00364

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	:	**MEX3211 – Communicating Engineering Information**
Academic Year	:	2012/13
Date	:	01 - 08 - 2013
Time	:	13.30 – 17.30hrs
Duration	:	4 hours

Write your Index number clearly									

General 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 (2 ½) 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 evaluation.**
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 clearly in the space provided above**. If you have not received an index number, write your registration number in the space above. **Do not write your NAME.**
10. If you are in a doubt, consult the supervisor or an invigilator conducting the examination.

PART – A

(Five questions – 60 Marks)

Q 01.

Using suitable examples, explain clearly the difference between the followings.

a) Data and information

b) Signal and noise

c) Algorithm and flow chart

d) Abstract and summary

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Q 02.

You intend preparing **a technical report on a current topic**.

a) List four **types of sources** you would refer for information.

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b) List the **main elements** that should make up such a report.

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c) What kind of information would you give under **annexure**?

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Q 03.

Explain clearly the following statements.

a) Information is context dependent

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b) Information of today make a better life tomorrow

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c) Medium is the message

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d) Perspective view has a better marketing demand than an isometric view.

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Q 04.

You are the leader of a five member committee, entrusted to organize a function. In this function the best performer of each of the ten departments of your company, is to be honoured. The function is to be held in the company premises, attended by the entire company staff of around 200. Each award winner is to make a brief presentation on his/her award winning project/assignment at this function, followed by speeches of the heads and the award presentation ending with refreshments.

Write a progress report on the preparatory work of the function to be submitted to the management committee meeting. The report should be prepared in point form as far as possible.

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Q 05

a) Briefly define the terms **sample mean, sample variance and sample standard deviation.**

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b) To estimate the average study time spent by a student in a week to study a particular course, a survey is carried out as follows; Samples are collected on 5 different days as indicated in the following table. Note that the sample sizes used on different days are different.

Days	Sample size	Average study time(hrs)
1	80	6.32
2	97	4.21
3	62	5.81
4	21	3.17
5	11	10.21

Table 01

Compute the **reliable average** study time spent by the student in a week.

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c) A student recorded the time taken by him (in minutes) to travel to the university from home on some randomly chosen days.

35	37	38	34	37	39	47	46	48	41
43	57	41	55	59	53	55	59	62	66

Table 02

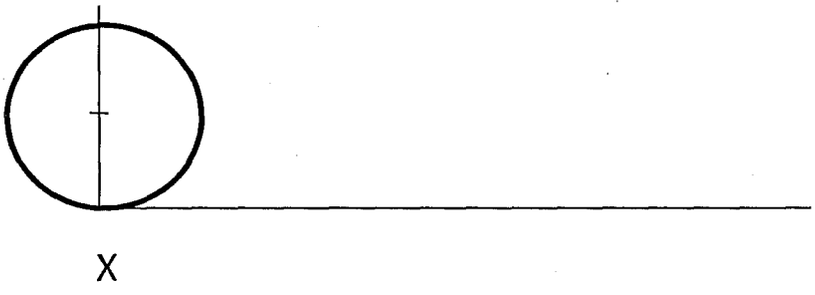
Compute the sample variance and sample standard deviation of the above data.

PART- B
(Four questions – 40 Marks)

Q 06.

Point ' X' is located on the periphery of a 40 mm diameter circle as shown below.

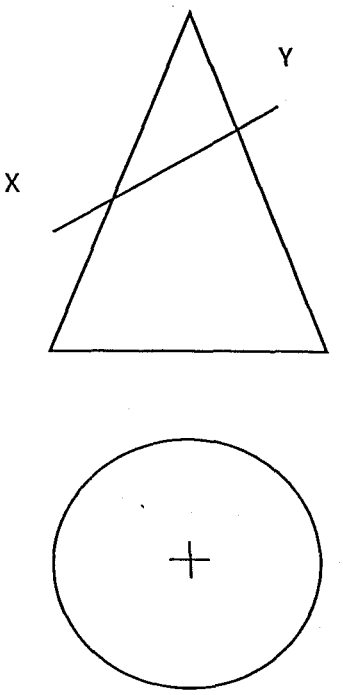
1. Sketch the locus of the point 'X' when the circle rolls one round on a straight line path.
2. Briefly explain the steps of your construction.



Answer cage

Q 07.

Orthographic projections of a hollow cone are shown in the figure. The upper part of the cone is cut off by an inclined plane x-y, which makes 45^0 angle with the horizontal plane.



Sketch **the development of the truncated cone.**
(Take suitable dimensions for the cone)

Answer cage

Q 08.

Figure shows the pictorial view of an **universal coupling.**

Sketch the following views in first angle projection.

i. **Front view** looking from the direction X.
ii. **Plan**
iii. **End view** looking from the direction Y.

Note: Name views, show hidden details & indicate 3 major dimensions in each view.

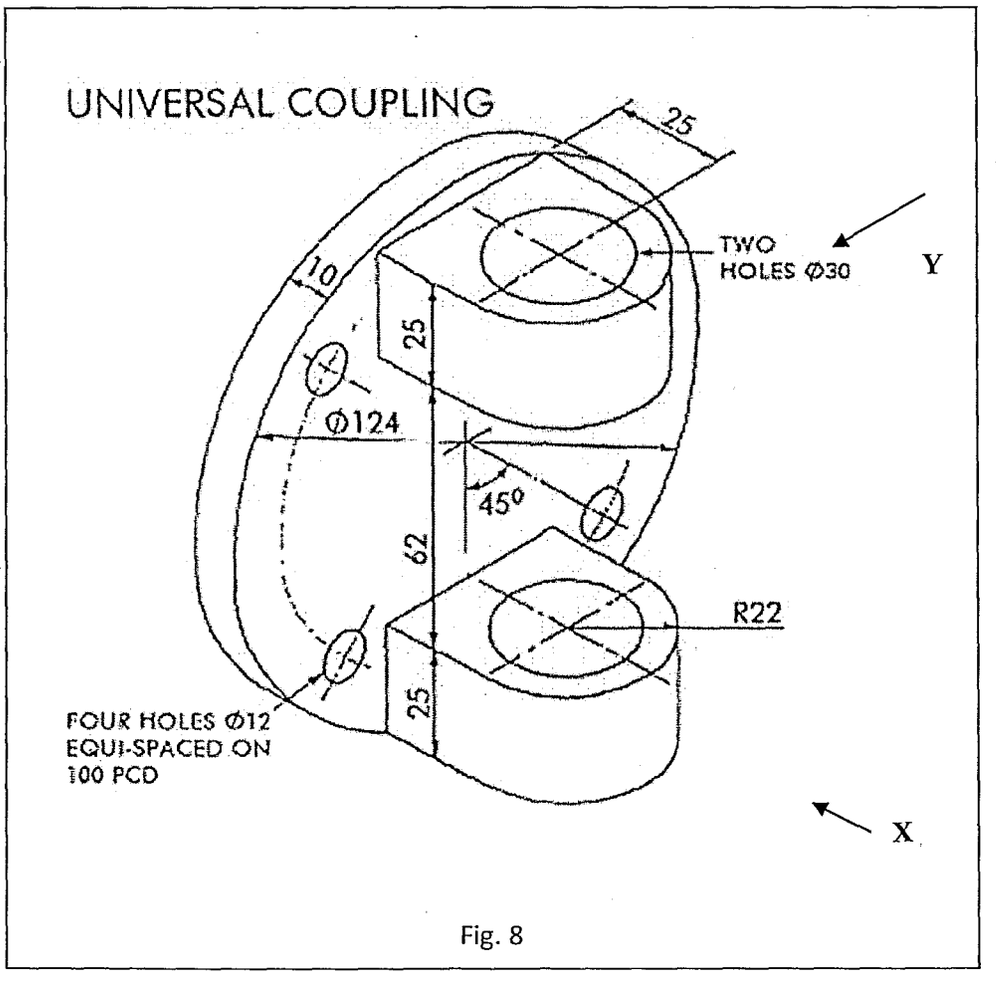


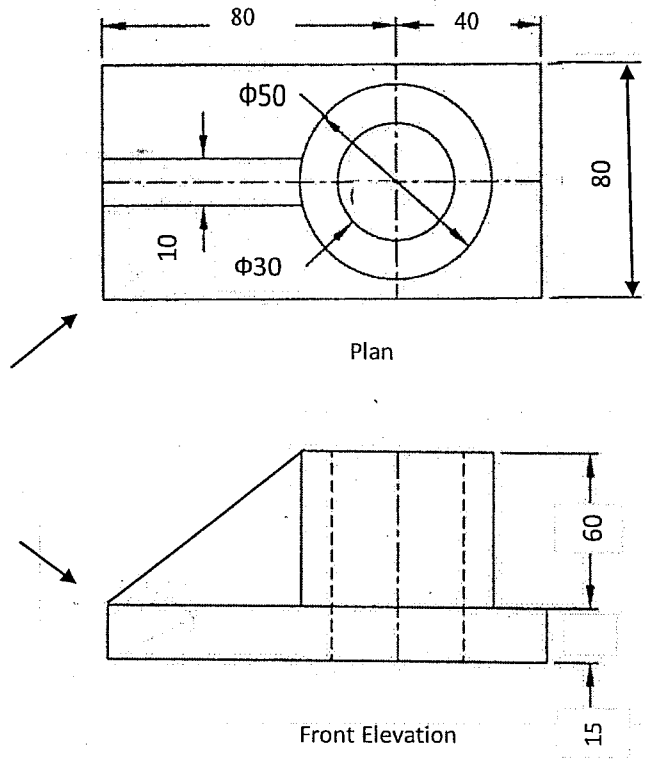
Fig. 8

Answer cage

Q 09

The figure shows two views of an object in third angle projection.

Sketch the isometric view of the object. (Use true scale and take arrow heads as nearest points)



Answer cage