

C-0777

Sub. Code

83731

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Third Semester

Game Technology

GAME DEVELOPMENT FOR MOBILE

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Define OOPS.
2. How to create an instance of a class in Java?
3. Summarize the functions of mobile OS.
4. Define emulator.
5. What is overloading with example?
6. Define manifest file.
7. Give an example of deployment.
8. What is IDE?
9. What is game Texture Atlas?
10. What is screen transition?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) What are the types of inheritance in java?
Or
(b) List the advantage of OOPs over Procedure-oriented programming language.
12. (a) Differentiate between computer OS and Mobile OS.
Or
(b) Explain the features of mobile operating system.
13. (a) Draw the life cycle of an activity.
Or
(b) Explain Scroll view.
14. (a) What are frameworks in game development? Explain.
Or
(b) Explain the features of game engine.
15. (a) How to create a parallax scrolling effect? Explain.
Or
(b) Write notes on handling sensors.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Elaborate on the various object-oriented concepts, with necessary illustrations.
Or
(b) Explain the arrays and its types in detail with example program.

17. (a) Analyse the components of a Mobile Operating System.

Or

(b) With suitable example explain the steps to develop a simple android application.

18. (a) Explain the importance of threads and multithreads in java.

Or

(b) What are the different types of views in android OS? Explain it in detail.

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83732

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Third Semester

Game Technology

MODELING AND TEXTURING

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is meant by tiling texture? Give example.
2. Write short note on modular design.
3. How does AO map work?
4. What is UV texture editor?
5. What is spotlight in Maya?
6. Define batch render.
7. Define blender.
8. What is body mesh?
9. What do you mean animated mesh?
10. What are the basic colours of a map?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss on Lossy image compression.

Or

- (b) List down the types of graphic file formats.

12. (a) Describe on ambient map.

Or

- (b) Write notes on texture nodes.

13. (a) Outline the sources of direct light.

Or

- (b) Elaborate on colour theory.

14. (a) Write notes on Low poly vehicles.

Or

- (b) Discuss on rigid rigging.

15. (a) Mention the features of 3d character modelling.

Or

- (b) Why body proportion is important while creating a game character?

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the concepts and techniques of texturing in digital modelling.

Or

- (b) Explain various modelling tools available in MAYA.

17. (a) Explain the basics of vehicle modelling with suitable example.

Or

(b) Extend the steps involved in setting up a MAYA scene for Image Based Lighting.

18. (a) Explain the followings

(i) Lighting types

(ii) Rendering techniques.

Or

(b) Analyse the basics of character modelling in game development.

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83733

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Third Semester

Game Technology

GAME DEVELOPMENT USING ENGINE – II

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. Why game engine needed?
2. What is custom mesh?
3. What are decals and opacity masks?
4. Why post processing required?
5. What is AI?
6. What are blueprint classes?
7. Define sprite.
8. Give the functions of death animation.
9. What is D/O game screen?
10. What are the issues in game development?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the overview of user interface.

Or

- (b) Explain the process of game engine.

12. (a) Discuss the sound and destruction mesh.

Or

- (b) Describe the creation of swimming pool in game engine.

13. (a) Explain the blueprint input key binding.

Or

- (b) Describe the UI floating widget component.

14. (a) Describe the VFX.

Or

- (b) Discuss the functions of death animation.

15. (a) Give the steps to create enemy bot with AI.

Or

- (b) Explain the level blocking system.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe in detail the types of tools used in game engine.

Or

- (b) Explain the purpose of editor in game development.

17. (a) Explain in detail health system development.

Or

(b) Explain the parameters to control the game design.

18. (a) Describe the cascade VFX in detail.

Or

(b) Explain in detail the moving platform creation.

C-0780

Sub. Code

83734

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

Third Semester

Game Technology

GAME PSYCHOLOGY

(2019 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 2 = 20)

Answer **all** questions.

1. What is behaviour psychology?
2. What is emotion?
3. Define memory.
4. What is attention?
5. What are cognitive processes?
6. What is insightful learning?
7. Define intelligence.
8. What is game psychology?
9. Why game learning curve needed?
10. What is cognitive addiction?

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the history of science psychology.

Or

- (b) Explain the application of psychology.

12. (a) Write note on levels of thinking.

Or

- (b) Explain the personality assessment methods.

13. (a) Highlight the multiple response learning.

Or

- (b) Discuss the motivation and emotion.

14. (a) Describe the video game attraction.

Or

- (b) Describe the mental workload in game.

15. (a) Discuss the motivation tool for games.

Or

- (b) Describe the social consequences.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the scientific methods in psychology.

Or

- (b) Describe the memory types with examples.

17. (a) Explain in detail about theory of intelligence.

Or

(b) Explain in detail the emotion theory.

18. (a) Describe the impact of games on player attitude.

Or

(b) Explains the theories of game psychology.

C-1325

Sub. Code

83711

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023

First Semester

Game Technology

ADVANCED GAME DEVELOPMENT

(2023 onwards)

Duration: 3 Hours

Maximum : 75 Marks

Section A

(10 × 1 = 10)

Answer **all** questions.

1. Which gaming console is credited with revolutionizing the gaming industry by introducing 3D graphics and analog controls?
 - (a) Nintendo Entertainment System
 - (b) Sega Genesis
 - (c) Sony PlayStation
 - (d) Atari 2600

2. In game design, which of the following factors is often represented on a tension map?
 - (a) The locations of hidden Easter eggs
 - (b) The distribution of enemy encounters
 - (c) The game's soundtrack and audio cues
 - (d) Player character customization options

3. Which dramatic element in a video game primarily refers to the main storyline and the sequence of events that drive the player's progress?
- (a) Plot
 - (b) Setting
 - (c) Character development
 - (d) Game play mechanics
4. In a typical game progression system, what is often required to advance to higher levels or unlock new content?
- (a) Collecting in-game currency
 - (b) Solving complex puzzles
 - (c) Defeating the final boss
 - (d) Gaining experience points
5. Which term describes a game character that is controlled by the player and represents their actions within the game world?
- (a) NPC (Non-Playable Character)
 - (b) Protagonist
 - (c) Antagonist
 - (d) Sidekick

6. Which of the following is a common challenge in balancing art and technology in game development?
- (a) Overemphasizing technical aspects and neglecting visual appeal
 - (b) Excessive use of artistic elements, leading to poor game performance
 - (c) Ignoring both art and technology to create a minimalist game
 - (d) Making the game too short, thus compromising the player's experience
7. What term is often used to describe the overall emotional and cognitive impact that a game has on a player?
- (a) Game play
 - (b) Ludonarrative
 - (c) Immersion
 - (d) Score
8. Which of the following is a common method used in game balancing to ensure fairness and competitiveness in multiplayer games?
- (a) Randomly assigning player stats and abilities
 - (b) Matchmaking based on player skill levels
 - (c) Letting players choose any character
 - (d) Awarding power-ups based on playtime

9. In the player taxonomy proposed by Amy Jo Kim, which type of player is characterized by their desire to connect and interact with other players, often forming social bonds within the game?
- (a) Competitor
 - (b) Soloist
 - (c) Achiever
 - (d) Networker
10. Which of the following ethical concerns in game design pertains to the potential for games to promote addictive behaviour and excessive in-game spending?
- (a) Inclusivity
 - (b) Micro transactions
 - (c) Narrative coherence
 - (d) Level design

Section B

(5 × 5 = 25)

Answer **all** questions.

Each answer should not exceed 500 words.

11. (a) Write short notes on types of games.

Or

- (b) Discuss about the types of fun.

12. (a) Write about the loop of interaction.

Or

- (b) What is Alea? Brief out.

13. (a) Distinguish between real and virtual architecture.

Or

(b) Write short note on value of aesthetics.

14. (a) Discuss about attributes and states of game mechanics.

Or

(b) Patterns inside patterns. Brief out.

15. (a) Write short note on the flow of influence.

Or

(b) Write a brief note on Psychographics.

Section C

(5 × 8 = 40)

Answer **all** questions.

Each answer should not exceed 1000 words.

16. (a) Elaborate on the ethics of New Media.

Or

(b) Explain the tension maps in game Design.

17. (a) Illustrate the dramatic elements of game.

Or

(b) Write a detailed note on integrating emergence and progression.

18. (a) Explain the common elements of successful worlds.

Or

(b) Write a detailed note on balancing art and technology.

19. (a) Elaborate the game balancing methodologies.

Or

(b) Explain about the game mechanics.

20. (a) Discuss about the taxonomy of players.

Or

(b) Write a detailed note on laws of computer game design.

C-1326

Sub. Code

83712

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023

First Semester

Game Technology

ADVANCED GAME DESIGN AND ANALYSIS

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the questions.

1. What is the central focus of player-centric game design?
 - (a) Maximizing profit through micro transactions
 - (b) Developing visually stunning graphics
 - (c) Creating immersive and engaging player experiences
 - (d) Implementing complex game mechanics
2. What kind of puzzle challenges players to find hidden objects within a cluttered scene or image?
 - (a) Hidden object puzzle
 - (b) Riddle puzzle
 - (c) Maze puzzle
 - (d) Word search puzzle

3. Which of the following is an essential element of strategic skill in games?
 - (a) Reaction time and hand-eye coordination
 - (b) Knowledge of game lore and storyline
 - (c) A high score achieved during game play
 - (d) Luck and chance

4. What does the term "Twitch skill" primarily refer to in gaming?
 - (a) The ability to stream games on the Twitch platform
 - (b) Quick reflexes and precise hand-eye coordination
 - (c) Strategic planning and long-term decision-making
 - (d) Knowledge of game mechanics and rules

5. Which type of sequel takes place in the same fictional universe as the original game but features a different storyline and cast of characters?
 - (a) Direct sequel (b) Expansion
 - (c) Remake (d) Spin-off

6. Which storytelling method involves revealing a story's events in chronological order from beginning to end?
 - (a) Flashback
 - (b) Nonlinear narrative
 - (c) Linear narrative
 - (d) Stream of consciousness

7. Which of the following is an example of a cooperative multiplayer game where players work together to achieve common goals?
- (a) Cooperate with teammates to complete missions
 - (b) Capture the opposing team's flag
 - (c) Be the last player or team standing by eliminating all other players
 - (d) Score points by defeating enemies in a team-based match
8. Which of the following is a common feature of leader boards in online multiplayer games?
- (a) Access to exclusive in-game items
 - (b) Display of players real names and contact information
 - (c) Personalized recommendations for new games to play
 - (d) The ability to compare your performance with friends and global players
9. Which phase of the UI design process typically involves creating visual representations of the interface's layout and functionality, often in the form of sketches or digital prototypes?
- (a) User testing
 - (b) Wire framing and prototyping
 - (c) Usability analysis
 - (d) Information architecture

10. Which of the following is a primary focus of educational serious games?
- (a) Training and skill development
 - (b) Entertainment and leisure
 - (c) High-stakes competition
 - (d) Storytelling and narrative

Part B

(5 × 5 = 25)

Answer **all** questions.

Each answer should not exceed 500 words.

11. (a) Write a note on game design atoms.

Or

- (b) Differentiate between level design and puzzle design.

12. (a) Distinguish between strategy and Tactics in game design.

Or

- (b) Write short note on mechanics of skill.

13. (a) Write about the mass market.

Or

- (b) What is meant by working backward? Brief out.

14. (a) Write a brief note on the types of multiplayer games.

Or

- (b) Write about the future of social networks and games.

15. (a) Games as a teaching tool – Justify.

Or

(b) Write short note on focus test.

Part C

(5 × 8 = 40)

Answer **all** questions.

Each answer should not exceed 1000 words.

16. (a) Elaborate on the types of design.

Or

(b) Write a detailed note on types of puzzles.

17. (a) Elaborate on the elements of Strategic skills.

Or

(b) Explain the elements of Twitch skill.

18. (a) What is meant by learning about the target market? Explain.

Or

(b) Write a detailed note on the story telling methods.

19. (a) Discuss about the issues in multiplayer game design.

Or

(b) Explain the propagation mechanics in social network games.

20. (a) Elaborate on the process of UI design.

Or

(b) Illustrate the importance of designing and modifying games for students.

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Sub. Code

83713

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

First Semester

Game Technology

GAME CONCEPTUALIZATION

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the questions.

1. Linear perspective in art is primarily used to _____.
 - (a) Depict distant objects with reduced detail and lighter colours
 - (b) Create the illusion of depth and three-dimensional space on a flat surface
 - (c) Show objects from a top-down view with accurate proportions
 - (d) Emphasize the use of strong, bold lines in the artwork

2. In linear perspective, what is the term for the point on the horizon line where parallel lines appear to converge and meet?
 - (a) Vanishing point (b) Focal point
 - (c) Zenith point (d) Nadir point

3. Which of the following is a fundamental technique in figure drawing, involving the use of ovals or circles to represent joints and the structure of the human body?
(a) Hatching (b) Foreshortening
(c) Gesture drawing (d) Constructive drawing
4. In traditional figure drawing, what is the standard measurement unit often used to determine the proportions of the human body?
(a) Inches (b) Centimetres
(c) Heads (d) Feet
5. Which of the following design elements refers to the visual weight and distribution of elements in a composition?
(a) Contrast (b) Balance
(c) Proportion (d) Unity
6. What is the attribute of color that refers to its lightness or darkness, often described as a scale from black to white?
(a) Saturation (b) Hue
(c) Intensity (d) Value
7. What type of texture is often associated with the feel of natural materials like wood, stone, or sandpaper?
(a) Tactile texture (b) Visual texture
(c) Patterned texture (d) Abstract texture
8. Which of the following describes a design with poor proportion?
(a) Elements are arranged symmetrically
(b) Elements are arranged asymmetrically
(c) Elements appear too large or too small in relation to the rest of the composition
(d) Elements are aligned to a grid

9. Which industry commonly uses concept art as a crucial step in the development of characters, environments, and props?
- (a) Agriculture
 - (b) Video game and film production
 - (c) Aerospace engineering
 - (d) Retail
10. In theatre and filmmaking, what is the term for the process of arranging and coordinating the elements of a scene, including actors, props, lighting, and camera placement?
- (a) Scene composition
 - (b) Scene blocking
 - (c) Scene scripting
 - (d) Scene rendering

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) What is station point? Brief out.
Or
(b) Write a brief note on vanishing point.
12. (a) Distinguish between proportion and gesture.
Or
(b) Write a short note on stick figure.
13. (a) What are Gestalt principles? Brief out.
Or
(b) Differentiate between additive model and subtractive model.
14. (a) Mention the useful tips an creating a texture.
Or
(b) Write a brief note on background colour textures.

15. (a) What is Silhouettes? Brief out.

Or

(b) Write a short note on vehicle design.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Explain the types of perspective views.

Or

(b) Elaborate on linear perspective construction.

17. (a) Illustrate the essentials of human figure drawing.

Or

(b) Write a detail note on constructing the front view using basic shapes.

18. (a) Write about the characteristics of a good design.

Or

(b) Explain the attributes of color.

19. (a) Write a detailed note on the study of different environment.

Or

(b) Elaborate on the application of texture and colouring.

20. (a) Write in detail about props and weapon design.

Or

(b) Explain the elements of story.

C-1328

Sub. Code

83714

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

First Semester

Game Technology

GAME PROGRAMMING

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** the questions.

1. Who is often credited with building the worlds first programmable computer, known as the “Analytical Engine”?
(a) Alan Turing (b) John von Neumann
(c) Charles Babbage (d) Ada Lovelace
2. Which of the following memory management techniques involves dividing physical memory into fixed-sized blocks, each capable of holding a single program or process?
(a) Paging (b) Segmentation
(c) Swapping (d) Fragmentation
3. _____ is used to store and manipulate data that can change during program execution.
(a) constant
(b) variable
(c) conditional statement
(d) if statement

4. What is the primary purpose of a function in programming?
- (a) To store data for later use
 - (b) To declare variables
 - (c) To print text on the screen
 - (d) To perform a specific task or computation
5. _____ arrays can automatically resize themselves to accommodate more elements.
- (a) Dynamic (b) Multidimensional
 - (c) One dimensional (d) Two dimensional
6. In programming _____ is a variable that holds the memory address of another variable.
- (a) function (b) memory id
 - (c) array (d) pointer
7. Which type of polymorphism occurs at compile-time and is resolved during compile-time, often referred to as “early binding”?
- (a) Static polymorphism
 - (b) Compile-time polymorphism
 - (c) Dynamic polymorphism
 - (d) Run-time polymorphism
8. Which access modifiers are commonly used in encapsulation to control access to class members in most programming languages?
- (a) Static, final and abstract
 - (b) Inheritance and polymorphism
 - (c) Public, private and protected
 - (d) Getters and setters

9. Which container adaptor in C++ STL allows elements to be processed in a last-in, first-out (LIFO) manner?
(a) queue (b) stack
(c) vector (d) map
10. Which of the following is an example of a linear data structure?
(a) Binary tree (b) Hash table
(c) Stack (d) Graph

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a note on the generations of computers.
Or
(b) Write short note on output devices.
12. (a) Differentiate between variables and constants.
Or
(b) Distinguish between inline function and recursive functions.
13. (a) Discuss about generating pointer to an array.
Or
(b) Write a brief note on Union and Enum.
14. (a) What is encapsulation? Brief out.
Or
(b) Write a short note on virtual function.
15. (a) Discuss about mutating algorithms.
Or
(b) Write a brief note on shortest path algorithm.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Describe the classification of computers.

Or

- (b) Write a detailed note on the problem solving techniques.

17. (a) Elaborate on data types.

Or

- (b) Discuss about the conditional statements.

18. (a) Write about the advantages and disadvantages of pointers.

Or

- (b) Explain the user defines data types.

19. (a) Elaborate on the types of polymorphism.

Or

- (b) Write a detailed note on Exception Handling.

20. (a) Illustrate the importance of random number generator.

Or

- (b) Explain the types of data structures.

C-1329

Sub. Code

83716A

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

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. Oldest Neolithic site in India
 - (a) Burzahom
 - (b) Chirand
 - (c) Brahmagiri
 - (d) Mehargarh
2. Which was the first metal used by man?
 - (a) Copper
 - (b) Silver
 - (c) Bronze
 - (d) Brass
3. The Parthenon, a famous temple dedicated to the goddess Athena, is located in which ancient Greek city?
 - (a) Athens
 - (b) Sparta
 - (c) Corinth
 - (d) Delphi
4. In Roman mythology, who is the messenger god often depicted with wings on his sandals and hat?
 - (a) Bacchus
 - (b) Vulcan
 - (c) Mercury
 - (d) Pluto

5. What is a Japanese hanging scroll called?
(a) Kimono (b) Kakemono
(c) Emaki (d) Sansebiao
6. What did ukiyo-e mean?
(a) World of peace
(b) World of people
(c) Human harmony
(d) Pictures of the floating world
7. Madhubani paintings traditionally depict scenes from which religious epics?
(a) Ramayana and Mahabharata
(b) Rhagavad Gita and Puranas
(c) Quran and Hadith
(d) Bible and Torah
8. Mughal miniature art was significantly influenced by the art of which culture or civilization?
(a) Greek (b) Persian
(c) Egyptian (d) Chinese
9. What aspect of nature did Romanticism emphasize and celebrate?
(a) Urban landscapes
(b) The power of technology
(c) The beauty and spirituality of nature
(d) Industrialization
10. Which city is often considered the birthplace of the Dada movement, where it originated during World War I?
(a) Paris (b) Berlin
(c) Berlin (d) New York City

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a short note on Palaeolithic age.
Or
(b) What do you understand by Valley civilization?
12. (a) What are the similarity between Roman and Greek art?
Or
(b) Define Rococo Medieval art? What are characteristics of Rococo art?
13. (a) What is Japanese woodblock printing?
Or
(b) Write a short note on Calligraphy.
14. (a) What is the origin and history of Madhubani painting?
Or
(b) How has Mughal miniature art influenced later Indian art forms?
15. (a) What is the concept of Romanticism?
Or
(b) Write a short note Pop art.

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Explain Neolithic Age? What are the three main characteristics of Neolithic age?
Or
(b) Explain one Indian valley civilization?

17. (a) What are the techniques of preservation and conservation of old and rare manuscripts?

Or

(b) What is the hierarchical scale in Egypt?

18. (a) What role did Buddhism play in the development of Chinese art, particularly in the creation of sculptures and temple architecture?

Or

(b) What are the essential tools and materials used in Japanese calligraphy?

19. (a) What are some common themes depicted in Rajasthani miniature paintings?

Or

(b) Describe the key characteristics of Mughal miniature art, including techniques, use of colours, and stylistic features.

20. (a) When and where did the Impressionist art movement originate and how did Impressionism influence the development of modern art?

Or

(b) Which historical period and events influenced the emergence of Dadaism?

C-1330

Sub. Code

83716B

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023.

First Semester

Game Technology

GAME MATH AND PHYSICS

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Section A

(10 × 1 = 10)

Answer **all** the questions.

1. In a system of linear equations, how many solutions exist if the determinant of the coefficient matrix is equal to zero?
 - (a) No unique solution, infinite solutions
 - (b) One unique solution
 - (c) No solution
 - (d) Two unique solutions

2. What is the dimensionality of the affine space in a 2D affine algebra?
 - (a) 0D
 - (b) 1D
 - (c) 2D
 - (d) 3D

3. In a 2D Cartesian coordinate system, which of the following correctly describes a vector's components?
 - (a) A single value representing magnitude
 - (b) Two values : magnitude and direction
 - (c) Three values: magnitude, direction and location
 - (d) Two values : horizontal and vertical

4. What is a quaternion in mathematics?
- (a) A three-dimensional vector representing spatial orientation
 - (b) A type of complex number with a real part and three imaginary parts
 - (c) A unit of measurement for angles
 - (d) A type of prime number
5. Which of the following kinematic representations is most suitable for describing the position and orientation of a rigid body in 3D space?
- (a) Quaternion
 - (b) Scalar
 - (c) Vector
 - (d) Scalar field
6. In Euler's equation of motion, what does the "T" represent in the equation $T = I\alpha$, where T is torque and α is angular acceleration?
- (a) Integration
 - (b) Impulse
 - (c) Intensity
 - (d) Inertia
7. In the context of deformable bodies, what is the term for a measure of the resistance of a material to deformation or stretching?
- (a) Elasticity
 - (b) Plasticity
 - (c) Density
 - (d) Hardness
8. Which of the following processes typically involves form deformation?
- (a) Melting
 - (b) Elastic deformation
 - (c) Forging
 - (d) Cooling

9. Which of the following is an example of a conservation law in physics?
- (a) Law of motion
 - (b) Law of energy
 - (c) Law of acceleration
 - (d) Law of randomness
10. In a simplified 2D model of a car moving on a flat plane, what would be the primary force opposing its motion?
- (a) A vertical line downwards
 - (b) A circular path
 - (c) A straight line upwards
 - (d) A curved parabolic trajectory

Section B

(5 × 5 = 25)

Answer **all** questions.

11. (a) Write a note on vector spaces.
Or
(b) What are Cartesian coordinates? Brief out.
12. (a) Write a brief note on rotation matrices.
Or
(b) Discuss about varying Quaternions.
13. (a) Write short note on rigid body Kinematics.
Or
(b) What is meant by rigid body motion? Brief out.
14. (a) Differentiate between stress and strain.
Or
(b) Write a brief note on spring systems.
15. (a) What is vector calculus? Brief out.
Or
(b) Write about simplified model for fluid flow.

Section C

(5 × 8 = 40)

Answer **all** questions.

16. (a) Elaborate on the systems of linear equation.

Or

- (b) Write a detailed note on Barycentric coordinates.

17. (a) What are advanced operations? Explain its properties.

Or

- (b) Explain the interpolation of Quaternions.

18. (a) Discuss about Newtonian Dynamics.

Or

- (b) Postulate Euler's Equations of motion.

19. (a) Elaborate on Mass-Spring Systems.

Or

- (b) Explain in detail about implicit surface deformation.

20. (a) Elaborate on conservation laws.

Or

- (b) Illustrate the importance of variations of the simplified model.

C-1331

Sub. Code

83716C

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023

First Semester

Game Technology

ADVANCE ART FOR GAME CHARACTER

(2023 onwards)

Duration : 3 Hours

Maximum : 75 Marks

Part A

(10 × 1 = 10)

Answer **all** questions.

1. What is the primary emphasis of observational design in art?
 - (a) Expressing emotions through abstraction
 - (b) Capturing the subject matter with a high degree of accuracy
 - (c) Using imagination to create artworks
 - (d) Incorporating digital technology into the creative process

2. Which of the following is NOT typically associated with observational design in art?
 - (a) Direct observation of the subject
 - (b) Use of photographs as the primary reference
 - (c) Development of artistic skills
 - (d) Rendering the subject realistically

3. Which of the following is a crucial concept in perspective drawing?
- (a) Pointillism
 - (b) Impressionism
 - (c) Vanishing points
 - (d) Cubism
4. In perspective drawing, what happens to objects as they recede into the distance?
- (a) They become larger
 - (b) They become more colourful
 - (c) They appear smaller and converge towards a vanishing point
 - (d) They lose their shape
5. What are the Tertiary Colours?
- (a) Red Orange, Red Violet, Blue Green, Blue Violet, Yellow Orange and Yellow Green
 - (b) Red, Orange, and Yellow
 - (c) Blue, Green, and Purple
 - (d) Red Orange, Red Violet and Yellow Orange
6. Who is the father of Color theory?
- (a) Johann Wolfgang von Goethe
 - (b) Isaac Newton
 - (c) Faber Birren
 - (d) Wassily Kandinsky

7. In which artistic discipline is a comprehensive knowledge of human anatomy particularly crucial?
- (a) Landscape painting
 - (b) Still life photography
 - (c) Portrait sculpture
 - (d) Performance art
8. Which artistic medium often involves a deep study of human anatomy due to its emphasis on realistic representations?
- (a) Abstract painting
 - (b) Digital art
 - (c) Figure drawing
 - (d) Collage
9. What is the main objective of environmental design in art?
- (a) To maximize profit
 - (b) To minimize the use of sustainable materials
 - (c) To create aesthetically pleasing and eco-friendly spaces
 - (d) To promote industrialization
10. Which of the following is NOT a consideration in choosing sustainable materials for environmental art projects?
- (a) Material availability
 - (b) Environmental impact
 - (c) Cost-effectiveness
 - (d) Durability

Part B

(5 × 5 = 25)

Answer **all** questions.

11. (a) How to develop visual perception?

Or

(b) What is the role of Contouring in drawing?

12. (a) What do you understand by Perspective drawing?

Or

(b) Explain the steps of Creating Depth.

13. (a) What are some essentials of human live figure drawing?

Or

(b) Explain Cylindrical forms in human figure.

14. (a) What is the basic theory behind the Colour wheel?

Or

(b) Explain the term Colour Psychology.

15. (a) How does colouring play a significant role in environmental design?

Or

(b) What do you understand by study of different environment?

Part C

(5 × 8 = 40)

Answer **all** questions.

16. (a) What is the variety in art? Give three examples of variety.

Or

- (b) Write down the importance Value and Shading.

17. (a) What do you understand by Perspective systems?

Or

- (b) Explain the term Overlapping and Placement in Art.

18. (a) What are some basic and essentials figures for human drawing?

Or

- (b) What do you understand by Line of action?

19. (a) What are the methods of colour application?

Or

- (b) State the importance of colour temperature in practical application.

20. (a) Explain Golden ratio.

Or

(b) How does Biophilic design promote a connection between people and the natural world in built environments?
