

QUESTION 4

MECHANICAL
ASSEMBLY

Figure 2 shows a series of pictures of a **JACK STAND**, as well as an exploded view of how the components of a similar, simplified system are assembled.

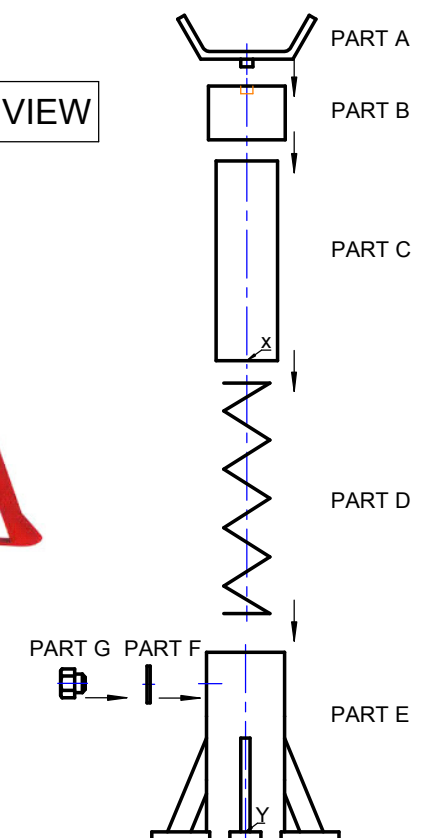
Figure 1 shows the different components (not to scale) that need to be assembled.

Complete the following to a **SCALE** of **1:1**:

- 4.1 A **Left View** of the assembled components.
- 4.2 A **Sectioned Front View** of the assembled components to the cutting plane **A-A**.
 - 4.2.1 **Point X** on the pipe (Part C) must be assembled **20 mm** above **Point Y** on the base (Part E).
 - 4.2.2 The **bolt** must show 3 faces.
- 4.3 Show **Hidden Detail** on the **Left View** of only the **Support** (Part A) and the **Bolt** (Part G).
- 4.4 Show the **Cutting Plane** and the **Centre Lines**.
- 4.5 Insert 3 important, functional **Dimensions**.
- 4.6 Draw the **Projection Symbol**.
(In the space provided)
- 4.7 Add a suitable **Title** and indicate the **Scale** used.
(In the space provided)
- 4.8 Label the **Sectioned View**.

FRONT VIEW

FIGURE 2



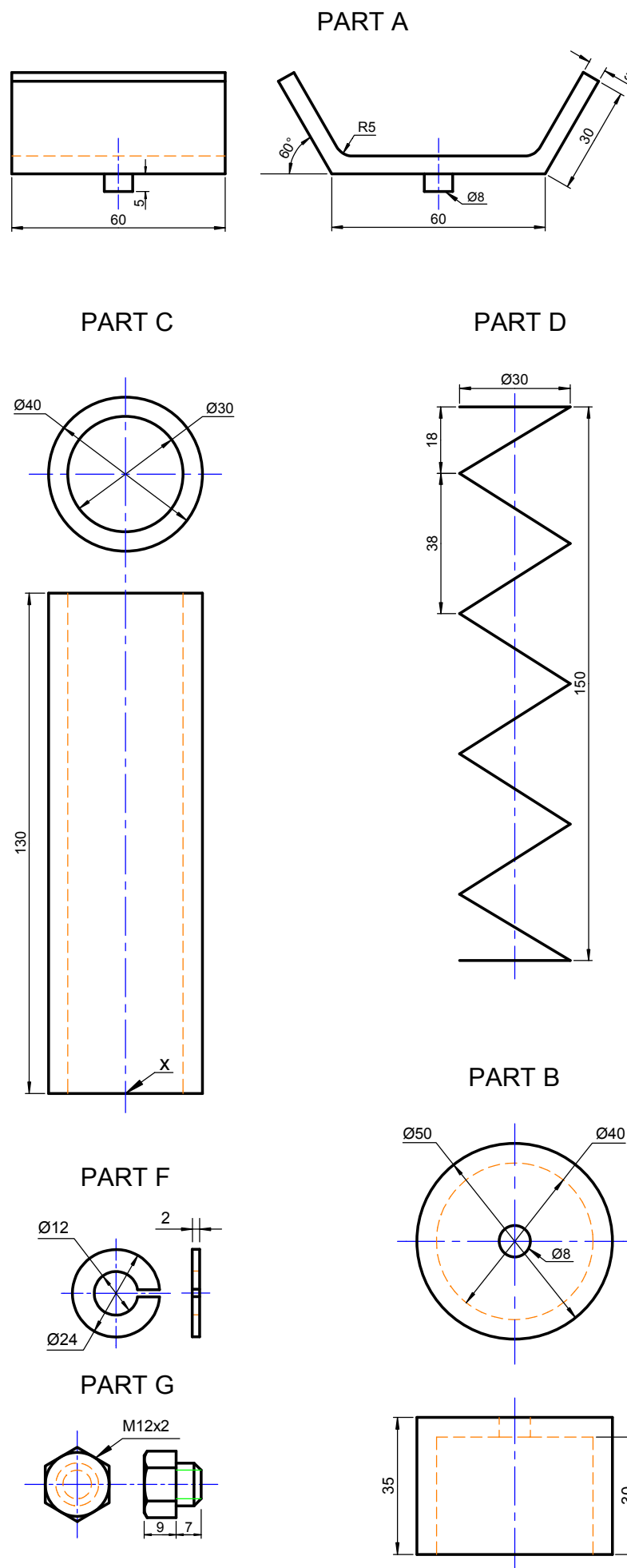
EXAMINATION NUMBER

100 MARKS

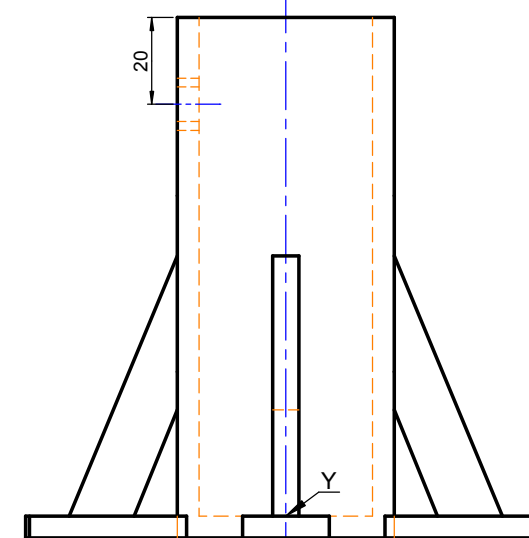
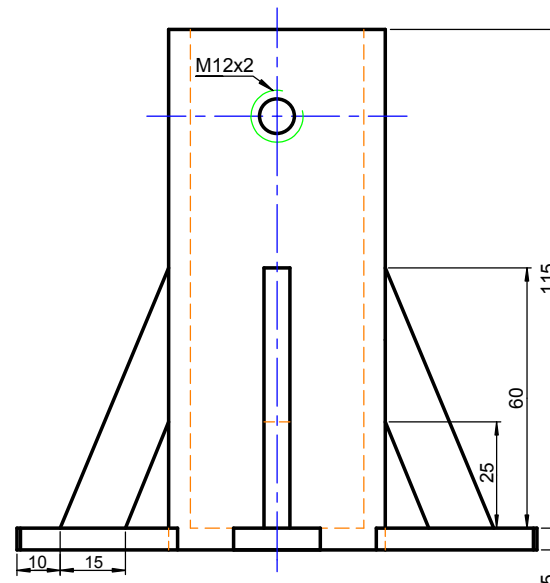
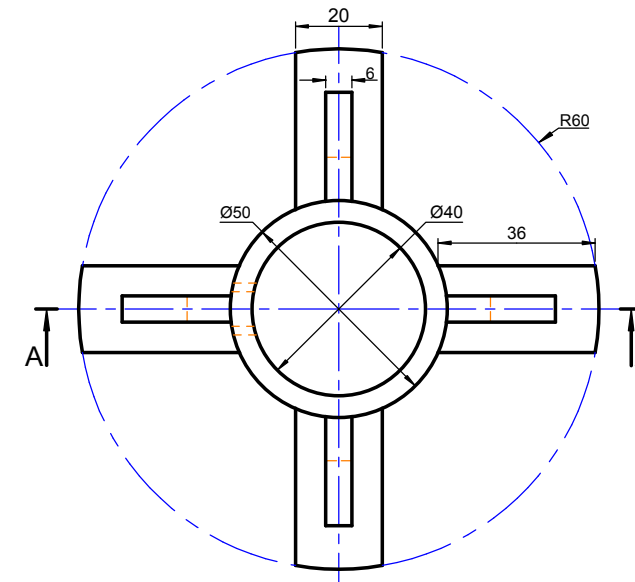
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PLEASE TURN OVER

FIGURE 1



PART E



COMPONENT LIST

NO.	PART	QUANTITY	MATERIAL
A	SUPPORT	1	MILD STEEL
B	COVER	1	MILD STEEL
C	PIPE	1	MILD STEEL
D	SPRING	1	STEEL
E	BASE	1	MILD STEEL
F	WASHER	1	STEEL
G	M12 BOLT	1	MILD STEEL