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Gandhi Institute of Engineering and Technology University, Odisha, Gunupur (GIET University)



B. Tech (Sixth Semester - Regular) Examinations, April 2025

22BCDPC36001– Software Engineering

(CSE- Data Science)

Time: 3 hrs

Maximum: 70 Marks

Answer ALL questions
(The figures in the right hand margin indicate marks)

PART – A

(2 x 5 = 10 Marks)

Q.1. Answer **ALL** questions

	CO #	Blooms Level
a. What is the use of COCOMO model?	CO1	K1
b. Differentiate between functional & non-functional requirement.	CO2	K1
c. What are the elements of design model?	CO3	K1
d. What is white box testing?	CO4	K1
e. List the principles of a software design.	CO3	K1

PART – B

(15 x 4 = 60 Marks)

Answer **ALL** the questions

	Marks	CO #	Blooms Level
2. a. Explain briefly about the Spiral model with neat sketch.	8	CO1	K1
b. Describe Requirement Engineering process.	7	CO1	K2
(OR)			
c. Describe characteristic and components of SRS.	8	CO2	K2
d. Describe are the advantages of iterative development? Compare iterative development with Incremental delivery approach.	7	CO2	K2
3.a. Describe about software design. Explain abstraction & modularization.	8	CO3	K3
b. Explain the brief concepts of integration testing approach.	7	CO4	K2
(OR)			
c. Describe the details of white box testing approach.	8	CO4	K3
d. Describe about different types of UML diagrams.	7	CO3	K2
4.a. Discuss in detail about user interface design patterns with an example.	8	CO3	K3
b. Discuss how feasibility studies are important in requirement engineering process.	7	CO2	K2
(OR)			
c. Why and how requirements validation is done in software development?	8	CO2	K2
d. Explain briefly about different common design issues in user interface design.	7	CO3	K2
5.a. What is system testing? Explain briefly about system testing.	8	CO4	K3
b. Explain briefly about the COCOMO model with neat sketch.	7	CO1	K2
(OR)			
c. Describe the different stages of SDLC model with diagram.	8	CO1	K1
d. Discuss in detail about the art of debugging.	7	CO4	K2

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