

**C-7088**

**Sub. Code**

**83711**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

**First Semester**

**Game Technology**

**ADVANCED GAME DEVELOPMENT**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. What is the fundamental principle of Human-Computer Interaction (HCI) in new media?
  - (a) User-centered design
  - (b) Hardware optimization
  - (c) Virtual reality adaptation
  - (d) Data mining
  
2. Which game genre focuses on exploration and discovery in large open-world environments?
  - (a) Strategy
  - (b) Role-playing
  - (c) Simulation
  - (d) Adventure
  
3. In the MDA framework, which component refers to the underlying rules and systems of a game?
  - (a) Aesthetics
  - (b) Mechanics
  - (c) Dynamics
  - (d) Tuning

4. What is the primary purpose of flow in game design?
  - (a) To create suspense
  - (b) To balance skill and difficulty
  - (c) To enhance player satisfaction
  - (d) To increase game duration
5. Which dramatic element in games refers to the progression of the story with branching paths or decision points?
  - (a) Linear Plot
  - (b) Braided Plot
  - (c) Branching Tree
  - (d) Open Worlds
6. What is the nature of Alea in game mechanics?
  - (a) A form of chance-based gameplay
  - (b) A technique for emergent gameplay
  - (c) A strategy for competitive games
  - (d) A set of player roles
7. Which property of the game world is characterized by the visual design and how the world is perceived by players?
  - (a) Audio of environment
  - (b) Game space organization
  - (c) World aesthetics
  - (d) Architecture
8. In terms of game design, what does “emergence” refer to?
  - (a) Fixed game outcomes
  - (b) A predetermined player experience
  - (c) Unplanned phenomena arising from player interaction
  - (d) A type of game balance
9. What is the focus of player taxonomy in game design?
  - (a) Player demographics
  - (b) Balancing game mechanics
  - (c) Game graphics and visuals
  - (d) Ethical game design

10. What is a major ethical concern in game design?
- (a) Game speed
  - (b) Player interaction
  - (c) Visual design elements
  - (d) Player manipulation or addiction

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the different types of communication with suitable examples.

Or

- (b) Discuss the barriers to effective communication and suggest solutions.

12. (a) Analyze the evolution of journalism and its impact on modern society.

Or

- (b) Explain the role of cinema in shaping public perception.

13. (a) Discuss the development of radio and television as mass media.

Or

- (b) Describe the impact of digital audio broadcasting on the radio industry.

14. (a) Explain the theories of media effects and media uses.

Or

- (b) Analyze the role of mass media in influencing public opinion.

15. (a) Discuss the impact of the gaming industry on mass communication.

Or

- (b) Evaluate the role of E-Commerce and E-Banking in modern society.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Critically analyze Western and Indian communication theories.

Or

- (b) Explain the different models of communication with examples.

17. (a) Discuss the history and evolution of Indian cinema.

Or

- (b) Analyze the influence of regional cinema on cultural identity.

18. (a) Explain the ethical concerns in broadcasting and their implications.

Or

- (b) Describe the role of folk and traditional media in mass communication.

19. (a) Discuss the representation of women in mass media and its societal impact.

Or

- (b) Explain the effects of mass media on children and adolescents.

20. (a) Evaluate the impact of information technology on mass communication.

Or

- (b) Analyze the role of intellectual property rights in media and gaming.

**C-7089**

**Sub. Code**

**83712**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

**First Semester**

**Game Technology**

**ADVANCED GAME DESIGN AND ANALYSIS**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which of the following is not a common term in game design?  
(a) Mechanics                      (b) Strategy  
(c) Plotting                        (d) Dynamics
2. Which design approach is iterative and adapts with testing and feedback?  
(a) Linear Design                  (b) Iterative Design  
(c) Modular Design                (d) Fixed Design
3. Which of the following is an elements of strategic skill in a game?  
(a) Reflex                              (b) Speed  
(c) Decision-making                (d) Luck
4. Which type of story is most common in video games?  
(a) Non-linear stories  
(b) Fixed plot stories  
(c) Open-ended stories  
(d) Monologic stories

5. What is the purpose of adding mechanics in game design?
  - (a) To limit player choices
  - (b) To increase complexity
  - (c) To enhance player engagement
  - (d) To remove elements of chance
6. What is a key feature of Twitch mechanics in games?
  - (a) Decision-making
  - (b) Reflexive actions
  - (c) Predictive skill
  - (d) Planning
7. Which type of game IP allows for the creation of sequels?
  - (a) Trademarked IP
  - (b) Public Domain IP
  - (c) Franchise IP
  - (d) Non-exclusive IP
8. What is a common issue in multiplayer game design?
  - (a) Reducing player interaction
  - (b) Limiting social interaction
  - (c) Managing player feedback
  - (d) Server latency
9. What is the main goal of designing a user interface (UI) in games?
  - (a) To distract the player
  - (b) To challenge the player
  - (c) To provide feedback and guidance
  - (d) To increase difficulty
10. What type of games are referred to as “Serious Games”?
  - (a) Games designed for entertainment
  - (b) Games designed with complex narratives
  - (c) Games designed for educational or training purposes
  - (d) Game based on real-life events

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b)

11. (a) Explain the iterative design approach in game design.

Or

- (b) Discuss the different types of game puzzles and their roles in enhancing gameplay.

12. (a) Describe the relationship between chance and skill in game mechanics.

Or

- (b) How do strategic decisions affect the dynamics and difficulty in game design?

13. (a) What are the key factors in targeting a market for a video game?

Or

- (b) Discuss the role of storytelling in games, with examples of different story arcs.

14. (a) Discuss the impact of multiplayer mechanics in modern games.

Or

- (b) How does social networking influencing game design and player interaction in multiplayer games?

15. (a) What are the goals of UI design in games?

Or

- (b) Discuss the role of feedback in game user interfaces and the impact of bad UI on gameplay.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b)

16. (a) Analyze the different game mechanics and their contribution to player engagement and challenge.

Or

- (b) Discuss the concept of balancing skill and change in game design and its effect on player experience.

17. (a) Evaluate the role of story and character development in shaping the narrative of a game.

Or

- (b) Compare and contrast linear and non-linear storytelling techniques used in video games.

18. (a) Discuss the concept of game IP and the importance of sequels in the gaming industry.

Or

- (b) Evaluate the factors that make a game's intellectual property successful and long-lasting.

19. (a) Explain the challenges of designing multiplayer games, focusing on balancing game mechanics and player interaction.

Or

- (b) How can social media and online communities enhance or hinder the success of multiplayer games?

20. (a) Assess the significance of UI design in games and the impact of poor UI on player immersion.

Or

- (b) Discuss the role of serious games in education and their design considerations.

**C-7090**

**Sub. Code**

**83713**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025.**

**First Semester**

**Game technology**

**GAME CONCEPTUALIZATION**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which of the following is NOT a type of perspective view in game design?
  - (a) One-point perspective
  - (b) Two-point perspective
  - (c) Three-point perspective
  - (d) Four-point perspective
  
2. In linear perspective, the point where all parallel lines seem to converge is called:
  - (a) Station point
  - (b) Horizon line
  - (c) Vanishing point
  - (d) Picture plane

3. The basic unit of figure drawing is often simplified as:
  - (a) Cubes and rectangles
  - (b) Circles and squares
  - (c) Stick figures and lines
  - (d) Triangular shapes
  
4. What is the purpose of gesture drawing in figure sketching?
  - (a) To detail the anatomical features
  - (b) To capture the movement and pose
  - (c) To define the texture of the figure
  - (d) To create a background for the figure
  
5. Which of the following is NOT a characteristic of a good design?
  - (a) Visual hierarchy
  - (b) Repetition
  - (c) Uniformity
  - (d) Chaos
  
6. Which of the following is an example of a color scheme?
  - (a) Additive model
  - (b) RGB
  - (c) Triadic harmony
  - (d) Color wheel
  
7. What is the key element in the concept of Gestalt principles in design?
  - (a) Contrast
  - (b) Proximity
  - (c) Size
  - (d) Shape

8. What texture type is associated with the sense of smoothness or roughness?
- (a) Patterned
  - (b) Visual
  - (c) Tactile
  - (d) Static
9. When creating a concept art scene, which of the following is the most important to convey?
- (a) Storytelling through visuals
  - (b) Detailed line work
  - (c) Color theory
  - (d) Typography
10. Which of the following is a characteristic of hybrid art styles?
- (a) Extreme realism
  - (b) Combination of different artistic styles
  - (c) Abstract shapes only
  - (d) Simplicity and minimalism

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the role of vanishing points in linear perspective and their importance in game design.

Or

- (b) Explain how aerial perspective differs from linear perspective in terms of application in game environments.

12. (a) Discuss the process of simplifying the human figure into basic shapes for figure drawing.

Or

- (b) Explain the significance of proportion and gesture in creating a lifelike character design.

13. (a) What are the essential elements of visual composition in design?

Or

- (b) Define the principles of design and explain how they impact the overall aesthetic of a game.

14. (a) Explain how textures are applied in game design to create depth and realism

Or

- (b) Discuss how understanding the foreground, midground, and background in textures contributes to a more immersive environment.

15. (a) Describe the role of storytelling in concept art.

Or

- (b) Discuss the significance of scene construction and how it enhances the narrative in a game.

**Part C** (5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Explain the concept of “world-building” in concept art and its significance in creating immersive game environments.

Or

- (b) Discuss the process of designing and sketching a game character, including factors like silhouette and personality.

17. (a) Analyze the importance of color theory in visual design for games, particularly in the context of character design.

Or

- (b) Discuss how color schemes such as complementary or analogous colors can enhance the visual appeal and mood of a game.

18. (a) Discuss the role of multiplayer mechanics in game design and how it affects player interaction.

Or

- (b) Explain the challenges and considerations involved in designing multiplayer games, such as balancing gameplay and social interaction.

19. (a) Describe the various types of textures used in game design and how they influence player experience.

Or

- (b) Discuss the process of applying texture and color to materials and environments, including tips for achieving realistic results.

20. (a) Explain the importance of script writing in concept art and how it contributes to the overall game design process.

Or

- (b) Discuss the significance of storyboards in visualizing scenes and transitions, and how they help communicate ideas to the design team.
-

**C-7091**

**Sub. Code**

**83714**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

**First Semester**

**Game Technology**

**GAME PROGRAMMING**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. What is the main function of the processor in a computer system?
  - (a) Process and execute instructions
  - (b) Store data
  - (c) Display output
  - (d) Provide power
  
2. Which of the following is a type of software?
  - (a) input device
  - (b) Output device
  - (c) Operating system
  - (d) CPU
  
3. Which of the following data types is used for storing a whole number?
  - (a) float
  - (b) char
  - (c) int
  - (d) string

4. Which type of loop will execute at least once before checking the condition?
  - (a) for loop
  - (b) while loop
  - (c) do-while loop
  - (d) if-else
  
5. Which of the following is true about functions in C++?
  - (a) Functions cannot return values
  - (b) Functions must always be inline
  - (c) Functions help in code reusability
  - (d) Functions cannot have parameters
  
6. What does the concept of inheritance allow in object-oriented programming?
  - (a) Classes can inherit properties of other classes
  - (b) Functions cannot be used
  - (c) Only data members are inherited
  - (d) The object cannot be instantiated
  
7. Which of the following is an example of a container in C++ Standard Template Library (STL)?
  - (a) Pointer
  - (b) Array
  - (c) Queue
  - (d) Function

8. What is a class in object-oriented programming?
- (a) A collection of functions
  - (b) A blueprint for creating objects
  - (c) A collection of data only
  - (d) A sequence of instructions
9. Which operator is used to access a function or variable through a pointer?
- (a) \*
  - (b) &
  - (c) →
  - (d) .
10. Which of the following is NOT a linear data structure?
- (a) Array
  - (b) Linked list
  - (c) Stack
  - (d) Tree

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b)

11. (a) Explain the basic anatomy of a computer system and describe the role of input, output, and memory devices.

Or

- (b) Describe the different types of programming languages and their characteristics.

12. (a) Discuss the concept of recursion in programming and give an example of a recursive function.

Or

- (b) Define and explain the use of loops in C++. Provide examples for while, for, and do-while loops
13. (a) What are pointers in C++? Explain the advantages and disadvantages of using pointers in programming.

Or

- (b) Explain the concept of structures in C++. How do structures differ from arrays?
14. (a) Discuss the concept of polymorphism and explain the difference between function overloading and function overriding.

Or

- (b) What is encapsulation in object-oriented programming? Describe how it helps in data security.
15. (a) What are the different types of containers in the Standard Template Library (STL)? Explain their uses.

Or

- (b) Describe the process of sorting in C++. How does the binary search algorithm work?

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b)

16. (a) Explain the evolution of computers, highlighting the key advancements in computer generations and their impact on technology.

Or

- (b) Discuss the various memory management techniques used in operating systems and their importance in improving system performance.
17. (a) Explain the concept of data types and variables in programming.

Or

- (b) Elaborate on the process of program debugging. Discuss the importance of debugging and tools used for this purpose.
18. (a) What is the difference between dynamic and static memory allocation in C++? Discuss how dynamic memory management is handled using pointers.

Or

- (b) Discuss the different types of loops in C++.
19. (a) Describe the principles of object-oriented programming.

Or

- (b) Explain the concept of exception handling in C++.

20. (a) What are iterators in C++? Discuss their types and explain how they are used in STL containers.

Or

- (b) Describe the process of searching and sorting algorithms in C++.
-

**C-7092**

**Sub. Code**

**83716A**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

**First Semester**

**Game Technology**

**HISTORY OF ART IN GAMES**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which cave is famous for its Paleolithic cave paintings?
  - (a) Cave of Altamira, Spain
  - (b) Lascaux, Southwestern France
  - (c) The Chauvet-Pont-d'Arc Cave, Southern France
  - (d) Valley civilization (Harappa, Mohenjo Daro)
  
2. Mesopotamia is known for its ancient civilization located in which modern-day region?
  - (a) Europe
  - (b) North America
  - (c) Middle East
  - (d) South America

3. Which artistic style emerged during the Medieval period, characterized by its focus on religious themes and symbolic imagery?
  - (a) Gothic
  - (b) Renaissance
  - (c) Baroque
  - (d) Classicism
  
4. Hieratic scale or mental perspective is a characteristic feature of which artistic period?
  - (a) Gothic
  - (b) Renaissance
  - (c) Baroque
  - (d) Classicism
  
5. Which art form is a traditional Japanese method of woodblock printing?
  - (a) Calligraphy
  - (b) Mandala
  - (c) Ukiyo-e
  - (d) Byobu
  
6. The art of Chinese pottery is characterized by which of the following?
  - (a) Hand Scroll
  - (b) Japanese Woodblock Printing
  - (c) Calligraphy
  - (d) Pottery

7. Which art form is known for its intricate detailing and vibrant colors, often depicting scenes from Hindu mythology and court life?
- (a) Mughal miniature painting
  - (b) Madhubani painting
  - (c) Kangra painting
  - (d) Warli painting
8. Which Indian art form originated in the Bihar region and is characterized by its bold lines and use of natural colors to depict scenes from everyday life and mythology?
- (a) Mughal miniature painting
  - (b) Madhubani painting
  - (c) Kangra painting
  - (d) Warli painting
9. Which art movement emphasized emotion, individualism, and the glorification of nature, often depicted through dramatic landscapes and intense scenes?
- (a) Romanticism
  - (b) Impressionism
  - (c) Expressionism
  - (d) Cubism
10. Impressionism is known for its emphasis on:
- (a) Highly detailed and realistic depictions of scenes
  - (b) Use of bold, abstract shapes and forms
  - (c) Capturing fleeting moments and effects of light
  - (d) Depicting fragmented views of objects from multiple perspectives

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Discuss the significance of the Paleolithic Age in human history.

Or

- (b) Discuss the artistic achievements of Harappan culture.

12. (a) Define the Hieratic Scale in medieval art and its significance in representing religious themes.

Or

- (b) Explain the key principles of Renaissance art and its departure from medieval artistic conventions.

13. (a) Explain the significance of hand scrolls and hanging scrolls in traditional Chinese and Japanese art.

Or

- (b) Describe the art of Japanese woodblock printing (ukiyo-e). Discuss its origins, techniques, and themes depicted in prints.

14. (a) Discuss the characteristics of Mughal miniature painting and its development under Mughal patronage.

Or

- (b) Explain the distinctive features of Madhubani painting.

15. (a) Discuss the characteristics of Romanticism as an art movement.

Or

- (b) Discuss the artistic innovations of Post-Impressionism artists such as Van Gogh and Gauguin.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Compare and contrast the Mesolithic and Neolithic Ages, highlighting the major advancements and developments during each period.

Or

- (b) Explain the significance of Mesopotamia as one of the earliest cradles of civilization.

17. (a) Explain the concept of Hieratic Scale or Mental Perspective in medieval art.

Or

- (b) Describe the artistic principles of Classicism, drawing examples from Greek and Roman art.

18. (a) Discuss the development of pottery and bronze art in ancient China and Japan.

Or

- (b) Analyze the significance of Japanese woodblock printing (ukiyo-e). Discuss its techniques, themes, and impact on Japanese art and culture.

19. (a) Describe the art forms of Madhubani, Kangra, and Warli painting.

Or

- (b) Explain the tradition of manuscript painting in India, with a focus on Pala and Jain manuscripts.
20. (a) Discuss the characteristics of Abstract art, exploring its focus on form, color, and non-representational imagery.

Or

- (b) Explain the principles and philosophy behind Dadaism as an avant-garde art movement.
-

**C-7094**

**Sub. Code**

**83716C**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025**

**First Semester**

**Game Technology**

**ADVANCED ART FOR GAME CHARACTER**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. Which of the following improves the quality of contour drawing?
  - (a) Focusing only on the details
  - (b) Quickly glancing back and forth between the subject and the paper
  - (c) Maintaining consistent attention on the subject without looking at the paper
  - (d) Using heavy pressure on the pencil
  
2. What is the purpose of focusing on visual perception in observational drawing?
  - (a) To memorize the subject
  - (b) To draw faster
  - (c) To simplify complex forms into cartoons
  - (d) To train the eye to see details, relationships, and proportions

3. What is foreshortening in drawing?
  - (a) Creating lighter values for distant objects
  - (b) Compressing the dimensions of an object to give the illusion of depth
  - (c) Using bright colors to emphasize the foreground
  - (d) Extending the proportions of an object to make it appear larger
  
4. What are converging lines?
  - (a) Parallel lines that remain equidistant
  - (b) Decorative lines that frame the composition
  - (c) Lines that extend to meet at the vanishing point
  - (d) Lines that emphasize texture
  
5. In terms of relative proportions, how many heads tall is the average human figure?
  - (a) 5
  - (b) 6
  - (c) 7.5
  - (d) 8
  
6. When simplifying body parts into 2D shapes, which of the following is commonly used for the torso?
  - (a) A triangle
  - (b) A rectangle or oval
  - (c) A square
  - (d) A circle

7. In digital color theory, what does the RGB color model stand for?
- (a) Red, green, blue
  - (b) Red, green, black
  - (c) Royal green, blue, and red
  - (d) Red, grey, blue
8. When creating a harmonious color palette, which of the following is typically used?
- (a) Random color choices to create visual interest
  - (b) A combination of analogous, complementary, or triadic colors
  - (c) A monochromatic palette of only one color
  - (d) Only primary colors
9. What does “conceptual depth’ refer to in environmental design?
- (a) The use of different textures in a space
  - (b) The emotional and psychological impact of the space
  - (c) The physical layers of space within a design
  - (d) The visual layering of objects in the background
10. How is the Golden Ratio applied in environmental design?
- (a) To divide a space into equal sections for symmetry
  - (b) To establish the height and width of walls in a room
  - (c) To create harmonious proportions and visually appealing layouts
  - (d) To determine the exact color palette for a design

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Describe the significance of observational drawing in developing visual perception.

Or

- (b) Define contour drawing and explain its purpose in art education.

12. (a) Explain the different types of perspective systems.

Or

- (b) Discuss the role of size, placement, and perspective systems in achieving depth in drawing.

13. (a) Discuss the role of figure drawing in understanding human anatomy.

Or

- (b) Discuss how the relative size and placement of various body parts affect the overall realism of the figure.

14. (a) Explain the RGB color model used in digital color theory.

Or

- (b) Discuss the role of color psychology in marketing and branding.

15. (a) Explain how the Golden Ratio is applied in environmental design.

Or

- (b) How does the Golden Ratio influence the layout of architectural elements in a building or room design?

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Discuss the concept of “value” in drawing. How does understanding value improve the realism of a drawing?

Or

- (b) Analyze the importance of light and shadow in creating a sense of three dimensionality in observational drawing.
17. (a) Explain the importance of correct placement when drawing objects in perspective.

Or

- (b) Discuss the concept of proportional accuracy in perspective drawing.
18. (a) Explain how you would approach constructing the front view of the human figure using basic shapes. What steps would you take to ensure correct proportions, symmetry, and balance?

Or

- (b) How does balance play a role in figure drawing? Discuss the principles of balance and stability when constructing a figure in a particular pose.
19. (a) Describe the concept of color temperature. How do warm and cool colors impact the mood and perception of a painting or design?

Or

- (b) Discuss hue, saturation, and value, and explain how they work together to define a color.

20. (a) What is the significance of scale and proportion in environmental design? Discuss how designers use these principles to ensure that elements within a space feel harmonious and functional.

Or

- (b) Discuss the concept of “conceptual depth” in environmental design. How can designers incorporate emotional and psychological depth into their designs to enhance user experience?
-

**C-7101**

**Sub. Code**

**83731**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025.**

**Third Semester**

**Game Technology**

**SPECIALIZED GAME ENGINE – II**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. What is the first step in using a game engine for project creation?
  - (a) Importing assets
  - (b) Installation process
  - (c) Creating a material
  - (d) Importing height maps
  
2. What is a BSP surface primarily used for in game engines?
  - (a) Static mesh creation
  - (b) Terrain generation
  - (c) Landscape editing
  - (d) Lighting creation

3. Which of the following is used for terrain material creation?
  - (a) Vertex painting
  - (b) Height maps
  - (c) Particle systems
  - (d) Static meshes
  
4. What is the primary function of the Foliage Editor in game engines?
  - (a) Editing terrain
  - (b) Editing particle systems
  - (c) Placing foliage and plants
  - (d) Importing meshes
  
5. Which of these is required for creating a custom material in a game engine?
  - (a) Normal maps
  - (b) Diffuse texture
  - (c) Vertex painting
  - (d) Blueprint classes
  
6. What does Matinee help create in a game engine?
  - (a) AI scripting
  - (b) Cinematics and cutscenes
  - (c) Physics simulations
  - (d) Mesh animation

7. What does Blueprint input key binding refer to in game engines?
  - (a) Assigning commands to buttons or keys
  - (b) Assigning variables to specific actions
  - (c) Importing assets
  - (d) Creating enemy AI
  
8. Which of these is essential for creating a working health system in a game?
  - (a) Main menu
  - (b) Blueprint classes
  - (c) Destruction meshes
  - (d) UI widgets
  
9. In UI Widgets, what is used for creating the HUD?
  - (a) Post processing
  - (b) Floating UI widget component
  - (c) Level streaming
  - (d) Main menu functionality
  
10. What is the function of a coin pickup and counter in game mechanics?
  - (a) Triggering health regeneration
  - (b) Creating timed abilities
  - (c) Collecting in-game currency or items
  - (d) Activating particle systems

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the process of creating a static mesh and its importance in a game environment.

Or

- (b) Describe the role of lighting in a game engine, including how custom static meshes are imported and used.

12. (a) Discuss the significance of using height maps in terrain creation.

Or

- (b) Explain the importance of normal maps and emissive maps in enhancing visual realism in a game.

13. (a) How does Blueprint help in creating AI and enemy behavior?

Or

- (b) Discuss the process of creating and styling a pause menu in a game engine.

14. (a) Describe the functionality of the Game Countdown Timer and how it impacts gameplay.

Or

- (b) Explain the process of creating and implementing a fuel system in a game.

15. (a) Discuss how animated popup messages can be used to enhance user experience in a game.

Or

- (b) Describe the steps involved in creating and using structural meshes for level design.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Explain the process of setting up a game engine from installation to project creation.

Or

- (b) Discuss the significance of learning about primitive geometry and geometry editing for game designers.

17. (a) Analyze the role of sound and music in game design.

Or

- (b) Explain the process of integrating destructible meshes in games and their effects on gameplay dynamics.

18. (a) Discuss the process of creating a health system in a game, including Blueprint classes, input handling, and variable types.

Or

- (b) Explain the concept of user interface widgets in a game engine, focusing on HUD creation and functionality.

19. (a) Explore the creation of visual effects using Cascade VFX.

Or

- (b) Describe the process of creating and implementing a level streaming system and its impact on large-scale game environments.
20. (a) Analyze how creating a moving platform or crushing pillar can impact gameplay dynamics in side-scroller games.

Or

- (b) Discuss the importance of game over and death screens in user experience, and how lighting and health indicators can be used for storytelling.
-

**C-7102**

**Sub. Code**

**83733**

**M.Sc. DEGREE EXAMINATION, NOVEMBER 2025.**

**Third Semester**

**Game Technology**

**EMERGING TECHNOLOGIES IN GAME  
DEVELOPMENT**

**(2023 onwards)**

Duration : 3 Hours

Maximum : 75 Marks

**Part A**

(10 × 1 = 10)

Answer **all** questions.

1. What is the primary goal of Virtual Reality (VR)?
  - (a) To create a real-world experience
  - (b) To simulate a real or imagined world
  - (c) To improve gaming graphics
  - (d) To track motion in the real world
  
2. Which of the following is NOT a part of Geometric modeling?
  - (a) Transformation
  - (b) Rotation
  - (c) Quaternions
  - (d) Yaw and Roll

3. In VR, the Pitch, Yaw, and Roll transformations are associated with
  - (a) Viewing transformations
  - (b) Camera tracking
  - (c) Rotation of objects
  - (d) Depth perception
  
4. Which of the following representations is used to represent rotations in 3D space?
  - (a) Euler Angles
  - (b) Axis-Angle Representation
  - (c) Homogeneous Transformations
  - (d) Quaternions
  
5. In the context of camera tracking in VR, what does “Tilt Drift Correction” refer to?
  - (a) Correcting the cameras focal length
  - (b) Correcting rotation errors in tracking
  - (c) Adjusting the field of view
  - (d) Calibrating depth perception
  
6. What is the purpose of Feature Matching in Augmented Reality (AR)?
  - (a) To create a realistic virtual environment
  - (b) To align geometric shapes in the scene
  - (c) To match corresponding features between real and virtual images
  - (d) To calculate depth in AR scenes

7. What technique is commonly used for Feature Extraction in AR?
  - (a) Quaternions
  - (b) SIFT
  - (c) Homogeneous Transformation
  - (d) Axis-Angle Representation
  
8. Which of the following is NOT a part of Internet of Things (IoT) technology?
  - (a) Networking
  - (b) Communication protocols
  - (c) Actuation
  - (d) Quaternions
  
9. In IoT, Machine-to-Machine Communication is used to.
  - (a) Allow devices to communicate directly with each other
  - (b) Control the lighting in virtual reality
  - (c) Enhance user experience in AR
  - (d) Improve data storage efficiency
  
10. Which of the following is a method used to correct Yaw Drift in VR tracking?
  - (a) Motion tracking
  - (b) Perspective n-point problem
  - (c) Camera calibration
  - (d) Tilt Drift Correction

**Part B**

(5 × 5 = 25)

Answer **all** questions, choosing either (a) or (b).

11. (a) Explain the different types of transformations used in VR. specifically Pitch, Yaw, and Roll.

Or

- (b) Discuss how matrices are used for transformations in VR environments.

12. (a) What is a Quaternion, and how does it differ from Euler angles in VR?

Or

- (b) Describe homogeneous transformations and their application in VR systems.

13. (a) Explain the concept of Depth Perception in VR. How does it impact the user experience?

Or

- (b) Discuss the role of eye movement in VR and its effect on depth perception.

14. (a) What are the main techniques for Feature Extraction in AR, and how do they contribute to tracking and mapping?

Or

- (b) Describe the process of feature matching and geometric verification in AR applications.

15. (a) Explain the concept of “Sensor Cloud” in IoT and its significance in data handling.

Or

- (b) Discuss the role of communication protocols in IoT systems and how they enable networking between devices.

**Part C**

(5 × 8 = 40)

Answer **all** questions, choosing either (a) or (b).

16. (a) Describe the process of viewing transformations in VR, including the roles of eye transforms, canonical view transforms, and viewport transformation.

Or

- (b) Explain the role of axis-angle representations in 3D rotations and discuss their importance in VR systems.

17. (a) Analyze the concept of motion perception in VR.

Or

- (b) Discuss the challenges of orientation tracking in VR and the solutions for yaw drift correction.

18. (a) Explain the significance of the “Perspective n-point problem” in VR and how it is solved.

Or

- (b) Discuss how camera tracking and filtering techniques are used to enhance VR experiences.

19. (a) Describe how Image Acquisition works in AR.

Or

- (b) Explain the concept of Hybrid Tracking in AR and how it differs from sensor-based or vision-based tracking.

20. (a) Discuss the role of IoT in smart grids and its impact on energy efficiency.

Or

- (b) Explain the importance of networking and machine-to-machine communication in IoT-enabled systems.
-