



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

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

IT1104 – Information Systems & Technologies
Multiple Choice Question Paper

5th 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.

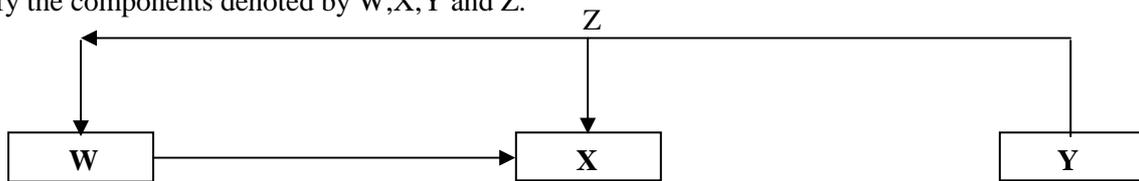
Identify the CORRECT statement/s.

- | | | |
|----------------|-----------------------|------------------------|
| (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

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|-----------------|
| (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.

- (i) Organisational (A)..... refers to how organisational sub units relate to the overall organization.
- (ii) Organisational (B)..... consists of major understandings, values and beliefs of an organisation.
- (iii) 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
