**PRESIDENCY UNIVERSITY**
**BENGALURU**

## SCHOOL OF INFORMATION SCIENCE
### END TERM EXAMINATION - JAN 2022

**Semester :** Semester V - 2020
**Course Code :** BCA221
**Course Name :** Sem V - BCA221  - Animation and Shaders
**Program :** BCA

**Date :** 6-JAN-2023
**Time :** 9.30AM - 12.30PM
**Max Marks :** 100
**Weightage :** 50%

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**Instructions:**
*(i) Read all questions carefully and answer accordingly.*
*(ii) Question paper consists of 3 parts.*
*(iii) Scientific and non-programmable calculator are permitted.*

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## PART A

### ANSWER ALL THE FOLLOWING QUESTIONS

**10 X 2 = 20M**

1. List the various modifiers in Boolean modifiers.

   (CO1) [Knowledge]

2. When will you apply cycle render? List any two use cases.

   (CO1) [Knowledge]

3. Why Texture analysis is important? - Justify?

   (CO2) [Knowledge]

4. List the stages of animation with relevant examples?

   (CO2) [Knowledge]

5. Distinguish between timeline and key frame used in animation?

   (CO3) [Knowledge]

6. What do you mean by texture in 3D model?

   (CO3) [Knowledge]

7. Define the texture options in blender?

   (CO4) [Knowledge]

8. Mention the usage of timelines in 2D and 3D animation?

   (CO4) [Knowledge]

9. Specify, where render setting option available in blender?

   (CO5) [Knowledge]

10. What is the role of Shaders in GPU?

   (CO5) [Knowledge]

**PART B**

**ANSWER ALL THE FOLLOWING QUESTIONS** **5 X 10 = 50M**

11. Describe how you'll animate a 2 dimensional car. Using auto key frame setting, explain the movement of car in front, back, left, and right directions using blender tool. Comprehensively explain the process involved.

(CO1) [Comprehension]

12. Implement an animated lighthouse with spot light along with sea wave simulation using the blender tool, and then sketch down all the necessary steps.

(CO2) [Comprehension]

13. Create a sun set scenario with the concept of Shaders and sun light setting. Using blender, create an animation and implement the same with proper plane setting. Explain the process in detail with a neat diagram.

(CO3) [Comprehension]

14. Construct an academic classroom with appropriate furniture, fixtures, and lighting. Describe the procedures involved to create this scene.

(CO4) [Comprehension]

15. List the various stages of creating and animating a Mickey Mouse cartoon character using blender

(CO5) [Comprehension]


**PART C**

**ANSWER ALL THE FOLLOWING QUESTIONS** **2 X 15 = 30M**

16. i) Describe how you'll animate a 3 dimensional car. Using auto key frame setting, explain the movement of car in forward and backward directions using blender tool.
    ii) Comprehensively explain the process involved. Apply an image texture to the car model.

(CO5) [Application]

17. i) Design and develop a moving robot using blender. Apply image texture.
    ii) Narrate the steps involved for robot animation using manual key frame settings.

(CO5) [Application]