



## UNIVERSITY COLLEGE TATI (UC TATI)

FINAL EXAMINATION QUESTION BOOKLET	
COURSE CODE	: BTE 2623
COURSE	: MANAGING TECHNOLOGY AND INNOVATION
SEMESTER/SESSION	: 2-2024/2025
DURATION	: 3 HOURS

Instructions:

1. This booklet contains 4 questions. Answer **ALL** the questions.
2. All answers should be written in answer booklet.
3. Write legibly and draw sketches wherever required.
4. If in doubt, raise your hands and ask the invigilator.

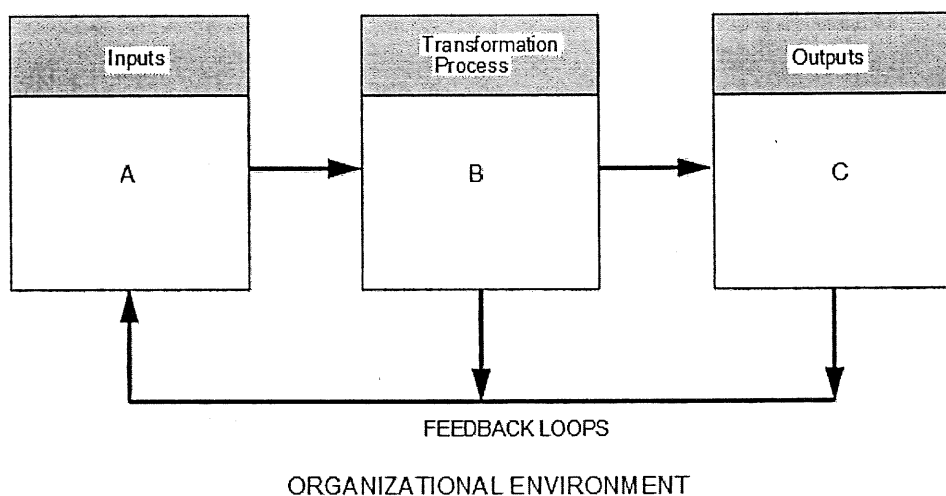
**DO NOT OPEN THIS BOOKLET UNTIL YOU ARE TOLD TO DO SO**

**THIS BOOKLET CONTAINS 5 PRINTED PAGES INCLUDING COVER PAGE**

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**QUESTION 1**

- a) Illustrate the importance of innovation and technology to society in terms of jobs, incomes, and exports. (9 marks)
- b) In the entire process, a framework of inputs, transformations, outputs, and feedback is used in the systems approach to technology implementation. Sketch the schematic diagram as shown in Figure 1 and write the information for A, B and C to illustrate the connections between this system. (9 marks)

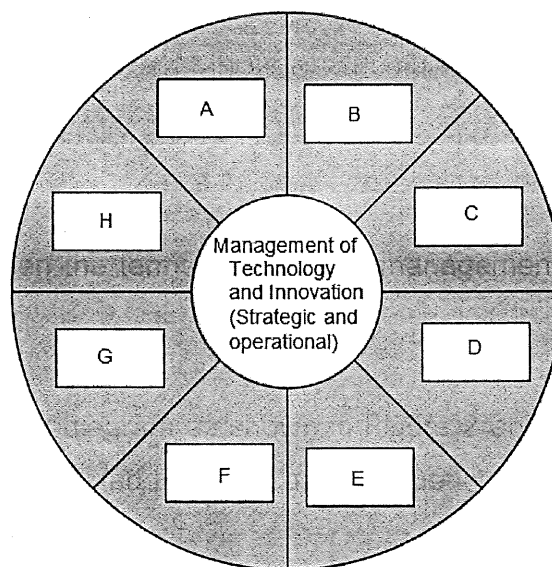
**Figure 1**

- c) Define what is the Innovation. (3 marks)
- d) Compare Just-in-time (JIT) inventory management with the capital costs and storage costs. (4 marks)

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**QUESTION 2**

- a) Distinguish between the terms "technology management" and "innovation management." (4 marks)
- b) Sketch the pie chart diagram as shown in Figure 2 and fill the information for A, B, C, D, E, F, G and H for the areas influencing the management of technology and innovation. (8 marks)

**Figure 2**

- c) Illustrate the importance of innovation for the following area:
- i. Innovation Creates Better Products & Services
  - ii. Innovation Increases Productivity
- (6 marks)

### QUESTION 3

- a) Define what is the strategy. (3 marks)
- b) Illustrate how the firm's technical and market capabilities enable it to integrate technology and gain a competitive edge over other firms. (5 marks)
- c) Differentiate between "Offensive versus defensive technology" (6 marks)
- d) The strategic process of a firm can be broken down into three (3) principal activities and these activities are performed simultaneously and continuously. Interpret these three (3) activities as follow:
  - i. Planning
  - ii. Implementation
  - iii. Evaluation and control (15 marks)

### QUESTION 4

- a) Explain one (1) type of innovation effort in the research and development process. (5 marks)
- b) Process innovations help to improve the output-to-input ratio of the firm. Illustrate the most common actions that address process innovation as follow:
  - i. Restructuring
  - ii. Reengineering (10 marks)
- c) Determine what are the common aspect for the innovation planning process that the firm decides to pursue. (5 marks)

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- d) Creativity requires more than simply creating new ideas. From a strategic standpoint, it is vital that individuals not only are creative but that the creative activity within the firm gets translated to the bottom line of the organization using such tool and techniques. Explain two (2) of these tools to support creative thinking. (8 marks)

-----*End of question*-----

