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)**