

KABARAK



UNIVERSITY

UNIVERSITY EXAMINATIONS

2009/2010 ACADEMIC YEAR

FOR THE DEGREE OF BACHELOR OF COMPUTER SCIENCE

COURSE CODE: COMP 313

COURSE TITLE: SOFTWARE ENGINEERING

STREAM: Y3S1

DAY: FRIDAY

TIME: 9.00 – 11.00 A.M.

DATE: 13/08/2010

INSTRUCTIONS:

- Attempt **Question ONE** and **Any other TWO**

PLEASE TURNOVER

Question ONE: (30 Marks)

- a) Is it possible to obtain software size before coding? Justify your answer with suitable examples. (4 Marks)
- b) Software production involves many steps. Describe Four main ones. (4 Marks)
- c) Maintenance of software systems is a tedious task and is usually associated with many problems. Describe any four problems in software maintenance and their potential solutions. (4 Marks)
- d) Explain the problems of software development process model. (5 Marks)
- e) Explain three features of Waterfall process model. (3 Marks)
- f) Explain any three primary purpose of having reviews or inspections in any project. (3 Marks)
- g) Explain how you will improve schedules of the project you have been working on to meet set datelines. (4 Marks)
- h) Describe the various types of feasibility study in software development. (3 Marks)

Question TWO: (20 Marks)

- a) What is a risk? Describe six risk factors identified in risk management process. (4 Marks)
- b) Identifying project scope and objectives is one of the phases in project planning. Explain what is done. (4 Marks)
- c) A company wants to change its management information system. Explain the factors that may have made her to adopt this change. (4 Marks)
- d) Explain the factors considered when selecting a suitable software development model. (4 Marks)
- e) Describe the software maintenance process with a sample diagram. (4 Marks)

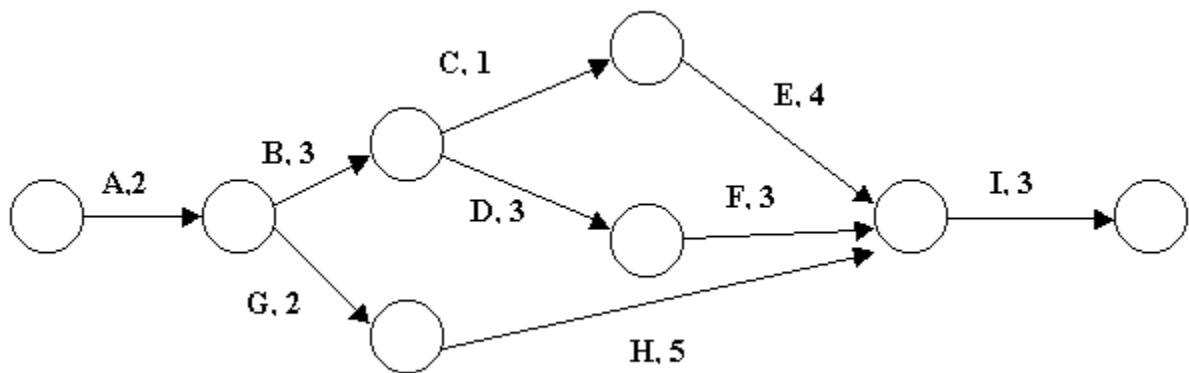
Question THREE: (20 Marks)

- a) Describe the hierarchical team organization structure with the help of a diagram. Give the advantages. (5 Marks)
- b) Describe the quantitative measures in software maintainability (4 Marks)

- c) What is the significance of having a prototype for the client in every software developed?
(5 Marks)
- d) Why does software require undergoing testing phase before being released to the market?
Discuss. (4 Marks)
- e) Explain the functions of software testing. (2 Marks)

Question FOUR: (20 Marks)

- a) Describe the Waterfall model of software development with a sample diagram and highlight its advantages and disadvantages. (4 Marks)
- b) Maintenance is not a one time process, but an ongoing one. Why is it so? (4 Marks)
- c) Explain the functions of testing. (4 Marks)
- d) Describe the FURBS software quality factors. (5 Marks)
- e) Study the chart below.



Required.

- i. Describe the chart above. (1/2 Mark)
- ii. Which task is on the critical path? (1/2 Mark)
- iii. The project manager decides to reduce the time needed for tasks D and F by one day each. How effective will this reduction be in achieving his aim of maintaining the original finish time for the project? (2 marks)