



**NP – 320**

**IV Semester B.C.A. Examination, Aug./Sept. 2023**

**(NEP Scheme)**

**COMPUTER SCIENCE**

**4.1 : Software Engineering**

Time : 2½ Hours

Max. Marks : 60

***Instruction : Answer all the Parts.***

**PART – A**

- I. Answer **any four** questions. **Each** question carries **two** marks. (4×2=8)
- 1) Define software engineering.
  - 2) List the four core agile values.
  - 3) What is problem decomposition ?
  - 4) Why smoke testing is beneficial ?
  - 5) What is prototyping ?
  - 6) Explain Software Process Improvement (SPI).

**PART – B**

- II. Answer **any 4** questions. **Each** question carries **five** marks. (4×5=20)
- 7) Explain waterfall model in detail.
  - 8) What are the agile principles of agile software development ?
  - 9) Describe the various types of box structure specification.
  - 10) What are the 4P's of management spectrum ?
  - 11) Which are the different factors that affect the project scheduling ?
  - 12) Explain Software Configuration Management (SCM).

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PART – C

- III. Answer **any four** questions. **Each** question carries **eight** marks. (4×8=32)
- 13) Explain spiral model in detail with a diagram. 8
- 14) a) How are requirements gathered using various methods ?  
b) What is Scrum ? Explain Scrum events. (4+4)
- 15) a) Explain W5HH principles for project management.  
b) Explain unit testing in detail for conventional software. (3+5)
- 16) a) Explain clean room process model.  
b) Mention White Box Testing in detail. (4+4)
- 17) a) Explain software risk and its classification.  
b) What is re-engineering ? Explain the process of it. (4+4)
- 18) a) What is Software Process Improvement (SPI) process ?  
b) Explain maturity levels in people CMM. (4+4)
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