



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2020 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF COMPUTER AND LIBRARY SCIENCE

REGULAR PROGRAMME

CMT 408: SOFTWARE PROJECT MANAGEMENT

Date: APRIL 2020

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) Define the following terms as used in project management. **(4 Marks)**
- i. Software project management
 - ii. Conway's law.
 - iii. Process.
 - iv. Earned value Analysis (EVA).
- b) Define a Software Project and give **FOUR** attributes on how software projects differ from other artificial projects. **(4 Marks)**
- c) What is PMBOK in Project Management and explain **SIX** Knowledge Areas as defined by PMI. **(4 Marks)**
- d) With an AID of a diagram explain the **FIVE** Process Groups and list the Deliverable if any in each phase. **(5 Marks)**
- e) List **FOUR** project Dimensions and Explain each Related Mistake. **(4 Marks)**

f) Define Work Breakdown Structure (WBS) and Explain the **THREE** techniques that project managers can employ when designing the project structure. **(5 Marks)**

g) Give **THREE** reasons why the management of software projects is different from other types of management **(3 Marks)**

- Q2. a) Using a well labeled diagram Explain the project life cycle. **(8 Marks)**
b) Explain **SIX** responsibilities of a Project manager **(6 Marks)**
c) Describe **FIVE** major features of Programme management. **(6 Marks)**

- Q3. a) Define Scope creep and Describe the techniques for handling scope creep. **(8 Marks)**
b) “Software project management is a young field and thus most of the field engineers and managers are also young. Young people have less experience and therefore tend to fail more” Discuss and give **FOUR** reasons why software project fail. **(6 Marks)**
c) Briefly explain **THREE** project scheduling techniques **(7 Marks)**

- Q4. a) With an aid of a diagram Describe the following Tools used in Project Management of the project, stating their specific purpose. **(6 Marks)**
i. Gantt chart
ii. PERT chart
b) Suppose you are involved in a large project concerning the development of a patient planning system for a hospital. You may opt for one of the two following strategies:

The first strategy is to starts with a less complete requirements analysis phase, after which a pilot version is developed. This pilot version is installed in one or a few small departments. Further development of the system is guided by the experience gained while working with the pilot version.

The second strategy is to start with a thorough analysis of user requirements, after which the system is built according to these requirements.

Which one would be your choice? Explain why your choice for this particular strategy.
(4 Marks)

c) Describe the **FIVE** Steps for approaching Risk in projects
(10 Marks)

Q5. a) Explain **THREE** basic tools and techniques for cost estimates
(6 Marks)

b) As a project manager explain **FIVE** conflict handling modes you will employ in the event of a conflict
(4 Marks)

c) Using a diagram Explain the steps for creating Activity-on-Arrow (AOA).
(5 Marks)

d) Explain **FOUR** attributes of a good project Plan.
(4 Marks)

END