

Exam Date & Time: 08-May-2024 (02:30 PM - 05:30 PM)



# MANIPAL ACADEMY OF HIGHER EDUCATION

VI SEMESTER B.TECH END SEMESTER EXAMINATIONS, MAY 2024

**TECHNOLOGY MANAGEMENT [MME 4056]**

**Marks: 50**

**Duration: 180 mins.**

**A**

**Answer all the questions.**

Instructions to Candidates: Answer ALL questions Missing data may be suitably assumed

- 1) Explain the market-based and resource-based perspectives in management with differences between two approaches (4)
  - A)
  - B) Elaborate on why is technology management important for business growth? (3)
  - C) Explain the Capacity driven, Customer driven and Knowledge driven industries (3)
- 2) Explain about the development of the next generation 64K large-scale integrated circuit chip (4)
  - A)
  - B) Analyze and evaluate the role of innovation and competition in shaping technology management strategies and compare and contrast the various types of innovation and their effects on the resilience of organizations in the technology sector (3)
  - C) Explain i) creation of new knowledge and ii) application of knowledge activities in technology development (3)
- 3) Effective management of technology requires simultaneous attention to matters of technology and market, explain this with TM matrix (4)
  - A)
  - B) Explain Innovation, Imitation and Adoption in dynamics of technological change (3)
  - C) Explain the S curve of technology evolution using a diagrammatic representation (3)
- 4) Explain the dynamics of diffusion with a supporting diagram (4)
  - A)
  - B) Explain automation in the competitive consequences of technological change with an example of productivity enhancement from office automation (3)
  - C) Explain competitive rivalry in the technological change (3)

- 5) Explain the schematic plot of product versus process innovation (4)
- A)
- B) Explain the importance of technology intelligence, Justify it with the support of any one case study (3)
- C) Explain the generic mechanism for intellectual property protection by firms (3)

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