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

Question Paper Code: U4805

B.E./B.Tech. DEGREE EXAMINATION, NOV 2024

Fourth Semester

Computer Science and Engineering

21UIT405 SOFTWARE ENGINEERING METHODOLOGY

(Common to IT Branches)

(Regulations 2021)

Duration: Three hours | Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1.	List the categories of software	CO1-U
2.	Draw a use case diagram for an online shopping which should provide provisions for registering, authenticating the customers and also for online payment through any of the payment system like paypal.	CO2-App
3.	What is data dictionary?	CO1-U
4.	Draw the level 0 DFD for railway reservation system.	CO2-App
5.	What are four phases of a software design model?	CO1-U
6.	Differentiate cohesion and coupling with an example.	CO1-U
7.	Differentiate verification and validation.	CO1-U
8.	What are the various black box testing techniques?	CO1-U
9.	What is RMMM Plan?	CO1-U
10.	What is function point? How is it derived?	CO1-U

PART – B (5 x 16= 80 Marks)

11.	(a)	Explain in detail the umbrella activities in the aspect of maintaining the quality.	CO1-U	(16)
		Or		
	(b)	Explain the agile manifesto and summarize the agile software development principles.	CO1-U	(16)

12.	(a)	Consider you are associated with an online shopping website designing project. List the functional and nonfunctional requirements for the website design with illustrations and justifications.	CO2-App	(16)
		Or		
	(b)	Draw the use case and data flow diagrams for a restaurant system. The activities of the restaurant system are listed as below. Receive the customer food orders, produce the customer ordered foods, serve the customer with their ordered foods, collect payment from customers, store customer payment details, order raw materials for food products, pay for raw materials and pay for labor.	CO2-App	(16)
13.	(a)	Draw the class diagram for Banking services and explain the relationship exists between the classes.	CO1-U	(16)
		Or		
	(b)	Illustrate liskov substitution principle with an example program.	CO1-U	(16)
14.	(a)	Explain the White box testing techniques with example	CO1-U	(16)
		Or		
	(b)	Explain the following (i) Integration Testing (8) (ii) System Testing (8)	CO1-U	(16)
15.	(a)	How will you plan and schedule a software project?	CO1-U	(16)
		Or		
	(b)	Explain the necessity of risk management in a project.	CO1-U	(16)