



University of Colombo, Sri Lanka



University of Colombo School of Computing



**DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY
(EXTERNAL)**

Academic Year 2022 — 1st Year Examination — Semester 1

IT1106 — Information Systems

Multiple Choice Question Paper
(Two hours)

Important Instructions

- The duration of the paper is **Two (2) hours**.
- The medium of instructions and questions is English.
- This paper has **40 questions** on **10 pages**. Answer **all** questions.
- All questions are of the **MCQ** (Multiple Choice Questions) type.
- Each question will have **5 (five)** choices with **one or more** correct answers.
- All the questions will carry equal marks.
- There will be a penalty for incorrect responses to discourage guessing.
- The mark given for a question will vary from -1 (All the incorrect choices are marked & no correct choices are marked) to +1 (All the correct choices are marked & no incorrect choices are marked). However, **the minimum mark per question would be zero**.
- Answers should be marked on the **special answer sheet** provided.
- Note that questions appear on both sides of the paper. If a page is not printed, please inform the supervisor/invigilator immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**
- Calculators are **not** allowed.
- *All Rights Reserved*. This question paper can NOT be used without proper permission from the University of Colombo School of Computing.

1) Which of the following is/are NOT (a) computer device(s)?

- | | | |
|-------------|----------------|-------------|
| (a) Laptop | (b) Smartphone | (c) Speaker |
| (d) Desktop | (e) Tablet | |

2) Which of the following is/are NOT (a) system software?

- | | | |
|-----------------------|----------------------|------------|
| (a) Disk Defragmenter | (b) Google's Android | (c) Ubuntu |
| (d) Microsoft Edge | (e) Printer Driver | |

3) There is a trend in the computer industry to develop,

- | |
|--|
| (a) smarter and colourful memory cards. |
| (b) colourful and smaller display devices. |
| (c) faster and mobile computing devices. |
| (d) smarter and luxurious keypads. |
| (e) faster and bigger mouse devices. |

4) The fundamental role of any business information system includes supporting,

- | |
|--|
| (a) the uplift of employee wages. |
| (b) business processes and operations. |
| (c) strategies for competitive advantage. |
| (d) decision making by employees and managers. |
| (e) collaboration between competitors and suppliers. |

5) Consider the following types of communication devices listed under column A and the descriptions provided in column B.

A	B
I. Switch	I. Forwards data packets across two or more different networks toward their destinations.
II. Bridge	II. Forwards incoming messages to reach the relevant devices on the same network.
III. Router	III. Connects one LAN to another LAN where both LANs use the same communications protocol.

Which of the following correctly matches the type of communication devices given in column A with their descriptions in column B?

- | | |
|---|---|
| (a) A(I)-B(I), A(II)-B(II), A(III)-B(III) | (b) A(I)-B(II), A(II)-B(III), A(III)-B(I) |
| (c) A(I)-B(III), A(II)-B(II), A(III)-B(I) | (d) A(I)-B(I), A(II)-B(III), A(III)-B(II) |
| (e) A(I)-B(III), A(II)-B(I), A(III)-B(II) | |

6) Consider the following activities that need to be done.

- (A.) Start-up the computer
- (B.) Browse the internet and search for graphics
- (C.) Edit graphics
- (D.) Prepare a report
- (E.) Manages computer memory and files
- (F.) Controls access to printers connected to the network

Which of the above activities can be accomplished using computer application software?

- | | | |
|---------------------|------------------------|---------------------|
| (a) Only A, B and C | (b) Only B, C and D | (c) Only C, D and E |
| (d) Only D, E and F | (e) All the activities | |

7) The control or suppression of publishing or accessing of information on the internet is termed as,

- | | | |
|--------------------------|-------------------------|--------------------|
| (a) Information Security | (b) Digital Divide | (c) Net Neutrality |
| (d) Ethics | (e) Internet Censorship | |

8) Consider the following information system acquisition methods and their descriptions listed under columns A and B, respectively.

A	B
I. Buy off-the-shelf software	I. Though it takes time, it can match an organisation's needs well.
II. Build a custom application	II. The organisation can use the required software and pay on a subscription model.
III. Choose a software service provider	III. It is the fastest method to acquire and deploy a software solution.

Which of the following correctly matches the information system acquisition methods given in column A with their descriptions in column B?

- | | |
|---|---|
| (a) A(I)-B(I), A(II)-B(II), A(III)-B(III) | (b) A(I)-B(II), A(II)-B(III), A(III)-B(I) |
| (c) A(I)-B(III), A(II)-B(II), A(III)-B(I) | (d) A(I)-B(I), A(II)-B(III), A(III)-B(II) |
| (e) A(I)-B(III), A(II)-B(I), A(III)-B(II) | |

9) To be a Chief Information Officer (CIO) of an organisation, one should be able to,

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|--|
| (a) develop and deliver training on proper security measures. |
| (b) use financial and accounting information systems efficiently. |
| (c) develop information systems to meet the organisational requirements. |
| (d) assess the needs of the information technology workforce and make strategies to achieve those needs. |
| (e) provide leadership and direction to the information systems department to help the organisation achieve its goals. |

10) The role of a System Analyst includes,

- (a) Testing and debugging the software.
- (b) Assisting in matching technology to users' needs.
- (c) Authoring the software that customers and employees use.
- (d) Converting a program design into one of many computer languages.
- (e) Conveying system requirements to software developers and network architects.

11) Which of the following statements is/are CORRECT regarding Business Process Re-engineering?

- (a) It is an incremental approach to change the existing business process.
- (b) It introduces minor changes to the existing business processes.
- (c) It aims to improve the business process within a very short time.
- (d) It can bring broad and cross-functional improvements to the information system.
- (e) It results in a radical redesign of the business process.

12) Many organisations having e-commerce platforms use both buy-side e-commerce and sell-side e-commerce to support the organisation's value chain. The buy-side e-commerce activities include,

- (a) negotiating and establishing prices and terms.
- (b) providing a portal of information of interest to the customer.
- (c) identifying and comparing competitive suppliers and products.
- (d) encouraging sales and generating leads from potential customers.
- (e) providing information for customers to evaluate the organisation's goods and services.

13) Which of the following form of e-commerce allows its customers to deal directly with an organisation and avoid intermediaries?

- | | |
|--------------------------|--------------------------|
| (a) Business-to-Business | (b) Consumer-to-Consumer |
| (c) Business-to-Consumer | (d) Public-to-Business |
| (e) Consumer-to-Public | |

14) e-Government should be the application of Information and Communication Technologies (ICTs) to,

- (a) persuade citizens and governments around the world to support the government through donations.
- (b) share government information among the citizens and make them believe and trust the government.
- (c) government functions and procedures with the purpose of increasing efficiency, transparency and citizen participation.
- (d) win elections by positively influencing the citizens' attitudes about political issues, leaders, government institutions and events.
- (e) simplify the sharing of information, speed up business processes, and improve the relationship between citizens and government.

15) Conversion to e-commerce and m-commerce enables organisations to,

- (a) reach new customers.
- (b) increase the salaries of their employees.
- (c) speed the flow of information and goods.
- (d) help in-store customers to locate what they need.
- (e) reduce the information technology infrastructure cost.

16) SUCCESS is an e-commerce company. To host its own e-commerce website, the company needs,

- | | |
|----------------------------|----------------------------------|
| (a) a Server Computer | (b) Web Server software |
| (c) a mobile application | (d) an Operating System Software |
| (e) a Web Service Provider | |

17) The routine operations associated with the business processes of an organisation are supported by _____ Systems.

- | | | |
|----------------------------|----------------------------|-----------------------|
| (a) Management Information | (b) Decision Support | (c) Office Automation |
| (d) Executive Information | (e) Transaction Processing | |

18) Which of the followings is/are usually done using batch processing method?

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|-------------------------------|---|
| (a) Airline ticket purchasing | (b) ATM (Automated Teller Machine) transactions |
| (c) Payroll processing | (d) Credit Card Bill Generation |
| (e) Bank Cheque Clearance | |

19) Consider the following list of management reports provided under column A and the list of descriptions provided under column B.

A	B
I. Exception report	I. A report generated on a manager's request with the needed information
II. Demand report	II. A report generated automatically and periodically with selected information and broadcasted to computers in the company network
III. Push report	III. A timely generated report to inform the managers of any discrepancy in the business process

Which of the following correctly matches the type of management reports given in column A with their descriptions in column B?

- | | |
|---|---|
| (a) A(I)-B(I), A(II)-B(II), A(III)-B(III) | (b) A(I)-B(II), A(II)-B(III), A(III)-B(I) |
| (c) A(I)-B(III), A(II)-B(II), A(III)-B(I) | (d) A(I)-B(I), A(II)-B(III), A(III)-B(II) |
| (e) A(I)-B(III), A(II)-B(I), A(III)-B(II) | |

20) Presentation methods used by Executive Information Systems include _____ capability(ies).

- (a) drill down
- (b) trend analysis
- (c) decision making
- (d) exception reporting
- (e) deleting and altering data

21) Which of the following statements is/are INCORRECT regarding Enterprise Information Portals?

- (a) They eliminate the rules implemented to access secure databases.
- (b) They are developed for the purpose of sharing data among the public.
- (c) They integrate company information systems such as KMS, MIS and DSS.
- (d) They allow intranet users and selected extranet users to access a variety of internal and external business applications and services.
- (e) They cannot be tailored or personalised to the needs of individual business users or groups of users.

22) Organisations use Marketing Information Systems to assist marketing managers in,

- (a) advertising
- (b) product pricing
- (c) conducting training
- (d) recruiting new salesmen
- (e) making product management decisions

Read the following description and answer the questions (23-27).

BestFIT is a garment manufacturing company. They have retail sales centres all over the country. They have recently introduced an e-commerce website to promote their sales. BestFIT would like to understand their customers' buying patterns, requirements and interests and take decisions to improve their sales. For this purpose, BestFIT is planning to acquire a new information system that can assist executives and middle managers to easily analyse their data and make data-driven decisions.

23) What type of information system is BestFIT looking for? (Select the best appropriate option.)

- (a) Business Intelligence System
- (b) Transaction Processing System
- (c) Production Management System
- (d) Supply Chain Management System
- (e) Customer Relationship Management System

24) To meet the above stated requirements, the new information system should include tools for,

- | | | |
|---------------|------------------------|--------------------|
| (a) querying | (b) data visualisation | (c) pattern making |
| (d) reporting | (e) training | |

- 25) If BestFIT has saved its data in databases, until they develop a proper system, it can analyse its data and present results on dashboards using software such as,

(a) Microsoft Excel	(b) Microsoft Power BI	(c) Microsoft Project
(d) QlikView	(e) Microsoft Access	

- 26) BestFIT needs to present in a chart the process/journey its potential customers take towards buying the garments. What type of chart should they use for this purpose?

(a) WordCloud	(b) Pie Chart	(c) Histogram
(d) Scatter Diagram	(e) Conversion Funnel	

- 27) The company is planning to store all data in a multidimensional data warehouse and analyse their current as well as historical data from different perspectives. What kind of data processing method should be used for this purpose?

(a) TP	(b) OLTP	(c) ETL
(d) OLAP	(e) ROLAP	

- 28) Which of the following can be considered as (an) advantage(s) of buying an existing (off-the-shelf) software?

(a) The software can be get upgraded easily
(b) The software implementation time would be less.
(c) Buyers can test drive and evaluate the software before buying it.
(d) The users will get a software solution best matches their requirements.
(e) The software can be easily modified and improved to meet the changing user requirements.

- 29) Which of the following is/are NOT (an) agile software development approach(es)?

(a) Waterfall	(b) Scrum	(c) Kanban
(d) Lean	(e) V-model	

- 30) A traditional software development approach would be appropriate when,

(a) critical system requirements are fully defined at the start of the project.
(b) the users need to try out and use the system modules as they are developed.
(c) the scope of the software is well-defined, and there is a fixed budget.
(d) the users value the quality of the software more than the scope it covers.
(e) there is a large software development team with well-defined roles and responsibilities.

- 31) The Software Package Implementation Process can be followed to implement a software package as a solution to an existing manual system. Following is the list of steps involved in the process before the final step, implementation. However, they are not in the correct order.

- A. Package Evaluation
- B. Integration and Testing
- C. System Analysis
- D. Investigation

Which of the following lists the correct order of the steps involved in the Software Package Implementation Process?

- | | | |
|----------------|----------------|----------------|
| (a) A, B, D, C | (b) B, A, C, D | (c) D, C, A, B |
| (d) B, D, A, C | (e) A, B, C, D | |

- 32) An Information system can add value to a business organisation in three ways. Among them, _____ supports organisational learning and improving business processes so that the organisation can do their business activities better.

- | |
|------------------|
| (a) Automating |
| (b) Generating |
| (c) Informating |
| (d) Strategizing |
| (e) Transforming |

- 33) SEWANA is a company manufacturing umbrellas, raincoats and jackets. It strives to increase the quality of its products and build a brand by introducing different types of products with more quality features and better customer support than its competitors provide.

Which of the following organisational strategies is followed by SEWANA?

- | |
|---------------------------------|
| (a) Overall Low-Cost Leadership |
| (b) Focused Low-Cost |
| (c) Broad Differentiation |
| (d) Focused Differentiation |
| (e) Best Cost Provider |

- 34) Which of the following problems is/are directly related to the heavy use of information systems?

- | |
|---------------------------------|
| (a) Poverty |
| (b) Data leakage |
| (c) Economic collapse |
| (d) Spreading of viral flu |
| (e) Spreading of misinformation |

- 35) Information system investments can be evaluated by conducting a cost-benefit analysis. Following is the list of four steps involved in the analysis. However, they are not in the correct order.
- A. Compare Costs and Benefits
 - B. Assign a Monetary Value to the Benefits
 - C. Assign a Monetary Value to the Costs
 - D. Brainstorm Costs and Benefits

Which of the following option provides the correct order of steps involved in cost-benefit analysis?

- | | |
|----------------|----------------|
| (a) A, B, D, C | (b) A, D, B, C |
| (c) B, C, A, D | (d) C, D, A, B |
| (e) D, C, B, A | |

- 36) To avoid computer-related waste and mistakes, organisations can,

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|---|
| (a) Conduct training programmes for employees on how to use computer resources. |
| (b) Prepare and disseminate manuals and instruction sheets on how to use the computer resources. |
| (c) Implement policies and procedures to acquire, use and dispose of computing devices and services. |
| (d) Expel the employees who are found guilty of misusing or making mistakes in using the computers. |
| (e) Provide access to computer resources only to the employees who have obtained certificates on how to use them. |

- 37) Consider the following terms listed under column A and the definitions under column B.

A	B
I. Cyber-libel II. Cyberbullying III. Cyberloafing	I. The action of the employees who use computer resources for personal use while pretending to be doing office work II. The act or crime of making false statements to harm an individual's or a business organisation's reputation III. The act of harassing individuals using information technology mainly via social platforms

Which of the following correctly matches the terms given in column A with the definitions in column B?

- | | |
|---|---|
| (a) A(I)-B(I), A(II)-B(II), A(III)-B(III) | (b) A(I)-B(II), A(II)-B(III), A(III)-B(I) |
| (c) A(I)-B(III), A(II)-B(II), A(III)-B(I) | (d) A(I)-B(I), A(II)-B(III), A(III)-B(II) |
| (e) A(I)-B(III), A(II)-B(I), A(III)-B(II) | |

38) To overcome the privacy issues associated with *apps* for instant messages, texting and emails, people should,

- (a) not open files or click links in messages from people you do not know.
- (b) stop using emails and *apps* such as WhatsApp and Instagram for instant messaging and texting.
- (c) never send sensitive personal data such as credit card numbers, and passwords via text or instant messages.
- (d) never send messages and photos you would be embarrassed to have your family members, colleagues, or friends read.
- (e) select a texting or instant messaging *app* that receives high security ratings, and consider using a service that encrypts texts.

39) Which of the following statements is/are CORRECT regarding ergonomics?

- (a) It is the science that studies human behaviour as a relationship between ends and scarce means which have alternative uses.
- (b) It helps to reduce job related injuries, illnesses, and stresses, and to increase job satisfaction, which leads to improve productivity.
- (c) It is the science of designing information system infrastructure to maximise the safety, comfort, and efficiency of their users.
- (d) It is the study of how people allocate scarce resources for production, distribution, and consumption, both individually and collectively.
- (e) It considers factors such as slope of the keyboard, position and design of display screens, and placement and design of computer tables and chairs.

40) Which of the following CANNOT help to protect computers and/or data in computers?

- (a) Antivirus Software
- (b) Distributed Denial of Service
- (c) Encryption
- (d) Flaming
- (e) Firewall
