QP Code:RM21BTECH437 | Reg. No | | | | | | | | | | | AY 21

GIET UNIVERSITY, GUNUPUR – 765022

B. Tech (Sixth Semester Regular) Examinations, May – 2024

21BCDPC36001 – Software Engineering

(CES - Data Science)

Time: 3 hrs | Maximum: 70 Marks

(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. Write the advantages of using LOC.	CO1	K2
b. Describe the good characteristics of a good software.	CO2	K1
c. Differentiate between SRS document and design document.	CO2	K4
d. Define driver and stud module.	CO4	K2
e. What is meant by validation testing?	CO2	K1

PART – B **(15 x 4=60 Marks)**

Answer ***ALL*** questions	Marks	CO #	Blooms Level
2. a. Differentiate between the features of different life cycle models highlighting there advantages and disadvantages	10	CO1	K3
b. Explain the COCOMO estimation model.	5	CO1	K2
(OR)			
c. Why we need project estimation factor to develop any software product. Suppose that a project was estimated to be 400 KLOC. Calculate the effort, person estimation and development time for each of three modes i.e., organic, semidetached and embedded.	10	CO1	K3

Software Project	A	B	C	D
Organic	2.4	1.05	2.5	0.38
Semi-Detached	3.0	1.12	2.5	0.35
Embedded	3.6	1.20	2.5	0.32

d. Draw a schematic diagram to represent the classical waterfall model in software development lifecycle.	5	CO1	K2
3.a. Explain the activities of requirement analysis and specification phase.	5	CO2	K2
b. Explain the requirement engineering process with suitable diagram and it's need for software development product.	10	CO2	K3
(OR)			
c. What is a SRS document? Why it is an important phase in SDLC life cycle. List the desirable characteristics of good and bad SRS document?	10	CO2	K3
d. Explain the functional and non-functional requirement with examples.	5	CO2	K3
4.a. Explain coupling and cohesion in the context of software design. Describe the type of coupling and cohesion.	10	CO3	K2

b.	How does object oriented analysis and design differ from function oriented design?	5	CO3	K3
	(OR)			
c.	Briefly explain the software design process.	5	CO3	K1
d.	What do you mean by structured software design? Design a level 1 DFD for railway reservation system and explain it.	10	CO3	K2
5.a.	What is system testing? Discuss the types of system testing in details.	10	CO4	K3
b.	Discuss the implementation issues important in software engineering.	5	CO4	K3
	(OR)			
c.	Define the term software re-engineering. Explain the different activities undertaken during the reverse engineering.	10	CO4	K2
d.	Explain various debugging techniques.	5	CO4	K2

--- End of Paper ---