THE OPEN UNIVERSITY OF SRI LANKA

FACULTY OF ENGINEERING TECHNOLOGY

DIPLOMA IN TECHNOLOGY – LEVEL 02

FINAL EXAMINATION 2007

595

MEX2330 – COMMUNICATING ENGINEERING INFORMATION

DATE : 21st APRIL 2008

TIME : 1330 HRS – 1730 HRS

DURATION : FOUR HOURS [04]

WRITE YOUR INDEX NUMBER CLEARLY ⇨ | | | | | | |

WRITE YOUR REGISTRATION NUMBER ⇨ | | | | | | | |

READ THE FOLLOWING INSTRUCTIONS CAREFULLY BEFORE ANSWERING THE QUESTION PAPAER

INSTRUCTIONS:

1. *This question paper consists of two sections PART A (5 questions) and PART B (4 questions).*
2. ***Answer all questions. PART A** will carry **60** marks and **PART B** will carry **40** marks.*
3. *Spend at least two and a half (2½) hours for **PART A** and the rest for **PART B.***
4. *Answers should be written or drawn within the space provided under each question in both **PART A** and **PART B**. No additional papers should be used for any question.*
5. ***Any answers given in separate sheets other than this question paper will not be taken for evaluatio** .*
6. *You may use drawing instruments (other than drawing board and T-ruler) at your discretion.*
7. *All sketches must be neatly drawn and proportional in sizes.*
8. *It is extremely important that you do not remove the question paper, or any part of the question paper, from the examination hall.*
9. *Remember to write your index number and registration number in the space provided above. Do not write your NAME.*
10. *If you are in a doubt, consult the supervisor or an invigilator conducting the examination.*

PART -A

Question 01

Answer the questions given below.

(a) *"Ability to communicate Engineering Information is an important soft skill to be developed among the prospective engineers."* Define the terms communication and information in respect to the above statement.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(b) *"The meaning of the word information is context dependent."* Elaborate on the above statement.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(c) Distinguish between signals and noise in the context of information. Explain your answer by taking a suitable example.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(d) Construct a matrix that represents all forms of information (at least 03) and all media of communication (at least 05). Take the first column to represent the forms of information and the first row to represent the medium. Indicate the medium applicable to each forms of information by placing a "✓" in the appropriate cell.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(e) Define briefly the following terms with particular reference to Communicating Engineering Information.

(i) Graphical symbols.

.....

.....

.....

.....

.....

.....

.....

.....

(ii) Prefixes for decimal multiples.

.....

.....

.....

.....

.....

.....

.....

.....

(iii) Algorithms.

.....

.....

.....

.....

.....

.....

.....

.....

(iv) Perspective views in sketching.

.....

.....

.....

.....

.....

.....

.....

.....

Question 02

You are required to make a short oral presentation to a group of newly registered students in OUSL to create an awareness about the course Communicating Engineering Information.

(a) What are the decisive factors that you would critically consider prior to prepare your presentation?

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(b) Explain the factors (at least 04) to be considered with regard to the presentation environment.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(c) You have the option of selecting one of the modes of delivery given below.

(i) Manuscript method.
(ii) Memory method.
(iii) Impromptu method
(iv) Extemporaneous method

Briefly explain each of the methods above. Select the method that suite your need the best, and justify as to why the method you selected is the best.

(d) Briefly explain the main elements that your presentation contains.

Question 03

Answer the following questions.

(a) Explain the decisive factors to be considered prior to writing a technical report.

.....
.....
.....
.....
.....
.....
.....
.....
.....

(b) Clearly state the difference between drafting and revising your document before writing the final report.

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(c) Distinguish between progress reports and feasibility reports drawing special attention to the purpose and its main constituents.

.....
.....
.....
.....
.....
.....

(d) You are required to submit a report on an experiment that you have conducted in the laboratory. List the main elements that this report should contain.

Question 04

The marks obtained by 500 students for a particular course at the Open University are given below.

Marks	No. of students
0 – 9	20
10 – 19	40
20 – 29	40
30 – 39	90
40 – 49	120
50 – 59	64
60 – 69	60
70 – 79	40
80 – 89	26
90 +	0

(a) Calculate and represent the data in percentage and cumulative percentage form.

(b) Calculate the average makes obtained by the students for the above subject.

(c) What is the standard deviation for the above subject?

Question 05

The data shown below presents the number of students registered and the number of students gained eligibility for a particular course at the Open University for a past period of five years.

	2002	2003	2004	2005	2006
Registered students	1230	1550	2700	1800	1750
Eligible students	308	465	675	630	700

(a) Construct a suitable bar chart to represent the above data.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

(b) The course team intends to review the progress of the course and the performance of the students. Present the data graphically in a meaningful manner in order to meet the above requirement of the course team. What information can you infer from this graph/s?

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

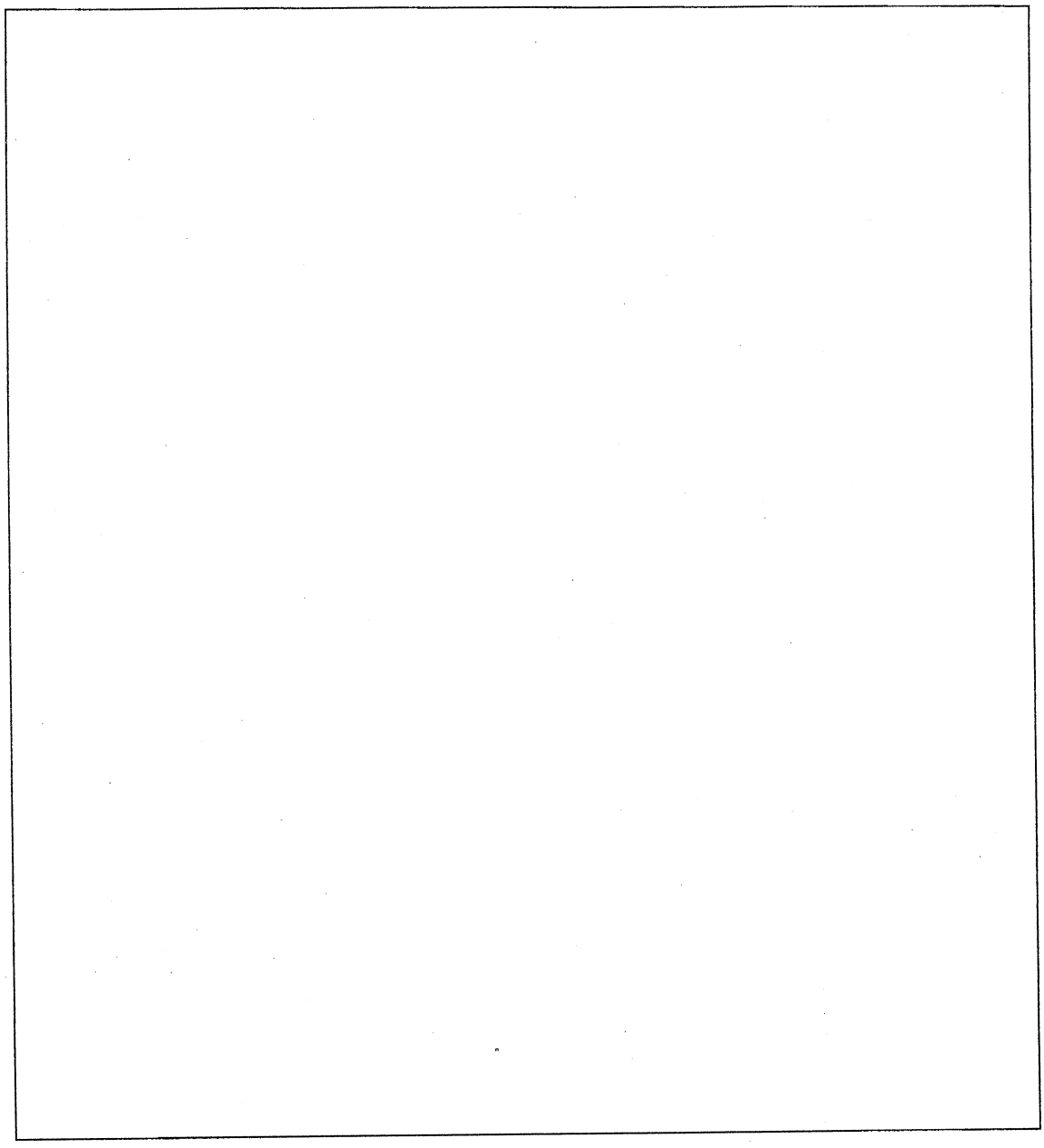
PART - B

Question 06

Draw a scalene triangle to a suitable scale, and illustrate the geometrical methods that results its,

(i) Centroid.

(ii) Orthocenter.



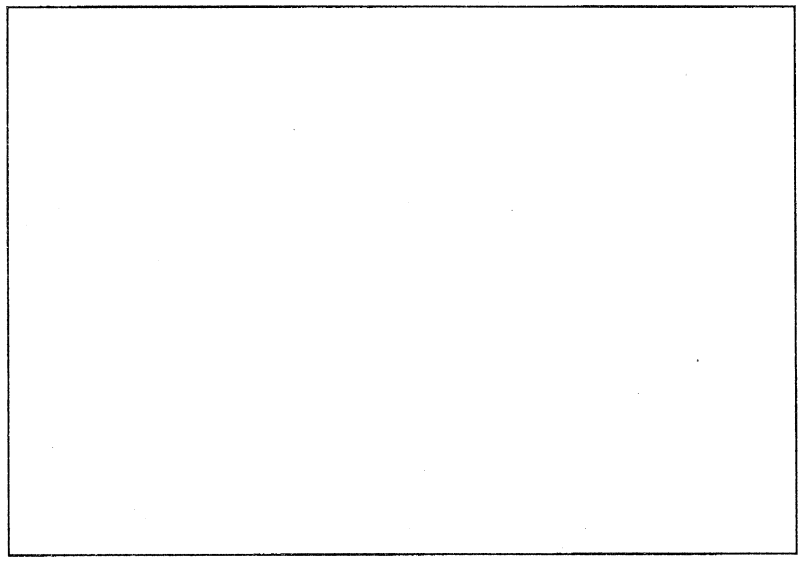
Question 07

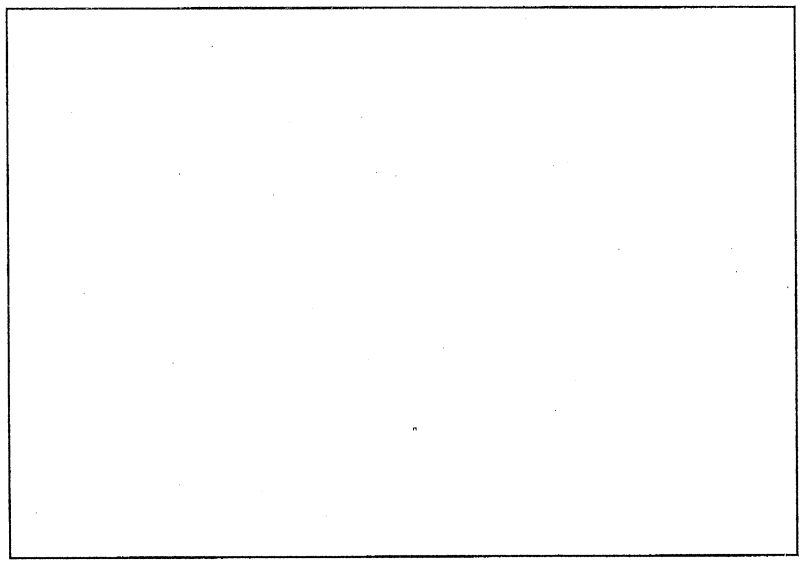
Draw the standard symbols which represents,

(i) First angle projection

(ii) Third angle projection

(You are required to give the recommended proportions of the symbols as well)





Question 08

Figure Q8 shows two orthographic views of an object in first angle projection. Sketch the isometric view of the object within the space given below taking the near points as shown by two arrows.

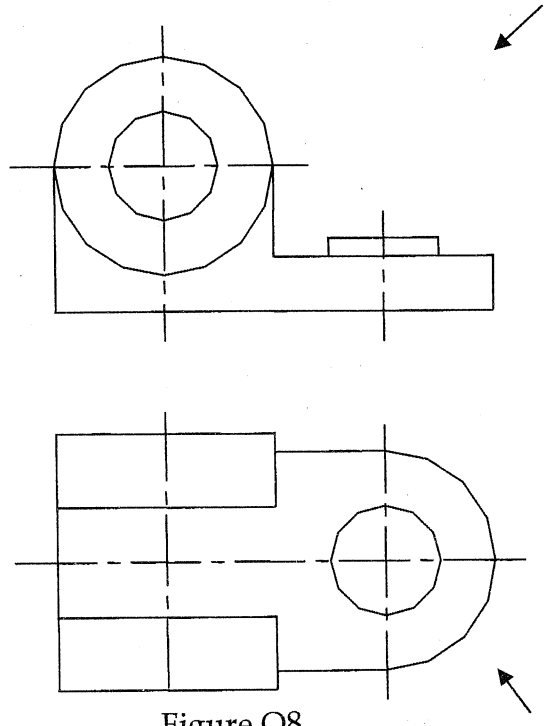


Figure Q8

Question 09

Figure Q9 shows an isometric view of an object. Sketch the following orthographic views within the space given below in first angle projection.

(a) Front elevation looking in the direction of arrow "X"

(b) End elevation projected to the left of view (a)

(c) Plan projected from view (a)

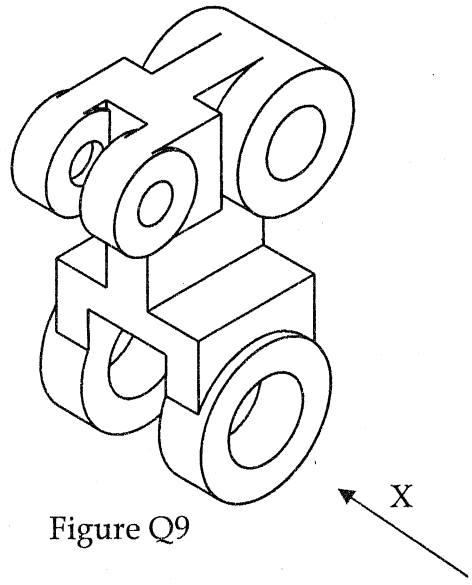


Figure Q9

ALL RIGHTS RESERVED