VIT
Vellore Institute of Technology
(Deemed to be University under section 3 of UGC Act, 1956)
CHENNAI

Continuous Assessment Test 2 (CAT) – Oct 2024-25

Reg. Number: 22BAI1266

Programme	:	B.Tech - BCE, BAI, CPS, BRS	Semester	:	Fall 24-25
Course Code & Course Title	:	BCSE301L & Software Engineering	Class Number	:	CH2024250102292, CH2024250100966, CH2024250100974, CH2024250101315, CH2024250101316, CH2024250100549, CH2024250101380, CH2024250101317, CH2024250100970, CH2024250102456, CH2024250100547
Faculty	:	Dr.Jayanthi.R, Dr.Suganeshwari G, Dr.S.Brindha, Dr.G.Saranya, Dr.Sudharson S, Dr N.M.Elango, Dr.Smrithy G S, Dr. Rama Prabha K. P, Dr. N Ganesh, Dr.Ilakiyaselvan N, Dr. SK. Karthika	Slot	:	G1+TG1
Duration	:	90 Minutes	Max. Mark		50

General Instructions:
- Write only your registration number on the question paper in the box provided and do not write other information.

Answer all questions

Q. No	Sub Sec.	Description	Marks
1.		Hospitals are among the most complex types of buildings, and it is crucial to ensure that patients have a comfortable and stress-free experience during their stay. Designers play a vital role in fostering a therapeutic environment. Key aspects of creating a therapeutic interior include building elements, color, texture, and pattern.	16
	a)	Develop a use case diagram for a hospital's therapeutic environment design project including at least five use cases on "select color scheme," "design room layout," "consult with healthcare professionals", "Review Design Proposals", "Conduct Patient Feedback Sessions" and three actors, "interior designer", "hospital administrator" and," patient". (9 Marks)	
	b)	Describe the key benefits of refactoring code practices within a project aimed at developing a therapeutic environment for hospitals. (3 Marks)	
	c)	Identify and explain User Interface (UI) design principles that should be prioritized when creating interfaces for a hospital's therapeutic environment. (4 Marks)	
2.		"Drive-Easy" is the leading brand for self-drive car rentals across various locations. They aim to design and develop an application that provides a convenient and flexible rental service platform for users.	10
	a)	Compare and contrast various types of cohesion and coupling in the context

		of the Drive-Easy application with a neat sketch. (6 Marks)	
	b)	Assess how the refactoring design improves the Drive-Easy application. (4 Marks)	
3.	a)	Indian Airlines aims to develop a ticketing and reservation system that will handle ticket booking, cancellations, rescheduling, and class changes. These services will be managed by a Reservation Clerk. Additionally, the system will provide a query feature to check flight schedules, fares, and seat availability, and offer a cargo service for passengers. Create a test plan document by identifying specific test cases for the Indian Airlines ticketing and reservation system within a structured template. (5 Marks)	14
	b)	Explain briefly Black Box Testing and its types in the development of the Indian Airlines System. (9 Marks)	
4.	a)	In the context of Hospital Management Systems for the given scenario in **Question No. 1**, Describe the various roles and responsibilities defined in a review process to achieve high-quality software. (5 Marks)	10
	b)	Calculate Cyclomatic Complexity for the following code snippet, (5 Marks) `num = 1.5` `if num > 1:` `  print("+ve Number")` `elif num == 0:` `  print("Zero")` `else:` `  print("-ve number")`	

**********All the best *************