



The Open University of Sri Lanka  
Faculty of Engineering Technology  
Department of Mechanical Engineering

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| Study Programme         | : Bachelor of Technology Honours in Engineering                |
| Name of the Examination | : Final Examination  |
| Course Code and Title   | : <b>DMX3511/MEX3211 Communicating Engineering Information</b> |
| Academic Year           | : 2019/2020  |
| Date                    | : 15 <sup>th</sup> October 2020                                |
| Time                    | : 9.30am – 1.30pm  |
| Duration                | : 4 hours  |

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**General instructions (Please read carefully before you start answering the question paper)**

1. This question paper consists of two sections PART A (5 questions) and PART B (4 questions).
2. This question paper consists of nine (09) questions on (09) pages.
3. **Answer all questions.** PART A will carry 60 marks and PART B will carry 40 marks.
4. Spend at least two and a half (2½) hours for PART A and the rest for PART B.
5. Answers to PART A should be written on the answer book provided by the Examinations Division while answers to PART B should be written or drawn within the space provided under each question on the question paper itself.
6. The whole question paper along with the answers to PART B should be attached with the answer book at the time of collection. It is extremely important that you do not remove the question paper, or any part of the question paper, from the examination hall.
7. Please write your index number in the space provided on the answer book and on the question paper. Do not write your name.
8. Commence to answer each new question on a fresh page with regard to PART A.
9. You may use drawing instruments (other than drawing board and T-ruler) at your discretion.
10. All sketches must be neatly drawn and proportional in sizes.
11. Assume any missing dimensions.
12. If you are in a doubt, consult the supervisor or an invigilator conducting the examination.

**PART A****Question 01**

- (a) *The modern era is said to be an information society. State six dominant features of an information society.* [06 Marks]
- (b) Explain the adverse effects of the modern-day mobile communication technology on society. [06 Marks]

**Question 02**

- (a) *Technical reports play a major role in transferring information effectively to relevant stakeholders. Therefore, writing a good technical report will be of utmost importance, if the objectives of a technical report are to be met. List out four (04) decisive factors to be considered before writing a technical report.* [04 Marks]
- (b) State at least four (04) precautions that need to be taken in the context of writing style, when writing a good technical report. [04 Marks]
- (c) *Abbreviations are typically used in technical report writing to avoid tedious repetition of expressions in full. State four (04) rules that need to be followed when using abbreviations in report writing.* [04 Marks]

**Question 03**

- (a) List out at least, four salient features that a questionnaire should contain in order to gather information effectively. [04 Marks]
- (b) What are the other methods available for gathering of information, apart from the use of questionnaires? Briefly describe one of the methods. [04 Marks]
- (c) *Thinking critically about the information gathered, is often considered as a good practice for making use of the data in a more effective manner. Elaborate on this statement by taking a suitable example.* [04 Marks]

**Question 04**

- (a) Editing and coding is the first step in processing of the gathered data for it to make sense. That is, converting the raw data to information. State four (04) attributes that data would possess after the editing process. [04 Marks]
- (b) Explain four (04) objectives in classifying data. [08 Marks]

**Question 05**

You are required to make a short oral presentation on the progress of a mini-project undertaken in a course you have been registered, to the academic staff of the department.

- (a) Briefly explain the important aspects that you would consider before conducting the presentation. *[04 Marks]*
- (b) What mode of delivery methods would you select to conduct the presentation? Justify the reason for selecting the above method. *[04 Marks]*
- (c) Assuming that you are using visual aids in your presentation, explain effectiveness of using such aids in delivering your presentation. *[04 Marks]*

**END OF PART A**

## PART B

IMPORTANT : Sketch your answers to suitable proportions. Dimensions, if given, are only for guidance. You are not required to use the exact dimensions.

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**Question 06**

Sketch and explain how to find the center of a given arc.

[10 Marks]

**Question 07**

Two circles, one having a center  $A$  and a radius of  $a$ , and the other having a center at  $B$  with a radius of  $b$  are given. Sketch and explain how to draw a circle tangent, so that it will be externally tangent to the circle with center  $A$  and internally tangent to the circle having center  $B$ .

[10 Marks]

**Question 08**

Figure 1 shows the elevation and plan of an object in first angle projection. Sketch the isometric view of the object taking the nearest point as given by the arrows. (Isometric scale need not be used)

[Correct near point- 03 marks + Isometric view 07 marks = 10 Marks]

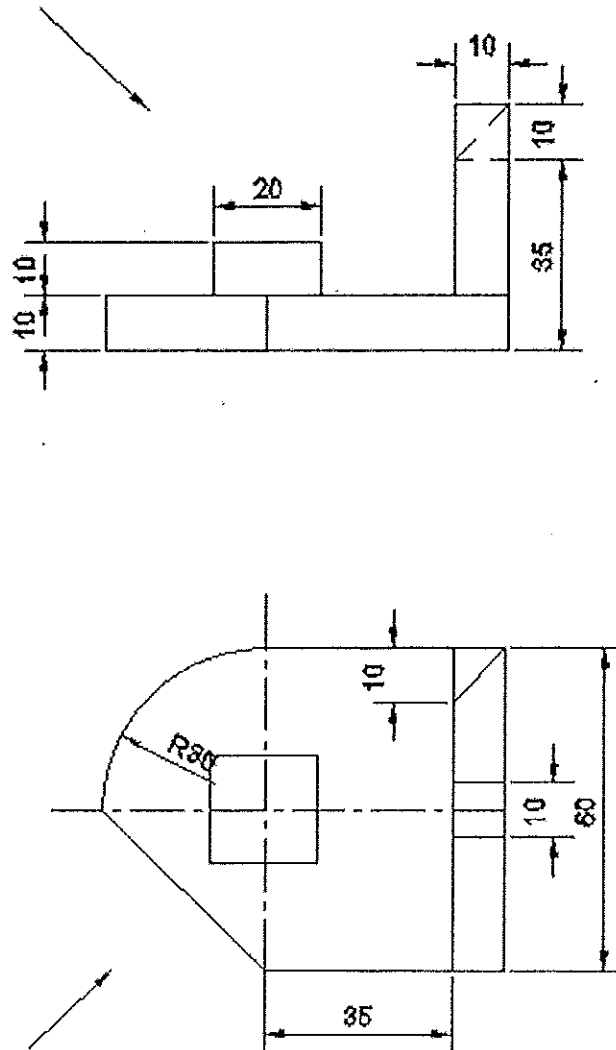


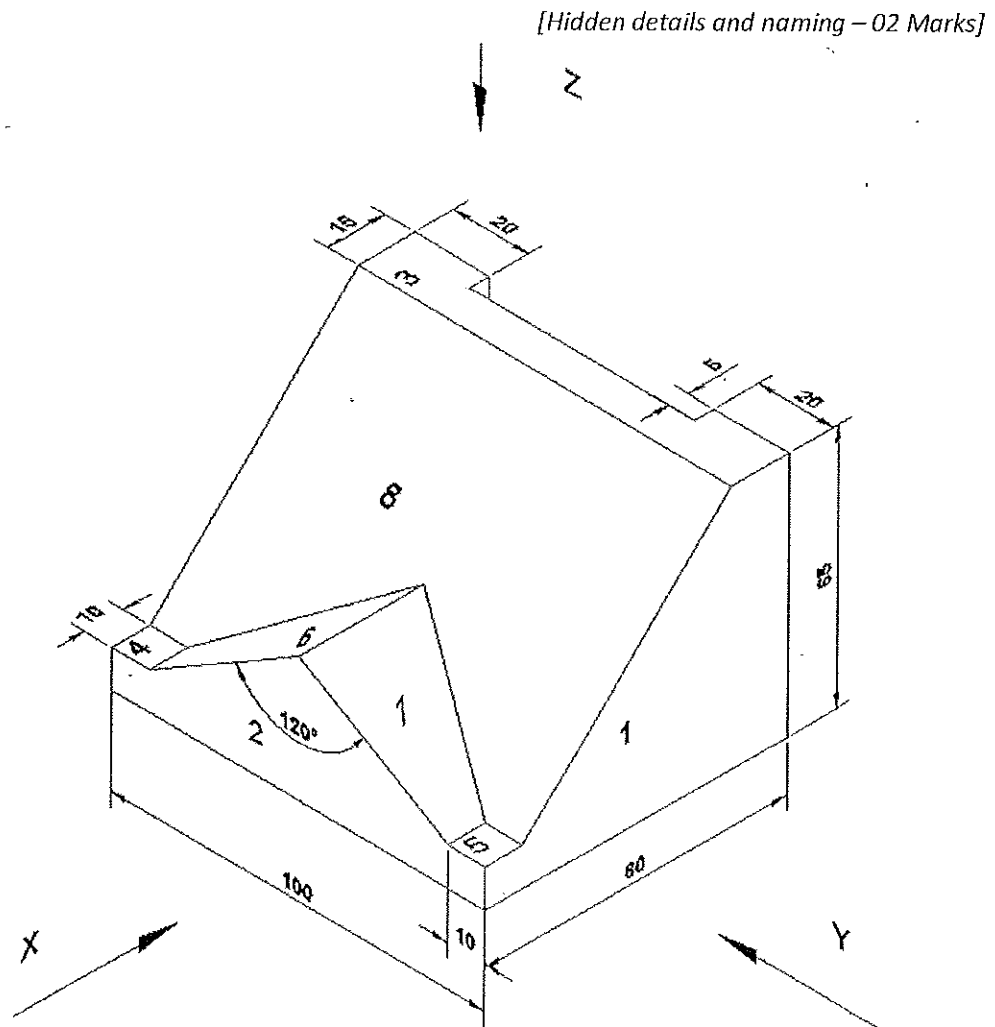
Figure 1



### Question 09

Figure 2 shows a pictorial view of a solid object. Note that all visible faces are numbered. Sketch the following views in first angle projection. You are required to show the numbering on the surfaces in the respective views.

- (a) Front Elevation looking in the direction of arrow X [03 Marks]  
 (b) Front Elevation looking in the direction of arrow Y [03 Marks]  
 (c) Plan looking in the direction of arrow Z [02 Marks]



*All dimensions are in mm*

Figure – 2



END OF PART B  
END OF PAPER

