C–7440	Sub. Code
	82613

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

First Semester

Game Programming

GAMES ANALYSIS AND DESIGN

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is fun?

2. Difference between skill and difficulty.

3. Enlist the kinds of character in a game.

4. Define branching Trees.

5. State Actions and how to integrate rules?

6. Give the importance of balance in art.

7. What is interest curve?

8. What are Dynamics based on Player interaction?

9. What is ergodic?

10. Define player taxonomy.

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the types of game.

Or

(b) Briefly describe the history of game.

12. (a) Briefly discuss the structure of Game.

Or

(b) Explain game channels with an example.

13. (a) Describe the importance of aesthetic in virtual games.

Or

(b) Explain how to design and organize a game art.

14. (a) Briefly discuss imagination of game.

Or

(b) Explain briefly on player experience.

15. (a) Describe the player knowing.

Or

(b) Explain the player taxonomy.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Select one game of your choice and classify the gameplay using MDA method.

Or

(b) Explain the various types of players.

17. (a) Discuss in detail the construction and dramatic elements of game.

Or

(b) Explain the add and remove mechanics to games in this context.

18. (a) Explain the player interaction in game with an example.

Or

(b) Describe in detail the design and organise the gaming space.

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C–7441	Sub. Code
	82614

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

First Semester

Game Programming

PROGRAMMING FOR GAME DEVELOPMENT

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is looping function?

2. What are datas?

3. What are arrays?

4. What is the purpose of 1D array?

5. Define OOPS.

6. What is encapsulation?

7. How to handle the file?

8. What are timer functions?

9. What is game vector?

10. What is the functions of queue?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Discuss the various data variables in detail.

Or

(b) Write note on anyone programming for game development.

12. (a) Explain the dynamic array and give its merits and demerits.

Or

(b) How to generate the pointer to array.

13. (a) Discuss the classes and object.

Or

(b) Explain the inheritance.

14. (a) Describe the exception handling.

Or

(b) Explain enumerations with an example.

15. (a) Explain container in detail.

Or

(b) Describe the generate of random number.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write a program to find the factorial of a number using functions.

Or

(b) Describe the programming hello world in detail.

17. (a) Explain in detail the various types of arrays.

Or

(b) Explain the functions of virtual design.

18. (a) Explain abstract class with example.

Or

(b) Describe transforming algorithm with an example.

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C–2146

Sub. Code
82623

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Second Semester

Game Programming

ALGORITHMS AND DATA STRUCTURES

(2019 - onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Compare and contrast greedy algorithm and dynamic programming

2. What are the important problem types?

3. State Divide and conquer method

4. What is Binary Search?

5. What is an AVL Tree?

6. What is the length of the path in a tree?

7. State Greedy Technique

8. Where to apply the Kruskal's Algorithm Technique?

9. How to make the decision trees in algorithms?

10. Draw the structure for N-Queen Problem

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Explain about the different problem types used in data structures.

Or

(b) Explain clearly about the fundamentals of algorithms and problems in data structure.

12. (a) Discuss in detail about divide and conquer method.

Or

(b) State and explain about Quick sort.

13. (a) Illustrate divide and conquer method in detail.

Or

(b) Explain in detail about insertion sort method.

14. (a) Write Prims algorithm to find space complexity.

Or

(b) Write a routine to find shortest path algorithm

15. (a) Write a routine to find shortest path using travelling salesman problem.

Or

(b) Write short notes on Knapsack problem.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write short notes on time and space complexity in algorithms.

Or

(b) Find the optimal tour in traveling salesperson problem using dynamic programming.

17. (a) Explain briefly about bubble sort with suitable example.

Or

(b) Discuss the running time of Divide-and-Conquer merge sort algorithm.

18. (a) Explain briefly about Depth first search with example.

Or

(b) Formulate an algorithm to insert an element in binary tree.

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C–8076	Sub. Code
	82624

B.Sc. DEGREEEXAMINATION, NOVEMBER 2022

Game Programming

GAME MATHS AND PHYSICS

Second Semester

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A ($10 \times 2 = 20$)

Answer **all** questions.

1. What is Linear algebra?
2. What is Coordinate system?
3. What are the different kinds of Vectors?
4. What are quaternions?
5. What is rigid body?
6. State Newton's 1^{st} law?
7. What is elasticity?
8. What is free from deformation?
9. What are conservation laws?
10. What do you understand fluid flow model?

Part B ($5 \times 5 = 25$)

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

11. (a) Explain the important of matrices and vector spaces.

Or

(b) Discuss the cartesian coordinates.

12. (a) Briefly discuss the rotation matrices.

Or

(b) Explain the basic vector operations.

13. (a) Describe the importance of game physics.

Or

(b) Explain the rigid body kinematics.

14. (a) Briefly discuss deformable bodies.

Or

(b) Explain briefly on control point deformation.

15. (a) Describe vector calculus in detail.

Or

(b) Discuss the 2D simplified model in detail

Part C ($3 \times 10 = 30$)

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

16. (a) Explain in detail the coordinate systems.

Or

(b) Briefly describe the mathematical analysis of transformation.

17. (a) Explain the various approach involved in game physics.

Or

(b) Explain the various dynamics with suitable example.

18. (a) Explain the various rigid body concepts.

Or

(b) Describe in detail the simplified model for fluid flow.

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C–7442	Sub. Code
	82625

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Second Semester

Game Programming

2D GRAPHICS PROGRAMMING

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is 2D game?
2. What is game loop?
3. What is vertex and color?
4. What is FOV?
5. Classify matrix.
6. State the properties of virtual camera.
7. What is design level?
8. What is frame-based animation?
9. What is HUD?
10. What are attributes of particle system?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the important of graphics programming.

Or

(b) Discuss the coordinate spaces.

12. (a) Briefly discuss the buffers.

Or

(b) Explain the user interaction of graphics.

13. (a) Describe the importance of rotate and skew matrix.

Or

(b) Explain the basics of virtual camera.

14. (a) Briefly discuss the level editor.

Or

(b) Explain briefly on mouse picking.

15. (a) Describe rendering fonts in detail.

Or

(b) Discuss the particle system in detail.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail the API for graphics programming.

Or

(b) Explain the computer graphics terminology.

17. (a) Explain the programmable pipeline in detail.

Or

(b) Explain the world coordinates with suitable example.

18. (a) Explain the various animations for graphics design.

Or

(b) Describe in detail the implementation of basic physics concepts in game development.

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C–7443

Sub. Code
82632

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Game Programming

3D GRAPHICS PROGRAMMING

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. Define 3D graphics.
2. What is back face culling?
3. What is BSP tree?
4. Define bounding tree.
5. Enlist the types of cameras.
6. What is mouse picking?
7. What is the purpose of phong in graphics?
8. What is cel shading?
9. What is shadow?
10. What is normal mapping?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the importance of 3D graphics.

Or

(b) Discuss the types of maps used in 3D graphic design.

12. (a) Briefly discuss the BSP tree.

Or

(b) Describe the occlusion detection in detail.

13. (a) Discuss the characteristics of mouse interaction.

Or

(b) Briefly note on zoom and rotate operation in flexible camera.

14. (a) Describe the pixel light in detail.

Or

(b) Explain the purpose of blend map in graphic programming.

15. (a) What is mapping? Explain in detail.

Or

(b) Briefly explain the rendering.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write a program for rotating object of cube, with viewer movement.

Or

(b) Explain in detail the 3D transformations with their matrix representations.

17. (a) Explain the concept of free camera of an imaging system.

Or

(b) Describe the multiple lighting model. Also, indicate advantages and disadvantages.

18. (a) Explain the various methods of mapping.

Or

(b) With neat sketch, explain the components of 3D graphic system for skeletal animation.

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C–7444

Sub. Code
82633

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Game Programming

GAME NETWORKING TECHNIQUES

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is network topology?
2. What is network hub?
3. What is TCP?
4. What is the importance of firewall?
5. What is local client and remote client?
6. What are player objects?
7. What is spawning?
8. What is command?
9. What is call backs?
10. What are the host migration?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the network architecture.

Or

(b) Discuss the encryption and decryption in any one game.

12. (a) State the advantages of Bluetooth network.

Or

(b) Describe the characteristics of network security.

13. (a) Describe the network multiplayer game.

Or

(b) Explain the concepts of network system.

14. (a) Explain the network behaviour.

Or

(b) Explain the RPC client.

15. (a) Discuss the benefits of local player discover.

Or

(b) Explain the network servers in detail.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the various types of networks.

Or

(b) Discuss the routing algorithm with suitable example.

17. (a) Explain the network monitoring and statistics collection.

Or

(b) Discuss the network security and firewall in detail.

18. (a) Explain the functions of remote procedure call.

Or

(b) Explain in detail the network multiplayer game.

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C–7445	Sub. Code
	82634

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Third Semester

Game Programming

GAME ENGINE – I

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is 3D?
2. What is animation?
3. What is design tag?
4. What is mesh filter?
5. Define ray casting.
6. What is the pathfinding?
7. List out the types of joints.
8. What is user interface?
9. How to optimize the memory?
10. What is spawning?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Compare the 2D and 3D game concepts.

Or

(b) Explain the 3D game objects.

12. (a) Describe the basics of 3D methods.

Or

(b) Explain the collision detection.

13. (a) Explain the generic functions.

Or

(b) Discuss the 3D physics.

14. (a) Discuss the properties of GUI.

Or

(b) Explain the importance of lighting.

15. (a) Explain the basics of UI layout.

Or

(b) Highlight the clean-up code.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail the various components for 3D game development.

Or

(b) Explain in detail the game design levels.

17. (a) Discuss the generic functions of controlled game in detail.

Or

(b) Explain the characteristics of various types of joints.

18. (a) Describe the importance of texture and lighting in game.

Or

(b) Elucidate the designing of user interface for game with a suitable example.

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C–5131	Sub. Code
	82642

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fourth Semester

Game Programming

WEB GAME PROGRAMMING

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is HTML?
2. What is SVG?
3. What is the calf back functions?
4. What is form validation?
5. Pen down the image slider.
6. What is sprite sheet?
7. How to implement timer?
8. List the game paly programming.
9. What is debug?
10. Define render.

Part B (5 × 5 = 25)

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

11. (a) Explain tag in detail.

Or

(b) Differentiate SVG and canvas.

12. (a) Explain the types of arrays.

Or

(b) Explain the HTML event.

13. (a) Discuss in detail the JSON parsing.

Or

(b) Write about the development of sprite animation.

14. (a) Discuss the image manipulation.

Or

(b) Explain the application of UI in game design.

15. (a) Write note on pre-defined functions.

Or

(b) Discuss the request and response in web page development.

Part C (3 × 10 = 30)

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

16. (a) Explain in detail about HTML evolutions.

Or

(b) Explain in detail OOPS with Java Script Expressions and Operators.

17. (a) Discuss in detail the methods and functions of canvas in detail.

Or

(b) Explain the process of UI Designing with suitable example.

18. (a) Explain in detail about controlled game elements.

Or

(b) Discuss the application of asynchronous WebPages in detail.

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C–5120	Sub. Code
	83443/82643

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fourth Semester

MOBILE GAME DEVELOPMENT

(Common for B.Sc. (GD and D)/B.Sc. (GP))

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Polymorphism.
2. Infer about the types of arrays.
3. Summarize on the types of inheritance.
4. Write a note on runnable interface.
5. Define emulator.
6. Tell about the build system.
7. Pen down about Game life cycle.
8. Tell about the Gesture listener.
9. Write about the screen transition.
10. Write a note on particle effects.

Part B (5 × 5 = 25)

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

(Brief answers)

11. (a) Explain the types of casting.

Or

(b) Discuss on the data abstraction and encapsulation.

12. (a) Discuss about the multithreading using thread class.

Or

(b) Outline the various prospects in synchronization.

13. (a) Give a keynote on parsing of external files.

Or

(b) Write in details about the build tools.

14. (a) Summarize on the Game development framework.

Or

(b) Discuss about the graphic libraries.

15. (a) Briefly write about the parallax scrolling.

Or

(b) Write short notes on programming gameplay.

Part C (3 × 10 = 30)

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

(Essay type)

16. (a) Elaborate in detail about the OOPS concept.

Or

(b) Briefly write on types of multithreading using thread class and runnable interface.

17. (a) Explain in detail about the elements of a mobile OS.

Or

(b) Briefly illustrate the camera and their setting, screen interface.

18. (a) Discuss in detail about the processes of developing a complete game.

Or

(b) Detail on graphics libraries and game development framework.

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C–7446	Sub. Code
	82651

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

GAME ENGINE – II

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A $(10 \times 2 = 20)$

Answer **all** questions.

1. What is Game engine?
2. What is diffuse texture?
3. Enlist the types of terrain.
4. What is health system?
5. Define mesh.
6. What is UI widget?
7. Enlist the types of game player.
8. What are check point systems?
9. How to select the game levels?
10. What is flashlight?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write note on game installation process.

Or

(b) Explain the importance of lighting in game development.

12. (a) Describe the terrain material.

Or

(b) Explain the post processing in game development.

13. (a) Explain the AI Creation.

Or

(b) Discuss the UI widget.

14. (a) Discuss the properties of fuel system.

Or

(b) Explain the importance of animation in game.

15. (a) Explain the basics of game levels.

Or

(b) Describe the game platform.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail the various concepts for game development.

Or

(b) Explain in detail the blueprint concepts in game.

17. (a) Explain the generic functions of controlled game development in detail.

Or

(b) Explain the characteristics of various types of game players.

18. (a) Describe the importance of expert system in game development.

Or

(b) Explain the designing of functional keys for game with a suitable example.

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C–7447	Sub. Code
	82653

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

ARTIFICIAL INTELLIGENCE

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is AI model?

2. List the AI level.

3. What is AI roaming?

4. What are the examples of parametric model?

5. What is game AI?

6. What are fuzzy state machines?

7. State shafer theory.

8. What is strip?

9. What is meta knowledge?

10. Define expert system.

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write short note on AI technique.

Or

(b) Describe the features of production system.

12. (a) Briefly describe the interactive artificial intelligence.

Or

(b) Discuss the importance of good game AI.

13. (a) Write a A* algorithm for game development.

Or

(b) Discuss the fuzzy logic system.

14. (a) Write short note on production-based system.

Or

(b) Differentiate the basic plan and advanced plan generation system.

15. (a) Describe the characteristics of expert system.

Or

(b) Write short note on strategical AI in gaming.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Describe the various models of Artificial Intelligence.

Or

(b) Explain the concept of ISA hierarchy with the suitable example.

17. (a) Describe the multi-layer artificial neural network with an example.

Or

(b) Describe the various algorithm used in game development.

18. (a) Explain in detail the artificial expert system.

Or

(b) Describe the application of AI in game development.

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C–7448	Sub. Code
	82654

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

GAME PROGRAMMING PATTERNS

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is design pattern?

2. What is inheritance?

3. What are structural design patterns?

4. Why the iterator used for game programming?

5. What is prototype model?

6. What is template?

7. Enlist the types of objects.

8. What are bytecodes?

9. How to select bricks system?

10. What is weapon system?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Write note on history of pattern design.

Or

(b) Explain the importance of OOPS in game programming.

12. (a) Describe the elements of design pattern.

Or

(b) Explain the template method in game program.

13. (a) Explain the creation of new game.

Or

(b) Discuss the prototype model.

14. (a) Discuss the properties of sequencing pattern.

Or

(b) Explain the importance of optimization process.

15. (a) Explain the basics of paddle in game design.

Or

(b) Describe the game upgrade systems.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Discuss in detail the various types for design patterns.

Or

(b) Explain in detail the responsibility of elements in game design pattern creation.

17. (a) Explain the generic functions of components systems in game development.

Or

(b) Explain the characteristics of various types of objects.

18. (a) Describe the importance of weapon system in game development.

Or

(b) Explain the designing of common factors consider for breakout with suitable example.

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C–7449	Sub. Code
	82655A

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

SHADER PROGRAMMING

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define shader.
2. How to evaluate performance of vertex array?
3. What is buffering depth?
4. How to create running shader?
5. Compare surface light and spotlight.
6. What is fog effect?
7. State texture.
8. Define map.
9. What is filter?
10. What is mesh shader?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the GLSL.

Or

(b) Describe the shader geometry.

12. (a) Briefly describe the algorithm drawing.

Or

(b) Write short note on various types of shapes in drawing.

13. (a) Describe the principles of lighting.

Or

(b) Explain the fog effect.

14. (a) Write short note on image operations.

Or

(b) Explain the rule and principle of texture.

15. (a) Describe the characteristics of filter.

Or

(b) Describe the futures of shader program.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the various applications of shader programming.

Or

(b) Explain the variables used to create shader programme.

17. (a) Describe in detail the importance of lighting in shader programming.

Or

(b) Explain the texture importance in programming.

18. (a) Explain various approaches to filter the images.

Or

(b) Describe the Gaussian blur effect in detail.

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C–7450	Sub. Code
	82655B

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

GAME ENGINE ARCHITECTURE

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is game engine?
2. What are profiling tools?
3. What are matrices?
4. How to form game loop?
5. What do you mean by HUD?
6. What is rendering?
7. What are game levels?
8. Define game object.
9. What is game editor?
10. How to update the game object?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the history of game engine.

Or

(b) Describe the profiling tools in detail.

12. (a) Briefly describe the 3D maths for games.

Or

(b) Write short note on engine configuration.

13. (a) Describe the in-game menu in detail.

Or

(b) Explain the global illumination.

14. (a) Describe the background elements.

Or

(b) Explain the animation controller.

15. (a) Describe the characteristics of game play system.

Or

(b) Describe the game scripting.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the various tools used in engine architecture.

Or

(b) Explain the uses of C/C++ in error handling and exception handling.

17. (a) Describe in detail the importance of resource management in game model.

Or

(b) Explain the importance of rendering engine in game development.

18. (a) Explain various approaches to animate system architecture.

Or

(b) Describe the components of gameplay foundation systems.

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C–7451	Sub. Code
	82655C

B.Sc. DEGREE EXAMINATION, NOVEMBER 2022

Fifth Semester

Game Programming

EMERGING TRENDS

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define VR.
2. What are matrices?
3. What are quaternions?
4. How to view eye transform?
5. What is refraction?
6. What is filtering?
7. What is sensor?
8. Define image acquisition.
9. What is IoT?
10. How to communicate protocol?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Describe the geometric modelling.

Or

(b) Describe the birds-eye view software in detail.

12. (a) Briefly describe the homogeneous transformation.

Or

(b) Write short note on eye transforms.

13. (a) Describe the light intensity in detail.

Or

(b) Explain the orientation tracking.

14. (a) Describe the feature extraction.

Or

(b) Explain the hybrid tracking.

15. (a) Describe the sensor network.

Or

(b) Describe the neuro gaming.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain the various goals and definition of VR.

Or

(b) Explain the uses of birds-eye hardware for game technology.

17. (a) Describe in detail the importance of axis and angle representation in game model.

Or

(b) Explain the various types of sensors used in game technology.

18. (a) Explain various approaches to feature extraction.

Or

(b) Describe the components of IoT in detail.

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C–7013	Sub. Code
	16/17/23/25/ 26/27/29

COMMON FOR ALL U.G DEGREE COURSES
EXAMINATION, NOVEMBER 2022

First/Second Semester

ENVIRONMENTAL STUDIES

(2019/2020 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Nonrenewable resources
2. Ecosystem
3. Food Chain of forest ecosystem.
4. Pandemic Emergencies.
5. Red Data Book
6. Hot spots
7. Climate Change
8. Deforestation
9. Biodiversity
10. Acid Rain

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Differentiate renewable and nonrenewable energy resources.

Or

(b) Write notes on structure and functions of grassland ecosystem.

12. (a) Write notes on Food Webs of Forest Ecosystem with suitable examples.

Or

(b) Write notes on Genetic, Species and Ecosystem Diversity.

13. (a) Write short notes on Food resources and its problems associated with them.

Or

(b) Write notes on land resources and problem associated with them.

14. (a) Write notes on thermal pollution.

Or

(b) Write notes on energy pyramids with suitable examples.

15. (a) Explore the threats to biodiversity.

Or

(b) Write note on man-made disaster with special reference to strike.

Part C (3 × 10 = 30)

Answer **all** the questions.

16. (a) Write an essay on multidisciplinary nature of environmental studies and about the need for public awareness on environment.

Or

(b) Write an essay on Water Resources and problem associated with over-utilization of various water resources.

17. (a) Write an essay on Biogeographical classification of India.

Or

(b) Write an essay on values of biodiversity.

18. (a) Write an essay on causes, effects and control measures of water pollution.

Or

(b) Enumerate various strategies in managing disasters caused due to natural calamities.

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C–5664	Sub. Code
	16/17/23/25/ 26/27/29

Common for All U.G. B.Sc./B.B.A. DEGREE EXAMINATION, APRIL 2022

First/Second Semester

ENVIRONMENTAL STUDIES

(2019/2020 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** the questions.

1. ZSI.

2. WII.

3. What is renewable energy?

4. Food web.

5. Pyramid of numbers in aquatic ecosystem.

6. Red data book.

7. List out any five Endemic species of India.

8. List out marine pollutants.

9. *Ex Situ* Conservation.

10. Enlist Option Values of Biodiversity.

Part B (5 × 5 = 25)

Answer **all** the questions.

11. (a) Write notes on definition, scope and importance of environmental studies.

Or

(b) Write notes on soil erosion and desertification.

12. (a) Write notes on energy flow in the ecosystem.

Or

(b) Write notes on threads to biodiversity.

13. (a) Write notes on Biodiversity at Global, National and Local levels.

Or

(b) Write notes on various strategies of conservation of Biodiversity.

14. (a) Write notes on ecological pyramids.

Or

(b) Write notes on air pollution.

15. (a) Write notes on noise pollution.

Or

(b) Write notes on effects and control measures of nuclear hazards.

Part C

(3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on the multidisciplinary nature of Environmental Studies.

Or

(b) Write an essay on the following resources with special emphasis to how they are overexploited/utilized which in turn damage the environment, (i) Forest Resources and (ii) Food Resources.

17. (a) Write an essay on "India is a mega-diversity nation".

Or

(b) Write an essay on Biodiversity and their values.

18. (a) Write an essay on causes, effects and control measures of (i) Marine Pollution and (ii) Water Pollution.

Or

(b) Write an essay on concept, structure and function of ecosystem.

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