CSC 3142 KNOWLEDGE MANAGEMENT CAT 1

Question 1: Introduction to Knowledge Management (20 marks)

a) Define Knowledge Management (KM) and explain its four pillars: capturing, organizing, accessing, and applying knowledge. Provide examples of each pillar's implementation in technology-driven organizations.

b) Discuss the importance of Knowledge Management in the context of computer science. Trace the historical evolution of Knowledge Management and highlight key milestones that shaped its current practices in the tech industry.

Question 2: Knowledge Management and Learning in Organizations (20 marks)

a) Differentiate between single-loop and double-loop learning. Provide examples of how organizations in the tech sector utilize these learning levels to adapt to market changes. Discuss the motivations behind continuous learning in tech companies.

b) Explain experiential learning and its relevance to tech innovation. Discuss how tech organizations incorporate disciplines like systems thinking and mental models to enhance learning processes and foster innovation.

Question 3: KM and Individual Learning (20 marks)

a) Explain the knowledge hierarchy and its significance in computer science. Discuss the concept of intellectual capital, emphasizing its role in driving innovation and competitive advantage in tech companies.

b) Outline the optimal characteristics of learners in the tech industry. Discuss various learning delivery types, including online courses, mentorship programs, and hackathons. Provide examples of tech professionals benefiting from these learning methods.

Question 4: Security and Organizational Knowledge (20 marks)

a) Discuss responsible security disclosure practices in the tech industry. Provide real-world examples of security breaches and how organizations managed the disclosure of knowledge assets ethically and transparently.

b) Examine organizational learning in the context of cybersecurity incidents. How can organizations learn from security breaches to enhance their knowledge management processes? Provide examples of tech companies adapting their KM strategies after security incidents.

Question 5: Knowledge Management Processes (20 marks)

a) Explain the Knowledge Management (KM) cycle and its stages: creation, storage, dissemination, application, and innovation. Discuss different modes of knowledge transfer, including explicit and tacit knowledge sharing, and their roles in the KM cycle.

b) Highlight the strategic importance of secure Knowledge Management processes in safeguarding intellectual property. Discuss the reasons for knowledge sharing in tech collaborations, emphasizing how shared knowledge fuels innovation and industry growth.