

IT GOVERNANCE

March-April 2023

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) In order to increase production capability and supply chain management of agriculture through ICT applications, among the expected deliverables and benefits, one is, "Reduce wastage and increase yield through the use of agricultural inputs based on specific soil condition". What is the relevant action item for this? How will this be carried out in short term, mid term, and long term?	4
b) Ethical dimensions and other actions based on the use of information systems are becoming more and more important everyday.	6
i) Define ethics.	
ii) Why do information systems raise new ethical questions for both individuals and societies?	
iii) How has new urgency been given to ethical issues in information systems by the rise of the Internet and e-commerce?	
iv) What are the other pressing ethical issues that information systems raise?	
2. a) Draw the diagram of classic managerial pyramid. Briefly describe decision structure.	6
b) In business, credit characteristics is very important. It may result in a good or bad loan. So, credit evaluation is very important. How do you incorporate neural network for credit evaluation?	4
c) Define crowdfunding in context of FinTech industry. Describe all of its sub-segments. Give an example of crowdfunding platform for Bangladesh.	5
d) Briefly describe the impact of block chain technology on society.	5
3. a) "Political resistance is one of the great difficulties of bringing about organizational change." Explain and justify this statement from the perspective of development of new information systems.	4
b) How do you define "disruptive technologies"? Explain with relevant examples. What is "riding the wave" in this connection?	6
c) Discuss the impact of information technology on transaction costs according to transaction cost theory.	5
4. a) How is a DoS attack carried out? How does a DDoS attack differ from a DoS attack? What is the impact of these attacks on information and site cost? Which role does a botnet play in these attacks?	5
b) When does a "click fraud" occur? Describe how click frauds affect organizations.	3
c) Define "zero-day vulnerability". Why are these called zero day?	3
d) Explain in detail how information technology can be used to solve human and social problems through societal solutions.	3
e) Describe clearly how Intrusion Detection Systems work in a computer network.	3
f) Differentiate among data owners, data custodians, and data users as per the CISA Review Manual.	3
5. a) Define prototype. Mention suitable application of this process.	3
b) Define project. Briefly describe the key activities of the five phases of project activities.	6
c) Describe the steps needed to transform a newly developed system into an operational system to the end users.	6
6. a) What are the issues the IS audit wants to determine?	3
b) What are the purposes and contents of an audit charter? How does an audit charter differ from an engagement letter?	5
c) As per the CISA guidelines, in analyzing the business risk arising from the use of IT, what are the issues that are important for the IS auditor to have a clear understanding of?	3
d) What does substantive testing actually substantiate? Explain. What is the correlation between the internal controls and substantive testing?	5
e) Audit reports are the end product of the IS audit work. They are used by the IS auditor to report findings and recommendations to management. What are the minimum points, audit documentation should include, at a minimum?	4

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