Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 27169

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Fourth Semester

Computer Science and Engineering

CS 6403 — SOFTWARE ENGINEERING

(Common to Information Technology)

(Regulations 2013)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. What are the pros and cons of Iterative software development models?
2. What are the issues in measuring the software size using LOC as metric?
3. Define Feasibility study and list the types.
4. Write a note on Data Dictionary.
5. What are the golden rules for an interface design.
6. Write a note on FURPS model of design quality.
7. List some of the good coding practices.
8. How will you test a simple loop?
9. Define Risk and list its types.
10. Mr. Koushan is the project manager on a project to build a new cricket stadium in Mumbai, India. After six months of work, the project is 27% complete. At the start of the project. Koushan estimated that it would cost $50,000.000, What is the Earned Value?

PART B — (5 × 16 = 80 marks)

11. (a) Assume that you are the technical manager of a software development organization. A client approached you for a software solution. The problems stated by the client have *uncertainties which lead to loss if it not planned and solved.* Which software development model you will suggest for this project – justify. Explain that model with its pros and cons and neat sketch. (16)

Or

(b) (i) Explain the various levels of capability maturity model intergation. (10)

(ii) What are the pros and cons of using mathematical approach for software development? (6)

12. (a) Explain the software requirement engineering process with neat diagram. (16)

Or

(b) Consider an online railway reservation system, which allows the user to select route, book/cancel tickets using net banking/credit/ Debit cards. The site also maintains the history of the passengers. For the above system, list and draw the use case scenario and model the above specification using data flow diagram. (16)

13. (a) Explain the cohesion and coupling types with examples. (8 + 8)

Or

(b) Discuss about User Interface Design of a Software with an example and neat sketch. (16)

14. (a) A Program specs state the following for an input field: The program shall accept an input value of 4-digit integer equal or greater than 2000 and less than or equal 8000. Determine the test cases using

(i) Equivalence class partitioning.

(ii) Boundary value analysis. (8 + 8)

Or

(b) Explain unit testing and integration testing process with an example. (16)

15. (a) Explain in detail about the risk management in a software development life cycle. (16)

Or

(b) (i) Discuss about COCOMO II model for software estimation. (10)

(ii) Discuss about the metrics for small organizations. (6)