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THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF ENGINEERING TECHNOLOGY

DIPLOMA IN TECHNOLOGY – LEVEL 03

FINAL EXAMINATION 2011/2012

IN

ENGINEERING DRAWING - MEX3234

DATE	:	**22nd February 2012**
TIME	:	**0930 HRS – 1330 HRS**
DURATION	:	**FOUR (04) HOURS**

READ CAREFULLY THE FOLLOWING INSTRUCTIONS BEFORE ATTEMPTING TO ANSWER THE QUESTION PAPER

1. Clarify any doubts with the supervisor/invigilator in your examination hall.
2. **The Question in SECTION A is compulsory.** Answer this question and one another of your choice from **SECTION B.**
3. It is strongly advised to prepare a sketch of the solution on a rough paper, before drawing it on the drawing paper. If you wish, you could attach the sketch to your answer script.
4. Spend approximately three hours for Question 01 and the rest of the time for the other question.
5. Use both sides of the drawing paper.
6. Draw the Standard cage, Title block, Projection symbol, etc. only for the Question 01. (Marks will be deducted if the Title block is not properly placed)
7. All construction details, centerlines, etc. should be clearly shown.
8. Candidate is strictly advised to write his/her Index Number, Registration Number and Course Code only on the drawing paper. Do not write your name or provide any other information.

(This Question paper consists of five (06) pages)

SECTION A

QUESTION 01

Fig. Q1 shows exploded orthographic views of the following components of a **Safety Valve.**

1.	Valve Body	5.	Valve
2.	Valve Spindle	6.	Rubber Washer (4 Nos.)
3.	Packing Adjuster	7.	Standard Hexagonal Bolt(4 Nos.)
4.	Grub Screw	8.	Packing Holder

Assemble the different components in their correct position, and draw the following views to a scale of full size in first angle projection.

(a) Front Elevation of the assembly corresponding to the given view of the valve body.

(b) Sectional End Elevation projected to the right of view (a) taken through Y – Y.

(c) Plan projected from view (a).

Your answer should contain ten main dimensions. Radii of casting curves may be taken suitably.

Your answer should indicate the symbol of projection, main title, sub titles and scale.

Note: (i) It is necessary that the valve (5) be in the closed position with four rubber washers (6) placed inside the packing holder (8).

(ii) Assume any missing dimensions.

(iii) All dimensions are in millimeters.

SECTION B

(Answer only one question from section B)

QUESTION 02

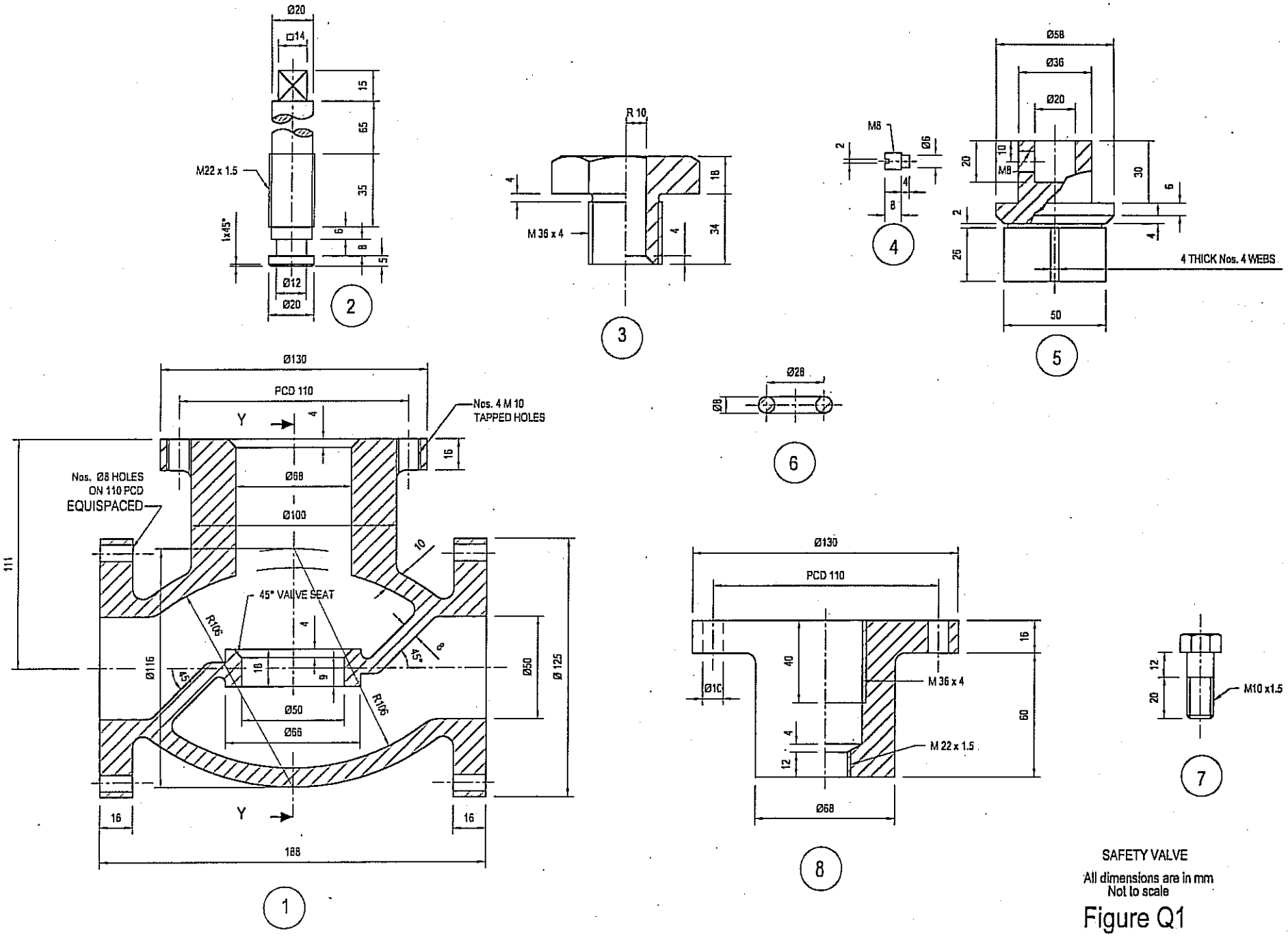
Fig Q2 shows the Front Elevation of a truncated right circular cone made out of thin sheet metal.

(a) Draw the given Front Elevation and Plan in **first angle projection** to a **scale of full size.**

(b) Draw the development of the truncated cone taking the seam as A – A.

QUESTION 03

Draw the **Isometric view** of the object shown in **Fig. Q3**, taking the **near point** as indicated by the arrows shown in the figure. Use isometric scale. Do not show hidden details and dimensions in your answer.

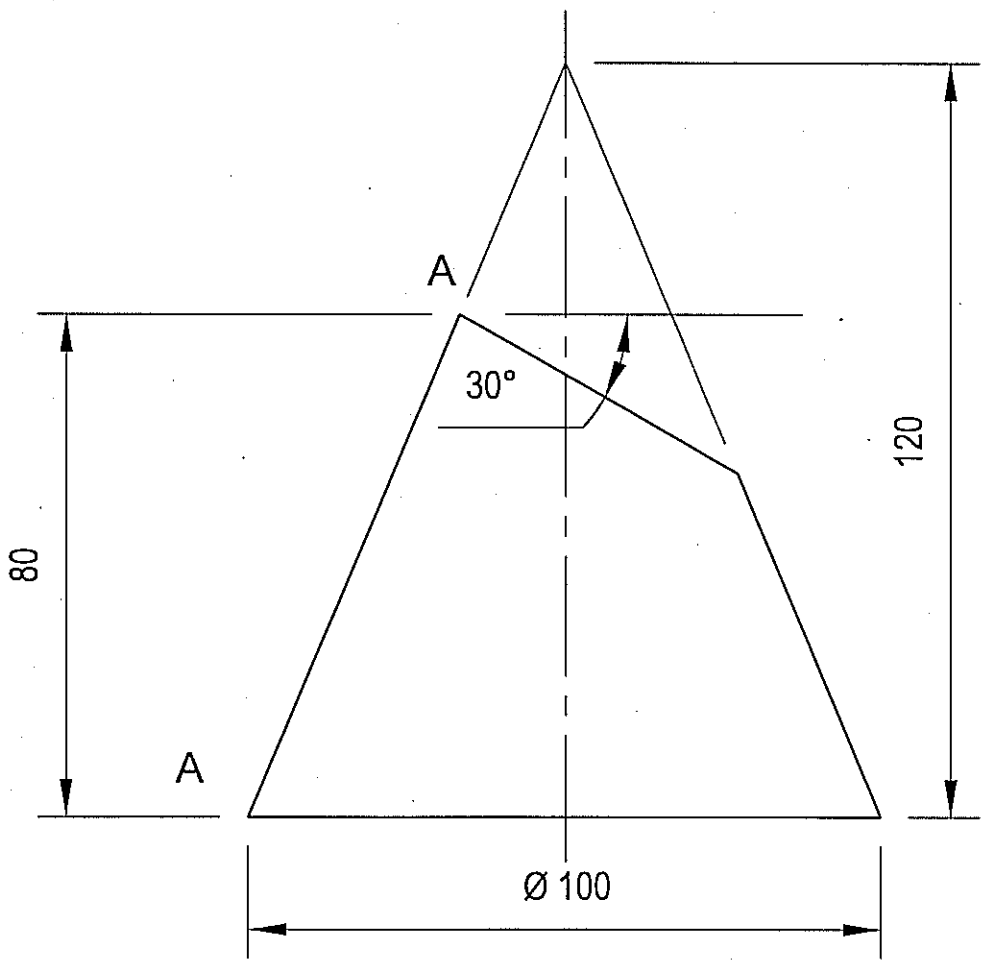


SAFETY VALVE

All dimensions are in mm
Not to scale

Figure Q1

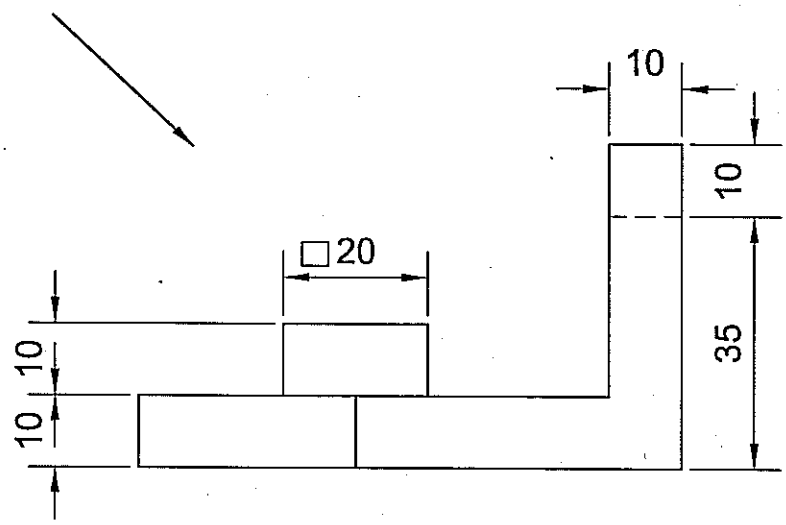
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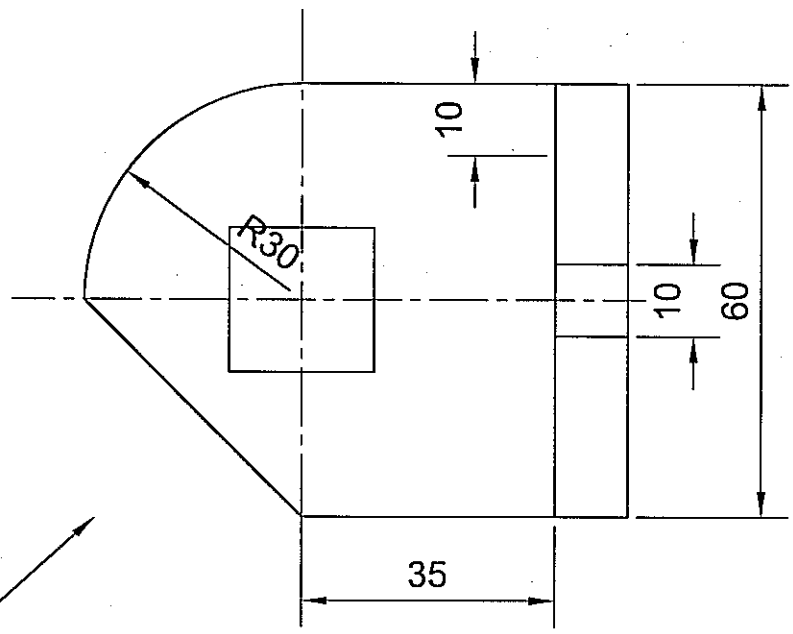


TRUNCATED CONE

All dimensions in mm
Not to scale

FIGURE Q2





All dimensions are in mm
Not to scale

Figure Q3