



SLIATE

SRI LANKA INSTITUTE OF ADVANCED TECHNOLOGICAL EDUCATION

(Established in the Ministry of Higher Education, vide in Act No. 29 of 1995)

Higher National Diploma in Information Technology

Second Year First Semester Examination – 2020

HNDIT 2312-Principles of Software Engineering

Instructions

Time: Two (02) hours

Answer Any four Questions

All Questions carry equal marks

No. of questions : 05

No. of pages : 02

Q1)

- Engineer discipline that concern with All aspect software production*
- I. What is software engineering? (03 marks)
 - II. Briefly explain the two types of software products. *Generic Customized* (04 marks)
 - III. Write down four (04) essential attributes of good software. *Made PC* (04 marks)
 - IV. What differences has the web made to software engineering? *? ✓* (06 marks)
 - V. Explain the four (04) concepts of software engineering ethics. *? ✓* (08 marks)

(Total 25 marks)

Q2)

- set of document. requirement*
- I. What is software process? *Design & Implementation* (03 marks)
 - II. Draw a diagram for waterfall model. *step by step* (04 marks)
 - III. Compare and contrast plan driven and agile methods. *can work & schedule* (04 marks)
 - IV. State three (03) benefits of software prototyping. *Unit testing, Integration, system testing* (06 marks)
 - V. Briefly explain the four (04) best practices in extreme programming. *operation & maintain* (08 marks)

(Total 25 marks)

Q3)

- I. What is requirement specification? *?* (03 marks)
- II. Write down the main activities in requirement engineering. *?* (04 marks)
- III. Define the term non-functional requirement. Give two (02) examples. (04 marks)
- IV. Compare and contrast coupling and cohesion. *relation want ?* (06 marks)
- V. Explain the best practices for interface designing. *simple* (08 marks)

(Total 25 marks)

Q4)

- I. What is software architecture? (03 marks)
- II. Name four (04) software architectural pattern. (04 marks)
- III. Briefly explain the V model with a diagram. (04 marks)
- IV. Name two (02) types of black box testing techniques. (02 marks)
- V. Briefly explain following testing methods. (12 marks)
 - a. Unit testing
 - b. System testing
 - c. Performance testing
 - d. Release testing

(Total 25 marks)

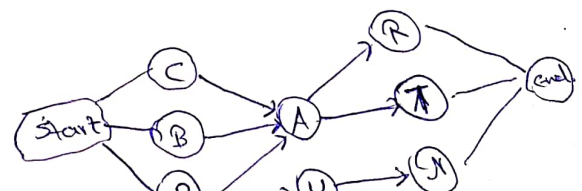
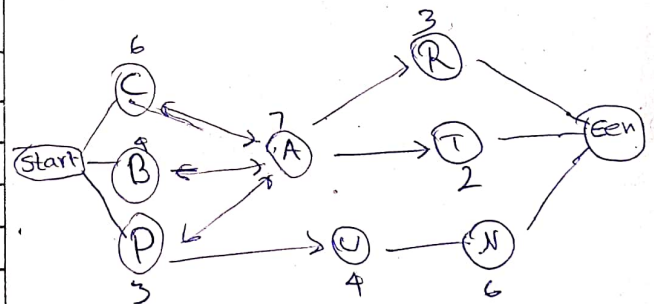
Q5)

- I. What is software maintenance? (03 marks)
- II. State four (04) reasons for software maintenance. (04 marks)
- III. List four (04) activities in configuration management. (04 marks)
- IV. Briefly explain the following terms. (06 marks)
 - a. code line
 - b. Baseline
 - c. System builds

change requirement.
Adapting new technology.
fix errors in system.
Modify software
Include new thing

- V. The following table explain the activities, dependencies and durations. Draw the network diagram and find the critical path. (08 marks)

Activity	Predecessor	Estimate in weeks
Start		0
C	Start	6
B	Start	4
P	Start	3
A	C, B, P	7
U	P	4
T	A	2
R	A	3
N	U	6
End	T, R, N	0



(Total 25 marks)