

**CSC – Systems Analysis**

**T033**

**Monday, 14/11/2016**

**08:30 – 11:30**

WORKFORCE DEVELOPMENT AUTHORITY



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**ADVANCED LEVEL NATIONAL EXAMINATIONS, 2016,  
TECHNICAL AND PROFESSIONAL STUDIES**

**EXAM TITLE: Systems Analysis**  
**OPTION: Computer Science (CSC)**  
**DURATION: 3hours**

**INSTRUCTIONS:**

The paper is composed of **three (3) main Sections** as follows:

|   |                 |
|---|-----------------|
| <b>Section I: Fourteen (14) compulsory</b> questions.           | <b>55 marks</b> |
| <b>Section II: Attempt any three (3)</b> out of five questions. | <b>30 marks</b> |
| <b>Section III: Attempt any one (1)</b> out of three questions. | <b>15 marks</b> |

**Note:**

***Every candidate is required to carefully comply with the above instructions. Penalty measures will be applied on their strict consideration.***

**Section I. Fourteen (14) Compulsory questions****55marks**

- 01.** In which way is physical DFD useful? **3marks**
- 02.** Why is it recommended to document and to train on the software being used just while implementing it? **3marks**
- 03.** Differentiate open – ended questions from closed – ended questions and give example for each. **3marks**
- 04.** Distinguish True from False for the following statements. Use the table below. **5marks**

- ▶ A collection of components that work together to realize some objectives forms a system.
- ▶ System life cycle is not an organizational process of developing and maintaining a system.
- ▶ In the system analysis and design terminology the system development life cycle means software development life cycle.
- ▶ Coding is a step of SDLC that follows implementation phase.
- ▶ System analysis and system design are the same phase of system development life cycle.

| <b>True statements</b> | <b>False Statements</b> |
|------------------------|-------------------------|
|                        |                         |

- 05.** What is an Information System? **3marks**
- 06.** Differentiate functional from no functional requirements of a system. **3marks**
- 07.** Why do businesses need Systems Analysts? **3marks**
- 08.** Why are system tests necessary just before implementing a developed system? **3marks**
- 09.** What are the initial two steps followed by a system analyst when he is requested to design an information system? **3marks**
- 10.** List at least three main differences between Data Flow Diagram (DFD) and flowchart. **6marks**
- 11.** Explain the term “End- User”. **4marks**
- 12.** Define: software error, software fault and software failure. **6marks**
- 13.** Describe a system analyst. **5marks**
- 14.** Mention what are the types of requirements that a system analyst should gather and analyze? **5marks**

**Section II. Choose and answer any three (3) questions.**

**30marks**

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- 15.** During design phase, there are three primary ways to approach the creation of new system. Explain them. **10marks**
- 16.** There are two main data storage formats, file and database. Explain following terms:
- a. Master files
  - b. Transaction files
  - c. Look up file
  - d. Audit file
- 10marks**
- 17.** Testing occurs during the implementation phase. Explain:
- (a) Unit testing
  - (b) Integration testing
  - (c) Black box testing
  - (d) System testing
- 10marks**
- 18.** a. Explain the project work plan.
- b. Explain the importance of showing tasks dependencies in software project management. **10marks**
- 19.** Interview is one of the techniques used for data/information collection. Differentiate the three types of interview questions. **10marks**

**Section III. Choose and answer any one (1) question.**

**15marks**

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- 20.** Explain the following three fundamental types of user documentations:
- (1) Reference documents
  - (2) Procedures manuals
  - (3) Tutorials
- 21.** What is primarily done during the design phase?
- (a) Explain three strategies among which a company may choose during the design phase
  - (b) What is the importance of support plan established during implementation phase?
- 22.** (A) Explain the break-even-point, a technique used to measure the software project's worth.
- (B) Explain the Organizational feasibility.