



PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF SCIENCE INFORMATION TECHNOLOGY AND BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BSIT201 BIT201

COURSE TITLE: SYSTEMS ANALYSIS AND DESIGN

CAMPUS: ROYSAMBU

EXAM DATE: FRIDAY, 6TH DECEMBER 2024

TIME: 6:00PM-9:00PM

INSTRUCTIONS

- This exam script has **TWO (2)** sections.
- Read all questions carefully before attempting.
- Answer All questions in Section **A** and any other THREE questions in Section **B**.
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

Section A (Compulsory)

Question One

- a) Examine what a system analyst needs to consider when designing the user interface. **[2 Marks]**
- b) A system leads to a lot of planning and less of implementation. Do you agree? Justify your answer. **[4 Marks]**
- c) Discuss system investigation clearly stating the activities involved. **[4 Marks]**

Section B (Answer any 3 Questions)

QUESTION TWO

- a) Examine three major activities in requirements determination. **[4 Marks]**
- b) Assuming you are senior systems analysts working in an IT department of a large organization that currently uses the traditional SDLC as the standard for developing new systems. You have been asked by your manager to examine a number of structured systems methodologies with a view to recommending the most appropriate one to be adopted by the company. Describe three features of the structured approach to systems analysis and design. **[6 Marks]**

QUESTION THREE

- a) Discuss the typical stakeholders in an information system. **[4 Marks]**
- b) Draw a context diagram and a data flow diagram for a distance education university described in the following narrative:

Students send in an application form containing their personal details, and their desired course. The university checks that the course is available and that the student has necessary academic qualifications. If the course is available the student is enrolled in the course, and the university confirms the enrolment by sending a confirmation letter to the student. If the course is unavailable the student is sent a rejection letter.

[6 Marks]

QUESTION FOUR

- a) Describe a spiral model. **[2 Marks]**
- b) A fast-food organization has expanded the number of outlets around a city. At the moment the outlets use conventional cash tills. The organization would like to implement a Point-Of-Sale (POS) system in all its outlets with linkages to a centralized computer. Assume you are the organization's systems analyst and

you have been asked to assist in the conversation process from the existing system to the new one:

- i. Evaluate the change-over options that are available and recommend the most suitable method for the new system. **[4 Marks]**
- ii. Construct a sequential check list for the activities to be carried out during the implementation process. **[4 Marks]**

QUESTION FIVE

- a) Discuss the roles of software maintenance in system development. **[2 Marks]**
- b) Analyze two types of system testing. **[4 Marks]**
- c) An Online Community Library System (OCLS) is a library subsystem that provides people of the community with access to borrow e-books and e-videos online at their convenient time. On demand, e-videos and e-books are chargeable. Users of the system are Community people, Library Staff, Credit Payment Service and PayPal. Community people use OCLS to login into the system, view items, borrow books and/or videos, and complete checkout; Library staff uses OCLS to view items, login and complete check out; Credit Payment Service and PayPal use OCLS to complete check out. Represent this situation with a Use Case diagram.
[4 Marks]

QUESTION SIX

- a) GalaxyTech Kenya limited Company would like to shortlist candidates for a Systems Analyst's position. This is position reporting to the IT Manager and attracts a good remuneration.
 - i) Discuss why you are the best candidate for the job. **[2 Marks]**
 - ii) Assuming that you are hired for the job. Prepare an orientation report highlighting some of the expertise you would bring into the company. **[4 Marks]**
- b) Investigate current technology drivers that influence information systems development. **[4 Marks]**

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