E-3924

B.C.A.(Part-III) EXAMINATION, 2021
(Old Course)
Paper Sixth
SOFTWARE ENGINEERING
(304)

Time: Three Hours]   *[Maximum Marks:100*
[Minimum Pass Marks:40

Note: Attempt any two parts from each Unit. All questions carry equal marks.

Unit-I
1. (a) What is software engineering? Explain the needs and software problem?
   (b) Discuss the connection between waterfall model and iterative model?
   (c) What are software process model? Explain the design principle in software engineering.

Unit-II
2. (a) Briefly describe features of function-oriented metrics with example?
   (b) Discuss the role of Size Oriented Metrics in Software Engineering.
   (c) What is system development life cycle? Explain each phase of SDLC.

Unit-III
3. (a) What is software requirement specification? Why requirement specification is important in software designing?
   (b) What is the role of DFD for software requirement specification? Draw a DFD for a system that pays workers.
   (c) Explain data dictionary. What is the use of data dictionary in software development process?

Unit-IV
4. (a) What is abstraction? Explain different levels of abstraction.
   (b) What are the rules of good programming style? How can we verify code of a system?
   (c) Explain the following two approaches to design hierarchy of component:
      i.   Top down strategy
      ii.   Bottom up strategy

Unit-V
5. (a) What is software testing? Explain various types of testing.
   (b) Differentiate between verification and validation?
   (c) Explain the steps of software maintenance with the help of a diagram.