



SN – 663

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.



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V Semester B.C.A. Degree Examination, Nov./Dec. 2017
(Repeaters) (Y2K8 Scheme)
(BCA 501) : SOFTWARE ENGINEERING

Time : 3 Hours

Max. Marks : 90/100

- Instructions :** 1) Section – A, B, C is common to all.
2) Section – D is applicable to the students who have taken admission in 2011-12 and onwards.

SECTION – A

I. Answer any ten questions. Each question carries 2 marks. (10×2=20)

- 1) What is Software Engineering ? Mention any two components of Software Engineering.
- 2) Explain system decommissioning.
- 3) Define SRS. List any two characteristics of a good SRS.
- 4) What is requirement management process ?
- 5) Define prototype. Mention its characteristics.
- 6) Explain Loose coupling and Tight coupling.
- 7) What is structural decomposition ?
- 8) What are the characteristics of GUI ?
- 9) Define POFOD.
- 10) Define verification and validation.
- 11) What is interface testing ? Mention any two types of interfaces.
- 12) What is software risk ?

SECTION – B

II. Answer any five questions. Each question carries 5 marks. (5×5=25)

- 13) What is software process ? Explain the different activities of software process.
- 14) Write a note on data-flow models.
- 15) Describe the difference between functional and non-functional requirements.

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- 16) Explain evolutionary and throw-away prototyping.
- 17) Describe the various software design principles.
- 18) Explain advantages and disadvantages of software reuse.
- 19) Explain cyclomatic complexity.
- 20) Write a note on software maintenance.

SECTION - C

III. Answer **any three** questions.

(3×15=45)

- 21) a) Define SDLC. Explain the different phases of SDLC.
b) Explain different phases of system engineering process with a neat diagram. (7+8)
- 22) a) Write the structure of SRS document.
b) Explain user interface prototyping with a neat diagram. (8+7)
- 23) a) Explain cohesion and explain different types of cohesion.
b) Discuss object oriented process in details. (8+7)
- 24) a) Explain different types of reliability metrics.
b) Explain user-interface design activities. (8+7)
- 25) a) Describe different types of testing.
b) Explain cocomo model. (8+7)

SECTION - D

IV. Answer **any one** question. **Each** question carries **10** marks.

(10×1=10)

- 26) Compare and contrast between waterfall model and spiral model. 10
- 27) Write short note on :
 - a) Software Quality Assurance. 5
 - b) System Procurement Process. 5