

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY



FACULTY OF INDUSTRIAL TECHNOLOGY DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

B-Eng Hons Industrial and Manufacturing Engineering

Supplementary Examination

COURSE : **Engineering Drawing 1**
CODE : **TIE 1101**
DATE : **July 2013**
DURATION : **3 hours 15 minutes**

INSTRUCTIONS AND INFORMATION TO CANDIDATE

1. Answer question 1 and 2 and any other two (2) questions
 2. Question 1 and 2 as well as the Title Block carry a total of **60 marks**.
 3. All other questions carry **20 marks** each.
 4. This paper contains five (5) questions.
 5. There are five (5) printed pages.
 6. Produce a simple Title Block in the bottom right hand corner of your A3 Drawing Paper and print your Student Number, Department, Subject Name and Course Code. Print your Student Number Only on the rest of your answer sheets.
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[5]

REQUIREMENTS

1. Drawing Boards and Tee-squares
2. A3 size drawing papers
3. Masking Tape

QUESTION 1

Two views of a Base Block are shown in 1st Angle Orthographic Projection in Figure 1. Draw an Isometric View of the block so that the base length is along the right horizontal axis. Do not erase the construction lines used.

[30]

QUESTION 2

Figure 2 shows a pictorial view of a Machine Block. Draw using a scale 2:1, in First Angle Orthographic Projection the following views:

- a) A Sectional Front View as seen from cutting plain T-T
- b) End elevation as seen from the left showing all hidden details
- c) A Plan projected from View (a)

[25]

QUESTION 3

Figure 3 shows in orthographic projection, two views of a Tray with slopping sides. Copy the views and draw the surface development of the tray on the plan.

[20]

QUESTION 4

A single view of a Plain Handle is shown in Figure 4. Construct the Plain Handle, clearly showing the methods used to get centres and points of tangency.

[20]

QUESTION 5

On a common base $AB = 70$ mm long, construct a Pentagon and a Heptagon clearly showing all the steps followed.

[20]

END OF EXAM