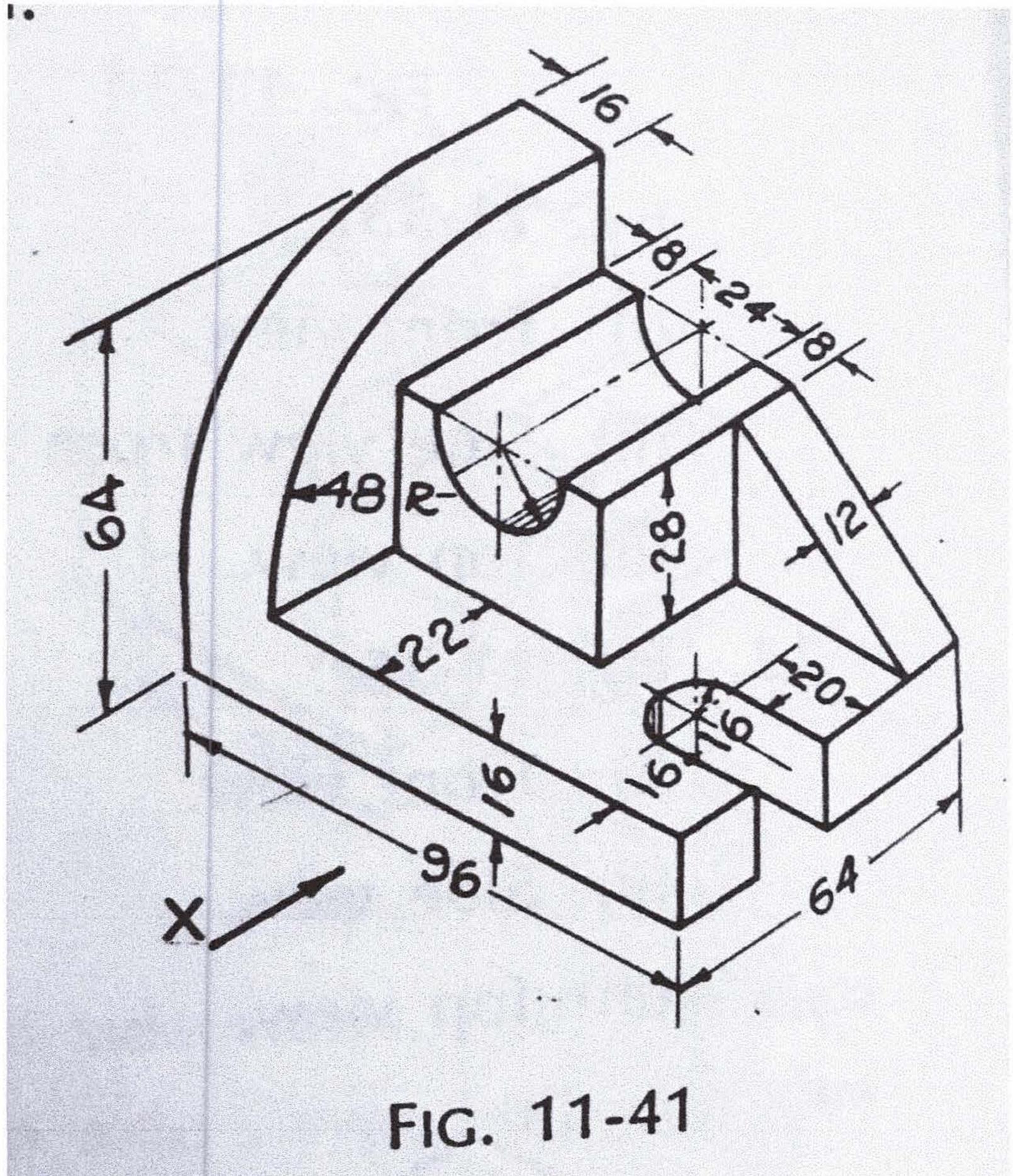


Fig. 2

**QUESTION 3**

(a) Draw an orthographic (first angle) showing the front view, side view and plan [15 MARKS]

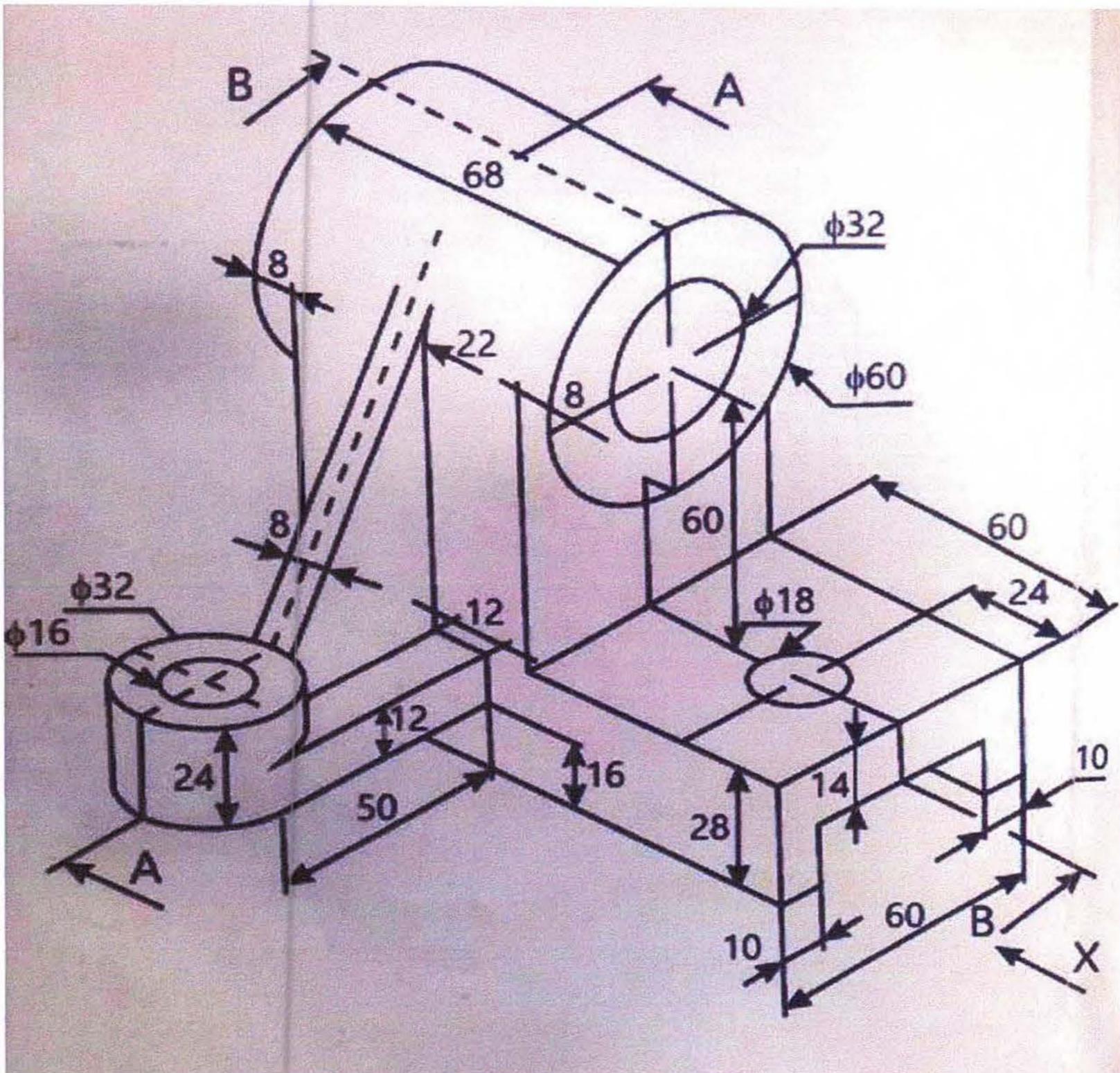


**FIG. 11-41**

**QUESTION 4**

From the Figure 4

- a) Reproduce the diagram below {20 Marks}
- b) Draw section B-B {10 Marks}
- c) Draw section A-A {10 Marks}



**QUESTION 5**

**Construct a triangle ABC with  $AB=6,8\text{cm}$   $\angle C=150$  degrees and  $BC= 8\text{cm}$ .On**

**Separate diagrams; { 5 Marks}**

- a) **Construct a circumscribed circle of the above triangle. {5 Marks}**
- b) **Construct an inscribed circle of the triangle {5 Marks}**