

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).



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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