



TECHNICAL UNIVERSITY OF MOMBASA

INSTITUTE OF COMPUTING AND INFORMATICS

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

UNIVERSITY EXAMINATION FOR:

BTIT/SEP 2012/J-FT Y4S2(S)

EIT 4418: WORKFLOW MANAGEMENT SYSTEMS

END OF SEMESTER EXAMINATION

SERIES:AUGUST2016

TIME:2HOURS

DATE:Pick DateSelect MonthPick Year

Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Attempt question ONE (Compulsory) and any other TWO questions.

Do not write on the question paper.

Question ONE

- a) Define the following terms:
- i). Workflow
 - ii). Workflow management system (WFMS)
 - iii). Business Process (6 marks)
- b) List any two workflow management systems (WFMS) software's (2 Marks)
- c) Distinguish between Intraorganizational Processes and Process Choreographies (4 marks)
- d) Identify three benefits of workflow management system. (3 marks)
- e) *"The Accounting Department receives and pays invoices. The payment of an invoice can be made by a bank transfer, check or credit card. Only one payment method is used"*.
Identify and draw the suitable basic control flow pattern for the above narration. (4 marks)
- f) Briefly explain three goals of business process management. (3 marks)
- g) The business process domain is characterized by several types of stakeholders with different knowledge, expertise, and experience. Describe the tasks carried out by the following:
- i). Chief Process Officer
 - ii). Business Engineer (4 marks)
- h) Identify the challenges of workflow management. (4 marks)

Question TWO

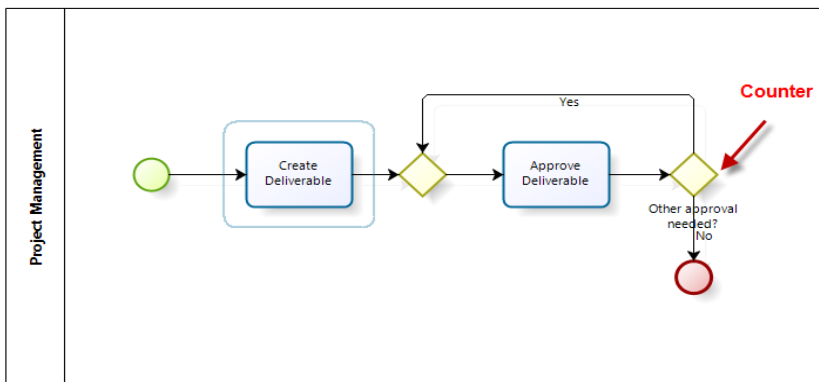
- a) Describe four typical features associated with many Workflow Management Systems (4 marks)
- b) With the aid of a diagram explain the Workflow Reference Architecture. (8 marks)
- c) Define the following terms:
- i). Process (2 marks)
 - ii). Activity (2 marks)
- d) With the aid of a diagram, briefly describe the following Advanced Branching and Synchronization Patterns:
- i). Multiple Merge (4 marks)
 - ii). Discriminator

Question THREE

- a) Briefly describe major components of a Workflow Management System. (8 marks)
- b) Distinguish between the following:
- i). Multiple-application workflow and Human Interaction Workflows (4 marks)
 - ii). Process Designer and Knowledge Worker (4 marks)
- c) *“An employee requests a loan from the company. To grant the credit to the employee, it must be approved by the boss and by the financial area. When both of them approve the request, the money is disbursed to the employee”.*
Identify and draw the suitable workflow modeling patterns for the above narration. (4 marks)

Question FOUR

- a) Describe the major steps in the Business Process Lifecycle (8 marks)
- b) Identify and explain the following workflow modeling structural pattern. (4 marks)



- c) Describe the following categories of workflow management systems, giving one advantage and disadvantage in each case.
- i). Web-based Workflow Systems (4 marks)
 - ii). Suite-based Workflow Systems (4 marks)

Question FIVE

- a) Describe the following trigger patterns:
- i). Transient trigger (2 marks)
 - ii). Persistent trigger (2 marks)
- b) Distinguish between the following:
- i). Organizational business processes and Operational business processes. (4 marks)
 - ii). Process and Activity (4 marks)
- c) Identify the basic terminologies (i) to (vi) in the following diagram. (8 marks)

