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*(Knowledge for Development)*

KIBABII UNIVERSITY

**UNIVERSITY EXAMINATIONS  
2021 /2022 ACADEMIC YEAR**

**END OF SEMESTER EXAMINATIONS  
YEAR THREE SEMESTER TWO EXAMINATIONS**

**FOR THE DEGREE OF  
BACHELOR OF SCIENCE  
(COMPUTER SCIENCE)**

**COURSE CODE : CSC 325**

**COURSE TITLE : SOFTWARE PROJECT  
MANAGEMENT**

**DATE: 07/09/2022**

**TIME: 9.00 A.M – 11.00 A.M**

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**INSTRUCTIONS TO CANDIDATES**

**ANSWER QUESTIONS ONE AND ANY OTHER TWO.**

**QUESTION ONE (COMPULSORY) [30 MARKS]**

- a) Define the term project management [2 Marks]
- b) Why do we carry out monitoring and control on a project? [3 Marks]
- c) Name FOUR criteria by which a project can be judged a success. [2 Marks]
- d) What are the three project activities that are needed for WBS? [3 Marks]
- e) Describe THREE different algorithmic techniques for estimating effort for an IT system development project. [6 Marks]
- f) Identify and explain TWO advantages of using a Gantt chart in comparison with a network diagram, and TWO advantages of using a network diagram compared with a Gantt chart. [6 Marks]
- g) Explain what the difference is between project risks and business risks [2 Marks]
- h) Explain what in project management is meant by 'quality' [2 Marks]
- i) In preparation for your meeting with your sponsor, you have developed an estimate using the PERT method. Briefly describe this method. [4 Marks]

**QUESTION TWO [20 MARKS]**

You have been asked to assemble a project team for a development project. You will require analysts, programmers and testers. There is an IT Department at the company doing maintenance and support. You have been told that you will be able to get about half the team you require from here and the other half will be hired from outside.

- a) Describe FIVE key steps in the recruitment process from a staffing vacancy being identified to putting a new effective team member in place. [10 Marks]

- b) List FIVE factors you would take into account when deciding who should do which task in a plan. [5 Marks]
- c) The team members from the IT Department have been working on their tasks for a month when the newly hired external analysts and programmers join. There is then a decrease in the productivity of the existing staff. What could explain this? [5 Marks]

### **QUESTION THREE [20 MARKS]**

Conflict is inevitable in a project setting, and conflict resolution is part of a project manager's core responsibilities. But conflict resolution is more than just refereeing disputes. The root causes of conflict in a project setting are largely due to flaws in the project plan, process, or organization.

- a) What is Conflict Management? [2 Marks]
- b) As a project manager how do you prepare to manage conflict? [6 Marks]
- c) What are some of the root causes of conflict and how can you resolve them? [6 Marks]
- d) Your design reviews in the project always get emotional - what can you do to avoid this conflict? [6 Marks]

### QUESTION FOUR [20 MARKS]

a) The table below shows the list of activities, their duration and immediate predecessors

Activity	Duration in weeks	Immediate predecessors
A	4	-
B	3	-
C	3	-
D	12	C
E	7	B
F	5	A
G	3	E,F

- i) What do you understand by “Critical Path” in network diagrams. [2 Marks]  
ii) Construct an Activity on Node diagram for the project [6 Marks]  
iii) Identify the activities on the critical path in a(ii) above. [2 Marks]
- b) Discuss the Triple point constraints of any project. [6 Marks]
- c) Discuss some of the software cost estimation techniques that a project manager may use and when each is applicable. [4 Marks]

### QUESTION FIVE [20 MARKS]

- a) i) Discuss six resources needed in software development projects [6 Marks]  
ii) Outline any FOUR Characteristics of a project. [4 Marks]
- b) Explain how a project manager might use information generated as part of project control reporting to identify situations that are behind schedule for each of the following reasons:
- Staff who are intended to be working full-time on the project are taken off sometimes to help*
  - resolve emergency situations on other projects;*
  - The original estimates of development times were too low*
  - The project scope has been extended to meet additional requests from users*
  - Staff productivity is lower than expected.*

[10 Marks]