

**NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
FACULTY OF INDUSTRIAL TECHNOLOGY**

DEPARTMENT OF ELECTRONIC ENGINEERING

BACHELOR OF ENGINEERING (HONS) DEGREE

MAY 2013

TEE 5205 ENGINEERING MANAGEMENT

Duration of Examination – 3 Hours

INSTRUCTIONS TO CANDIDATES

1. This question paper consists of 3 printed papers and 8 questions.
 2. Answer any **FIVE** questions.
 3. Each question carries 20 marks.
 4. Start the answers for each question on a fresh page.
 5. Use relevant concrete examples to support your answers
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QUESTION 1

- a) What is motivation? [2]
- b) Briefly explain 4 of Herzberg's hygienic factors. [12]
- c) Explain 3 main differences between Douglas McGregor's Theory X and Theory Y. [6]

QUESTION 2

- a) What is the significance of an organisation's mission statement? [2]
- b) How does the mission statement differ from the vision statement? Provide an example for your answer? [6]
- c) Using examples describe each of the following forms of power and how they affect an organisation's performance:
- i. Position power
 - ii. Influential power
 - iii. Expert power
 - iv. Ascetic power [12]

QUESTION 3

a) With the aid of a diagram and appropriate examples, describe the impact of the Porter's Five Forces Model on a small start-up company's survival. [15]

b) Explain why an organization with all the necessary money, material resources and a highly skilled workforce does not necessarily translate into a successful organization. [5]

QUESTION 4

a) Draw the **BCG Matrix** diagram. [4]

b) A company has a product portfolio consisting of products code-named **W, X, Y** and **Z** in ascending order of product life maturity. Describe how you would use the BCG Matrix as a market strategizing tool, state any assumptions you made about these products. [12]

c) State two major disadvantages of using the BCG Matrix in **4 b)** above. [4]

QUESTION 5

a) What is the meaning of Critical success factors (CSFs) for an organisation? [2]

b) Outline the Regulatory and Industry specific CSF concepts using **2** relevant examples for **each case**. [10]

c) State the difference between a KPI and CSF. [4]

d) Show how KPI and CSF may be measured by a mobile phone service provider who wants to increase their coverage by 40% within two years. [4]

QUESTION 6

a) What is the main difference between CPM and PERT in project management? [2]

b) Using some project's activities illustrated by the table below:

- i. Draw the Activity-on-Arrow model network diagram.
- ii. Determine and label the slack, the earliest start and earliest finish times on each node. [15]

ACTIVITY	IMMEDIATE PREDECESSORS	ESTIMATED TIME (WEEKS)
A	---	2
B	A	2
C	B	5
D	A	3
E	D	3
F	C,D	1
G	A,F	7
H	F	3
I	G,H	2
J	I	1
K	G,J	4

c) Determine the critical path for the project? [3]

QUESTION 7

a) Briefly state what a balance sheet is. [6]

b) The following is a mixed list of financial records for Japhet Cobblers Pvt Ltd. The list is derived from transactions that ended on the 30th of March 2013.

Bank \$3500	Capital \$5000
Machinery \$1000	Creditor \$300
Cash \$500	
Loan \$500	Stock \$800

Re-arrange the listed record items to come up with a properly classified balance sheet. Justify the classification for each record entry. [14]

QUESTION 8

a) Briefly discuss the 5M's of management. [10]

b) State 5 leadership attributes and how they can each be applied by the Engineer in his/her work environment. [10]

END OF PAPER