



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (*EXTERNAL*)  
*Academic Year 2010/2011 – 1<sup>st</sup> Year Examination – Semester 1*

***IT1104 – Information Systems & Technologies***  
***Multiple Choice Question Paper***

**5<sup>th</sup> March, 2011**  
**(TWO HOURS)**

**Important Instructions:**

- The duration of the paper is **2 (Two) hours**.
- The medium of instruction and questions is English.
- The paper has **45 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 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 can be considered as a Transaction Processing System (TPS)?

- |   |   |
|---|---|
| (a) a payroll system                        | (b) a system used to diagnose medical illnesses |
| (c) a system used to purchase goods on-line | (d) a point of sales system                     |
| (e) an order processing system              |   |

2) Valuable information should be

- |                 |
|-----------------|
| (a) complex.    |
| (b) accurate.   |
| (c) expensive.  |
| (d) relevant.   |
| (e) verifiable. |

3) Which of the following activities in the traditional software development life cycle determine(s) whether the developed system is achieving the business needs of the organisation?

- |                            |                      |                         |
|----------------------------|----------------------|-------------------------|
| (a) Systems Implementation | (b) Systems Review   | (c) Systems Development |
| (d) Systems Maintenance    | (e) Systems Analysis |                         |

4) Which of the following helps to govern the operation of a computer system?

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

5) Data made up of numbers and letters are known as

- |                         |                   |
|-------------------------|-------------------|
| (a) image data.         | (b) numeric data. |
| (c) alpha numeric data. | (d) noise data.   |
| (e) spatial data.       |                   |

6) Some types of application software are given on the left hand side (A, B, C) and a brief description of these terms is given on the right (P, Q, R).

- |  |   |
|--|---|
| A - Customer Relationship Management (CRM) | P - a set of integrated programs capable of managing a company's vital business operations such as planning, manufacturing, finance, sales, marketing, etc. |
| B - Supply Chain Management (SCM)          | Q - helps to collect customer data, contact customers, educate about new products and sell products to existing and potential customers.                    |
| C - Enterprise Resource Planning (ERP)     | R - helps to determine what supplies are required for the value chain, what quantities are needed to satisfy customer orders etc..                          |

Match the terms with the CORRECT descriptions.

- |                   |                   |                   |
|-------------------|-------------------|-------------------|
| (a) A-R, B-P, C-Q | (b) A-R, B-Q, C-P | (c) A-Q, B-R, C-P |
| (d) A-Q, B-P, C-R | (e) A-P, B-Q, C-R |                   |

7) The following statements are about organisational structures.

- (i) A “Project” organisational structure is centered on major products or services.
- (ii) A “Virtual” organisational structure allows members from around the world to work collaboratively.
- (iii) In a traditional “Hierarchical” organisational structure the top/strategic level management has a high level of authority than lower level employees.

Identify the CORRECT statement/s.

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

8) Fill in the blank space with the most appropriate word.

A system uses ..... to monitor and control its operations to make sure that it continues to meet its objectives.

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

9) Which of the following definitions refer(s) to ‘timeliness’ which is a characteristic of valuable information?

- |  |
|--|
| (a) ability to use the information for a variety of purposes |
| (b) contain all important facts                              |
| (c) error free information                                   |
| (d) deliver information when it is required                  |
| (e) ability to verify whether the information is correct     |

10) Organisations are able to achieve competitive advantage through

- |              |                      |                      |
|--------------|----------------------|----------------------|
| (a) selling. | (b) cost leadership. | (c) differentiation. |
| (d) finance. | (e) planning.        |                      |

11) The following statements are connected with information systems.

- (i) Organisations can use information systems to gain competitive advantage.
- (ii) A transaction processing system can be helpful to provide solutions to unstructured problems
- (iii) A decision support system is mainly used by operational/first level managers.

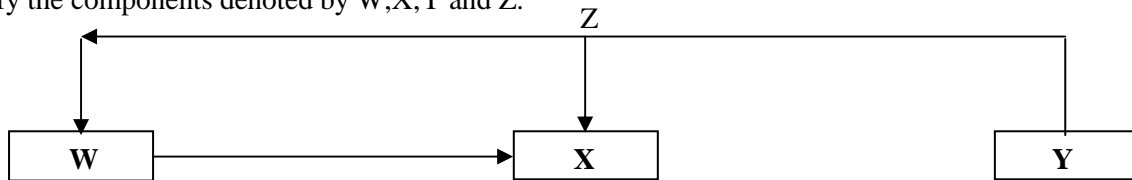
Identify the CORRECT statement/s.

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

12) A computer based information system consists of

- |                 |
|-----------------|
| (a) hardware.   |
| (b) people.     |
| (c) culture.    |
| (d) software.   |
| (e) procedures. |

- 13) Identify the components denoted by W,X,Y and Z.



- |                  |              |            |              |
|------------------|--------------|------------|--------------|
| (a) W-input      | X-processing | Y-feedback | Z-processing |
| (b) W-processing | X-input      | Y-feedback | Z-output     |
| (c) W-input      | X-processing | Y-output   | Z-feedback   |
| (d) W-input      | X-feedback   | Y-output   | Z-processing |
| (e) W-processing | X-output     | Y-input    | Z-feedback   |

- 14) Consider the following incomplete statements.

- Organisational (A)..... refers to how organisational sub units relate to the overall organization.
- Organisational (B)..... consists of major understandings, values and beliefs of an organisation.
- An organisation with a reduced number of management layers is said to be having a flat organisational (C) .....

Identify the appropriate words to fill in above blanks (A), (B) and (C) in the CORRECT order.

- |                   |               |               |
|-------------------|---------------|---------------|
| (a) (A)-culture   | (B)-structure | (C)-culture   |
| (b) (A)-culture   | (B)-structure | (C)-structure |
| (c) (A)-structure | (B)-culture   | (C)-structure |
| (d) (A)-structure | (B)-culture   | (C)-culture   |
| (e) (A)-culture   | (B)-culture   | (C)-structure |

- 15) Components of a Central Processing Unit (CPU) include

- |                                |
|--------------------------------|
| (a) Random Access Memory.      |
| (b) Registers.                 |
| (c) Read Only Memory.          |
| (d) Control Unit.              |
| (e) Arithmetic and Logic Unit. |

- 16) A computer network of a company

- |  |
|--|
| (a) helps to share resources such as printers in an organization.        |
| (b) facilitates collaborative work.                                      |
| (c) makes company information vulnerable to attacks.                     |
| (d) does not require to implement mechanisms to make information secure. |
| (e) helps to inform employees about company information very quickly.    |

- 17) Which of the following is an/are object oriented programming language/s?

- |          |            |       |
|----------|------------|-------|
| (a) C++  | (b) COBOL  | (c) C |
| (d) Java | (e) PASCAL |       |

18) The following statements are about an Information System (IS).

- (i) The components of an IS work together to achieve a specific goal.
- (ii) A closed system always interacts with the environment.
- (iii) A dynamic system undergoes many changes over time.

Identify the CORRECT statement/s.

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

19) Which of the following could be an issue for a global software developer?

- |   |   |
|---|---|
| (a) Providing software support globally | (b) Complaints related to software bugs |
| (c) Threats from open source software   | (d) Privacy violations                  |
| (e) Copyright violations                |   |

20) Which of the following is an/are Open Source software?

- |                  |                 |
|------------------|-----------------|
| (a) Linux        | (b) MS Office   |
| (c) Visual Basic | (d) Open Office |
| (e) Lotus Notes  |                 |

21) Consider the following incomplete statements.

ERP software is known as (A) ..... software.

SCM software is known as (B) ..... software.

Fill in the blanks in the CORRECT order.

- |   |   |
|---|---|
| (a) (A)-a work group application            | (B)-an enterprise application           |
| (b) (A)-an enterprise application           | (B)-an enterprise application           |
| (c) (A)-a personal productivity application | (B)-an enterprise application           |
| (d) (A)-an enterprise application           | (B)-a personal productivity application |
| (e) (A)-a work group application            | (B)-a personal productivity application |

22) Bespoke software

- (i) is available to be bought off the shelf.
- (ii) could help organizations to achieve competitive advantage.
- (iii) cannot be developed by the in-house development team.

Identify the CORRECT statement/s.

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

23) Which of the following device(s) could be used to ensure secure entrance to a data centre?

- |                         |                              |
|-------------------------|------------------------------|
| (a) plotter             | (b) printer                  |
| (c) fingerprint scanner | (d) voice recognition device |
| (e) speakers            |                              |

24) The following statements are about computer waste and mistakes. Identify the CORRECT statement/s.

- |   |
|---|
| (a) Even by implementing proper policies, computer waste and mistakes cannot be minimized.  |
| (b) Using corporate time and resources for personal use by employees is considered as a computer waste.                                     |
| (c) By disposing computer equipment the correct way, money, as well as the environment can be saved.  |
| (d) Computer related waste and mistakes will never lead to reducing profits earned by an organization.                                      |
| (e) Information systems professionals should define proper information systems usage policies to ensure effective use of company resources. |

25) Which of the following could threaten the security of an organisation?

- |   |                             |
|---|-----------------------------|
| (a) implementing a security audit program       | (b) virus attack            |
| (c) sending encrypted messages across a network | (d) implementing a firewall |
| (e) use of an Intrusion Detection Systems (IDS) |                             |

26) Which of the following is a /are software development method/s more appropriate to be used when the user requirements are not clear/specific?

- |                                  |                        |
|----------------------------------|------------------------|
| (a) Traditional waterfall method | (b) Prototyping        |
| (c) Outsourcing                  | (d) End user computing |
| (e) On demand computing          |                        |

27) The following statements are based on Computer Crime.

- (i) Identity theft is a crime in which key personal details such as user id, passwords and national id numbers are obtained and used to act like someone else’.
- (ii) Software piracy is a computer crime.
- (iii) Trojan Horse is a program, attached to a network, which secretly records id numbers as well as passwords.

Identify the CORRECT statement/s.

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

28) The following statements are based on ‘privacy rights’ of employees and customers.

- (i) Providing personal information of customers to another company without notifying them could lead to violating privacy rights of customers.
- (ii) Monitoring employee activities without prior notice is a form of violation of the privacy of employees.
- (iii) Informing the policies and procedures of the company to the employees would lead to violation of privacy of employees.

Identify the CORRECT statement/s.

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

29) Which of the following practices could lead to health issues or reduce productivity of people who work with computers?

- (a) continuous use of CRT screens
- (b) positioning the monitor above the eye level
- (c) taking breaks without continuously working with computers
- (d) repetitive motion of typing using a keyboard for long hours for a long period of time
- (e) doing regular eye exercises

30) Compared to database approach to data management, traditional approach to data management

- |  |                                |
|--|--------------------------------|
| (a) reduces redundancy.                                | (b) reduces data integrity.    |
| (c) is more expensive.                                 | (d) increases data redundancy. |
| (e) makes easier modification and updating of records. |                                |

31) A,B,C, are terms related to the hierarchy of data. P, Q, R is a description of these terms.

A – record	P – a collection of characters
B – field	Q – a collection of fields
C – file	R – a collection of records

Match the terms A, B, C with the CORRECT description.

- |          |     |     |
|----------|-----|-----|
| (a) A- P | B-Q | C-R |
| (b) A-Q  | B-P | C-R |
| (c) A-Q  | B-R | C-P |
| (d) A-R  | B-Q | C-P |
| (e) A-R  | B-P | C-Q |

32) Following statements are based on data manipulation.

- (i) Projecting is manipulating data to eliminate rows according to certain criteria.
- (ii) Selecting is manipulating data to eliminate columns in a table.
- (iii)Joining is manipulating data to combine two or more tables.

Identify the CORRECT statement/s.

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

33) Which of the following enable(s) to discover patterns and relationships in a large collection of historical data?

- |                       |
|-----------------------|
| (a) data mining tools |
| (b) MS Excel          |
| (c) Lotus Notes       |
| (d) Linux             |
| (e) MS Windows        |

- 34) Which of the following is an /are example/s of a Database Management System (DBMS)?
- (a) MS Access
  - (b) MS Windows
  - (c) MySQL
  - (d) Linux
  - (e) MS Outlook
- 35) A datamart is
- (a) a data mining tool.
  - (b) a subset of a data warehouse.
  - (c) another name for a data warehouse.
  - (d) a name of a DBMS.
  - (e) a data modeling approach.
- 36) Decision Support Systems
- (a) support goal seeking and what-if analysis.
  - (b) processes information only through batch processing.
  - (c) components include a database, modelbase and a user interface/dialogue manager.
  - (d) which are model driven, primarily perform mathematical or quantitative analysis.
  - (e) which are data driven, perform qualitative analysis based on the company's databases.
- 37) Which of the following is /are **NOT** (a) basic component/s of a TPS?
- |                           |                |
|---------------------------|----------------|
| (a) databases             | (b) networks   |
| (c) knowledge base        | (d) procedures |
| (e) hardware and software |                |
- 38) Which of the following is /are **CORRECT** regarding interactive dialogue design?
- (a) Displays should use information systems terms and acronyms as much as possible.
  - (b) Users must be given more than 20 options on a menu at any time .
  - (c) Displays should be designed attractively.
  - (d) Messages should be grammatically correct.
  - (e) Displays within a specific application should take different formats.
- 39) A systems review that is caused by a problem with an existing system is/are called a/an
- |                          |                        |
|--------------------------|------------------------|
| (a) object review.       | (b) structured review. |
| (c) event-driven review. | (d) periodic review.   |
| (e) scheduled review.    |                        |
- 40) Which of the following employs tools, techniques and methodologies designed to speed application development?
- (a) waterfall method
  - (b) prototyping
  - (c) RAD
  - (d) ERD
  - (e) outsourcing



41) Complete the following incomplete statement.

The overall purpose of a ..... is to determine user, stakeholder and organisational needs.

- (a) system design
- (b) feasibility study
- (c) GAANT Chart
- (d) systems review
- (e) requirement analysis

42) Which of the following statements are CORRECT about Management Information Systems (MIS).

- (a) An MIS generates reports such as demand and scheduled reports.
- (b) Inputs to a MIS could include data from internal as well as external databases.
- (c) Outputs of MIS helps to support effective decision making.
- (d) Outputs of a financial MIS can include financial statements.
- (e) An MIS is capable of duplicating the features of a real system (simulation).

43) Organisations may consider outsourcing systems development

- (a) when the internal systems development capabilities are limited.
- (b) if the costs can be reduced by outsourcing.
- (c) if there is no threat of losing competitive advantage.
- (d) if the vendor (supplier) can provide a better service.
- (e) if the vendor (supplier) is not financially stable.

44) The following statements are about specialised information systems.

- (i) Robotics is useful to be used in situations that are dangerous to humans.
- (ii) Expert systems are useful to diagnose pests and diseases in rice crops.
- (iii) AI systems demonstrate the characteristics of intelligence.

Identify the CORRECT statement/s.

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

45) Which of the following approaches to systems conversion involve running both the old system and the new system for a period of time and switching to the new system, once the outputs are compared and the differences are corrected.

- |              |                    |
|--------------|--------------------|
| (a) direct   | (b) pilot start-up |
| (c) phase in | (d) parallel       |
| (e) indirect |                    |

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