

IT GOVERNANCE

July-August 2022

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) Green technology has garnered a significant amount of interest and awareness among all concerned. As per the National ICT Policy, what are the three action items under the strategic theme, “Promote environmental preservation by adopting environment-friendly green technologies”?	3
b) In an international environment, the government cannot avoid taking into account the foreign certifying authorities. As per the Information and Communication Technology Act, what are the terms of reference of the Controller regarding recognition of the foreign certifying authorities?	5
c) More and more companies are turning to computerized systems to filter and hire job applicants. Explain with an example, how the algorithms these systems use to evaluate job candidates may be preventing qualified applicants from obtaining these jobs.	2
2. a) Managers and other decision makers use an MIS to request information at their networked workstations that supports their decision-making activities. This information takes various forms as responses to inquiries. What are the four major reporting alternatives provided by such systems? Describe in detail.	7
b) Describe how geographic information systems (GIS) and data visualization systems (DVS) facilitate the mining and visualization of data in a business environment.	5
c) Explain Bitcoin from the perspective of blockchain as an “on-chain” asset. Describe how blockchain can be used to represent the “off-chain” assets as well.	4
d) Explain in detail, in light of FinTech, how technological and regulatory impediments can limit the scope of the activities of the crowd investing platforms.	4
3. You are the manager of a newly opened local restaurant “Khai Khai” at Banani, Dhaka, Bangladesh. As a newcomer in the area, you are to compete with the big names that are available around you. To do this, you have decided to exploit information technology which the other restaurants have not adopted yet.	
a) What competitive strategy will you follow to provide special services to the most profitable customers?	6
b) Describe how you can further use information technology to develop unique services for your restaurant to attract customers.	6
c) What is agency theory? How does information technology enable a restaurant to reduce agency costs?	3
4. Suppose you are working in a multinational Information Systems Security company. Can you imagine what would happen if you tried to link to the Internet without a firewall or antivirus software? Your computer would be disabled in a few seconds, and it might take you many days to recover. In short, if you operate a business today, you need to make security and control a top priority. Write short notes for the following concepts:	
a) Contemporary security challenges and vulnerabilities	5
b) Malicious Code: Storm and ILOVEYOU	4
c) Principles of Technology Ethics	2
d) Computer Matching	4
e) Ergonomic factors in the workplace	5

5.
 - a) Suppose your company's accounting information system is backdated. The top management of your organization want to replace the system. You are assigned to convert an old AIS to a new one. Now describe which possible conversion strategies you can use? 5
 - b) Feasibility is very important before implementing a new system. The goal of the feasibility study is to consider alternative information system solutions, evaluate their feasibility, and propose the alternative most suitable to the organization. The feasibility of a proposed solution is evaluated in terms of its components. Describe the components which are used to evaluate the feasibility. 5
 - c) Project management is the application of knowledge, skills, tools, and techniques to project activities in order to meet or exceed stakeholder needs and expectations from a project. Which factor demands do we need to balance to meet stakeholder needs and expectations? Draw a diagram to show the development process of a solution? 5
6. In order for information systems to fully realize the benefits and risk and resource optimization goals, risk that could prevent or inhibit obtaining these goals needs to be addressed. Organizations design, develop, implement and monitor information systems through policies, procedures, practices and organizational structures to address these types of risk. The internal control life cycle is dynamic in nature and designed to provide reasonable assurance that business goals and objectives will be achieved and undesired events will be prevented or detected and corrected.
 Answer the following questions based on the CISA Review Manual:
 - a) Define risk applicable throughout the information security business world. Why is the relationship between risk and control important for IS audit and control professionals? 3
 - b) What are the points based on which the assessment of countermeasures to mitigate risk are performed? 2
 - c) "The risk assessment process is characterized as an iterative life cycle". Elaborate with the necessary description of the steps involved. 3
 - d) From the IS auditor's perspective, which purposes are served by risk analysis? 3
7. While performing IS auditing, all the activities as well as the good practices, specifically the mandatory requirements, should be the IS auditor's mission to achieve an appropriate IS auditing outcome. The IS auditor should have a sound understanding of the related items.
 Answer the following questions based on the CISA Review Manual:
 - a) Describe the compliance, financial, operational, and integrated audits that the IS auditor should understand. 5
 - b) What are the two processes that drive effective risk-based auditing? Why is a risk-based audit approach usually adapted? What are the components of business risk? 4

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