

2056

M.Com (Entrepreneurship and Family Business)
Second Semester

FB-205: Technologies Knowledge and Networks Management

Time allowed: 3 Hours

Max. Marks: 80

NOTE: Attempt five questions in all, selecting atleast two questions from each Unit. All questions carry 16 marks.

x-x-x

UNIT – I

- I. An Indian pharmaceutical company has entered into a technology transfer agreement with a European biotech firm for manufacturing next-generation vaccines. Despite acquiring the technology, the company is unable to achieve expected productivity and quality standards. Examine the reasons behind poor technology absorption and diffusion. Suggest a comprehensive framework for successful technology assimilation at the organizational level.
- II. A deep-tech startup in India working in semiconductor manufacturing seeks government support for R&D, incubation, and commercialization. However, the founders are unaware of policy mechanisms and institutional support systems. Critically analyze the role of Indian government organizations such as Department of Science and Technology and Council of Scientific and Industrial Research in technology development and dissemination. Evaluate how public policy can strengthen India's technological competitiveness.
- III. A traditional textile manufacturing company has introduced AI-enabled automation and IoT-based production systems. Middle managers and workers are resisting the transformation due to fear of redundancy and skill mismatch. Discuss the managerial, ethical, and socio-economic implications of technological change. Design a strategic change management model that can ensure successful technological adaptation.
- IV. A multinational electronics company plans to enter the Indian renewable energy sector. It must decide whether to acquire technology through licensing, joint venture, acquisition, or in-house R&D. Evaluate various approaches to technology acquisition and recommend the most suitable strategy under conditions of high uncertainty, regulatory complexity, and competitive pressure.
- V. A public-sector engineering enterprise is planning a ₹500 crore modernization project involving robotics, AI-enabled maintenance systems, and digital twins. The project has high expected returns but uncertain market demand.

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Prepare a critical framework for technical, market, economic, and financial appraisal of the project. Discuss how technology upgradation decisions should be aligned with national industrial priorities and organizational capabilities.

UNIT - II

- VI. A consortium of companies proposes to establish a green hydrogen production facility in India under a government incentive scheme. The project requires large-scale technological investment, environmental compliance, and international collaboration. Develop the structure of a Detailed Project Report (DPR) for this project. Critically examine the role of demand analysis, project scheduling, technological feasibility, and risk assessment in ensuring project viability.
- VII. A metro rail infrastructure project in a major Indian city has experienced repeated delays, cost overruns, and stakeholder conflicts despite using advanced project management software. Analyze the causes of project failure from the perspectives of project organization, resource control, and leadership. Recommend corrective mechanisms using modern Project Management Information Systems (PMIS).
- VIII. A commercial bank is implementing a nationwide AI-based digital banking transformation project involving cloud migration, cybersecurity integration, and blockchain-enabled services. Critically evaluate the stages of project risk management including risk identification, qualitative and quantitative risk analysis, response planning, and monitoring. How should the bank balance innovation with operational risk?
- IX. A renewable energy company is executing a solar park project under strict deadlines imposed by government contracts. Accelerating the project requires higher labor and equipment costs. Using project trade-off analysis, examine how project managers should balance time, cost, and quality constraints. Suggest cost-control mechanisms suitable for large infrastructure projects.
- X. A global consulting firm has observed that valuable knowledge generated during projects is lost when employees leave the organization. The company wants to build a knowledge-driven culture. Critically discuss the role of tacit and explicit knowledge in organizational learning. Design a Knowledge Management (KM) system integrating knowledge life cycle, knowledge repositories, and organizational learning mechanisms.

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