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**Question Paper Code: 54804**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2022

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? CO1- R
  - (a) Build & Fix Model
  - (b) Prototyping Model
  - (c) RAD Model
  - (d) Waterfall Model
2. Which one of the following is NOT desired in a good Software Requirement Specifications (SRS) document? CO2- R
  - (a) Functional Requirements
  - (b) Non-Functional Requirements
  - (c) Goals of Implementation
  - (d) Algorithms for Implementation
3. Which of the following option is not considered by the Interface design? CO3- R
  - (a) the design of interfaces between software components
  - (b) the design of interfaces between the software and human producers and consumers of information
  - (c) the design of the interface between two computers
  - (d) all of the mentioned
4. Which of the following is black box testing? CO4- R
  - (a) Basic path testing
  - (b) Boundary value analysis
  - (c) Code path analysis
  - (d) None of the mentioned

5. Which one is not a stage of COCOMO-II? CO5- R
- (a) Early design estimation model
  - (b) Application Composition estimation model
  - (c) Comprehensive cost estimation model
  - (d) Post architecture estimation model

PART – B (5 x 3= 15 Marks)

6. Identify in which phase of the software life cycle the following documents are Delivered. CO1- U
- (i) Architectural design (ii) Test plan (iii) Cost estimate
7. Distinguish between expected requirements and excited requirements CO2- U
8. Summarize the three golden rules of user interface design CO3- U
9. List out the data structure errors identified during unit testing CO4- R
10. Why is so important to have a software project management process? CO5- U

PART – C (5 x 16= 80 Marks)

11. (a) Explain the iterative waterfall and spiral model for software life cycle and various activities in each phase. CO1- U (16)
- Or
- (b) What are the advantages of Agile model based software life cycle? Explain the process involved in Agile model CO1- U (16)
12. (a) Consider you are developing feedback web page for the college where visitors to the college will record their opinion on the college. List the functional and non functional requirements for the web page with illustrations and justifications. CO2- App (16)
- Or
- (b) Narrate the importance of software specification of requirements. Explain a typical SRS structure and its parts CO2- App (16)
13. (a) What is transform mapping? Explain the process with an illustration. What is its strength and weakness? CO3- U (16)
- Or
- (b) What are the characteristics of a good design? Describe different types of coupling and cohesion. How design evaluation is performed? CO3- U (16)

14. (a) Discuss the differences between black box and white box testing models. Discuss how these testing models may be used together to test a program schedule. CO4- U (16)
- Or
- (b) Apply the Integration Testing approaches for a software application where modular based development is followed to get a solution CO4- U (16)
15. (a) Briefly explain the different type of cost estimation model and compare CO5- U (16)
- Or
- (b) Explain the scheduling and tracking process in software project management CO5- U (16)

