019 (33)

SOUTH EASTERN UNIVERSITY OF SRI LANKA

SECOND EXAMINATION IN BACHELOR OF SCIENCE IN MANAGEMENT AND INFORMATION TECHNOLOGY-2009/2010

SEMESTER – 11, ~~JANUARY~~ / FEBRUARY - 2012

MIT 2253 – SOFTWARE ENGINEERING

Answer all questions

Time: 3 Hours

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1.

i) Explain key challenges facing Software Engineering. (3 Marks)

ii) Identify waterfall model phases, and explain waterfall model's problems (5 Marks)

iii) Distinguish incremental development from spiral development. (3 Marks)

iv) Explain four software process activities. (6 Marks)

v) How CASE technology supports software process activities? (3 Marks)

(Total 20 Marks)

2.

i) What do you mean by requirements engineering? And explain the types of requirements. (4 Marks)

ii) List out the guidelines for writing requirements. (4 Marks)

iii) How PIECES framework can be used to classify non functional requirements? Explain. (4 Marks)

iv) Explain the phases in software design process. (4Marks)

v) Briefly explain four techniques for improving software design. (4 Marks)

(Total 20 Marks)

3.

i) Explain any of the three programming guidelines.

(3 Marks)

ii) What is software fault? And why does software fail?

(3 Marks)

iii) Identify the purpose and roles of performance testing. And explain the terms of reliability, maintainability and availability in relation to performance testing.

(5 Marks)

iv) "Delivering the system involves more than just putting the system in place. It is also helping users to understand and feel comfortable with the system"

Explain two key issues to successful transfer of a system.

(6Marks)

v) Distinguish user function from operator function.

(3 Marks)

(Total 20 Marks)

4.

i) Explain the nature and types of maintenance.

(5 Marks)

ii) What is software rejuvenation? And explain four aspects of software rejuvenation.

(5 Marks)

iii) How can you evaluate software products, processes and resources? Explain one model for each of the above.

(6 Marks)

iv) Explain two software product improvement strategies.

(4Marks)

(Total 20 Marks)

5. Distinguish the followings.

i) Consumer reuse Vs Producer reuse

ii) Extreme Programming Vs Pair programming

iii) Functional requirements Vs Non -functional requirements

iv) Sandwich integration testing Vs Modified sandwich integration testing

v) Software inspection Vs Software testing (Total 20 Marks)