

<b>Name:</b>	
<b>Enrolment No:</b>	

**UNIVERSITY OF PETROLEUM AND ENERGY STUDIES**  
**End Term Examination, December- 2020**

<b>Programme Name:</b> B.Tech CSE- G&G	<b>Semester :</b> III
<b>Course Name :</b> Introduction to Game Programming	<b>Time :</b> 03 hrs
<b>Course Code :</b> CSGG3002	<b>Max. Marks:</b> 100
<b>Nos. of page(s) :</b> 2	

**Instructions:**

**SECTION A**

**1. Each Question will carry 5 Marks**

**2. Instruction: Answer briefly**

S. No.		CO
Q1	Discuss the importance of game engines, mention five game engines?	CO1
Q2	Give three examples in an application where one needs to apply static collider to the game objects.	CO2
Q3	Arrange the event functions listed below in the order in which they will be invoked when an application is closed.  Update() Ongui() Awake() Ondisable() Start() Lateupdate() Onenable() Onapplicationquit() OnDestroy()	CO3
Q4	Differentiate between operator overloading and overriding.	CO1
Q5	Explain why Time.deltaTime should be used to make things that depend on time operate correctly.	CO1
Q6	Discuss, which one is more preferred choice for applying rotation to game object, Euler or Quaternions.	CO3

**SECTION B**

**1. Each Question will carry 10 Marks**

<b>2. Instruction: Write short answers</b>		
Q7	<p>Explain the issue with the code below and provide an alternative implementation that would correct the problem.</p> <pre> using unityengine; using system.collections; public class test : MonoBehaviour { void start () { transform.position.x = 10; } } </pre>	<b>CO3</b>
Q8	Differentiate between static and dynamic collider, mention from the performance and efficiency perspective, which one is best, suited.	<b>CO3</b>
Q9	Discuss the importance of iterative approach for game development. Differentiate game development life cycle with traditional software development life cycle.	<b>CO2</b>
Q10	Differentiate between fixed update and late update function. Write code for null variable exception in unity and print the “Introduction to Game Programming” on successful execution.	<b>CO1</b>
Q11	Answer with respect to Animation in Unity, mention all the components of animation workflow. Is there a difference in animation workflow for a 2d game and 3d game?	<b>CO2</b>
<b>SECTION C</b>		
<b>1. Each Question carries 20 Marks.</b>		
<b>2. Instruction: Write long answer</b>		
Q12	<p>Create a Game design document and technical design document for an educational game to teach concept of elementary physics to students. Prototype the game with the help of storyboard, high-level conceptual diagrams and pseudo codes.(make necessary assumptions)</p> <p style="text-align: center;">Or</p> <p>Write the Game AI for Tic Tac Toe Game. Mention all the game essentials, which you will incorporate in the game, design a UI as well for the game and winner screen towards the end</p>	<b>CO4</b>

