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.
   \((10 \times 2 = 20)\)
   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.
   \((5 \times 5 = 25)\)
   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.
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. \((3\times15=45)\)
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. \((1\times10=10)\)
26) Explain COCOMO model in detail.
27) Explain system engineering process with a neat diagram.