

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

Bachelor of Engineering (Hons) Industrial and Manufacturing Engineering

ENGINEERING DRAWING 1 - TIE 1101

SEMESTER 1 EXAMINATION JANUARY 2011

INSTRUCTIONS

- 1. Answer question Q1 and Q2 in Section A and any other Two questions in Section B*
- 2. Draw carefully using appropriate line thicknesses. Show all construction lines used.*
- 3. Title block and margins carry 5 marks* *[5]*
- 4. Note: Produce a simple Title Block in the top left corner of your A3 drawing sheet*
- 5. And print your Student Number, Department, Subject Name, and Course Code.*
- 6. Print your student number only on the rest of your answer sheet.*

SECTION A

QUESTION 1

Fig Q1 shows a front elevation and plan of a Base Block, in first angle orthographic projection.

Draw full size in Third Angle Orthographic Projection the following views:

- a) A Sectional Front Elevation as seen on Cutting Plane R-R
- b) An End Elevation as seen from arrow S
- c) A Plan projected from view a)

[30]

QUESTION 2

Draw an Isometric View of the Machine Block shown in Fig Q2 so that the longer of the base dimensions is along the left axis and the width along the right. Do not erase any of the construction lines used. [25]

SECTION B

QUESTION 3

Construct the Swiveling Link shown in Fig Q3 clearly showing the centres and touching points used.

Fully dimension this drawing. [20]

QUESTION 4

Accurately construct the following:

a) An ellipse of Major Axis = 120 and a Minor Axis = 70 using the Four Centre Method.

[10]

b) A regular Heptagon (7) of side 60.

[10]

QUESTION 5

Draw the two views of the Truncated Octagonal Pyramid shown in Fig Q5 and then produce its surface development only. Layout of views is important if all the views are to be drawn on the same page. [20]

END OF EXAM