



UNIVERSITY OF COLOMBO, SRI LANKA

UNIVERSITY OF COLOMBO SCHOOL OF COMPUTING

DEGREE OF BACHELOR OF INFORMATION TECHNOLOGY (EXTERNAL)

Academic Year 2019 – 1st Year Examination – Semester 1

IT1105 – Information Systems & Technology
Multiple Choice Question Paper

22nd June 2019
(TWO HOURS)

Important Instructions:

- The duration of the paper is **2 (two) hours**.
- The medium of instruction and questions is English.
- The paper has **50 questions** and **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 (*All the incorrect choices are marked & no correct choices are marked*) to +1 (*All the correct choices are marked & no incorrect choices are marked*).
- Answers should be marked on the special answer sheet provided.
- Note that questions appear on both sides of the paper.
If a page is not printed, please inform the supervisor immediately.
- Mark the correct choices on the question paper first and then transfer them to the given answer sheet which will be machine-marked. **Please completely read and follow the instructions given on the other side of the answer sheet before you shade your correct choices.**
- Calculators are **not** allowed.
- *All Rights Reserved.*

1) Which of the following statements is/are **CORRECT** regarding computer information?

- (a) Information consists of raw facts such as employee number and sales orders.
- (b) Information is required to create knowledge from data.
- (c) Information can be created by defining and organizing relationships among data.
- (d) Information cannot be used without processing.
- (e) The value of information is improved during the process of creating new knowledge.

2) Valuable information should have characteristics such as being;

- (a) timely.
- (b) accurate.
- (c) complex.
- (d) flexible.
- (e) expensive.

3) An information system consists of;

- (a) input.
- (b) output.
- (c) computer.
- (d) feedback.
- (e) process.

4) Which of the following statements is/are **CORRECT** regarding computer hardware?

- (a) Hardware is used to perform input, processing and output activities.
- (b) Hardware governs the operation of the computer.
- (c) Supercomputers are the most appropriate type of computer for any type of work.
- (d) Computer hardware enables the application software to interact with the computer.
- (e) There is a trend in the hardware industry to develop, smaller, faster and portable computers.

5) Efficiency of a computer mainly depends on the size of;

- (a) mother board.
- (b) external memory.
- (c) output devices.
- (d) internal memory.
- (e) input devices.

6) Design of computer chips allows;

- (a) less power consumption.
- (b) automating virus detection.
- (c) larger storage capacity.
- (d) faster speed.
- (e) reducing the size of computer.

7) Which of the following statements is/are **CORRECT** regarding proprietary software?

- (a) It is also called commercial software.
- (b) It is a utility program.
- (c) It is also called off-the-shelf software.
- (d) Source code of the software is kept secret.
- (e) Users must agree to EULA to use the software.

8) Before purchasing a software from a shop, one should know whether the selected software;

- (a) runs on the operating system and hardware you have.
- (b) meets the essential business requirements that have been defined.
- (c) manufacturer is financially solvent and reliable.
- (d) can provide more benefits than its total cost of purchasing, installing, and maintaining.
- (e) manufacturer provides necessary rights to customize the software.

9) ASP is an approach to obtaining a customized software package. What does ASP stand for?

- (a) Activity of Software Purchasing
- (b) Active Server Pages
- (c) Associate Software Package
- (d) Application Service Provider
- (e) Application Software Plan

10) Which of the following statements is/are **CORRECT** regarding SaaS?

- (a) It is a software service provider.
- (b) SaaS companies maintain software on their servers and provide access to it over the Internet.
- (c) It stands for software for all application support.
- (d) It usually uses a Web browser-based user interface.
- (e) SaaS can reduce expenses by sharing its running applications among many businesses.

11) Which of the following software is **NOT** a Desktop Publishing application?

- (a) Adobe Illustrator
- (b) FreeHand
- (c) QuarkXpress
- (d) Microsoft Publisher
- (e) Adobe InDesign

12) Which of the following is/are (a) web-based productivity software suite(s) that require no installation on the personal computer?

- (a) Zoho
- (b) Google
- (c) ThinkFree
- (d) Office Live
- (e) Xbox Live

13) Groupware is an application software designed to support teamwork. The “Three Cs” rule for successful implementation of groupware are;

- (a) Collaborative, Convenient, and Coverage.
- (b) Coverage, Convenient and Cost-effective.
- (c) Convenient, Cost-effective and Collaborative.
- (d) Convenient, Content and Coverage.
- (e) Content, Collaborative and Cost-effective.

14) The impact of software bugs in a computer can be reduced by;

- (a) registering all software installed in the computer.
- (b) installing an anti-virus software.
- (c) updating the computer with latest versions of software.
- (d) taking regular backups of data saved in the computer.
- (e) checking the manual or read-me files for solutions to known problems.

15) Which of the following is/are **CORRECT** regarding open source software?

- (a) Most of the open source software is free for anybody.
- (b) Anyone interested can edit the source code of these software.
- (c) Copyright of the software is kept by the software developers.
- (d) There may be restrictions on using the software.
- (e) Fixing of a bug usually takes few years.

16) Thunderbird is an open source software used for;

- (a) sending emails.
- (b) creating animations.
- (c) drawing pictures.
- (d) browsing internet.
- (e) managing projects.

17) Refer to the following image of a table and identify what A, B, C, and D are.

| NIC No. | First_Name | Last_Name | Contact No. |
|------------|------------|-----------|-------------|
| 839758220V | Nalin | Ranatunga | 0717689230 |
| 690623445V | Manel | Bandara | 0773456781 |
| 826798452V | Kelum | Atapattu | 0777567676 |
| 936789092V | Sena | Wijesiri | 0726712345 |

Which of the following option lists the A, B, C, and D in the correct order.

- (a) Attributes, Data item, Entities, Key field
- (b) Attributes, Entities, Key field, Data item
- (c) Entities, Attributes, Data item, Key field
- (d) Entities, Data items, Key field, Attribute
- (e) Data items, Attributes, Data items, Key field

18) Organizations use Database Management Systems (DBMS) to;

- (a) improve strategic use of organizational data.
- (b) analyze and present organizational data in graphs and charts.
- (c) protect data by ensuring only authorized people have access to the data.
- (d) share data and information resources among the users and other applications.
- (e) organize data independently of organizational applications.

19) The Relational model of a database describes;

- (a) how data is organized in columns and rows.
- (b) the data using a standard tabular format.
- (c) the logical structure of organizational applications.
- (d) how to modify and configure the database.
- (e) the information needs of the organization.

20) What are the three (3) basic methods of manipulating data?

- (a) Join, Project and Retrieve
- (b) Retrieve, Add and Delete
- (c) Modify, Join and Add
- (d) Select, Project and Join
- (e) Delete, Modify and Select

21) A flat file database stores data in;

- (a) files and cupboards.
- (b) plain text format.
- (c) comma- or tab-separated text files.
- (d) binary files.
- (e) tables with fixed relationships between tables.

- 22) All database management systems share a common set of functions such as;
- (a) storing and retrieving data.
 - (b) modifying the structure of the database.
 - (c) analyzing and organizing data using complex algorithms.
 - (d) generating reports.
 - (e) providing decisions to be taken.
- 23) Which of the following is/are single user DBMSs?
- (a) FileMaker Pro
 - (b) MS SQL Server
 - (c) MS Access
 - (d) Oracle
 - (e) IBM Db2
- 24) When selecting an appropriate DBMS, one should look for important characteristics such as;
- (a) number of concurrent users.
 - (b) database size.
 - (c) database cost.
 - (d) user experience.
 - (e) vendor.
- 25) Which of the following is/are **CORRECT** regarding the “semantic Web”?
- (a) An extension of the WWW through standards by the World Wide Web Consortium.
 - (b) A Web of data which enables programs to exchange data even without human intervention.
 - (c) A seamless integration of traditional databases with the Internet.
 - (d) A collection of computer networks implemented to protect secured business data.
 - (e) An integration of archived databases to share data to the public.
- 26) The primary aim of designing a data warehouse in an organization is to;
- (a) meet the requirements of transaction processing systems.
 - (b) prepare a data repository by storing historical data in the organization.
 - (c) support management decision making.
 - (d) keep backups of all operational data.
 - (e) handle virus threats.

- 27) Major elements of a data warehouse include;
- (a) data access tools.
 - (b) databases.
 - (c) data extraction tools.
 - (d) data mining tools.
 - (e) data presentation tools.
- 28) Which of the following is/are **CORRECT** regarding a data mart?
- (a) It is another type of database used in an organization.
 - (b) It is smaller in size than a data warehouse.
 - (c) It consists of multiple data warehouses.
 - (d) It is a place to store information on how data is analyzed, processed and distributed.
 - (e) It contains data from one department or a business area.
- 29) Information systems are used in business mainly for the support of;
- (a) sharing information with the employees in all levels of the organization.
 - (b) decision making by employees and managers.
 - (c) maintaining friendly relationships with suppliers and customers.
 - (d) defining strategies for competitive advantage.
 - (e) improving business processes and operations.
- 30) The five forces model of competitive advantage include;
- (a) rivalry among existing competitors.
 - (b) threat of substitute products and services.
 - (c) bargaining power of competitors.
 - (d) threat of virus and hackers.
 - (e) blooming of new technologies.
- 31) According to the customers' perspective, the companies that offer best value should be able to;
- (a) keep track of their customers' individual preferences to offer better services.
 - (b) share customers' personal data with other related organizations.
 - (c) supply products, services, and information anytime and anywhere.
 - (d) provide loyalty card and identify customer buying patterns.
 - (e) send messages regarding new products and promotions to customers.

32) To be an agile company, a business should use strategies such as;

- (a) perceiving the products or services as solutions to customers' individual problems.
- (b) cooperating with customers, suppliers, and competitors as much as possible.
- (c) adopting a flexible organizational structure to meet constantly changing customer requirements.
- (d) providing powerful incentives for employee responsibility, adaptability, and innovation.
- (e) deciding the quality of company products or services by comparing the quality of competitors' products.

33) Which of the following statements **BEST** describes what a virtual company is?

- (a) An online company which is not physically existing and created by linking other companies.
- (b) Any company which delivers its services and products online.
- (c) An organization that uses information technology to link people, organizations, assets, and ideas.
- (d) A virtually created organization to solve issues related to companies with similar services.
- (e) A firm using a web site to share information related to company's products and services.

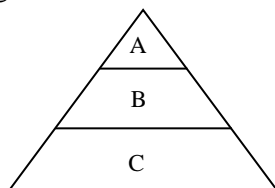
34) Knowledge management systems in an organization;

- (a) are designed to provide rapid feedback to knowledge workers.
- (b) track individual worker learning behaviours and report progress.
- (c) can be used to learn how to do the work in the organization.
- (d) can be used to improve the organizational business processes, products and services.
- (e) manage organizational learning and improve business performance.

35) What business values can be derived from online sales platforms?

- (a) Reduce transaction costs
- (b) Attract new customers
- (c) Reduce the number of returns and exchanges
- (d) Increase trust in the payment process
- (e) Increase the loyalty of existing customers

36) The following figure shows three major types of information systems: A, B, and C, in an organizational structure.



Which of the following option lists the A, B, and C in the correct order?

- (a) ESS, TPS, MIS
- (b) ESS, MIS, TPS
- (c) MIS, ESS, TPS
- (d) TPS, MIS, ESS
- (e) MIS, TPS, ESS

37) “Diyatha” is a shopping complex having more than one hundred employees. They need a software to support their staff engaging with sales every day. The software should support the sales staff to find information related to the products in the shopping complex and helping customers to purchase the right products.

What type of software do they need?

- (a) ESS
- (b) MIS
- (c) DSS
- (d) TPS
- (e) KMS

38) A transaction processing cycle includes several steps. Which of the following is/are **NOT** (a) step(s) in the transaction processing cycle?

- (a) Data collection
- (b) Data creation
- (c) Data correction
- (d) Data analysis
- (e) Data storage

39) Management Information Systems receive data as inputs from;

- (a) Order Processing Systems.
- (b) Enterprise Resource Planning Systems.
- (c) Accounts Payable Systems.
- (d) Group Support Systems.
- (e) Payroll Systems.

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

- (a) Database
- (b) Model Base
- (c) Model Management Software
- (d) Network
- (e) Dialogue

- 41) Which of the following is/are (a) characteristic(s) of an Executive Support System (ESS)?
- (a) Easy to use
 - (b) Drill-down abilities
 - (c) Structured decision support
 - (d) Customer support
 - (e) Linked with value added business processes
- 42) Systems with artificial Intelligence enable computers to;
- (a) learn from their users' knowledge.
 - (b) handle puzzling situations which requires careful planning and elaboration.
 - (c) determine what is important.
 - (d) engage with true and meaningful conversation.
 - (e) provide creative and effective solutions to any problem.
- 43) Which of the following statements do **NOT** correctly describe the role(s) of (a) member(s) in a software development team?
- (a) The supplier representatives should be able to decide what kind of a software solution should be implemented.
 - (b) The project manager should coordinate the stakeholders and resources needed to complete the project on time.
 - (c) The systems analyst develops detailed plans for the new or modified system.
 - (d) The technical specialist meets all the technical requirements of the project team.
 - (e) The programmer is responsible for modifying or developing programs.
- 44) Which of the following statements **BEST** describes what information systems planning in the software development process is?
- (a) Making the plans for implementing and evaluating a software solution
 - (b) Identifying and prioritizing information system requirements
 - (c) Translating strategic and organizational goals into systems development initiatives
 - (d) Preparing time plans and activity network diagrams to organize project activities
 - (e) Preparing activity and resource schedules to meet the project deadlines
- 45) There are different system development approaches. What system development approach(es) allow(s) the systems to change as they are being developed?
- (a) Rational Unified Process
 - (b) Joint Application Development
 - (c) Rapid Application Development
 - (d) Agile Approach
 - (e) Waterfall approach

- 46) What is/are the disadvantage(s) of using an “End-User Development approach”?
- (a) Some end users are not capable of designing and developing software.
 - (b) Users have to wait for information system professionals to develop and deliver the software.
 - (c) The team might not properly document the system.
 - (d) Systems might have not properly tested and there can be bugs in the code.
 - (e) Users have to clearly specify all the system requirements to the software developing company
- 47) Which of the following can be considered as computer waste?
- (a) Replacing all existing hardware with new hardware in every three years.
 - (b) Implementing complex computer systems irrespective of their usefulness.
 - (c) Disposing outdated software and hardware after a proper evaluation for their reusability.
 - (d) Disregarding office work and playing games and watching videos during the office time.
 - (e) Sending emails with heavy attachments to group e-mail lists.
- 48) In order to prevent computer related waste and mistakes a company can;
- (a) block emails with attachments in group emails.
 - (b) conduct awareness programmes on use and maintenance of computer systems.
 - (c) punish employees who often send emails to all the staff.
 - (d) establish policies and procedures regarding efficient acquisition, use, and disposal of systems and devices.
 - (e) reward the staff members who manage to use old systems and never request for new hardware and software.
- 49) Which of the following statements **BEST** describes who a cyber-terrorist is?
- (a) One who attacks another by abusing and insulting through social media.
 - (b) One who uses another one’s personal information to gain access to his/her existing accounts.
 - (c) One who threatens or forces a government or organization to advance his/her political or social objectives by launching computer-based attacks
 - (d) A software that sends malicious messages to people in group email lists.
 - (e) A software that attempts to gain unauthorized or illegal access to computer systems to steal passwords, corrupt files and programs, or even transfer money.
- 50) Which of the following is/are antivirus program(s)?
- | | |
|------------------|---------------|
| (a) Trojan Horse | (b) McAfee |
| (c) Rootkit | (d) Kaspersky |
| (e) Variant | |
