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

Question Paper Code: 50844

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Fourth Semester

Information Technology

15UIT404 - SOFTWARE ENGINEERING METHODOLOGIES

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Which one of the following models is not suitable for accommodating any change?

   (a) Build and Fix Model (b) Prototyping Model
   (c) RAD Model (d) Waterfall Model

2. Which one of the following is a requirement that fits in a developer's module?

   (a) Availability (b) Testability
   (c) Usability (d) Flexibility

3. UML interfaces are used to

   (a) specify required services for types of objects
   (b) program in Java, but not in C++ or Smalltalk
   (c) define executable logic to reuse across classes
   (d) define an API for all classes

4. Which test refers to the retesting of a unit, integration and system after modification, in order to ascertain that the change has not introduced new faults?

   (a) Regression Test (b) Smoke Test (c) Alpha Test (d) Beta Test

5. COCOMO stands for

   (a) COnsumed COst Model (b) COnstructive COst MOdel
   (c) COmmon COntrol Model (d) COmposition COst MOdel

PART - B (5 x 3 = 15 Marks)

6. Differentiate software engineering methods, tools and procedures.

7. Can we do functional and non-functional testing of websites too?

8. List the different types of CASE tools available In Software Engineering.

9. Distinguish between alpha and beta testing.

10. State the common risk tools and techniques.

PART - C (5 x 16 = 80 Marks)

11. (a) Explain iterative waterfall and spiral model for software life cycle and discuss various activities in each phase. (16)

Or

(b) (i) Identify the umbrella activities in software engineering process? (4)

(ii) Which is more important-the product or process? Justify your answer. (4)

(iii) With suitable illustration explain SPIRAL model evolutionary software development. (8)

12. (a) Explain the ways and means for collecting the software requirements and how are they organized and represented. (16)

Or

(b) (i) Compare functional and behavioral models. (4)

(ii) With a suitable diagram explain the elements of the analysis model. (4)

(iii) With an example explain about DFD. (8)

13. (a) (i) Discuss in detail about the design process in software development process. (8)

(ii) Justify "Design is not coding and coding is not design". (8)

Or

(b) (i) Explain data architectural and procedural design for a software. (8)

(ii) Describe the design procedure for data acquisition system. (8)

14. (a) List and explain different types of testing done during the testing phase. (16)

Or

(b) (i) How are SCM tasks practiced over the operational life of software? (8)

(ii) What is the impact of requirement changes during development of a software product? (8)

15. (a) Explain various cost estimation models and compare. (16)

Or

(b) (i) Justify the statement “software maintenance is costlier”. (8)

(ii) Discuss the concept of software maintenance process. (8)

———————