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

Question Paper Code: 54205

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

Fourth Semester

Computer Science and Engineering

15UCS405- SOFTWARE ENGINEERING

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. Which model can be selected if user is involved in all the phases of SDLC? CO1-R

   (a) Waterfall Model (b)Prototyping Model

   (c) RAD Model (d) both Prototyping Model & RAD Model

2. Which one of the following is not a step of requirement engineering? CO2-U

   (a) elicitation (b) design (c) analysis (d) documentation

3. Which of the following describes ”Is-a-Relationship”? CO3-R

   (a) Aggregation (b) Inheritance (c) Dependency (d) All of the mentioned

4. What is Cyclomatic complexity? CO4-U

   (a) Black box testing (b) White box testing

   (c) Sanity testing (d) Structural testing

5. In the Empirical Estimation Technique, Which model is developed by Barry W.Boehm? CO5-U

   (a) Putnam model (b) COCOMO (c) Both a & b (d) None of the above

PART – B (5 x 3= 15 Marks)

6. What are the fundamental activities of a software process? CO1-U

7. What is data dictionary? CO2-R

8. Why architectural design is important in software engineering CO3 -U

9.		How to compute Cyclomatic complexity.	CO4-U	
10.		What are the classes of software projects in COCOMO model?	CO5 -U	

PART – C (5 x 16= 80 Marks)

11.	(a)	What is CMMI? Explain.	CO1-U	(16)
		OR		
	(b)	Explain the various phases of software development life cycle (SDLC) and identify deliverables at each phase.	CO1- U	(16)
12.	(a)	What is Requirement engineering? State its process and explain requirement elicitation problem.	CO2 -U	(16)
		OR		
	(b)	Describe various prototyping techniques and discuss on analysis and modeling.	CO2 -U	(16)
13.	(a)	What are the characteristics of a good design? Describe different types of coupling and cohesion. How design evaluation is performed?	CO3 -U	(16)
		OR		
	(b)	(i) Describe the golden rules for interface design.	CO3-U	(06)
		(ii) Draw a detailed data flow diagram for library management.		(10)
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)	(i) What do you mean by system testing? Give a case study of a system testing for operating system?	CO4 -U	(08)
		(ii) What do you mean by boundary value analysis? Give two examples of boundary value testing.	CO4-U	(08)
15.	(a)	Write short notes on (i) COCOMO estimation criteria. (ii) Software metrics	CO5 -U	(16)
		OR		
	(b)	Explain the decomposition techniques in detail.	CO5 -U	(16)