Semester End Assignment

Engineering Management

Unit I: Introduction

1. Define management and explain its primary functions with examples.
2. Discuss the levels and scope of management in organizations, provide examples for each level.
3. Explain the principles of management and illustrate their application in modern organizations.
4. What are the key characteristics of an organization? Discuss with relevant examples.
5. Differentiate between formal and informal organizations, highlighting their advantages and limitations.
6. Describe a virtual organization and explain how it differs from traditional organizational models.
7. Analyze the importance of management in a technology-driven environment, focusing on its impact on innovation and productivity.

Unit II: Planning and Organizing

1. Differentiate between strategic, tactical, and operational planning, providing examples of each.
2. Outline and explain the steps involved in the planning process.
3. Describe three tools commonly used for planning and discuss their relevance in decision-making.
4. Explain why planning is considered a crucial function of management, with examples of its impact on business success.
5. Discuss the process of organizing, emphasizing its role in achieving organizational goals.
6. Compare and contrast traditional organizational structures (line and functional) with modern structures (matrix, network, and hybrid).
7. What are the emerging planning and organizing challenges for ICT enterprises, and how can they be addressed?

Unit III: Motivation and Leadership

1. Explain Maslow's hierarchy of needs and its application in motivating employees in an ICT organization.
2. Compare Herzberg's two-factor theory with the Expectancy theory of motivation, focusing on their practical implications.
3. Discuss techniques for motivating employees in a competitive, technology-driven work environment.
4. Analyze the characteristics, benefits, and challenges of transformational and democratic leadership styles.
5. What are the unique features of a learning organization, and how are they beneficial for the ICT industry?

6. Identify key challenges in motivating and leading a technical workforce and propose effective strategies to overcome them.
7. How can leadership styles influence employee performance and innovation in engineering teams?

Unit IV: Human Resource Management and Control

1. Discuss the primary functions of human resource management, emphasizing their importance in ICT-based organizations.
2. What is job analysis, and how does it contribute to the creation of effective job specifications and descriptions?
3. Explain the recruitment and selection process, highlighting its importance in hiring for technical roles in the ICT sector.
4. Compare on-the-job and off-the-job training methods, providing examples of how they can improve employee performance.
5. What are the major challenges in managing human resources in ICT enterprises, and how can they be addressed?
6. Explain the control process in management and discuss its significance in engineering projects.
7. Discuss ICT tools that enhance the effectiveness of control mechanisms in engineering organizations.

Unit V: Emerging Trends in Engineering Management

1. Explain the concept of participative management and discuss its role in improving organizational decision-making.
2. Discuss strategies for effective conflict resolution in team-based projects, providing relevant examples.
3. What is change management, and why is it crucial for successfully implementing organizational transformations in ICT enterprises?
4. Describe the principles and practices of quality management and their application in engineering projects.
5. Discuss the importance of innovation management in addressing technological disruptions, with examples.
6. Explain how recent engineering management concepts can be applied to manage ICT-based projects and organizations effectively.
7. Analyze the impact of disruptions in technology-driven industries and propose strategies for managing such changes.