BTS–V(R/S)–01–23–1374 Reg. No. | | | | | | | | | |

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B.Tech. Degree V Semester Regular/Supplementary Examination January 2023

CS 19-202-0503 OBJECT ORIENTED SOFTWARE ENGINEERING

(2019 Scheme)

Time: 3 Hours Maximum Marks: 60

Course Outcome
On successful completion of the course, the students will be able to:

CO1: Compare and classify various software process/ life cycle models.
CO2: Analyze structured vs object oriented modeling.
CO3: Illustrate various techniques in software quality assurance.
CO4: Analyze various principles of software project management.
CO5: Compare and classify the new trends in life cycle models in industry.
CO6: Analyze and make use of any one testing tool used in the industry.
Bloom's Taxonomy Levels (BL): L1 – Remember, L2 – Understand, L3 – Apply, L4 –Analyze, L5 – Evaluate, L6 – Create
PO – Programme Outcome

PART A

(Answer ***ALL*** questions)

			(8 × 3 = 24) Marks	BL	CO	PO
I.	(a)	Justify the statement "we make an object oriented system by combining structural and behavioural UML models in an effective way.	3	L2	2	1,2,3,5,8,11,PSO2
	(b)	Create a DFD for an ATM transaction. Clearly explain your notions and assumptions.	3	L3	2	1,2,3,5,8,11,PSO2
	(c)	"Client server systems are very popular architecture styles". Explain with examples.	3	L2	1	1,2,3,5,8,11,PSO2
	(d)	Analyze the following scenario and suggest the best cohesion and coupling techniques. "There are two modules M1 and M2 and they need to send a packet of information from M2 to M1. Also M1's programs are executed at the same time. Suggest a cohesion for M1 and coupling between these two.	3	L4	1	1,2,3,5,8,11,PSO2
	(e)	Give examples for white box testing with examples and diagrams.	3	L2	3	1,2,3,5,8,11,PSO2
	(f)	What are the key process areas of CMM level 3?	3	L2	3	1,2,3,5,8,11,PSO2
	(g)	How we can evaluate the various software quality metric and which management function is responsible for SQA and SQM?	3	L5	3	1,2,3,5,8,11,PSO2
	(h)	Distinguish a CASE environment and workbench.	3	L2	5	1,2,3,5,8,11,PSO2

PART B

(4 × 12 = 48)

II.		Suggest the best life cycle model after evaluating the following systems and explain that life cycle model in detail with diagrams and example.	12	L5	1	1,2,3,5,8,11,PSO2
	(i)	A large software system for automating a supermarket				
	(ii)	An AI based robotic arm software where expertise is less and requirements are not clear.				

OR

			Marks	BL	CO	PO
III.		Suggest the best structured analysis model after evaluating the following systems and explain that model in detail with diagrams and example				
		(i) The complex flow of data between departments for automating a supermarket	6	L5	2	1,2,3,5,8,11,PSO2
		(ii) The various conditions for sanctioning a loan can be expressed as a table of conditions and actions.	6	L5		
IV.	(a)	Explain any four Coupling techniques in detail with examples.	8	L2	1	1,2,3,5,8,11,PSO2
	(b)	Explain design heuristics or best practices.	4	L2	1	
		OR				
V.	(a)	Explain any four Cohesion techniques in detail with examples.	8	L2	1	1,2,3,5,8,11,PSO2
	(b)	Explain use case analysis with examples.	4	L2	1	
VI.		Distinguish CMM and ISO with examples and diagrams.	12	L4	3	1,2,3,5,8,11,PSO2
		OR				
VII.	(a)	Explain the format of a test plan in detail with an example.	4	L1	3	1,2,3,5,8,11,PSO2
	(b)	Distinguish reviews and audits.	8	L4	3	
VIII.	(a)	Distinguish Organizing and staffing management functions.	8	L4	4	1,2,3,5,8,11,PSO2
	(b)	Briefly explain the assumptions for COCOMO.	4	L1	4	
		OR				
IX.	(a)	Distinguish directing and controlling management functions.	8	L4	4	1,2,3,5,8,11,PSO2
	(b)	Briefly explain the equations for BASIC COCOMO with examples.	4	L1	4	

Blooms's Taxonomy Levels
L1 - 12%, L2 - 41%, L3 - 4%, L4 - 21%, L5 - 22%.

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