



**UNIVERSITY OF COLOMBO, SRI LANKA**

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

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

***Academic Year 2011/2012 – 1<sup>st</sup> Year Examination – Semester 1***

***IT1104: Information Systems & Technology***  
***Multiple Choice Question Paper***

**10<sup>th</sup> March, 2012**

**(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 10 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 applications would you use to create an architectural drawing?

- |               |                  |
|---------------|------------------|
| (a) Auto CAD  | (b) Visual Basic |
| (c) MS ACCESS | (d) Linux        |
| (e) MS Paint  |                  |

2. Which of the following statement(s) is/are **CORRECT** about hardware components of an information system?

- |                                                                                                                |
|----------------------------------------------------------------------------------------------------------------|
| (a) The Central Processing Unit (CPU) carries out the instructions of a computer program.                      |
| (b) The memory (RAM) is normally used to store the computer's operating system, application software and data. |
| (c) A floppy disk is suited to holding large volumes of data that is unlikely to change often.                 |
| (d) MICR technology could be used to read information printed on bank cheques.                                 |
| (e) The monitor is commonly used as an output device.                                                          |

3. In Value Chain Analysis, which of the following is/are **NOT** classed as (a) primary activity/(ies)?

- |                        |                       |             |
|------------------------|-----------------------|-------------|
| (a) Outbound logistics | (b) Sales & Marketing | (c) Service |
| (d) Inbound logistics  | (e) Technology        |             |

4. Which of the following is/are **NOT** (a) function(s) of an operating system?

- |                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------|
| (a) Managing the computer's memory.                                                                                          |
| (b) Controlling access to storage devices, for example disk drives.                                                          |
| (c) Dealing with errors, for example by displaying a message to the user if a fault is detected within a hardware component. |
| (d) Informing users when a data entry error occurs.                                                                          |
| (e) Coordinating and controlling peripheral devices, for example printers.                                                   |

5. The following statements are based on application software.

- (i) ERP applications can facilitate the flow of information between all business functions inside the boundaries of the organization.
- (ii) SCM applications enable organisations to track the status of the raw materials and the delivery of finished goods to customers.
- (iii) CRM software is useful to communicate with suppliers regarding the status of raw material.

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

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

6. The following statements are based on information systems security, privacy and ethical issues.
- (i) By having proper policies and procedures on recycling of products, computer waste related to discarding hardware could be reduced.
  - (ii) Identity theft is a computer mistake.
  - (iii) Ergonomics is the design of the work environment to reduce computer crime.

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

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

7. An intranet

- |                                                                                               |
|-----------------------------------------------------------------------------------------------|
| (a) is another name for electronic data interchange.                                          |
| (b) is a legacy system.                                                                       |
| (c) helps to provide useful information for the suppliers and customers of an organization.   |
| (d) could be used to communicate company information to its employees cost effectively.       |
| (e) is an internal corporate network used by employees to gain access to company information. |

8. Duplicating the design of an item or a computer program without authorisation is known as

- |                               |                          |
|-------------------------------|--------------------------|
| (a) reverse engineering.      | (b) computer monitoring. |
| (c) hacking.                  | (d) copyright theft.     |
| (e) electronic eavesdropping. |                          |

9. Which of the following mechanism is/are useful to secure data from external access and manipulation?

- |                                                  |                                |
|--------------------------------------------------|--------------------------------|
| (a) implementing a firewall                      | (b) encryption of data         |
| (c) use of virus protection software             | (d) use of an operating system |
| (e) implementing a Virtual Private Network (VPN) |                                |

10. Information

- |                                                                                             |
|---------------------------------------------------------------------------------------------|
| (a) transforms data using a defined process.                                                |
| (b) is produced in response to an information need and therefore serves a specific purpose. |
| (c) consists of raw data.                                                                   |
| (d) should be relevant as well as accurate.                                                 |
| (e) helps to improve management decision making.                                            |

11. Which of the following is/are included in a Physical Design of a system?

- |                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
| (a) characteristics of the communication software, media and devices                                     |
| (b) specifications of auditing, backup and output distribution methods to minimize the crimes and frauds |
| (c) performance characteristics of all computer equipments needed                                        |
| (d) all outputs from the system including the types, format, content and frequency of the output         |
| (e) specification of the type, format, content and frequency of the input                                |

12. The following statements are related to computer networks. Identify the **CORRECT** statement(s).
- |                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Networks enable organizations to share data.<br>(b) An extranet is useful to improve communication among employees of an organization.<br>(c) Networks enable organizations to share peripheral devices.<br>(d) The Internet is an example of a Wide Area Network (WAN).<br>(e) Intranets are useful to improve communication among the employees of an organisation. |
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13. Major risks and uncertainties associated with systems development may include
- (i) the difficulty of establishing information requirements, both for individual end users and for the organization as a whole.
  - (ii) the fact that time and cost factors to develop an information system are very difficult to analyze, especially in large projects.
  - (iii) the difficulty of managing organizational change associated with a new system.
- Identify the **CORRECT** statement(s).
- |                               |                                         |         |
|-------------------------------|-----------------------------------------|---------|
| (a) Only (i)<br>(d) Only (ii) | (b) Only (iii)<br>(e) Only (i) and (ii) | (c) All |
|-------------------------------|-----------------------------------------|---------|
14. Which group of individuals might be described as those who find out weaknesses in established systems and abuse them for reasons such as profit?
- |                                                         |                                                |
|---------------------------------------------------------|------------------------------------------------|
| (a) Information warriors<br>(c) Crackers<br>(e) Hackers | (b) Software pirates<br>(d) Computer criminals |
|---------------------------------------------------------|------------------------------------------------|
15. Which of the following activity/(ies) is/are carried out during the systems implementation phase of the traditional systems development life cycle?
- |                                                                                       |                                             |
|---------------------------------------------------------------------------------------|---------------------------------------------|
| (a) site preparation<br>(c) hardware and software acquisition<br>(e) user preparation | (b) feasibility study<br>(d) systems review |
|---------------------------------------------------------------------------------------|---------------------------------------------|
16. The following statements are about information systems.
- (i) An information system is always computer based.
  - (ii) 'Boundry' is a term which defines the scope of a system.
  - (iii) A 'probabilistic system' responds to changes in the environment and modifies its operation accordingly.
- Identify the **CORRECT** statement(s).
- |                           |                                          |              |
|---------------------------|------------------------------------------|--------------|
| (a) Only (iii)<br>(d) All | (b) Only (ii)<br>(e) Only (ii) and (iii) | (c) Only (i) |
|---------------------------|------------------------------------------|--------------|
17. Transaction Processing Systems (TPS)
- |                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) help top management decision making.<br>(b) enable organisations to achieve competitive advantage.<br>(c) provide inputs to the Management Information Systems (MIS).<br>(d) use artificial intelligence techniques.<br>(e) components include a database and a modelbase. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

18. In the phase of Information Systems (IS) maintenance, 'parallel running' is
- |                                                                  |
|------------------------------------------------------------------|
| (a) when the transition from an old IS to a new IS is immediate. |
| (b) when the transition from an old IS to a new IS is phased.    |
| (c) when the old IS and new IS run simultaneously for a period.  |
| (d) the same as direct changeover.                               |
| (e) abandoning the old IS and starting of the new IS.            |
19. Which of the following component(s) of the Computer Based Information System (CBIS) enable(s) users to communicate with the hardware of the computer system as well as to increase user productivity and efficiency?
- |                |              |              |
|----------------|--------------|--------------|
| (a) procedures | (b) software | (c) networks |
| (d) database   | (e) people   |              |
20. In terms of a system, finished products and information are examples of
- |               |                 |             |
|---------------|-----------------|-------------|
| (a) feedback. | (b) processing. | (c) inputs. |
| (d) control.  | (e) outputs.    |             |
21. The technology for finding hidden patterns and relationships in large databases and inferring rules from them to predict future behaviour best describes
- |                      |                       |                            |
|----------------------|-----------------------|----------------------------|
| (a) data clustering. | (b) data extraction.  | (c) knowledge acquisition. |
| (d) data mining.     | (e) data warehousing. |                            |
22. Each of the following is a Decision Support System (DSS) component, **EXCEPT** for the
- |                       |                              |
|-----------------------|------------------------------|
| (a) database.         | (b) model management system. |
| (c) inference engine. | (d) dialogue manager.        |
| (e) modelbase.        |                              |
23. A computer based system that can store analyze and display data using digitized maps to enhance planning and decision making best describes a/an
- |                                                |                                     |
|------------------------------------------------|-------------------------------------|
| (a) executive support system.                  | (b) demographic analysis system.    |
| (c) location analysis system.                  | (d) geographic information systems. |
| (e) Enterprise Resource Planning (ERP) system. |                                     |
24. The following statements are related to systems development. Identify the **CORRECT** statement(s).
- |                                                                                                   |
|---------------------------------------------------------------------------------------------------|
| (a) Interviews and observation can be considered as data gathering techniques.                    |
| (b) It is important to align business objectives with IS objectives when developing a new system. |
| (c) RAD tools enable rapid application development than the waterfall method.                     |
| (d) RFP is a tool that shows the flow of data through a system.                                   |
| (e) A system review is carried out prior to the implementation phase.                             |

25. Which of the following statements is/are **CORRECT** about Transaction Processing Systems (TPS)?
- |                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Data captured through a Management Information System (MIS) can be an input to a TPS.<br>(b) Inference Engine is a component of a TPS.<br>(c) TPS provides support for structured questions.<br>(d) TPS stimulates decision making by helping managers to question decision procedures or explore different solution designs.<br>(e) Typically TPS are used by the operational level/first level managers. |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
26. The preliminary working version of an information system for demonstration and evaluation purposes best describes a
- |                                       |                                 |                    |
|---------------------------------------|---------------------------------|--------------------|
| (a) prototype.<br>(d) physical model. | (b) data model.<br>(e) program. | (c) logical model. |
|---------------------------------------|---------------------------------|--------------------|
27. Decision Support Systems (DSS)
- |                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) are useful to solve structured problems.<br>(b) provide inputs to a Transaction Processing System (TPS).<br>(c) are used by first-line/operational managers.<br>(d) components include a dialogue manager/user interface.<br>(e) could be data or information driven. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
28. Management Information Systems (MIS) usually
- (i) help managers make decisions that are unique and not easily specified in advance.
  - (ii) perform and record the daily routine transactions necessary to the conduct of business.
  - (iii) serve managers interested in weekly, monthly and yearly results, not day-to-day activities.
- Which of the above statements is/are **CORRECT**?
- |                                                          |                                                  |
|----------------------------------------------------------|--------------------------------------------------|
| (a) Only (i)<br>(c) Only (i) and (iii)<br>(e) Only (iii) | (b) Only (i) and (ii)<br>(d) Only (ii) and (iii) |
|----------------------------------------------------------|--------------------------------------------------|
29. A document which specifies the required resources of an organisation such as hardware/software and submitted to potential vendors in order to determine if the vendor's product can meet the organization's specific requirements is called a/an
- |                                                                |                      |
|----------------------------------------------------------------|----------------------|
| (a) enterprise analysis.<br>(c) JAD.<br>(e) feasibility study. | (b) RFP.<br>(d) RAD. |
|----------------------------------------------------------------|----------------------|
30. Which of the following statements is/are **CORRECT** about application software?
- |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Examples of application software are Linux and Unix.<br>(b) Applications software is available as off-the-shelf packages.<br>(c) Application software acts as the interface between the user and the hardware components of a computer system.<br>(d) Bespoke software is a type of application software which is developed for an organisation's unique requirements.<br>(e) Individuals, work groups as well as enterprises use application software to achieve their needs. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

31. Which of the following systems generate various reports to middle management to enable effective decision making?

(a) Decision Support Systems	(b) Executive Support Systems
(c) Expert System	(d) Management Information Systems
(e) Artificial Intelligence Systems	

32. When developing a system for a business organization

(a) it is important to consider stakeholder requirements.
(b) business requirements should be enabled by information systems.
(c) use of DFD will enable efficient management of the project.
(d) system testing should be carried out after the systems review when using the traditional approach to development.
(e) system controls should be used to protect the system from unauthorized access.

33. Information Systems

(a) help to improve organizational efficiency.
(b) cannot help organisations to achieve competitive advantage.
(c) support business processes.
(d) enable improved decision making.
(e) can influence the culture of an organization, but not the structure.

34. Which of the following mechanism used to safeguard the security of an organization, could violate the privacy rights of an individual?

(a) installing virus guards	(b) implementing a firewall
(c) use of virtual private networks	(d) monitoring employees without prior notice
(e) setting up an audit trail	

35. Which of the following software enables integration of applications used in different functional units of an organization?

(a) Personal Productivity Software	(b) Enterprise Resource Planning Software
(c) Work group Software	(d) Supply Chain Management Software
(e) Customer Relationship Management Software	

36. A Transaction Processing System (TPS) is more appropriate to

(a) process large volumes of data.
(b) generate reports such as demand, key-indicator and schedule reports.
(c) diagnose illnesses such as skin allergies.
(d) identify the suitable locations to start a new retail outlet.
(e) carry out what-if analysis.

37. When selecting a Database Management Systems (DBMS) for a multi user environment, which of the following factors should be considered?

(a) ability to integrate with the word processing software
(b) cost of the database
(c) reputation and the financial stability of the vendor
(d) number of concurrent users
(e) database size

38. In traditional approach to data management,
- (i) all the data used by the different functional units of an organization is kept centrally.
  - (ii) the integrity of data is high as opposed to the database approach to data management.
  - (iii) there is more redundancy of data as opposed to the database approach to data management.
- 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. Data mining
- |                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>(a) enables to identify customer churn.</li> <li>(b) is a technique carried out to find patterns and relationships in data.</li> <li>(c) software can be purchased off the shelf.</li> <li>(d) is the process of cleaning a data warehouse.</li> <li>(e) is used by organisations to create business intelligence.</li> </ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
40. Which of the following strategies is directly about providing more value to its products and services than competitors?
- |                            |                             |
|----------------------------|-----------------------------|
| (a) cost leadership        | (b) product differentiation |
| (c) alliance               | (d) vertical integration    |
| (e) horizontal integration |                             |
41. A Transaction Processing System (TPS) helps to
- |                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>(a) solve unstructured problems.</li> <li>(b) increase labour efficiency.</li> <li>(c) motivate employees.</li> <li>(d) capture, process and store data.</li> <li>(e) carry out group decision making.</li> </ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
42. Which of the following could be generated by a Human Resource Management Information Systems?
- |                                  |                               |
|----------------------------------|-------------------------------|
| (a) Invoice                      | (b) Employee Selection Report |
| (c) Purchase Orders              | (d) Picking List              |
| (e) Performance Appraisal Report |                               |
43. According to traditional Systems Development Life Cycle (SDLC), a systems review is typically being carried out after
- |                        |                             |
|------------------------|-----------------------------|
| (a) systems analysis.  | (b) systems implementation. |
| (c) systems design.    | (d) requirement gathering.  |
| (e) feasibility study. |                             |



44. Which of the following statement(s) is/are **CORRECT** about computer security?
- (i) Installing firewalls in a computer network will protect the network from unauthorised access.
  - (ii) Anti Virus software has the ability to protect your computer from viruses and worms.
  - (iii) A trojan horse is a program hidden in a network or computer system that records identification numbers and passwords.
- |                       |                     |                      |
|-----------------------|---------------------|----------------------|
| (a) Only (i)          | (b) Only (i) & (ii) | (c) Only (i) & (iii) |
| (d) Only (ii) & (iii) | (e) Only (iii)      |                      |
45. Relational Database Management Systems
- |                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) are based on the object oriented model.<br>(b) increase data integrity.<br>(c) reduce data duplication.<br>(d) require special knowledge to operate.<br>(e) examples are MS ACCESS and MySQL. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
46. In software development, Rapid Application Development (RAD)
- (i) uses tools to reduce software development time.
  - (ii) has increased amount of documentation than the traditional method.
  - (iii) involves methods such as iterative development.
- Identify the **CORRECT** statement/s.
- |                      |                       |
|----------------------|-----------------------|
| (a) Only (i)         | (b) Only (i) & (ii)   |
| (c) Only (i) & (iii) | (d) Only (ii) & (iii) |
| (e) All              |                       |
47. An ethical manager
- (i) monitors employees without giving prior notice to them.
  - (ii) may consider ergonomics when designing the workplace.
  - (iii) will not disclose private information of customers to external parties without prior consent of customers.
- Identify the **CORRECT** statement/s.
- |                      |                       |
|----------------------|-----------------------|
| (a) Only (i)         | (b) Only (i) & (ii)   |
| (c) Only (i) & (iii) | (d) Only (ii) & (iii) |
| (e) Only (iii)       |                       |
48. The following statements are about the advantages of purchasing off-the-shelf software as opposed to developing a bespoke system.
- (i) Off the shelf software deployment speed is high.
  - (ii) There is greater possibility of achieving competitive advantage by using bespoke software.
  - (iii) Some features required by the users may not be available in off-the-shelf software.
- Identify the **CORRECT** statement/s.
- |               |                       |                         |
|---------------|-----------------------|-------------------------|
| (a) Only (i)  | (b) Only (i) and (ii) | (c) Only (ii) and (iii) |
| (d) Only (ii) | (e) All               |                         |

49. Which of the following deal with the right to be left alone or to be withdrawn from public view?

- |                             |               |
|-----------------------------|---------------|
| (a) Information Systems Law | (b) IS Policy |
| (c) Privacy                 | (d) Patents   |
| (e) Copyrights              |               |

50. Which of the following statements is/are **CORRECT** about a system?

- |                                                                                       |
|---------------------------------------------------------------------------------------|
| (a) Components of a system act together to achieve a common goal.                     |
| (b) A prison is an example of a closed system.                                        |
| (c) Converting or transforming inputs to outputs is known as processing.              |
| (d) Components of an information system include only input, output and feedback.      |
| (e) Feedback enables one to make changes to the input and/or the processing activity. |

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