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**PRESIDENCY
UNIVERSITY
BENGALURU**

School of Computer Science

Mid - Term Examinations - November 2024

Semester: VII

Date: 05/11/2024

Course Code: CSE3073

Time: 02:00pm – 03:30pm

Course Name: Game Design and Development

Max Marks: 50

Program: CSE

Weightage: 25%

Instructions:

(i) Read all questions carefully and answer accordingly.

(ii) Do not write anything on the question paper other than roll number.

Part A

Answer ALL the Questions. Each question carries 2marks.

5QX2M=10M

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|---|--|---------|----|-----|
| 1 | Describe the meaning of Sid Meier's definition of game. | 2 Marks | L1 | CO1 |
| 2 | Describe the meaning of "overcome unnecessary obstacles" in Bernard Suit's definition of game. | 2 Marks | L1 | CO1 |
| 3 | List the four types of obstacles generally used in entertainment media. | 2 Marks | L1 | CO1 |
| 4 | Define Game Play. | 2 Marks | L1 | CO2 |
| 5 | Define Vertical and Horizontal slicing. | 2 Marks | L1 | CO2 |

Part B

Answer ALL Questions. Each question carries 10 marks.

4QX10M=40M

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|-----|---|---------|----|-----|
| 6a. | Interpret definition of a game as per Bernard Suits. | 2 Marks | L2 | CO1 |
| 6b. | Summarize any two dynamic elements. | 2 Marks | L2 | CO1 |
| 6c. | Discuss the various aspects of Camera in the 3Cs framework. | 6 Marks | L2 | CO1 |
| Or | | | | |
| 7a. | Interpret definition of a game as per Tracy Fullerton. | 2 Marks | L2 | CO1 |
| 7b. | Summarize any two dramatic elements. | 2 Marks | L2 | CO1 |
| 7c. | According to MDA framework, explain mechanics. | 6 Marks | L2 | CO1 |

- 8a. Infer the meaning of Rules in FDD framework. 1 Marks L2 C01
- 8 8b. Explain the need for non-playing characters in a game. 4 Marks L2 C01
- 8c. Explain in detail triangle of weirdness. 5 Marks L3 C01

Or

- 9a. Infer the meaning of Procedure in FDD framework. 1 Marks L2 C01
- 9 9b. Explain in detail the four types of economy used in Games. 4 Marks L2 C01
- 9c. Explain in brief about game physics, and how it is applied to gaming. 5 Marks L3 C01

- 10a. Infer how attack and defense is modelled in games. 2 Marks L2 C02
- 10b. Summarize how probability is used in games. 3 Marks L2 C02
- 10c. Consider a basic one on one combat game between a Red man and a Blue man. Develop a combat model for this game using prototyping. Show why each individual choice is made in this design with examples/counter-examples.[Note: You have to show the evolution of two models.] 5 Marks L3 C02
- 10

Or

- 11a. Discuss how physical prototypes are used 2 Marks L2 C02
- 11 11b. Compare Software and Paper prototypes.[Note: Any 3 differences.] 3 Marks L2 C02
- 11c. Demonstrate the benefits of paper prototypes. 5 Marks L3 C02

- 12a. Discuss the need for dice in paper prototyping. 2 Marks L2 C02
- 12b. Infer the drawback of the combat model:
HP = HP - AV + DV. 2 Marks L2 C02
- 12c. Consider the hit table given below: 6 Marks L3 C02

Hit Table

Range	Hit Weight
0 - 29	10%
30 - 59	30 %
60 - 84	60 %
85 - 99	100%

- 12 Assume that two players Red(HP= 100, AV = 50, DV = 20) and Blue(HP=60, AV = 20, DV = 50) are fighting with each other in a turn based fighting game, starting with Red's attack.

Demonstrate the working of the model

$$HP = HP - wA.AV + wD. DV$$

for this game, considering the following random numbers generated:

sl no, Red's random number, Blue's Random number, attack by

- | | | | | | |
|----|----|---|----|---|-----|
| 1. | 25 | , | 11 | , | Red |
| 2. | 15 | , | 21 | , | Bue |
| 3. | 44 | , | 71 | , | Red |
| 4. | 92 | , | 23 | , | Bue |
| 5. | 78 | , | 94 | , | Red |
| 6. | 13 | , | 15 | , | Bue |

Or

13a. Classify the prototypes based on level of details included. 2 Marks L2 C02

13b. Infer the drawback of the combat model: 2 Marks L2 C02

HP = HP - AV.

13c. Consider the hit table given below: 6 Marks L3 C02

Hit Table	
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Range	Hit Weight
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0 - 29	10%
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30 - 59	30 %
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60 - 84	60 %
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85 - 99	100%
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Assume that two players Red(HP= 100, AV = 50, DV = 20) and Blue(HP=60, AV = 20, DV = 50) are fighting with each other in a turn based fighting game, starting with Red's attack.

Demonstrate the working of the models for two rounds of attacks(Attack order: red, blue, red, blue)

a. $HP = HP - AV + DV$

b. $HP = HP - wA.AV + wD. DV$

c. $HP = \min(HP, HP - wA.AV + wD. DV)$

For model 3, you may assume the random numbers are generated in the order: 54, 22, 98, 32.