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(4th Semester)

BACHELOR OF COMPUTER APPLICATIONS

Paper No. : BCA–404

(Software Engineering)

(New Course)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(Marks : 50)

*The figures in the margin indicate full marks
for the questions*

1. (a) Distinguish between generic and customized software products.   3

  (b) What are the components of software?   2

  (c) Write down the major characteristics of software. Illustrate with a diagram that software does not wear out.   3+2=5

Or

  (d) Discuss the generic waterfall model with a neat diagram.   5

  (e) With a neat diagram, explain the spiral model of software life cycle.   5

         (Turn Over)

2. *(a)* What are the crucial process steps of requirement engineering? Discuss with the help of a diagram.   5

(b) Discuss any three desirable characteristics of a good SRS.   3

(c) List out the different requirement elicitation techniques.   2

Or

(d) Explain why requirement engineering is important. Also write the work product of requirement engineering.   4

(e) Write the template for writing detailed descriptions of use case.   2

(f) What is a data flow diagram? Explain the notations used in a DFD.   4

3. *(a)* Write and explain the five different types of design classes.   5

(b) Differentiate between cohesion and coupling.   5

Or

(c) Explain the bottom-up approach for software design.   5

(d) Name and explain different types of coupling.   5

4. (a) What are the various activities during software project planning?   3

(b) State any two size estimation techniques. Explain any one in detail.   4

(c) Explain the risk management activities with a neat diagram.   3

Or

(d) Define software metrics. What are the various categories of software metrics?   2+3=5

(e) Write a short note on COCOMO model.   5

5. (a) What is software testing? State the difference between alpha testing and beta testing.   2+3=5

(b) What are the various debugging approach? Explain any one in detail.   5

Or

(c) Describe the various categories of maintenance.   5

(d) What is software failure? How is it related with a fault?   5

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