

## **SECTION A: COMPULSORY**

### **READ THE FOLLOWING SCENARIO CAREFULLY AND ANSWER THE QUESTIONS BASED ON THE SCENARIO**

#### **SCENARIO**

AllFresh Ltd is a company that was registered in 1990 to produce fruit drinks for both local and foreign markets.

While the production plant is sited in Accra, there are distribution outlets in the regions to cater for supplies to the various parts of the country.

The company has sixty distribution outlets throughout the country and operates an Information System (IS) that facilitates the capture and processing of data on production and sales in the local markets.

In the year 2002, there was a dramatic surge in the operations of AllFresh Ltd and this led to the management's recommendation for the automation (computerisation) of its operations. It was also decided to include the production and sale of a limited range of health foods. As a result of this expanded programme of activities, computers will be used for production, sales, information gathering and analysis, and the production of various reports (including management reports)

AllFresh Ltd does not have any IS steering committee in place at the moment. It has been decided that each distribution outlet be made self-supporting in terms of the information processing facilities. A firm of consultants is to be engaged for this expansion project, and management has agreed on an amount of GHC800,000 (eight hundred thousand Ghana Cedis only) as the budget for the project, which must be completed within 18 (eighteen) months.

It is intended to treat this project as a turnkey project. After the consultants have successfully completed the project, the company's staff will be trained sufficiently to be able to use it independently, and it will then be handed over to the staff of AllFresh Ltd to operate.

The board of AllFresh Ltd has become aware that there is no Information technology (IT) strategy in place within the company. A decision has therefore been made to establish a working group to produce an outline IT strategy. The membership of the group comprises:

- a) A senior manager  
He does not have much knowledge of IT because he has avoided IT in general since he sees it as not providing him with any benefits for this particular job. Literally, he fears IT. He is very task-oriented and dislikes wasting time on non-essential work. He is very good at producing overall policy directives.
- b) An IT professional  
He is very knowledgeable in mini computer applications and enjoys being in charge of a large IT department. He has been in computing for 10 (ten) years but has an aversion for end-user computing, believing that IT is best handled by specialists. Although he has some

knowledge of personal computers (PCs), this is not as thorough as that for the mini computers.

He has very little contact with the users of the information that the IT department provides. He is of the opinion that users should accept the information given and not make difficult demands on the department.

c) IT user – a trainee accountant

She is an ICAG Part III student, who has been working in various roles within the accounts department and this happens to be her first major assignment. Her agenda is to try to ensure that IT is used effectively and all staff within the company can therefore use PC applications to support their work. She is already well read on IT issues and is now looking forward to advance rapidly in the company in IT matters.

A recent survey has revealed that there are 15 (fifteen) major competitors in the fruit drinks manufacturing industry in the country and some of these competitors are almost as widely spread with regards to their operational sites as AllFresh Ltd.

Management has just received a report on a study initiated to find out the magnitude of the local competitors and everything points to the need to intensify the company's marketing capabilities.

A number of additional distribution centres have to be created, and there is an ongoing debate to engage in electronic commerce (e-commerce).

**Required:**

Answer the following questions based on the scenario:

**QUESTION 1**

- (a) Explain **four (4)** disadvantages associated with the absence of an overall IT strategy for AllFresh Ltd. **(12 marks)**
- (b) State **four (4)** considerations that could have been made in the formation of the working group. **(8 marks)**
- (Total: 20 marks)**

**QUESTION 2**

- (a) The IT professional on the working group is of the opinion that users should accept the information given and not make difficult demands on the department.
- Comment on **five (5)** issues that can lead to a rejection of this opinion. **(15 marks)**
- (b) The expansion project is to be treated as a turnkey project.
- What is a turnkey project? **(5 marks)**
- (Total: 20 marks)**

**SECTION B**  
**ANSWER ANY THREE (3) QUESTIONS FROM THIS SECTION**

**QUESTION 3**

- (a) Describe **four (4)** categories of computer software. *(12 marks)*
- (b) Using a business firm as an example, explain the ‘total system’ approach. *(8 marks)*
- (Total: 20 marks)**

**QUESTION 4**

Epsilon Ltd intends to introduce a new product onto the market and has two alternative methods it can use, A and D.

Method A costs GHC154,000 and has a 0.7 chance of success, while Method D costs GHC110,000 with a 0.4 chance of failure. Success with Method A requires a refinement process using either Method B or Method C, either of which will lead to market acceptance or qualified market acceptance.

Methods B and C cost, respectively, GHC20,000 and GHC22,000. While refinement Method B has a 0.6 chance of market acceptance, method C has a 0.5 chance of market acceptance.

Success with Method D requires a refinement process using either Method E or Method F, either of which will also lead to market acceptance or qualified market acceptance.

Methods E and F cost, respectively GHC15,000 and GHC16,000. Method E has a 0.7 chance of market acceptance and Method F a 0.5 chance of market acceptance.

Market acceptance through Method A will fetch Epsilon Ltd GHC300,000 and GHC250,000 for Method D.

Qualified market acceptance for Method A will yield GHC200,000 and GHC150,000 for Method D.

Using a decision tree, advise with justification, which method of production Epsilon Ltd should adopt and the refinement process to be used in the event of success.

**20 marks**

### QUESTION 5

- (a) In the context of expert systems, explain the following:
- (i) Knowledge engineer *(4 marks)*
  - (ii) Knowledge acquisition module *(4 marks)*
  - (iii) Backward chaining logic *(6 marks)*
- (b) State **three (3)** features of a transaction processing system (TPS) *(6 marks)*

**(Total: 20 marks)**

### QUESTION 6

- (a) What is a code? *(4 marks)*
- (b) Explain the term 'group code', giving **three (3)** illustrative examples. *(9 marks)*
- (c) What are CASE tools? Give any **two (2)** examples of CASE tools. *(7 marks)*

**(Total: 20 marks)**

### QUESTION 7

- (a) What is meant by 'business process re-engineering' (BPR)? *(4 marks)*
- (b) Describe **three (3)** ways in which Project Management Software (PMS) helps the project manager. *(12 marks)*
- (c) List **four (4)** examples of PC-based PMS packages. *(4 marks)*

**(Total: 20 marks)**