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

Question Paper Code: 60028

M.E. / M.Tech. DEGREE END-SEMESTER EXAMINATIONS – JAN. 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.	State the objective of 3D Transformation.	2	K2	CO2
2.	Outline the difference between hue, saturation and brightness in HSL color model.	2	K1	CO1
3.	Differentiate pre and post production of Game design.	2	K2	CO2
4.	Discuss Game latency with an example.	2	K2	CO2
5.	Differentiate Software and Hardware Rendering. In what do these rendering process improve the overall quality and efficiency in video streaming.	2	K2	CO2
6.	Paraphrase a front path finding mechanism in a 2D search space.	2	K1	CO1
7.	List down the various components required to deploy a Game studio.	2	K3	CO2
8.	Differentiate the features of single and multiplayer games with respect to the environment of Unity.	2	K3	CO2
9.	Summarize any two pygame component functionalities.	2	K1	CO1
10.	How do we incorporate music and sound in pygame?	2	K3	CO2

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the concept of transformation order and its significance in both 2D and 3D graphics. Brief how changing the order of transformation affect the final output.	13	K2	CO2
	(OR)			
b)	In what ways can procedural animating techniques component controller-based animation, Provide example scenarios where this integration in beneficial.	13	K2	CO2
12. a)	Discuss on story board development for Gaming.	13	K2	CO2
	(OR)			
b)	How can the principle of game balancing be applied to ensure that level design maintains a consistent difficult curve, providing a fair experience for players of varying skill levels? Explain in detail.	13	K2	CO2
13. a)	Discuss any two spatial sorting algorithms.	13	K3	CO3
	(OR)			
b)	Discuss any two Algorithms for Game design.	13	K3	CO3
14. a)	How can Unity scripts be optimized to enhance performance and resource management in mobile games.	13	K4	CO4
	(OR)			
b)	Identify the steps involved by Game designers to balance the inherent tension between player agency and controlled difficulty in level design. What are vital attributes to be considered?	13	K4	CO4
15. a)	Discuss on Avatar creation.	13	K2	CO2
	(OR)			
b)	Identify and analyze the key consideration and trade-off in developing game physics algorithms that achieves realistic interactions and behaviors while maintain computational efficiency in complex simulation of multi-player games.	13	K2	CO2

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16. a)	How can the integration of dynamic difficulty adjustment (DDA) systems into level design improve game balancing and identify their potential challenges.	15	K4	CO4
	(OR)			
b)	Design an interactive puzzle game by incorporating effective decision making.	15	K4	CO4
