JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF INFORMATICS AND INNOVATIVE SYSTEMS

UNIVERSITY EXAMINATION FOR THE DEGREE   IN BUSINESS INFORMATION SYSTEM

1ST YEAR 2ND SEMESTER 2023/2024 ACADEMIC YEAR

MAIN CAMPUS

COURSE CODE: ITB 2108

COURSE TITLE: BUSINESS INFORMATION SYSTEMS DEVELOPMENT

EXAM VENUE: CL I   **STREAM: BIIS**

DATE: 29/04/2024   **EXAM SESSION: 9.00 – 11.00 AM**
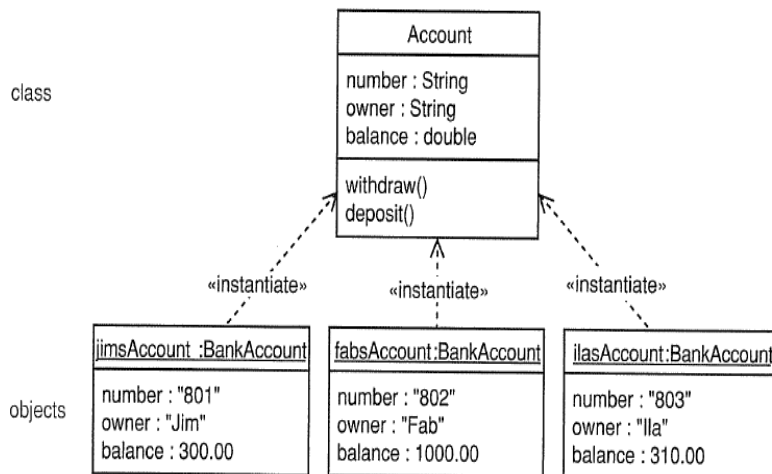
TIME: 2.00 HOURS

INSTRUCTIONS:

1. **Answer Question 1 (Compulsory) and ANY other two questions**
2. **Candidates are advised not to write on the question paper**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room.**

QUESTION ONE (30 MARKS)

a) Define the following terms as used in business information systems:
i.	Project Management	(2 marks)
ii.	Project Scoping	(2 marks)
iii.	Process Management	(2 marks)
iv.	Project Planning	(2 marks)

b) Many new system developments and interests in project management are being driven by quickly changing global markets, technology, and education. Global competition is putting pressure on prices, response times, and product/service innovation. Computer and telecommunications technologies along with greater education are allowing companies to respond to these pressures, pushing the boundaries of project management into regions where new tools are being developed for types of projects that have never been considered before. In this regard explain the Trends in Project Management which may be used in achieving these trends   (10 marks)

c) Explain the following terminologies in Case diagram in the UML   (4 marks)

    i. Actor
   ii. Uses
  iii. Extends
   iv. include

d) Class instantiation can be illustrated as shown in the diagram below ,explain class instantiation and how class instantiation it is implemented in the diagram
(4 marks)

QUESTION TWO (20 MARKS)

a) What is Project Management in Information Technology   (4 marks)

b) A business system development project consists of seven activities and the time estimates of the activities as given below:

Activity	Optimistic Days	Most likely Days	Pessimistic Days
1-2	4	10	16
1-3	3	6	9
1-4	4	7	16
2-5	5	5	5
3-5	8	11	32
4-6	4	10	16
5-6	2	5	8

Required

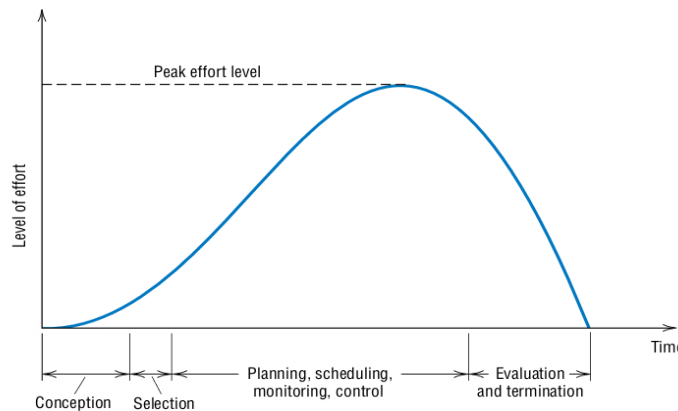i.   Draw the network diagram.   (4 marks)
ii.   Identify the critical path and its duration.   (2 marks)
iii.   What is the probability that project will be completed in 5 days earlier than the critical path duration?   (2 marks)

c) Discus the Business information Changeover techniques involved   in the project implementation.   (4 marks)

d) Explain any four key components of an information system development.   (4 marks)

QUESTION THREE (20 MARKS)

a) Describe FIVE phases of business information system development.   (8 marks)

b) Define the term stakeholder and using relevant examples describe the role of stakeholders in the process of business system development.   (6 marks)

c) Differentiate between data and information and more specifically data types used in system development   (6 marks)

QUESTION FOUR (20 MARKS)

a) Illustrate any SIX components of Database Management Systems. (6 marks)

b) The modern trends of on Project management is illustrated by the diagram bellow. Explain time distribution of project management efforts as shown. (4 marks)

c) Explain project selection and the process involved in selection of projects (4 marks)

d) Define a project and explain any five characteristics that help differentiate projects from other functions carried in the daily operations of the organization? (6 marks)

QUESTION FIVE (20 MARKS)

a) Using diagram explain the types and levels information system operations (8 marks)

e) Explain the following tools used in project management and specify the advantage of each
      i.   Gantt Charts
     ii.   PERT Charts
    iii.   Work Breakdown Structures (WBS). (6 marks)

b) Discuss the concepts of Object Oriented Programming and cite its application in business Information systems development (6 marks)