Reg.No.:												

VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60011

M.E. / M.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025
Third Semester
Computer Science and Engineering
P23ITOE3 – GAME DEVELOPMENT
(Regulation 2023)

Time: Three Hours | Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Differentiate the features of 2D and 3D graphics in game avatar.	2	K2	CO1
2.	Interpret the importance of controller based Animation.	2	K2	CO1
3.	Highlight the techniques used in storyboard development for gaming.	2	K2	CO2
4.	State the key principles of level design.	2	K1	CO2
5.	Outline any one algorithm, used in Game Engine.	2	K1	CO3
6.	Discuss the relevance of Game AI in modern video game development.	2	K2	CO3
7.	Enumerate the development of single-player and multiplayer games in Unity.	2	K2	CO4
8.	Outline the importance of a game studio in the gaming industry.	2	K2	CO4
9.	Paraphrase the importance of device handling in Pygame.	2	K1	CO5
10.	Enumerate the process of Asset Creation in Gaming.	2	K2	CO5

Part - B

(5 x 13 = 65 Marks)

Q.No.		Questions	Marks	KL	CO
11.	a)	Illustrate Illumination and Shader Models in gaming in detail with neat diagram.	13	K1	CO1

(OR)

	b)	Enumerate the types and applications of 2D and 3D game design transformations.	13	K1	CO1
12.	a)	Enumerate how proposals are written and used in the Preproduction, Production, and Post-Production stages of gaming.	13	K2	CO2
		(OR)			
	b)	Explain the concept of script design within game development. Discuss its role in controlling game logic, managing interactions, and handling in-game events.	13	K2	CO2
13.	a)	Interpret the concepts of software rendering and hardware rendering in game engine design.	13	K2	CO3
		(OR)			
	b)	Explain the algorithms used for collision detection in game engines. Discuss their working principles, types, and efficiency considerations.	13	K2	CO3
14.	a)	Compare Pygame and Unity as game development platforms, focusing on how each handles scripting and frame updates during the game loop.	13	K2	CO4
		(OR)			
	b)	i. Elaborate the key challenges and considerations in designing games specifically for mobile platforms.	6	K2	CO4
		ii. How does user interface (UI) and user experience (UX) design differ in mobile games compared to PC console games? Justify.	7		
15.	a)	Elaborate the process of avatar creation in Pygame for interactive games, including design considerations, implementation of controls, and integration with game mechanics.	13	K3	CO5
		(OR)			
	b)	Interpret the concepts of Isometric and Tile-Based arcade games in game development. Discuss their differences and advantages, with a typical use case.	13	K3	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.		Questions	Marks	KL	CO
16.	a)	How can narrative or storytelling be integrated into puzzle games to enhance engagement? Justify.	15	K2	CO2
		(OR)			
	b)	Enumerate the concept of core mechanics in game design and discuss how they influence player experience and gameplay dynamics	15	K2	CO2