Code No: 135BM

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD
B. Tech III Year I Semester Examinations, December - 2019
SOFTWARE ENGINEERING
(Common to CSE, IT)

Time: 3 Hours   Max. Marks: 75

Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B
consists of 5 Units. Answer any one full question from each unit. Each question carries
10 marks and may have a, b as sub questions.

PART – A

(25 Marks)

1.a) What is legacy software? Explain.   [2]
  b) Define Software and its Characteristics.   [3]
  c) Discuss software scope and feasibility study .   [2]
  d) Classify various functional and Non functional requirements.   [3]
  e) Explain in brief the taxonomy of various architectural styles.   [2]
  f) Express the golden rules in performing user interface design.   [3]
  g) Explain function point metrics.   [2]
  h) What are software quality metrics?   [3]
  i) What are software risks? Explain various types of software risks.   [2]
  j) Explain the measures of software reliability and availability.   [3]

PART – B

(50 Marks)

2.a) Compare and contrast between waterfall model and spiral model with neat diagrams.
  b) Analyze the importance of the Unified process in software development.   [5+5]
OR
3.a) Give an overview of Capability Maturity Model Integration. Which level of
organizations as a customer you would prefer and why?
  b) What are various software myths prevalent in industry? Why do the stakeholders
believe them? Contradict the myths with reality.   [5+5]

4.a) Discuss various steps in requirements Engineering. What are the work products of
engineering the requirements?
  b) What is context model? Describe the importance of context model.   [5+5]
OR
5.a) Describe desirable characteristics of a good software requirement specification
document. What is the role of SRS in Software Engineering?
  b) Describe the problem of library management system using any two UML diagrams.
                                                                                     [5+5]

6.a) Explain various types of cohesion and coupling. List in the order of level of cohesion and coupling preferred for component level design.
  b) Explain various steps in the user interface design and evaluation.   [5+5]

OR

7.a) Illustrate with neat diagrams the process of mapping data – flow into a software architecture.
  b) Give an overview of steps in conducting component level design.   [5+5]

8.a) What is software Testing? Explain test Characteristics.
  b) Give an overview of white-box testing techniques with help of flow graph.   [5+5]

OR

9.a) Explain Black box testing. Give an account of Equivalence partitioning and Boundary value analysis techniques.
  b) Differentiate measures, metrics and indicators. Explain software quality metrics.   [5+5]

10.a) Explain various steps in risk management.
  b) Define software quality assurance. State various SQA activities.   [5+5]

OR

11.a) What is RMMM. Explain various methods followed to mitigate, monitor and manage risks.
  b) What is role of formal technical reviews in quality control? Discuss various steps and procedure to conduct a FTR.   [5+5]

---ooOoo---