



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)
Academic Year 2012/2013 – 1st Year Examination – Semester 1

IT1104 - Information Systems & Technology
Multiple Choice Question Paper

23rd March, 2013
(TWO HOURS)

Important Instructions :

- The duration of the paper is 2 **(two) hours**.
- The medium of instruction and questions is English.
- The paper has **50 questions** and **09 pages**.
- All questions are of the MCQ (Multiple Choice Questions) type.
- All questions should be answered.
- Each question will have 5 (five) choices with **one or more** correct answers.
- All 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 0 (*All the incorrect choices are marked & no correct choices are marked*) to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- 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 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.**

1) Which of the following could be used as an input device to support data entry at the point of sales terminal of a super market?

- | | | |
|----------------------|---------------|--------------|
| (a) Bar code scanner | (b) Light pen | (c) Keyboard |
| (d) Mouse | (e) Joy Stick | |

2) Computer Aided Design software is useful for the following professionals to carry out their tasks.

- | | | |
|----------------|-------------------------|-----------------------|
| (a) Architects | (b) Software developers | (c) Fashion designers |
| (d) Lawyers | (e) Accountants | |

3) Which of the following can be considered as application software?

- | | | |
|---------------------|-----------|-------------|
| (a) Adobe Photoshop | (b) Linux | (c) MS Word |
| (d) MS PowerPoint | (e) Unix | |

4) Consider the following statements.

- (i) Output devices are hardware devices which enable users to enter data into an information system.
- (ii) Output devices such as printers help us to get hard and soft copies of a report.
- (iii) Processed data of a system is presented to the users through output devices.

Which of the above statement(s) is/are **TRUE** about output devices?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

5) Consider the following statements.

- (i) Complexity is a characteristic of quality data.
- (ii) Raw data is also known as information.
- (iii) Information is useful to make decisions.

Which of the above statement(s) is/are **TRUE** about 'data' and/or 'information'?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

6) Consider the following statements.

- (i) MISs support unstructured decision making.
- (ii) Inputs to an MIS could be an output of a TPS.
- (iii) Reports generated by an MIS cannot be printed.

Which of the above statement(s) is/are **TRUE** of Management Information Systems (MISs)?

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|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

7) Which of the following is **NOT** an example of a Database Management System (DBMS)?

- | | | |
|------------|----------------|---------------|
| (a) Oracle | (b) MySQL | (c) MS Access |
| (d) Unix | (e) PostgreSQL | |

8) Which of following is/are (a) component/s of a Decision Support System (DSS)?

- | | |
|-----------------------|--------------------------------------|
| (a) Inference Engine. | (b) Dialogue Manager/User Interface. |
| (c) Fuzzy logic. | (d) Knowledgebase. |
| (e) Modelbase. | |

9) Information

- | |
|---|
| (a) is generated after processing data. |
| (b) is useful for decision making. |
| (c) is also known as raw data. |
| (d) quality generated by an information system is dependent on the quality of data entered into the system. |
| (e) generated by a sales Management Information System (MIS) could enable the sales manager to evaluate performance of sales employees. |

10) Consider the following statements.

- (i) DSS outputs are used as inputs to the MIS.
- (ii) DSS outputs are used as inputs to a TPS.
- (iii) Outputs of an MIS is used as inputs to a DSS.

Which of the above statement(s) is/are **TRUE** of Decision Support Systems (DSS)?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

11) A Transaction Processing System (TPS) can help an organization to

- | |
|--|
| (a) achieve competitive advantage. |
| (b) increase its efficiency. |
| (c) carry out analysis such as 'what-if'. |
| (d) perform complex calculations using models from a model base. |
| (e) reduce labour costs. |

12) Which of the following system(s) has/have minimum interactions with the external environment?

- | | | |
|----------------|----------------|---------------------------------|
| (a) A prison | (b) A school | (c) Department of Motor traffic |
| (d) The Police | (e) The Courts | |

13) Consider the following statements about Business Process Reengineering (BPR).

- (i) It brings incremental changes to an organization.
- (ii) It helps organizations to achieve huge improvements in their business processes.
- (iii) It may lead to employees losing jobs.

Which of the above statement(s) is/are **TRUE** ?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

14) Which of the following can be considered as an input device of a computer based information system?

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|--------------------|---------------|-------------|
| (a) Mouse | (b) Joy stick | (c) Scanner |
| (d) Digital camera | (e) Plotter | |

15) Which of the following is system software?

- | | | |
|----------------|-------------------|----------|
| (a) MS Windows | (b) Adobe Reader | (c) Unix |
| (d) Linux | (e) MS Powerpoint | |

16) Consider the following statements.

- (i) The Control Unit of the Central Processing Unit (CPU) performs arithmetic calculations.
- (ii) Keyboard is an input device.
- (iii) Register is not a part of the CPU.

Which of the above statement(s) is/are **TRUE** about hardware of the computer?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

17) Which of the following can be used as personal application software?

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|---------------|-----------------------|---------|
| (a) MS Word | (b) ERP | (c) CRM |
| (d) MS Access | (e) Internet Explorer | |

18) Which of the following activity/ies is/are carried out during the Systems Implementation phase of the traditional systems development life cycle?

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|---------------------------------|--|
| (a) Hardware acquisition | (b) Data preparation |
| (c) User training | (d) Carrying out the feasibility study |
| (e) Gathering user requirements | |

19) A customer using a health management system does not wish to share his private information with any other external origination. The right to be left alone as stated above is known as

- | | | |
|-----------------------|----------------------|--------------|
| (a) saving copyright. | (b) privacy rights. | (c) patents. |
| (d) IS policy rights. | (e) identity rights. | |

20) Consider the following statements about the systems review stage of traditional systems development life cycle.

- (i) Systems review stage enables an organization to evaluate whether the objectives of systems development is achieved.
- (ii) Hardware and software selection is carried out during the systems review stage.
- (iii) Unit testing is carried out during the systems review stage.

Which of the above statement(s) is/are **TRUE**?

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

21) Decision Support Systems (DSSs)

- (a) are only used by the operational level staff of an organization.
- (b) can perform complex analysis on available data.
- (c) can generate reports.
- (d) can perform complex mathematical operations than a Transaction Processing System (TPS).
- (e) inputs include only the data taken from internal (organizational) databases.

22) Consider the following statements about Management Information Systems (MISs).

- (i) MISs are typically developed for the use of top level management of an organization.
- (ii) MISs are primarily useful to generate reports for middle level managers.
- (iii) Outputs of DSSs are used as inputs to an MIS.

Which of the above statement(s) is/are **TRUE**?

- (a) Only i
- (b) Only ii
- (c) Only i and iii
- (d) Only iii
- (e) Only ii and iii

23) Which of the following is/are **TRUE** about organizational structures?

- (a) According to the matrix organizational structure, an employee has to report to more than one manager.
- (b) Flat organizational structures do not support quick decision making.
- (c) Information Technology enables virtual organizational structures to function.
- (d) Matrix organizational structure helps organizations to be flexible.
- (e) Organizational structures enable organizations to divide the work among employees.

24) Which of the following is a/are example(s) of computer hardware?

- (a) Operating system
- (b) Touch screen
- (c) Light pen
- (d) Central processing unit
- (e) The procedures involved in managing the system

25) A computer network that uses Internet Protocol Technology to share information within one organization is known as a/an

- (a) Extranet.
- (b) Telecommunication network.
- (c) Intranet.
- (d) Bus network.
- (e) Intra organizational system.

26) Which of the following is/are **NOT** (a) major element (s) of Artificial Intelligence?

- (a) Robotics
- (b) Learning Systems
- (c) Transaction Processing Systems
- (d) Expert Systems
- (e) Vision Systems

27) Which of the following is **NOT** secondary storage?

- | | | |
|---------------------|--------------------------|-------------------|
| (a) Flash memory | (b) Random Access Memory | (c) Magnetic disk |
| (d) CD optical disk | (e) Hard disk | |

28) Consider the following incomplete statement.

The _____ is the part of the CPU that performs mathematical calculations and makes logical comparisons.

Fill in the blank using the appropriate answer.

- | | | |
|---------------------|------------------|--------------|
| (a) ALU | (b) Control Unit | (c) Register |
| (d) Primary Storage | (e) Cache Memory | |

29) The following statements are related to databases.

- (i) A Database Administrator is a skilled IS professional who directs all activities related to an organization's database.
- (ii) The Flat Model is a database model that describes data in which all data elements are placed in two-dimensional tables.
- (iii) A foreign key is a field that uniquely identifies a record.

Identify the **TRUE** statement/s.

- | | | |
|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

30) Consider the following statements about Management Information Systems (MISs)?

- (i) The MIS report that provides increasing detail about a situation is known as a scheduled report.
- (ii) What-if report is not an output of an MIS.
- (iii) A Human Resource Information Systems are used to generate reports such as profit and loss statement (income statement) and balance sheet.

Which of the above statement(s) is/are **TRUE**?

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|--------------|---------------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only iii | (e) Only ii and iii | |

31) Which of the following is a process for data collection and requirements analysis in which users, stakeholders and IS professionals work together to analyze existing systems, propose possible solutions and define the requirements of a new or modified system?

- | | | |
|-----------|--------------------------|---------------|
| (a) Agile | (b) JAD | (c) Waterfall |
| (d) RAD | (e) End user development | |

32) The following statements are about traditional systems development.

- (i) Implementation related details of a system are described in the physical design of a system.
- (ii) Interviews and observation are both data collection techniques.
- (iii) The final phase of systems development is site preparation.

Identify the **TRUE** statement/s.

- | | | |
|--------------|---------------------|-------------------|
| (a) Only i | (b) Only ii | (c) Only i and ii |
| (d) Only iii | (e) Only ii and iii | |

33) Which of the following is an approach to start a new system?

- | | | |
|-----------------------|----------------------|-------------|
| (a) Direct conversion | (b) Parallel running | (c) Dive-in |
| (d) Phase in | (e) Cycling | |

34) In computer security, persuading users to tell you their password is known as

- | | | |
|------------------------|---------------------|--------------------|
| (a) Cracking | (b) Hacking | (c) Identity theft |
| (d) Social engineering | (e) Cyber terrorism | |

35) The following statements are about ergonomics and computer security.

- (i) Ergonomics is the study of designing and positioning computer equipment for employee health and safety.
- (ii) Encryption is used by organizations to monitor system and network resources.
- (iii) Illegally duplicating software is known as scamming.

Identify the **TRUE** statement/s.

- | | | |
|---------------------|--------------|--------------------|
| (a) Only i | (b) Only ii | (c) Only i and iii |
| (d) Only ii and iii | (e) Only iii | |

36) Which of the following can be a security threat (data/information related) to an organization?

- | | | |
|-----------|------------------------|---------------------------|
| (a) Virus | (b) Firewalls | (c) Unsatisfied employees |
| (d) Worms | (e) Antivirus software | |

37) Which of the following is/are **NOT** a component(s)/resource(s) of a computer based information system?

- | | | |
|---------------|-------------------------|---------------|
| (a) Hardware | (b) Procedures/Policies | (c) Documents |
| (d) Databases | (e) Software | |

38) Which of the following is an attribute of valuable information?

- | | | |
|--------------|----------------|--------------|
| (a) Complex | (b) Economical | (c) Relevant |
| (d) Accurate | (e) Timeliness | |

39) Which of the following statements is/are **TRUE** about databases?

- (a) By using the database approach to data management, data redundancy problems can be reduced.
- (b) MS ACCESS is a database used by personal computer users.
- (c) The size of the database may be a criterion to be considered when purchasing a database.
- (d) The primary key does not uniquely identify records in a database.
- (e) A record in a database consists of a collection of files.

40) Which of the following statement(s) is/are **TRUE** about traditional software development lifecycle?

- (a) In the system design phase, the newly built systems are thoroughly tested.
- (b) Based on the feedback collected during system design, modifications to the existing system are carried out.
- (c) System review is the process of gathering requirements to build a new system.
- (d) An event driven system review is caused due to a problem with the existing system.
- (e) During the systems analysis phase, the database and user interface is designed.

41) Which of the following acts as an interface between the hardware and application software?

- (a) Linux
- (b) Microsoft Windows
- (c) Microsoft Access
- (d) Python
- (e) Visual Basic

42) Which of the following reports could be outputs of a Marketing MIS or a Human Resource MIS?

- (a) Sales by salesperson report
- (b) Raw material inventory control report
- (c) Training requirements report
- (d) Employee progress report
- (e) Report on production schedule

43) Following terms are related to hierarchy of data. A brief description of each of these terms is listed below.

- (i) Attribute – Attributes of 'Student file' could be 'student number', 'name' and 'address'
- (ii) Record – All the values of the attribute 'student number' listed in the Student file
- (iii) Database – An organized collection of data

Identify the **TRUE** description/s.

- (a) Only i
- (b) Only ii
- (c) Only i and iii
- (d) Only iii
- (e) Only ii and iii

44) Which of the following mechanism could help a networked organization to prevent external security threats?

- (a) Installing virus protection software
- (b) Disposing of computer equipment at the correct time
- (c) Sending encrypted messages across the network
- (d) Use of an intrusion detection system
- (e) Implementing policies with regard to the purchase of equipment

45) Following statements are about software. Identify the **TRUE** statement/s.

- (a) Copyright protection refers to protecting the privacy of customers using a system.
- (b) Some open source software may provide limited support to developers.
- (c) Off the shelf software deployment speed is higher than deploying bespoke software.
- (d) Some off the shelf software may not be able to satisfy all customer requirements.
- (e) CRM software helps to manage the supply chain of an organization.

46) The following statements are based on Computer Waste and Computer Mistakes.

- (i) Using the Internet during working hours is a computer waste.
- (ii) Through employee monitoring, computer waste may be reduced.
- (iii) Computer waste and mistakes can be minimised/prevented by implementing and monitoring effective policies and practices.

Identify the **TRUE** statement/s.

- (a) Only i
- (b) Only ii
- (c) All
- (d) Only iii
- (e) Only ii and iii

47) Which of the following systems produce scheduled and demand reports?

- (a) Transaction Processing Systems
- (b) Expert Systems
- (c) Knowledge Management Systems
- (d) Management Information Systems
- (e) Decision Support Systems

48) The following statements are related to data management/data manipulation. Identify the **TRUE** statement/s.

- (a) Data Mart is a technique used to discover patterns and relationships among data in a data warehouse.
- (b) Business Intelligence applications are used to improve communication among the internal employees of an organization only.
- (c) Projecting is manipulating data to eliminate rows in a table according to certain criteria.
- (d) A data warehouse does not contain historical data of an organization.
- (e) Joining is manipulating data to combine two or more tables.

49) Following statements are about different information systems. Identify the **TRUE** statement/s.

- (a) DSSs support unstructured problems.
- (b) The Automated Teller Machine (ATM) can be considered as an example of a TPS.
- (c) External databases may provide inputs to an MIS.
- (d) Dialogue generator of a DSS helps to perform mathematical data modeling.
- (e) By providing the correct answer to a question, Expert Systems help to eliminate the human decision maker.

50) Which of the following approach(es) to software development consists of different stages which are sequential and maintain tight controls at each stage via written documentation.

- (a) Spiral
- (b) RAD
- (c) Waterfall
- (d) Agile
- (e) Prototyping
