IT GOVERNANCE

March-April 2024

Time allowed- 3:30 hours
Total marks- 100

[N.B. - The figures in the margin indicate full marks. Questions must be answered in English. Examiner will take account of the quality of language and of the manner in which the answers are presented. Different parts, if any, of the same question must be answered in one place in order of sequence.]

			Marks
1.	a)	The National ICT Policy, 2009 aims to ensure quality IT subject teachers outside Dhaka as well as disseminate IT education across the country and make it more affordable to poor students. Explain clearly how these deliverables and benefits are planned to be achieved through the relevant action items? Which entities are the primary actors in this regard?	4
	b)	As per the the Information & Communication Technology Act, 2006 what are the conditions under which an electronic record is attributed to the originator?	2
	c)	Explain clearly how cookies identify web visitors.	4
2.	a)	Compare the major differences in the information and decision support capabilities of management information systems and decision support systems.	3
	b)	Describe Neural Networks (NN) with an example.	4
	c)	Define Expert Systems. Discuss some of the limitations you see in the use of Expert Systems. What could be done to minimize such limitations?	6
	d)	What is the meaning of "Smart Contract" in the context of blockchain technology?	2
	e)	Write down the segments and sub-segments of the FinTech industry.	5
3.	a)	Mr A is the CEO of an organization. He wants to adopt IT governance. Therefore, he decides to review COBIT, COSO, ITIL, CMMI, and FAIR. State the use cases of each mentioned framework. What are the factors he has to consider while reviewing?	4
	b)	Company X has adopted IoT and smart products inside the company. But the rival company Y is yet to adopt them. Define IoT and smart products. What are the advantages X getting over company Y?	4
	c)	What are the impacts of the Internet on the competitive forces and the industry structure?	5
	d)	Suppose you are a manager of a company. What you should do to identify the types of systems that provide a strategic advantage to their companies.	2
4.	a)	Define spyware. How do spyware work? Describe the harmful activities from the spyware including those from the keyloggers.	4
	b)	Which conflict among the nations has resulted from the Internet vulnerabilities? Explain how this conflict is more complex than conventional warfare. Why is it said that preparations for said conflict have become much more widespread, sophisticated, and potentially devastating?	6
	c)	How do company insiders pose security threats to an organization, and why is this often underestimated? What role does user knowledge (or lack thereof) play in this scenario? How does social engineering relate to security breaches in organizations? How do both end users and information systems specialists contribute to errors in information systems?	5
	d)	Why is it emphasized that cybersecurity is not just a technology risk but a business-wide issue? How does this relate to IoT opportunities? What is meant by the concept of a "business ecosystem," and why is it considered a part of the cybersecurity system?	5
5.	a)	Define four fundamental techniques employed in Object-oriented Programming.	3
	b)	List eight major software evaluation factors. Under each factor, write down the specific question(s) that must be answered.	5
	c)	Briefly discuss seven implementation activities needed to transform a newly developed information system into an operational system for end users.	5
	d)	List five stages of the Systems Development Life Cycle.	2
6.	a)	When planning each individual audit assignment, what are the issues the IS auditor need to consider? Regarding the overall environment under review, what are the entities an IS auditor must have an understanding of?	4
	b)	What are the multiple levels of documents the framework for the ISACA IS Audit and Assurance Standards provides for? What are the three categories of standards and guidelines—general, performance and reporting? Elaborate.	5
	c)	Argue how COBIT 5 provides a comprehensive framework that assists enterprises in achieving their objectives for the governance and management of enterprise IT (GEIT). What are the five key principles for governance and management of enterprise IT COBIT 5 is based on?	4
	d)	How does the IS auditor evaluate the various risk candidates to determine the high-risk areas that should be audited? How does the scoring system for risk assessment approach work?	3
	e)	Elaborate on the follow-up program in IS auditing. Comment on the timing and level of the follow-up program.	4

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