

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

**Bachelor of Engineering Honours Degree Industrial &  
Manufacturing Engineering**

1<sup>ST</sup> SEMESTER EXAMINATIONS - DECEMBER 2011

ENGINEERING COMMUNICATION SKILLS

COURSE CODE: TIE 1102

**EXAMINATION DURATION 3 HOURS**

**INSTRUCTIONS TO CANDIDATE:**

Answer ALL questions.

Each question carries 20 marks.

### **QUESTION 1**

- a) Name three types of graphs used in the presentation of statistical information. [3]
- b) What are the five advantages of presenting technical information in graphical form over textual form? [5]
- c) Given below are three tables: Table Q1.1, Table Q1.2 and Table Q1.3. Present the information given in these tables in graphical form. For Table Q1.1 present the plots for the rainfall and temperature on one figure. Explain your choice of the type of graph.

Table Q1.1 Mean Temperature & Average Rainfall for Bulawayo in one year

|         | Jan | Feb | Mar | April | May | June | July | Aug | Sept | Oct | Nov | Dec |
|---------|-----|-----|-----|-------|-----|------|------|-----|------|-----|-----|-----|
| Temp. C | 20  | 20  | 20  | 19    | 16  | 14   | 15   | 16  | 19   | 21  | 21  | 20  |
| R, mm   | 187 | 173 | 100 | 33    | 10  | 4    | 0    | 2   | 6    | 30  | 97  | 182 |

[4]

Table Q1.2 Percentage Market Share of Computer Companies

| Computer Company | IBM | Apple | Sony | Compaq | Gateway | Tandy | Others |
|------------------|-----|-------|------|--------|---------|-------|--------|
| %Share           | 28  | 21    | 14   | 9      | 8       | 6     | 14     |

[4]

Table Q1.3 Variation of Torque with Temperature

| Temp  | 39.5 | 40.5 | 41  | 42   | 44   | 45   | 46   | 47  | 48   | 48.5 |
|-------|------|------|-----|------|------|------|------|-----|------|------|
| F(Nm) | 1.44 | 1.46 | 1.5 | 1.51 | 1.55 | 1.57 | 1.58 | 1.6 | 1.61 | 1.62 |

[4]

### **QUESTION 2**

- a) What is a memo? [2]
- b) Describe briefly the common format of a memo, explaining how it differs from a standard letter. [8]
- c) You are a laboratory technician in the Department of Engineering. You have been asked by Professor Dlamini to set up an experimental rig for tomorrow's lesson. Write a memo to Professor Dlamini advising him that you have completed the task, indicating that you conducted some tests. [10]

### **QUESTION 3**

You have been offered a place at National University of Science and Technology to do a postgraduate degree. However, you do not have enough money for the fees and for your daily requirements while at the university. Submit an application to the manager of NMB Bank for support. Include a concise CV in your application letter. Address your letter to:

The Manager,  
The NMB Bank,  
Leopold Takawira,  
Bulawayo

[20]

### **QUESTION 4**

You have been working in a team on the development of a machine that is meant to make lifting of heavy luggage easier than the case when it is done manually. Imagine that no one has ever seen this machine. You have been selected to design and give a full description of the machine that will be placed in the local newspaper to enable your team to market it.

- a) Draw such a machine. [8]
- b) Write an article for advertising the machine in the newspaper. [12]

### **QUESTION 5**

- a) Discuss the main stages in the communication process and what is involved at each stage. [6]
- b) Identify and describe FOUR types of communication used in everyday business. [10]
- c) What are the advantages of each type of communication [4]

**END OF PAPER**