



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

*Academic Year 2013/2014 – 1<sup>st</sup> Year Examination – Semester 1*

***IT1105: Information Systems & Technology***  
***Multiple Choice Question Paper***

22<sup>nd</sup> March, 2014

**(TWO HOURS)**

**Important Instructions :**

- The duration of the paper is **2 (Two) hours**.
- The medium of instructions and questions is English.
- The paper has **50 questions** and **11 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 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.**

01. Which of the following is a/are type(s) of loss(es) associated with computer crime?

- |                          |  |
|--------------------------|--|
| (a) financial loss       | (b) lost sales and reduced competitive advantage |
| (c) violation of privacy | (d) encryption cost                              |
| (e) authentication cost  |  |

02. Database Management Systems (DBMS)

- |  |
|--|
| (a) help to manipulate the data stored in the database.                      |
| (b) can be expensive to implement and maintain.                              |
| (c) provide an interface between the database and the users of the database. |
| (d) provide an interface between the hardware and software of the computer.  |
| (e) help to enter data into a system without making errors.                  |

03. In databases which are structured according to the ..... model, all data elements are placed in two dimensional tables.

Select the suitable phrase(s) to complete the above statement.

- |                |                               |             |
|----------------|-------------------------------|-------------|
| (a) relational | (b) hierarchical              | (c) service |
| (d) network    | (e) object-oriented databases |             |

04. Following statements are related to computer software.

A ..... is a flaw in a computer program that causes it to produce incorrect or inappropriate results. Most computer software products are protected using .....

Select the appropriate words in the **CORRECT** order to complete the above statement.

- |                                 |
|---------------------------------|
| (a) software bug, patch         |
| (b) operational flow, copyright |
| (c) software bug, copyright     |
| (d) compiler, privacy           |
| (e) privacy, license            |

05. Transaction Processing Systems (TPS)

- (i) are used mainly by operational level employees of an organization.
- (ii) help to keep records of the transactions of the organization.
- (iii) help group decision making.

Identify the **CORRECT** statement(s).

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

06. The following statements are about databases.

- (i) Object oriented databases let users link complicated data structures more easily than most other database types.
- (ii) Oracle, MySQL are examples of open-source database management systems.
- (iii) In the hierarchical model, each child or member can have more than one parent (or owner).

Identify the **CORRECT** statement(s).

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

07. 'Human body' is an example of which of the following system types?

- |                     |
|---------------------|
| (a) Dynamic system  |
| (b) Stable system   |
| (c) Adaptive system |
| (d) Closed system   |
| (e) Open            |

08. Which of the following cannot be used to protect information assets of an organisation?

- |                                       |                  |
|---------------------------------------|------------------|
| (a) virus scanners                    | (b) firewalls    |
| (c) Intrusion Detection Systems (IDS) | (d) mail servers |
| (e) web servers                       |                  |

09. Which of the following is a/are phase(s) in the traditional system development life cycle of system development?

- |                          |                    |
|--------------------------|--------------------|
| (a) System Analysis      | (b) System Testing |
| (c) System Documentation | (d) System Review  |
| (e) System Design        |                    |

10. The top management of an organization can show their commitment to information security by

- |   |
|---|
| (a) setting an information security policy.                                       |
| (b) giving overall responsibility of information security to a top-level manager. |
| (c) implementing access controls.   |
| (d) allocating sufficient resources to implement security.                        |
| (e) monitoring employees without informing them.                                  |

11. Transaction Processing Systems can

- (a) help organisations to achieve competitive advantage.
- (b) improve efficiency of the organisation.
- (c) improve customer service.
- (d) help to increase customer loyalty.
- (e) support unstructured problems.

12. Which of the following statement(s) is/are **CORRECT** regarding 'virtual organisations' and 'Business Process Re-engineering'?

- (a) A virtual organization can exist without Information Technology.
- (b) BPR is about making radical changes to Transaction Processing Systems (TPS).
- (c) Virtual organizations typically form partnerships that are interlinked by the Internet.
- (d) BPR may help an organization to achieve competitive advantage.
- (e) Information technology plays a major role in re-engineering most business processes.

13. Consider the following descriptions related to Information Systems Planning.

Information Systems Planning

- (i) helps to convert strategic and organizational goals into systems development initiatives.
- (ii) enables organisations to perform well in their businesses.
- (iii) only considers how information systems review should be carried out.

Identify the **CORRECT** statement(s).

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

14. The following statement relates to security threats faced by an organization.

A ..... creates exact copies of themselves and a ..... appears to be useful, but actually is destructive.

Select the suitable phrase(s) in the **CORRECT** order to complete the above statement.

- |                         |                        |
|-------------------------|------------------------|
| (a) virus, worm         | (b) worm, Trojan horse |
| (c) Trojan horse, virus | (d) worm, virus        |
| (e) virus, Trojan horse |                        |

15. The act of purchasing an off-the-shelf application and distributing its copies among friends for half of the purchased price, is known as,

- |                           |                        |
|---------------------------|------------------------|
| (a) software privacy      | (b) software piracy    |
| (c) password sniffing     | (d) software reselling |
| (e) software distributing |                        |

16. The following statement(s) are about prototyping, which is a method used to develop systems.

- (i) Prototypes enable early detection of errors.
- (ii) Prototypes cannot be used to get user feedback on the system.
- (iii) Prototyping takes an iterative approach during the systems development life cycle.

Identify the **CORRECT** statement(s).

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

17. Computer-related health problems result due to

- |   |
|---|
| (a) the use of old power systems and old phone lines. |
| (b) poorly designed work environments.                |
| (c) lack of air conditioning facility.                |
| (d) errors in the software programs.                  |
| (e) lack of IT literacy.                              |

18. Authentication

- |   |
|---|
| (a) refers to the verification of the identity of individual users. |
| (b) refers to controlling access to data.                           |
| (c) can be achieved by providing usernames and passwords.           |
| (d) is same as non repudiation.                                     |
| (e) is also known as password sniffing.                             |

19. .... feasibility is a measure of the cost-effectiveness of a project or a solution.

Select the phrase(s) suitable to complete the above statement.

- |               |                 |                |
|---------------|-----------------|----------------|
| (a) Technical | (b) Operational | (c) Economical |
| (d) Schedule  | (e) Legal       |                |

20. Determining the requirements of the new system is carried out during which phase of the traditional systems development life cycle?

- |                    |             |                      |
|--------------------|-------------|----------------------|
| (a) Systems Design | (b) Testing | (c) Systems Analysis |
| (d) Implementation | (e) Review  |                      |

21. Which of the following is/are important to be considered when purchasing a Database Management System (DBMS)?

(a) Database size	(b) Performance	(c) Time taken to implement
(d) Cost	(e) Reputation of the vendor	

22. Which of the following is an/are input(s) to a purchasing Transaction Processing System (TPS)?

(a) status of the inventory	(b) production schedule
(c) purchase order	(d) general ledger
(e) payroll	

23. Which of the following is an/are output(s) generated by a Manufacturing Management Information Systems?

(a) quality control report	(b) payroll
(c) production schedule	(d) profit and loss statement
(e) human resource planning	

24. Following statements are about Transaction Processing Systems (TPSs).

- (i) The order processing system captures the data needed to process a customer order.
- (ii) Inventory-control system helps to identify exact quantities of stock available in the organization.
- (iii) A Purchasing TPS consists of budget, general ledger and payroll applications.

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

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

25. Which of the following statements is/are **CORRECT** about components of a Computer Based Information Systems (CBIS)?

(a) A computer cannot work without an operating system.
(b) A database is an organized collection of data in an organization.
(c) MS Windows and Linux are examples of operating systems.
(d) Internet is an example of a Local Area Network (LAN).
(e) People are components of a CBIS, but, procedures are not.

26. Following statement is about Transaction Processing Systems (TPSs).

A ..... of a buyer, generates payment information to the supplier, once it receives the invoice from the supplier.

Select the suitable phrase(s) to complete the above statement.

(a) executive support system.	(b) expert system	(c) purchasing transaction system
(d) geographic information systems	(e) Human resource MIS	

27. Information Systems (IS) are used in many industries and in different functional areas of businesses. Which of the following statement(s) is/are **CORRECT** about the use of IS in organisations?

(a) CRM applications help to improve customer service.
(b) The use of an intranet, enable organisations to link with suppliers and business partners and to ensure prompt delivery of quality components/services.
(c) In manufacturing, information systems can be used to develop production schedule.
(d) Healthcare organizations can use information systems to record patient information, track patient records, and bill patients.
(e) SCM applications help to communicate with internal employees securely.

28. Following statements are related to systems development.

- (i) Systems Design is a very general process of defining a problem, gathering important information, developing alternative solutions, and choosing the best appropriate among those identified alternatives.
- (ii) Systems Testing is the process of determining whether a program or system operates in the desired manner.
- (iii) Rapid Application Development is also known as RAD.

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

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

29. Following statement is related to transaction processing systems.

The ..... application produces a detailed list of all business transactions and activities.

(a) payroll	(b) general ledger
(c) asset management	(d) purchasing
(e) Human resource management	

30. Management Information Systems (MISs)

- (a) helps to record daily business transactions of a company.
- (b) is useful for decision making in organisations.
- (c) only support top/strategic level management of the organisation.
- (d) are developed to support data mining only.
- (e) can produce hard copies and soft copies of reports.

31. Which of the following is a/are report(s) generated by Management Information Systems (MISs)?

- |                      |                      |
|----------------------|----------------------|
| (a) Demand report    | (b) Executive report |
| (c) Review report    | (d) Exception report |
| (e) Scheduled report |                      |

32. Which of the following is a/are primary process(es) in the 'value chain'?

- (a) Customer Service
- (b) Inbound Logistics
- (c) Sales and Marketing
- (d) Information Technology
- (e) Human Resources

33. Typical outputs (reports and updated databases) of a Financial Management Information System provide support for

- (a) auditing
- (b) profit/loss systems
- (c) promotion and advertising
- (d) training and skills development
- (e) management of funds

34. Which of the following is a/are hardware component(s) of a Computer Based Information Systems (CBIS)?

- |                |             |
|----------------|-------------|
| (a) keyboard   | (b) Linux   |
| (c) RAM        | (d) printer |
| (e) MS Windows |             |

35. Competitive strategies help organisations to achieve competitive advantage. Increasingly IT is used to achieve benefits from these strategies. Which of the following is a/are strategy(ies) that can utilise IT and help organisations to compete?

- |                                      |                         |
|--------------------------------------|-------------------------|
| (a) Human resource strategy          | (b) Growth strategy     |
| (c) Alliance strategy                | (d) Management strategy |
| (e) Product Differentiation strategy |                         |



36. A Transaction Processing System (TPS) is **NOT** appropriate to

- (a) process large volumes of data.
- (b) decide whether a customer should be given credit .
- (c) diagnose illnesses.
- (d) identify a suitable location to start a new retail outlet.
- (e) support group decision making.

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

- (a) database
- (b) modelbase
- (c) inference engine
- (d) user interface/dialogue manager
- (e) database management system

38. Following statements are related to information security of an organization.

- (i) Authorisation is a mechanism used to identify the users by using a personal trait such as fingerprint patterns.
- (ii) By using firewalls, an organization can protect its data from harmful external entities.
- (iii) Internal employees who are dissatisfied with the management of the organisation can pose a security threat to the organisation.

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

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

39. By using the Internet effectively, organisations can

- (a) improve customer service.
- (b) attract new customers.
- (c) improve data security of the organisation.
- (d) improve customer loyalty.
- (e) improve data entry.

40. Computer Based Information Systems (CBIS) consists of

- |                                     |                |
|-------------------------------------|----------------|
| (a) people                          | (b) malware    |
| (c) hardware                        | (d) procedures |
| (e) telecommunications and networks |                |

41. Bespoke software

- |   |
|---|
| (a) consists of features that may not be used by the company which purchase it.<br>(b) helps organisations to achieve competitive advantage.<br>(c) can be purchased off-the-shelf from the market.<br>(d) is designed to be used by many organisations.<br>(e) takes longer time to implement than off-the-shelf applications. |
|---|

42. A Human Resource (HR) Management Information System (MIS) may consists of sub-systems such as

- |  |  |
|--|--|
| (a) recruitment<br>(c) performance evaluation<br>(e) marketing | (b) purchasing<br>(d) order processing |
|--|--|

43. Which of the following is a/are characteristic(s) of quality information?

- |   |                              |
|---|------------------------------|
| (a) complex<br>(c) accurate<br>(e) economical | (b) reliable<br>(d) relevant |
|---|------------------------------|

44. The following statements are about the system review phase of the systems development lifecycle.

- (i) A systems review that is caused due to a problem with an existing system, is called an 'event driven review'.
- (ii) All organisations carry out systems reviews every six months.
- (iii) Systems review should be carried out only by internal employees and not by external experts.

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

- |                                       |                                       |                      |
|---------------------------------------|---------------------------------------|----------------------|
| (a) Only (i)<br>(d) Only (ii) & (iii) | (b) Only (i) & (ii)<br>(e) Only (iii) | (c) Only (i) & (iii) |
|---------------------------------------|---------------------------------------|----------------------|

45. Which of the following task(s) is/are carried out during the systems implementation phase of traditional systems development life cycle?

- |   |
|---|
| (a) user training<br>(b) site preparation<br>(c) designing user interfaces<br>(d) gathering requirements of the new system<br>(e) reviewing existing system |
|---|

46. Following statements are related to databases.

- (i) Data mining can enable organisations to achieve competitive advantage.
- (ii) Database approach to data management helps to reduce data redundancy and improve data integrity.
- (iii) A row of a table in the relational data model is known as a record.

Identify the **CORRECT** statement/s.

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

47. Which of the following is a/main component(s) of an Information System?

- |                |              |
|----------------|--------------|
| (a) input      | (b) methods  |
| (c) processing | (d) feedback |
| (e) output     |              |

48. Implementation of an intranet is useful, as it can help

- |  |
|--|
| (a) to share information with employees quickly. |
| (b) to communicate with suppliers.               |
| (c) to reduce paper work.                        |
| (d) to detect security threats from viruses.     |
| (e) faster communication with business partners. |

49. Which of the following device/s can produce a hard copy of a drawing or a document?

- |               |               |
|---------------|---------------|
| (a) Plotter   | (b) Monitor   |
| (c) Printer   | (d) Light pen |
| (e) Joy stick |               |

50. Which of the following statement(s) is/are **CORRECT** about software?

- |   |
|---|
| (a) Groupware is a category of general-purpose application software that combines a variety of software features and functions to facilitate collaboration. |
| (b) ERP software cannot be purchased off-the-shelf.   |
| (c) ERP and SCM applications are examples of personal application software.   |
| (d) Spreadsheets can be used to prepare budgets, forecast profits, summarize and analyse data.  |
| (e) System software is used to design web sites.  |

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