

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY



FACULTY OF INDUSTRIAL TECHNOLOGY DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

B-Eng Hons Industrial and Manufacturing Engineering

Main Examination

COURSE : **Engineering Drawing 1**
CODE : **TIE 1101**
DATE : **January 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 top left-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.

[5]

REQUIREMENTS

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

QUESTION 1

Figure One shows a pictorial view of a Locating Block. Draw in Third Angle Orthographic Projection the following views:

- a) A Sectional Front View as seen from cutting plain Q-Q
- b) End elevation as seen from the left, showing all hidden details
- c) A Plan projected from View (a) [30]

QUESTION 2

Two views of a Stopper Block are shown in 1st Angle Orthographic Projection in Figure Two. 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. [25]

QUESTION 3

A Connecting rod is shown in Figure Three. Construct the Connecting Rod and clearly show the methods used to get centres and points of tangency. [20]

QUESTION 4

Two views of a Truncated Rectangular Pyramid are shown in Figure Four, in first angle orthographic projection. Copy the two views and then draw the surface development to also include the top, attached to the most appropriate edge. [20]

QUESTION 5

A Tracing Template, made up of two concentric circles and two ellipses is shown in Figure Five. The Minor Axis is 88 mm. Draw and fully dimension the Tracing Template, clearly showing all the construction lines used. [20]

End of Exam