

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

FOURTH YEAR SEMESTER TWO EXAMINATION FOR BACHELOR
OF SCIENCE IN COMPUTER SCIENCE

COMP 419: SOFTWARE PROJECT MANAGEMENT

STREAMS: BSC (COMP. SCI)

TIME: 2 HOURS

DAY/DATE: TUESDAY 09/4/2019

11.30 A.M. – 1.30 P.M.

INSTRUCTIONS: Answer Question One and any other two questions

Question one (30 marks)

- (a) A times the process of software development may be ripe for improvement. Explain how you would go about improving this process. (3 marks)
- (b) Highlight the four stages of software development before maintenance. (4 marks)
- (c) A high quality software process may lead to high-quality software product. However, this is not always the case. Discuss. (4 marks)
- (d) Outline the four risk management activities for a software project. (4 marks)
- (e) Explain the following software product metrics. (4 marks)
 - (i) Cyclomatic complexity
 - (ii) Length of identifiers
- (f) Explain why program inspections are an effective technique for discovering errors in a program. What types of errors are unlikely to be discovered through inspections? (5 marks)
- (g) Discuss three software project scheduling activities. (6 marks)

Question two (20 marks)

- (a) What is a software product quality? Discuss four factors that influence the quality of a software product. (10 marks)
- (b) In software project management, one of the major issues is change management. Any software product under development is prone to changes. Explain five factors you would consider when evaluating change in proposals for a software system. (10 marks)

Question three (20 marks)

- (a) One of the key challenges for software project managers is quoting a reasonable price for a software project. Discuss five factors that would influence a reasonable price quote. (10 marks)
- (b) Discuss five software project or product risks associated with a software under development. Show how such risks can be avoided. (10 marks)

Question four (20 marks)

- (a) Explain any five software quality attributes for an online banking software system. (10 marks)
- (b) Discuss five possible problems that could arise if a company does not develop effective configuration management policies and processes. (10 marks)

Question five (20 marks)

- (a) The release of software product or a new version requires a considerable amount effort in planning. Discuss five factors that would impact a release plan. (10 marks)
 - (b) Estimating the cost of a software project/system is inherently a risky task, irrespective of the technique being used. Suggest and explain five ways in which the risk in cost estimation can be reduced. (10 marks)
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