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The Open University of Sri Lanka
Faculty of Engineering Technology

Study Programme	:	Diploma in Technology/Bachelor of Technology (Engineering)
Name of the Examination	:	Final Examination
Course Code and Title	:	**MEX3234 – Engineering Drawing**
Academic Year	:	2013/14
Date	:	06-08-2014
Time	:	9.30 – 13.30hrs
Duration	:	4 hours

General instructions

1. Clarify any doubts with the supervisor/invigilator in your examination hall.
2. **The Question 01 in Section A is compulsory**. Answer this question and one other 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 remaining 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 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. You are strictly advised to write your Index Number, Registration Number and Course Code only on the drawing paper. Do not write your name or provide any other information.

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SECTION A (Compulsory)

Q 01.

Figure 01 shows the exploded orthographic views of different components of a VALVE ASSEMBLY(Stop valve). This assembly consists of the following components.

1. Valve body
2. Valve spindle
3. Packing adjustor
4. Grub screw
5. Valve
6. Rubber Washer (4 Nos)
7. Standard Hexagonal Bolt (4 Nos)
8. Packing Holder

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

(a) **Front Elevation** corresponding to the given front elevation of the valve body.

(b) **Sectional End elevation** taken through Y-Y and projected to the right of view (a).

(c) **Half Plan** projected from (a)

Note:

1. It is necessary that the valve (5) be in the closed position with four rubber washers (6) placed inside the packing holder (8).
2. Give only ten main dimensions in the drawing. Radii of casting curves may be taken suitably.
2. Assume any missing dimensions.
3. All dimensions are in mm.
4. Indicate the symbol of projection and print the main title, sub title and scale.

(75 Marks)

SECTION B
(Answer only one question)

Q 02.

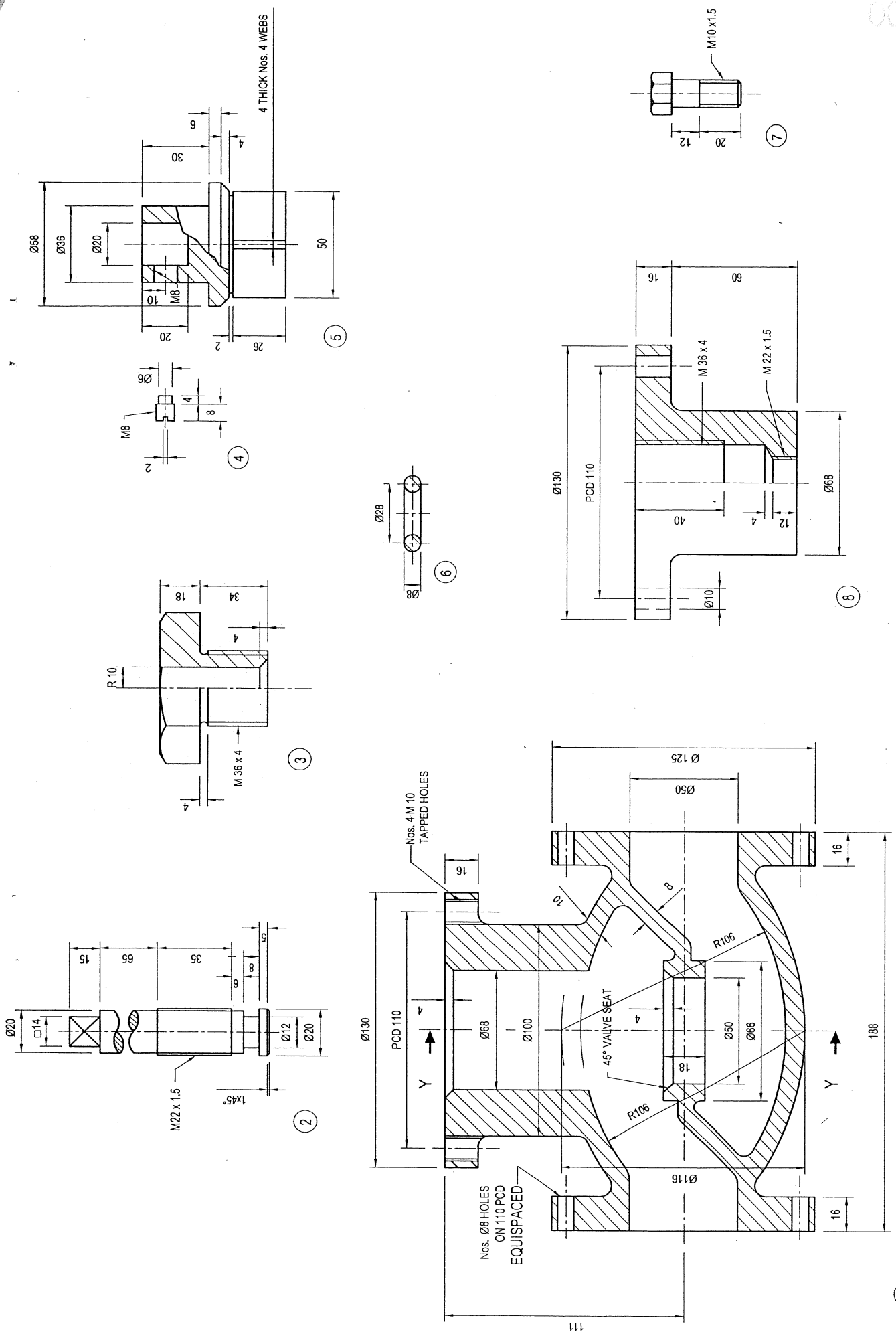
Figure 02, shows orthographic views of an object. Draw the isometric view of the object to a scale of full size taking the near point as shown by two arrows. **An isometric scale need not be used**. Do not show hidden details and dimensions in your answer.

(25 Marks)

Q 03.

Figure 03 shows the front elevation and the plan of a hollow cylinder with a through hole, made of a thin metal sheet. Draw the development of the cylinder taking B-B as the seam.

(25 Marks)


STOP SAFETY
Figure Q1
Nos. 4 M 10 TAPPED HOLES
Nos. Ø8 HOLES ON 110 PCD EQUISPACED
45° VALVE SEAT
R106
PCD 110
Ø130
Ø68
Ø100
Ø50
Ø66
Ø116
Ø 125
Ø50
188
111
M 36 x 4
M 22 x 1.5
M22 x 1.5
1x45°
4 THICK Nos. 4 WEBS
M10 x1.5
Ø58
Ø36
Ø20
Ø28
Ø8
Ø6
Ø10
Ø12
Ø14
R 10
PCD 110

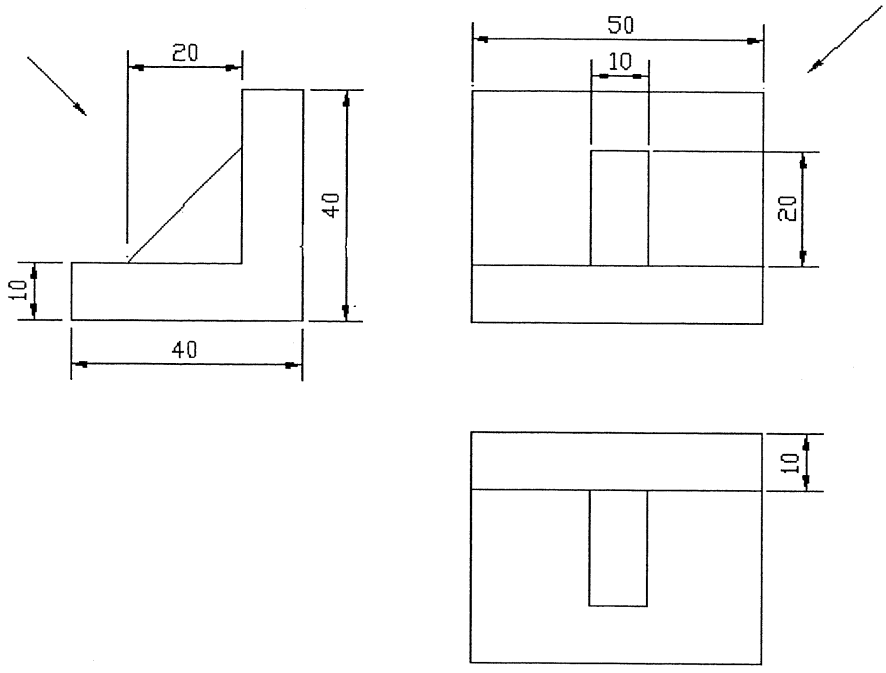


FIGURE Q 2

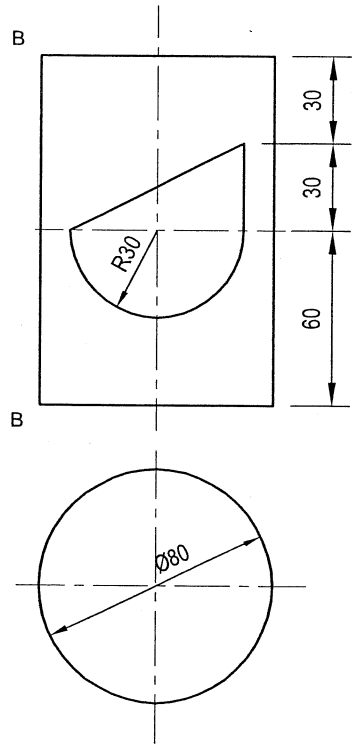


FIGURE Q 3