



**University of Kelaniya – Sri Lanka**  
**Centre for Distance & Continuing Education**  
**Bachelor of Science (General) External**  
**Second year second semester examination - 2019 (2024 February)**  
**(New Syllabus)**  
**Faculty of Science**

**COST 27582 - Information Systems**

**No. of Questions: 04      No. of Pages: 03      Time: 02 Hours**

**Answer ALL questions.**

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- 1)
- a) Define the term "Information System." (10 Marks)
  - b) List five components of an information system. (10 Marks)
  - c) Briefly explain the following information systems. (10 Marks)
    - i) Transaction Processing System (TPS)
    - ii) Management Information System (MIS)
    - iii) Enterprise Resource Planning (ERP) System
  - d) What is the difference between Batch TPS and online TPS? (15 Marks)
  - e) Explain three functions of an information system. (10 Marks)
  - f) Write down five characteristics of valuable information. (15 Marks)
  - g) Briefly explain three components of Management Information Systems. (10 Marks)
  - h) Explain security, privacy, and ethical issues of information system and internet. (15 Marks)

2)

- a) Draw the Organizational Pyramid of Management Information System and explain each component. (20 Marks)
- b) Management Information Systems consist of three decision levels. Explain each level briefly. (15 Marks)
- c) Write down five objectives of Transaction Processing System. (10 Marks)
- d) Data collection of Transactions Processing System has three methods. Describe each method briefly. (15 Marks)
- e) What is the usage of Point-of-Sale (POS) Transactions Processing System? (05 Marks)
- f) List three functions of a Management Information System. (15 Marks)
- g) What is meant by Key Performance Indicator (KPI)? (10 Marks)
- h) Soft data and hard data can be used to support decision-making processes. What is the difference between soft data and hard data? (10 Marks)

3)

- a) What is meant by Value Chain Analysis? (05 Marks)
- b) Business value chain has following primary activities. Explain each term briefly.  
i) Inbound Logistics  
ii) Operations/Manufacturing  
iii) Outbound Logistics (15 Marks)
- c) What is Supply Chain Management (SCM)? (10 Marks)
- d) Write down three benefits of SCM? (15 Marks)
- e) What is the difference between Push-based model and Pull-based model in the Supply Network? (10 Marks)
- f) Explain briefly Operational and Analytical Customer Relationship Management Systems. (10 Marks)

g) Draw the Enterprise Resource Planning (ERP) System Architecture. (20 Marks)

h) Describe the following terms briefly.

- i) Internet
- ii) Intranet
- iii) Extranet

(15 Marks)

4)

a) What is the difference between static IP addresses and dynamic IP addresses? (10 Marks)

b) What is the main purpose of Domain Name Server (DNS)? (05 Marks)

c) What is Artificial Intelligence (AI)? (05 Marks)

d) Write down five differences between narrow AI and general AI. (10 Marks)

e) What is meant by cloud computing? (05 Marks)

f) The following are the working models for cloud computing. Describe each term briefly.

- i) Deployment
- ii) Service Models

(10 Marks)

g) Write down two advantages and two disadvantages of cloud computing. (10 Marks)

h) List five steps of Knowledge Discovery process. (10 Marks)

i) Briefly explain three properties (3 V's) of big data. (15 Marks)

j) Explain four applications of data mining. (20 Marks)

