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B.Tech. Degree V Semester Regular Examination November 2021

CS 19-202-0503 OBJECT ORIENTED SOFTWARE ENGINEERING (2019 Scheme)

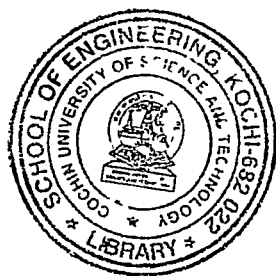
Time: 3 Hours

Maximum Marks: 60

PART A (Answer *ALL* questions)

(8 × 3 = 24)

- I. (a) Justify the statement “Agile model is analogous to mountain climbing”.
- (b) How are collaboration diagrams helpful in behavioural modelling of UML?
- (c) Suppose we have to model a student class which are UG/PG and full time/Part time simultaneously. Which design pattern is the best and why?
- (d) Explain any two design heuristics in detail.
- (e) Distinguish between Blackbox testing and Whitebox testing.
- (f) Write short notes on Key Process Areas of CMM.
- (g) Distinguish between authority, responsibility and accountability.
- (h) “If a project manager accepts a customer demand to compress the development time by more than 25%, it is very unlikely to succeed”. Why?



PART B

(4 × 12 = 48)

- II. (a) Compare and contrast in detail prototyping with evolutionary model. (7)
 - (b) Prepare an SRS for Student Information System. Make your own assumptions. (5)
- OR**
- III. (a) Explain the various structural modelling elements of UML. (5)
 - (b) Show the object-oriented analysis of ATM system. Clearly explain your assumptions. (7)
- OR**
- IV. Distinguish Cohesion and Coupling with examples. (12)
- OR**
- V. Explain MVC design patterns and Adapter design patterns with examples. (12)
- OR**
- VI. (a) Explain the different approaches towards Integration testing. (4)
 - (b) What is regression testing and explain the need for the same? (4)
 - (c) Write short notes on Control Flow Graph. (4)
- OR**
- VII. (a) Explain Software Configuration Management. (5)
 - (b) Substantiate the following statements with examples: (7)
 - (i) Verification is for the process and validation is for the product.
 - (ii) SQA is for the process and SQC is for the product.
- OR**
- VIII. (a) Explain COCOMO model. (8)
 - (b) The size of an Embedded type of software product has been estimated to be 12,000 lines of source code. Using Basic COCOMO equations, compute effort and development time. (4)
- OR**
- IX. Explain the various phases of project management. (12)