



UGANDA BUSINESS AND TECHNICAL EXAMINATIONS BOARD

PAPER CODE TDIT 121	PROGRAMME NATIONAL DIPLOMA IN INFORMATION AND COMMUNICATION TECHNOLOGY YEAR I SEMESTER II	DATE TUESDAY, 9 TH AUGUST 2022
SERIES JULY/AUGUST 2022	PAPER NAME SYSTEMS ANALYSIS AND DESIGN	TIME ALLOWED 3 HOURS
YOU SHOULD HAVE THE FOLLOWING FOR THIS EXAMINATION Answer Booklet Ball Point Pen		

INSTRUCTIONS TO CANDIDATES

1. This paper consists of **eight** questions in **two** sections **A** and **B**.
2. Answer only **five** questions including **two** questions from section **A** and **three** questions from section **B**.
3. All questions carry equal marks.
4. All answers to each question should begin on a fresh page.
5. **Do not** write anywhere on this question paper.
6. All rough work should be done in the official answer booklet provided.
7. Read other instructions on the answer booklet.

SECTION A - (40 MARKS)

Answer only two questions from this section.

Question One

- (a) Define the term Prototyping as applied to systems analysis and design. (02 marks)
- (b) Explain **two** types of prototyping carried out during systems analysis. (04 marks)
- (c) TKL Limited developed a system for its client. Developers used Computer aided Software Engineering tools at the design stage to ensure a high quality and defect free system.
 - (i) Explain **three** types of tools the developers used. (06 marks)
 - (ii) Suggest **four** benefits of the tools in 1(c)(i). (08 marks)

Question Two

- (a) Define the term project as used in system analysis and design. (02 marks)
- (b) Explain **two** characteristics of a project. (04 marks)
- (c) Suggest **three** conditions under which a project is considered a failure. (06 marks)
- (d) Explain **four** causes of project failure. (08 marks)

Question Three

- (a) Distinguish between **tangible** and **intangible benefits** from information systems projects. (04 marks)
- (b) Give **two** examples of each of the benefits in 3(a). (04 marks)
- (c) Fred has been recruited in a project management company. The manager invited him for a project initiation and planning meeting.
 - (i) Suggest **two** reasons why the above meeting is very important to the new employee. (04 marks)
 - (ii) Explain **four** factors to consider while determining the scope of a project. (08 marks)

SECTION B - (60 MARKS)

Answer only three questions from this section.

Question Four

- (a) KADO limited has approached you as a Computer specialist to design a job advert for the position of Systems Analyst. (04 marks)
- (i) State **four** qualities that the applicants must possess. (08 marks)
- (ii) Explain **four** roles you will specify for the advertised position. (08 marks)
- (b) Describe **four** approaches of systems development.

Question Five

Catherine's Catering enterprise is a small business that handles meals for individuals and social occasions. The business started on a small scale but with time, the number of events started to increase. Previously, Catherine was able to manage the business using spreadsheets and word processing but later she found difficulty in handling endless phone calls about the types of meals available, changes to the number of guests attending an event and so on. You have been hired to design a system that addresses the enterprise issue.

- (a) Identify **two** problems Catherine's business is currently facing. (02 marks)
- (b) Outline **two** methods that she should use to collect data about her business. (02 marks)
- (c) State **two** objectives of the system you will design. (02 marks)
- (d) Describe the steps you will take to come up with a system that will solve Catherine's problems. (14 marks)

Question Six

- (a) Distinguish between a **data flow diagram** and a **decision tree**. (04 marks)
- (b) Outline **three** components of a data flow diagram. (03 marks)
- (c) The university has a counsellor whose role is to advise students. Students take a course that comprises of a number of course units. Each course belongs to a given department.
- (i) Identify the main entities of the university. (05 marks)
- (ii) Draw an Entity Relationship diagram showing the above entities and their relationships. (08 marks)

Question Seven

The management of Blookies Financial Services limited has approached the country manager requesting him to conduct user training sessions for the new project managers.

- (a) Explain **five** scheduling techniques that the new managers should use while handling their tasks. (10 marks)
- (b) Describe **five** functions of the projects manager position. (10 marks)

Question Eight

- (a) Outline **four** components of a Database Management System. (04 marks)
- (b) Explain **four** advantages of using databases in an organization. (08 marks)
- (c) BAILER is a Web-based trading company based in Kampala. The company has expanded, and needs a new Information System to manage the inventory, the brokerage operation and information about prospective buyers. You have been approached to design samples of computer screens and reports that the new system might produce.
 - (i) Outline **four** guidelines you will follow to come up with a good user interface. (04 marks)
 - (ii) Explain **two** types of reports you will design for a client. (04 marks)

END