V Semester B.C.A. Degree Examination, Nov./Dec. 2017
(2016-17 and Onwards) (CBCS) (F + R)
BCA 502 : SOFTWARE ENGINEERING

Time : 3 Hours
Max. Marks : 100

Instruction : Answer all Sections.

SECTION – A

I. Answer **any ten** questions. **Each** question carries **two** marks.   (10×2=20)
    1) Define system.
    2) What are the two types of software products ?
    3) What is system decommissioning ?
    4) Mention two advantages of prototype model.
    5) Define cohesion.
    6) Define object and class.
    7) What are the characteristics of GUI ?
    8) Define SRS.
    9) Define Risk.
    10) Differentiate between verification and validation.
    11) Define reliability.
    12) What is a test case ?

SECTION – B

II. Answer **any five** questions. **Each** carries **five** marks.   (5×5=25)
    13) Explain waterfall model with its advantages and disadvantages.
    14) What are volatile requirements ? Explain the classification of volatile requirements.
    15) Explain the different phases of system design process with a diagram.
    16) What is fault tolerance ? Explain the two approaches to software fault tolerance.
    17) Differentiate between black box and white box testing.

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18) Explain the quality characteristics of design.

19) Describe different requirement validation checks.

20) Explain types of software maintenance.

SECTION – C

III. Answer **any three** questions. **Each** question carries **fifteen** marks.　　　(3×15=45)

21) a) Explain requirement elicitation and analysis process of requirement engineering with diagram.

　　b) Explain IEEE structure of SRS document.　　　(8+7)

22) a) Explain design principles in detail.

　　b) Explain two types of prototyping with advantages and disadvantages.　(8+7)

23) a) Explain different reliability metrics.

　　b) Explain reliability growth modeling.　　　(7+8)

24) a) Write a note on object oriented design concept.

　　b) Explain different styles of user system interaction.　　　(7+8)

25) a) Explain various levels of testing.

　　b) Explain the contents of test plan template.　　　(6+9)

SECTION – D

IV. Answer **any one** question. **Each** carries **ten** marks.　　　(1×10=10)

26) Explain COCOMO model in detail.

27) Explain system engineering process with a neat diagram.