

NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY

FACULTY OF INDUSTRIAL TECHNOLOGY

DEPARTMENT OF INDUSTRIAL AND MANUFACTURING ENGINEERING

ENGINEERING COMMUNICATION SKILLS - TIE 1102

1ST SEMESTER EXAMINATIONS – FEBRUARY 2010

Time Allowed: 3 hours

Instructions to Candidates

1. Answer ALL questions.
 2. Each question carries 20 marks
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QUESTION 1

- a)
 - i) Name three types of graphs used in the presentation of technical information. [3]
 - ii) Explain advantages of presenting technical information in graphical form over textual form. [5]
- b) 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.

Table Q1.1 Mean Temperature & Average Rainfall for Harare

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
T ^o C	20	20	20	19	16	14	14	16	19	21	21	20
R _{min}	187	173	100	33	16	4	0	2	6	30	97	181

[4]

Table Q1.2 Percentage Market Share of Computer Companies

Computer Company	IBM	Apple	Trendy	TI	Company	Gateway	Others
%Share	28	21	14	9	7	6	15

[4]

Table Q1.3 Variation of Torque with Temperature

(ToC)	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) Describe briefly the common format of a memo explaining how it differs from a standard business letter. [5]
- b) You are a laboratory technician in the Department of Engineering. You have been asked by Prof. Nyoni to set up an experimental rig for a lesson the following day. Write a memo to Prof Nyoni advising him that you have completed the task, indicating that you conducted some tests. Comment also on the quality of the results of the tests. [15]

QUESTION 3

You have been asked to investigate the cause of an accident in a manufacturing workshop, water sanitation plant or textile mill and to present a report to Management. Prepare a report for presentation to Management on your findings. [20]

QUESTION 4

You have been working in a team on the development of a ONE WHEEL CYCLE with a saddle and handle bar to make traveling long distances easier than on foot. You have been selected to sketch and write a full description of the cycle that will be placed in the local newspaper to enable your team to market it.

- a) Draw a sketch of the cycle in two dimension (2D) [5]
- b) Write a full description of the cycle [5]
- c) Write a full advertisement for marketing the cycle. [10]

QUESTION 5

You have been selected to work as a team of engineers on a twelve months project at Egodini, in Bulawayo to provide cloak rooms, toilets and a secure control system for the smooth movement of passengers travelling by 30 seater buses. Identify key activities and make a plan of work using a Gantt Chart, indicating milestones and the completion of the project. [20]

END OF EXAM