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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	:	2014/15
Date	:	05-08-2015
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 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.

SECTION A (Compulsory)

Q1. Figure 01 shows exploded orthographic views of following components of a Tool Holder which is used to hold the cutting tool of a lathe machine.

1. Tool Holder
2. Base Plate
3. Mover
4. Spring Washer (04 Nos)
5. Knob
6. Handle
7. Stud
8. Groove Screw (04 Nos)
9. Set Screw (04 Nos)
10. Spring (04 Nos)
11. Spherical Steel Ball (04 Nos)

Assemble the above components placing them correctly and following views to **a scale of full size in the first angle projection.**

(a) **Sectional Front elevation** of the assembly of the tool holder on B-B

(b) **End elevation** projected to the right of view (a).

(c) **Plan** projected from view (a).

Note:

1. Assume any missing dimensions.
2. Radii of casting curves may be taken suitably.
3. Print the main title, sub title and scale.
4. Give a minimum ten main dimensions.
5. Indicate the symbol of the projection.

(70 Marks)

SECTION B

(Answer only one question)

Q2. **Figure 02**, shows two 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.

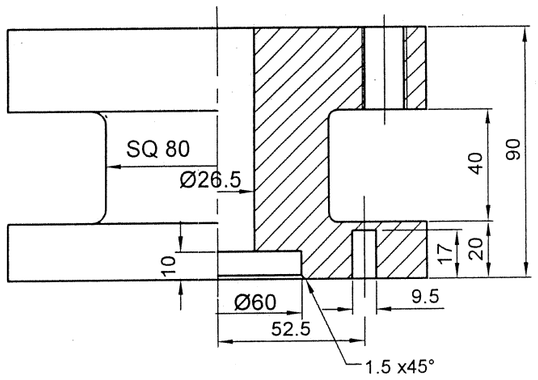
(30 Marks)

Q3. **Figure 03** shows the Front Elevation of a truncated right circular cone made out of thin sheet metal.

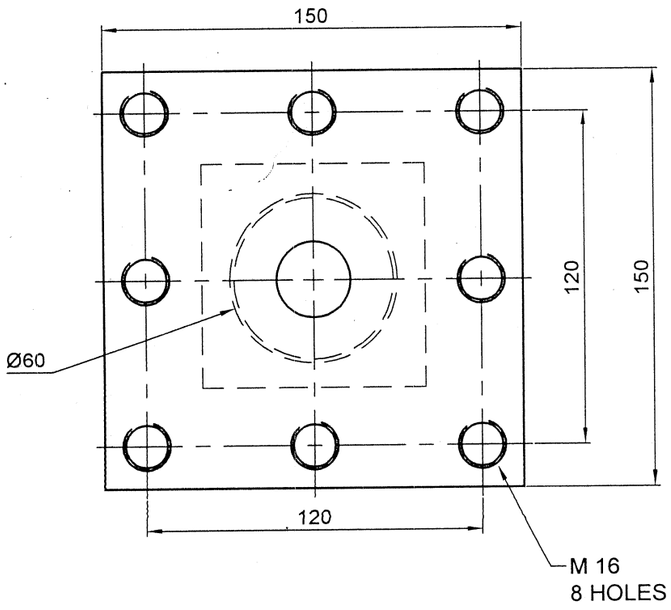
(a) Draw the given **Front Elevation** and **Plan** in first angle projection to a scale of full size.

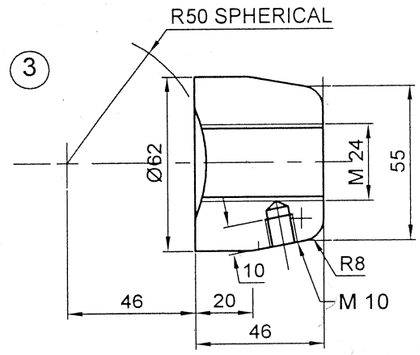
(b) Draw the **development of the truncated cone** taking the seam as A-A.

(30 Marks)

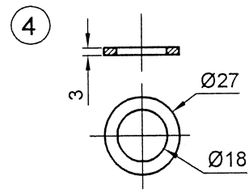


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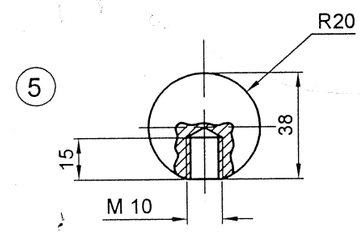




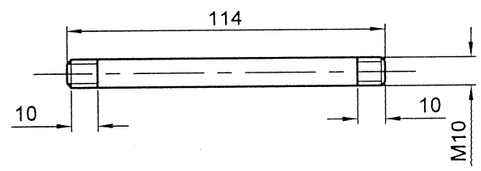
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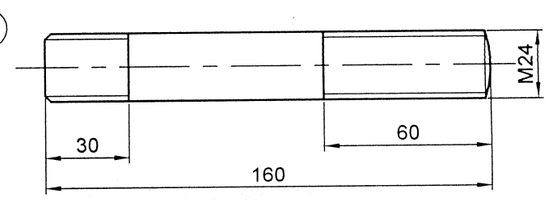
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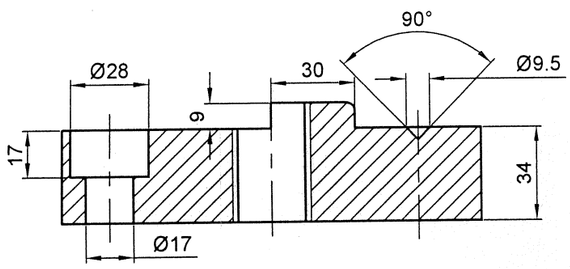
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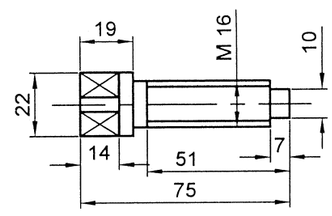


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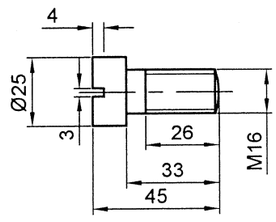


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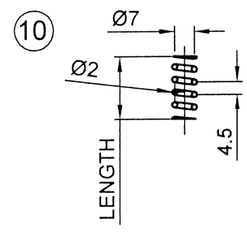




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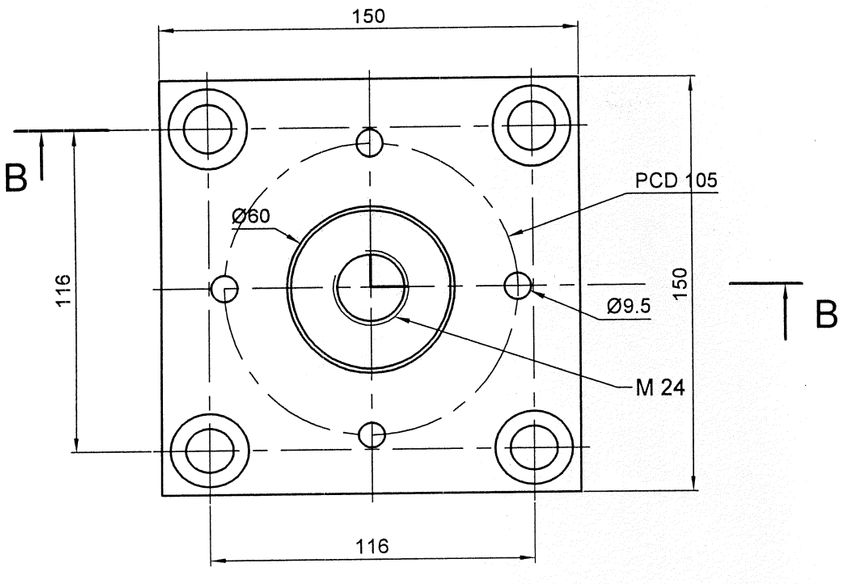
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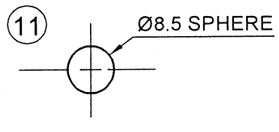


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SECTION B-B





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TOOL HOLDER

Not to scale

Figure 01

All dimensions in mm

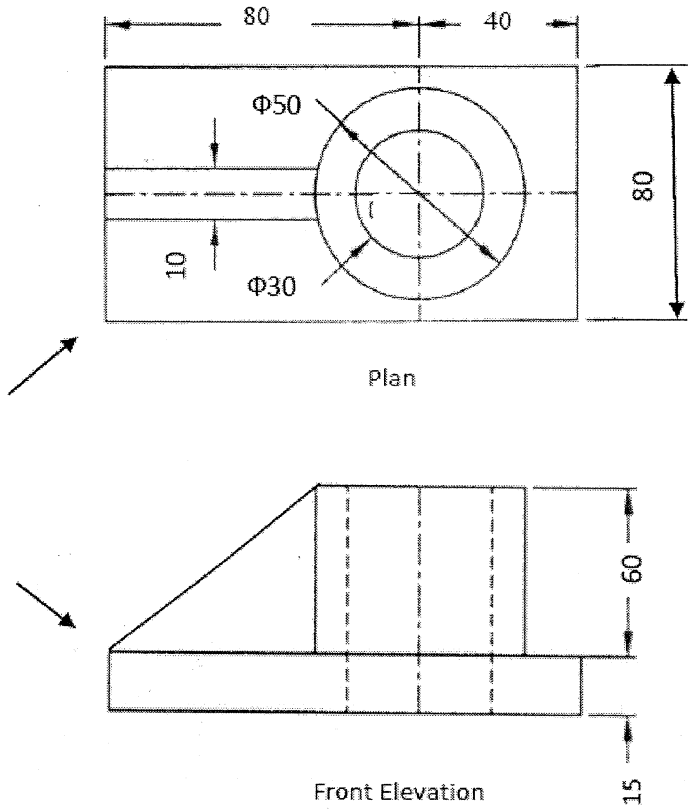


Figure 02

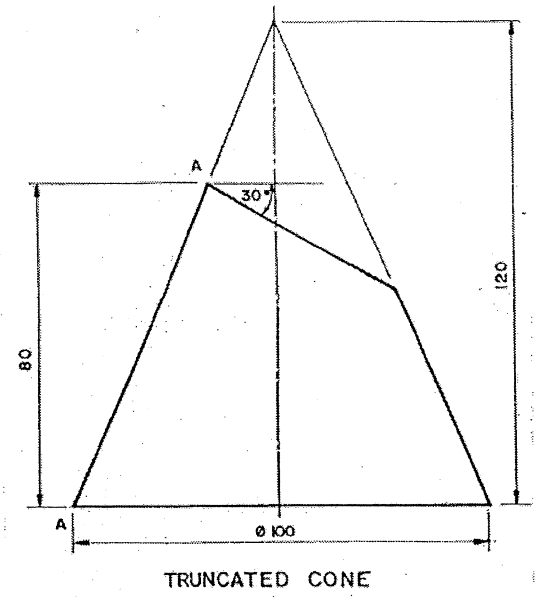


Figure 03