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THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF ENGINEERING TECHNOLOGY

DIPLOMA IN TECHNOLOGY (LEVEL 03)

FINAL EXAMINATION – 2009

IN

ENGINEERING DRAWING - MEX3234

DATE	**: 03rd MARCH 2010**
TIME	**: 0930 – 1330 HRS**
DURATION	**: FOUR (04) HRS.**

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

1. Clarify any doubts with the supervisor / invigilator in the examination hall.
2. 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 01and 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 (05) 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)

QUESTION 02

A right circular cone of diameter 80 mm and height 90 mm made out of thin sheet metal is cut by a plane PP inclined at 45° to the axis of the cone as shown in Fig. Q2.

(a) Draw the elevation of the truncated cone corresponding to the given view and the plan in first angle projection to a scale of full size.

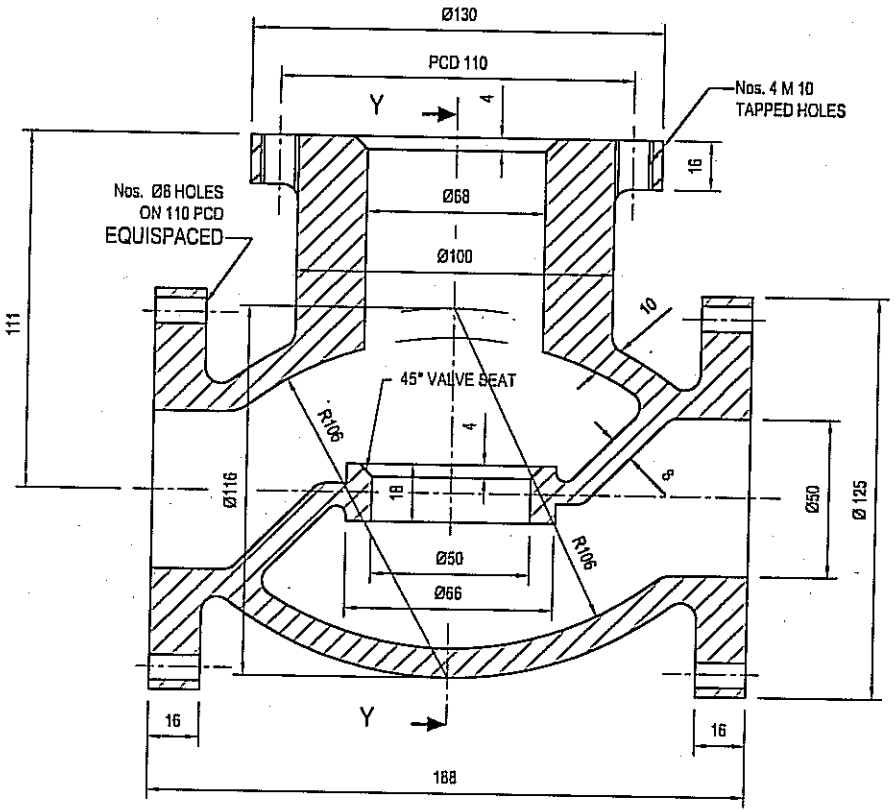
(b) Draw the development of the truncated cone taking AA as the seam.

(All dimensions are given in millimeters)

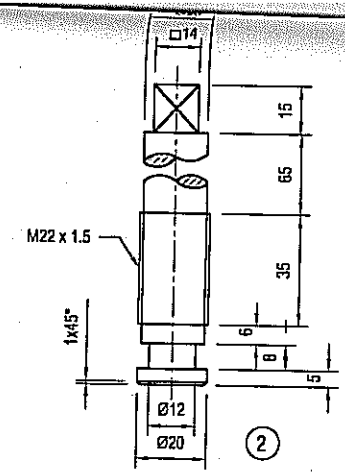
QUESTION 03

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.

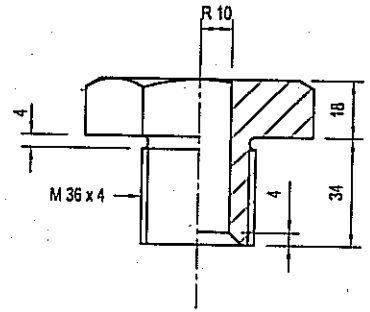
(All dimensions are given in millimeters)



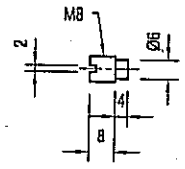
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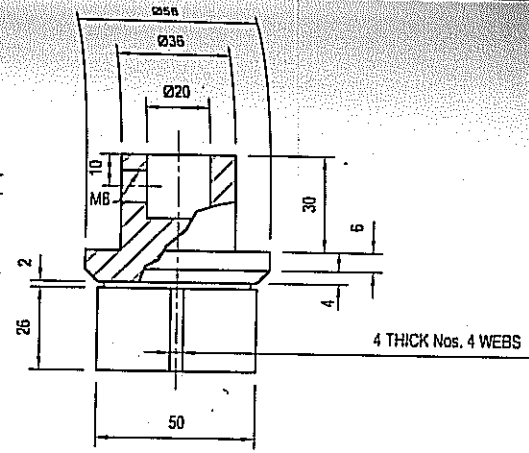
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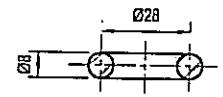
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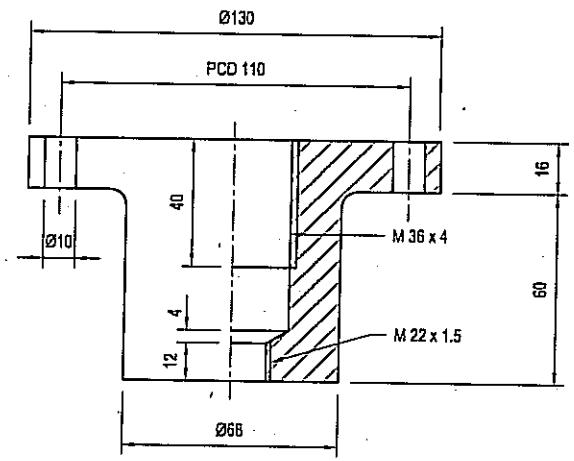
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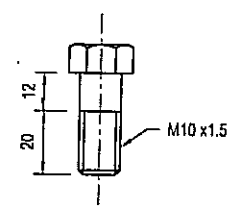
5



6



8



7

SAFETY VALVE

Fig. Q1

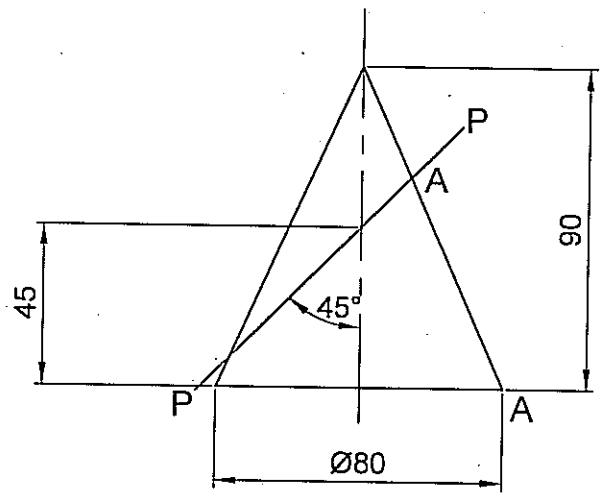
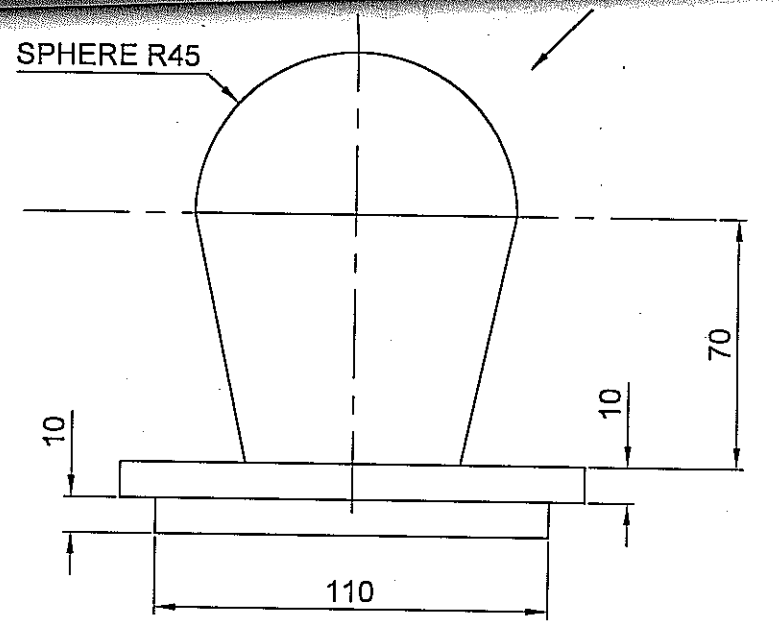


Fig.Q 2



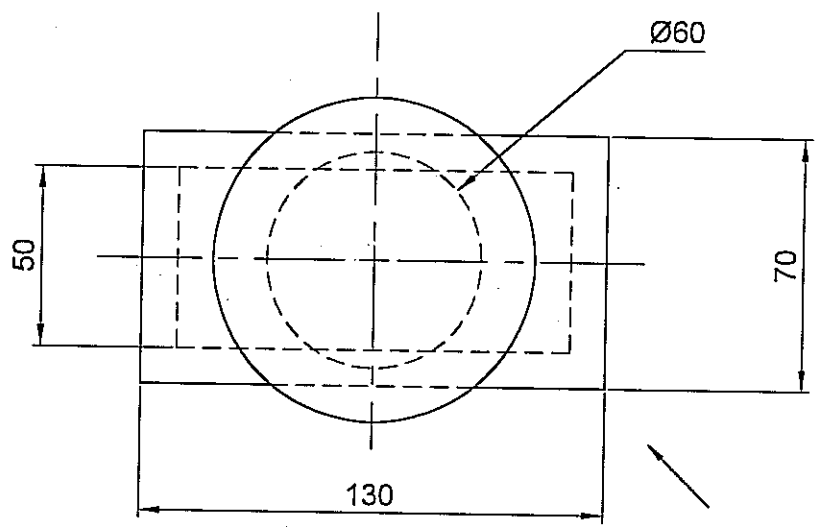


Fig.Q 3