

DIT 223 – SOFTWARE ENGINEERING

EXAM

DURATION: 2 HOURS

DATE: APRIL 2016

SECTION A (30 Marks)

Question One

- (a) Define the term software engineering and explain the characteristics of software (6 marks)
- (b) Explain using the help of a diagram the spiral model. (8 marks)
- (c) Explain requirements that software's should have. (8 marks)
- (d) What are System Models and what is their importance in software engineering?(4 marks)
- (e) Explain prototype model in software development cycle. What is its strength and when is it necessary to use it. (4 marks)

SECTION B: (20 Marks Each)

Instructions: Answer any two questions

Question Two:

- (a) What is a prototype? Explain different types of prototyping. (10 marks)
- (b) Explain the waterfall model in software development. (10 marks)

Question Three

- (a) Differentiate between Top down and Bottom Up design concepts as used in software engineering (2 marks)
- (b) What are CASE tools? Describe any four CASE building blocks (4 marks)
- (c) What is SDLC (Software Development Life Cycle?) (2 Marks)
- (d) Explain various phases of Software Development Life Cycle? (12 Marks)

Question Three

- (a) Discuss the software quality management. (10 marks)
- (b) Discuss the software testing techniques. (10 marks)

Question Four

- (a) Company A has approached you to design for it the software for running its activities. Explain the steps involved. (10 marks)
- (b) Discuss what you understand by the term software validation. (10 marks)

Question Five

- a) Documentation is an important part of software engineering; explain the types of documentation used in software development. (10 marks)
- b) Explain the special methods of non functional software testing. (10 marks)