C–6561	Sub. Code
	83711

M.Sc. DEGREE EXAMINATION, APRIL 2022.

First Semester

Game Technology

GAMES DEVELOPMENT PROCESS

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   What is human computer interaction?

2.   What is MDA?

3.   What is open world?

4.   Highlight the game function.

5.   Give the properties of game world.

6.   What is game space?

7.   What are the interest curves in player experience?

8.   What is real architecture in games?

9.   What is player taxonomy?

10.   What are flow of influence?

Answer **all** questions.

11. (a) Describe the various types of garlic Fun using appropriate instances.

Or

(b) Descried the evolution of game in detail.

12. (a) Explain the social functions game in detail

Or

(b) Discuss in detail the adding and subtracting mechanics.

13. (a) Describe in detail the properties of game world.

Or

(b) Explain in detail the world aesthetics.

14. (a) Briefly explain the motivation of players.

Or

(b) Describe the factors of interest.

15. (a) Write short note on ergodics of game design.

Or

(b) Briefly describe the player communities.

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

Answer **all** questions.

16. (a) Explain in detail the various types of game and their practical approach.

Or

(b) Explain in detail the MDA technique to categories the game play.

17. (a) In games, what is the difference between chance and skill? In this situation, how do you add and remove game mechanics?

Or

(b) In games, what is level design? Explain in detail using an appropriate example

18. (a) Explain the fundamental concepts of game design and creation for the human mind in detail.

Or

(b) Explain the code and laws of designing computer game.

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3   **C–6561**

M.Sc. DEGREE EXAMINATION, APRIL 2022.

First Semester

Game Technology

GAME DESIGN CHALLENGES

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1. What is game design?

2. List out the types of puzzles.

3. What is game tuning?

4. What are tactics in game?

5. What is IPR?

6. Enlist the types of sequels.

7. Give any two issues in game designing for multiplayers.

8. What is MDA?

9. How to create a user interface?

10. What are the casual games

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

Answer **all** questions

11. (a) Describe the various types of game design.

Or

(b) Briefly explain the game design atoms in detail.

12. (a) Discuss the elements of strategic skill in game design.

Or

(b) Explain the frequency of decision for trade off mechanics.

13. (a) Explain the five- parts of story structure in detail.

Or

(b) Discuss the various types of intellectual property rights.

14. (a) Describe the adding and removing mechanics in game.

Or

(b) Discuss the futures of social network and games.

15. (a) Explain the use of game as a teaching toll.

Or

(b) Give the merits and demerits of serious games.

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

Answer **all** questions.

16. (a) Explain the various types of puzzles and how to create the puzzle game in detail.

Or

(b) What are Avatars? Explain in detail the advantage and disadvantage of using Avatars in Games?

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17. (a) Discuss the types and frequency of decision in game designing.

        Or

    (b) Discuss in detail the game marketing for student groups.

18. (a) Explain the mechanics of propagation in social network games in detail.

        Or

    (b) Explain the process of user interface in game designing with suitable example.

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3   **C–6562**

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		83713

M.Sc. DEGREE EXAMINATION, APRIL 2022.

First Semester

Game Technology

VISUALIZATION

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   List the types of perspective view.

2.   What is vanishing point?

3.   What is contour drawing?

4.   What is the importance of figure drawing?

5.   What are principles of design?

6.   Define colour wheel.

7.   List out the types of texture.

8.   What are types of typography?

9.   What are the basic styles used for constructing a figure?

10. Highlight the scenes.

Part B   (5 × 5 = 25)

Answer **all** questions

11. (a) Compare linear perspective and aerial perspective.

Or

(b) Describe the two-point perspective construction methods.

12. (a) Write short notes on essentials of human figure drawing.

Or

(b) Discuss the line of action in drawing.

13. (a) Write short note on visual composition.

Or

(b) Briefly explain the colour theory.

14. (a) Describe the various types of texture.

Or

(b) Discuss the scale and proportion in design.

15. (a) Write short note on character sketching.

Or

(b) Highlight the elements of story.

Part C   (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain in detail three-point perspective with example.

Or

(b) Explain the drawing relative proportion of various parts of body.

2   **C–6563**

17. (a) Discuss in detail the fundamentals and characteristics of good design.

Or

(b) Explain in detail the various types of typography.

18. (a) Describe the application of texture and colouring of any subject with example.

Or

(b) Explain in detail the character development process.

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C–6564		Sub. Code
		83714

M.Sc. DEGREE EXAMINATION, APRIL 2022.

First Semester

Game Technology

PROGRAMMING FOR GAMES

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   Classify the computer.

2.   What is translator program?

3.   What is looping?

4.   What are inline functions?

5.   What is the purpose of array?

6.   What is user defined data?

7.   Enlist the types of polymorphism.

8.   How to handle data in file?

9.   What is container adopter?

10.   What are the types of algorithms used in game design?

Answer **all** questions

11. (a) Discuss the basic anatomy of computer system.

    Or

    (b) Write short note on problem solving techniques.

12. (a) Describe the understanding of function for gaming.

    Or

    (b) Explain in detail the data types.

13. (a) Discuss the importance of pointer and give their merits and demerits.

    Or

    (b) Compare array vs list

14. (a) Explain the overriding with an example.

    Or

    (b) Explain the need of a virtual function with an example.

15. (a) Describe the common errors done by programmer while programming.

    Or

    (b) Discuss the C++ language for game development.

    Part C (3 × 10 = 30)

    Answer **all** questions.

16. (a) Explain in detail the computer types.

    Or

    (b) Explain about objects in blender.

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17. (a) Explain in detail the elements of 2D array

Or

(b) Create a programme that calculates the sum of digits till it reaches a single digit.

18. (a) How to generate a random number within limits (say 20- 40) with example.

Or

(b) Explain the various function in standard template library-.

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		83721

M.Sc. DEGREE EXAMINATION, APRIL 2022.

Second Semester

Game Technology

2D GAME ART

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

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

Answer **all** questions.

1.   Write a short note on drop shadow.

2.   Name the different types of cropping.

3.   What is game UI?

4.   Explain grid.

5.   Define magic selection tool.

6.   Define color mixture.

7.   Define smart objects.

8.   Define logo design.

9.   What are dual brushes? Name them.

10.   Write a short note on paint bucket and zoom tool.

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

Answer **all** questions.

11. (a) What is object drawing? Explain.

Or

(b) Write a short note on image editing applications.

12. (a) What is matte painting?

Or

(b) Write a short note on game asset design.

13. (a) What are the qualities of a good logo?

Or

(b) How to make a sprite sheet in Photoshop.

14. (a) Write the usage of the following basic tools in game

(i) Move tool

(ii) Brush tool

Or

(b) Explain the three different tools used for logo designing.

15. (a) What are the different types of bushes used in digital painting?

Or

(b) Explain the importance of storyboard.

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Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write sort note on

   (i) Group and ungroup objects

   (ii) Pen tool and brush tool

   (iii) Dropper

   (iv) Alpha in color swatches

   Or

   (b) Drawing plays an important part in game design. Describe the importance.

17. (a) Explain the usage of

   (i) Fill tool

   (ii) Patch tool

   (iii) Air brush

   (iv) Blur tool

   (v) Spot healing tool

   Or

   (b) Explain the uses of

   (i) Free form pen tool

   (ii) Convert point tool

   (iii) Magic wand tool

   (iv) Polygonal lasso tool

   (v) Path selection tool

3   **C–6565**

18. (a) Write a short note on

    (i)   2D animation

    (ii)   Pixel art animation

                Or

(b) What is pixel art? How it is used in games? Explain briefly.

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	83722

M.Sc. DEGREE EXAMINATION, APRIL 2022.

Second Semester

Game Technology

GAME DEVELOPMENT USING ENGINE – I

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   Compare 2D and 3D concepts.

2.   Define Screen position.

3.   Define scripting.

4.   What is Game object?

5.   Define the properties of camera.

6.   List the different came options used in game engine.

7.   What is Game UI?

8.   State the purpose of networks.

9.   List out the events in game play.

10. What are the actions in the game?

Part B (5 × 5 = 25)

Answer **all** questions

11. (a) Explain about 3D game Development with some example.

 Or

 (b) Discuss about 3D game world with example.

12. (a) Explain in detail about the game objects behavior.

 Or

 (b) Write short notes on different colliders used in games.

13. (a) Explain about the cinematics properties in detail.

 Or

 (b) What are the functions used to identify the memory leaks?

14. (a) Design a Game UI for your game idea.

 Or

 (b) Explain about the information sharing to HUD.

15. (a) Differentiate update and fixed update.

 Or

 (b) Illustrate the basic AI elements in the game play.

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Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Explain briefly about the 3D game development and its advantages.

Or

(b) Illustrate how to host the game in networking with example.

17. (a) Explain briefly about Ray casting used with example.

Or

(b) Discuss briefly about goal oriented action plan in AI.

18. (a) Explain briefly about Particle system used in game engine.

Or

(b) Illustrate the Profiler window with example.

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M.Sc. DEGREE EXAMINATION, APRIL 2022.

Second Semester

Game Technology

3D GAME ART

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1.   Write about Cut Curve Options in Maya.

2.   Define detach.

3.   How to use the Bezier curve tool in Maya?

4.   Write about Trim or Untrim a NURBS surface.

5.   What is a specular map in Maya?

6.   What is a Glow Map?

7.   What are the benefits of polygon modeling?

8.   What is called Auto-Align in Photoshop?

9.   Define Blueprint of a car.

10.   What is the use of the Sculpt Geometry tool?

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

Answer **all** questions

11. (a) Write about rotating an object in three dimensions.

Or

(b) Write Offset Curve deformer for knee, shoulder and elbow in Maya.

12. (a) How to convert a curve to a polygon in Maya?

Or

(b) How to use the Booleans tool in Maya?

13. (a) How to control texture color and diffuse in Maya?

Or

(b) How to retopologize in Maya? Explain the techniques to achieve realistic character modeling for the game.

14. (a) Discuss the approaches to blocking character poses in Maya.

Or

(b) Write about Modeling a low poly game weapon.

15. (a) Describe the concept of world design.

Or

(b) How to create 3D game assets? Explain.

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

Answer **all** questions.

16. (a) What are the devices for virtual reality and 3D interaction? Explain.

Or

(b) What are Maya workspaces and how to customize the UI? Explain.

2   C–6576

17. (a) Explain how to stitch multiple surface edges, corners together in Maya.

Or

(b) Write about simulated reflections used in Maya.

18. (a) Write an essay on the fundamentals of Medical Animations.

Or

(b) What are the role of narrative and gameplay in an Android Game? Explain with examples like Clash of Clans, Temple run.

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M.Sc. DEGREE EXAMINATION, APRIL 2022.

Second Semester

Game Technology

GAME DEVELOPMENT FOR WEB

(2019 onwards)

Duration : 3 Hours　　　　　　Maximum : 75 Marks

Part A　　　　　　(10 × 2 = 20)

Answer **all** questions.

1.　Write the code to display a text inside canvas.

2.　Define Audio tags.

3.　List out the advantages of using Java script.

4.　State HTML events.

5.　State XML.

6.　What is web page?

7.　Define player movement in canvas.

8.　Define sprite animations in canvas.

9.　State events in game development.

10.　Create a UI for game menu page

Answer **all** questions.

11. (a) Write the code to display navigation tags inside the canvas.

Or

(b) Discuss about semantic tags used in canvas.

12. (a) What is class? Write the syntax with example.

Or

(b) What are the predefined events and its syntax?

13. (a) Write short notes on image sliders and manipulation.

Or

(b) Give an example for parsing and its types.

14. (a) List out the keyboard events in canvas

Or

(b) Write java script for Circle collision detection.

15. (a) Illustrate some input system to control the game elements.

Or

(b) Discuss the game review and testing process in web based game development.

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

Answer **all** questions.

16. (a) Write Java script code to display sprite animation inside the canvas.

Or

(b) Explain briefly about the evolution of HTML versions and its uses.

C–6568

17. (a) Write the brief about exploring web framework API.

Or

(b) What is polymorphism? Explain with suitable example.

18. (a) Explain in detail about Encapsulation and dynamic binding

Or

(b) Explain in detail about scrolling effects.

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M.Sc. DEGREE EXAMINATION, APRIL 2022.

Fourth Semester

Game Technology

ARTIFICIAL INTELLIGENCE

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

Part A   (10 × 2 = 20)

Answer **all** questions.

1. Dempster.

2. Define Architecture in AI.

3. What are the tasks of AI?

4. What are the rules of AI?

5. What is fuzzy logic?

6. What are the Basic components of AI?

7. What are the certainty factors in AI?

8. State Intelligent agents in AI.

9. Define Backtracking.

10. What is the role of Way point in AI?

Part B (5 × 5 = 25)

Answer **all** questions

11. (a) List out the merits of AI.

Or

(b) Discuss how strategically AI is used in games.

12. (a) What is meant by Means- end analysis?

Or

(b) Write about generate and test algorithm.

13. (a) What are the ways to formulate the problem?

Or

(b) What are the roles of expert systems in creating games?

14. (a) Explain the role of strips in AI.

Or

(b) Explain basic plant generation systems in AI.

15. (a) What is Heuristics search?

Or

(b) What are the characteristics of Meta knowledge?

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Give the structure of an agent in an environment. List the criteria to measure the performance of search strategies.

Or

(b) Differentiate forward and backward chaining.

2 C–6573

17. (a) Give an example for real world end toy problem. What is important for task environment?

Or

(b) What are the components of the problem? List the steps involved in problem solving technique.

18. (a) Write A* algorithm and briefly discuss the various observations about algorithm.

Or

(b) Explain the various problem solving and problem reduction methods with algorithm and examples?

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C–6574		Sub. Code
		83744

M.Sc. DEGREE EXAMINATION, APRIL 2022.

Fourth Semester

Game technology

LEVEL DESIGN

(2019 onwards)

Duration : 3 Hours　　　　　　　　Maximum : 75 Marks

Part A　　　　　　$(10 \times 2 = 20)$

Answer **all** questions.

1.　Define level design.

2.　What is level design layout?

3.　Define height map.

4.　Comment on mainstream media.

5.　What is playability testing?

6.　What is symmetrical level design?

7.　Define visual presentation.

8.　Define cookie lighting.

9.　What is the role of level designer?

10.　Who is called indie developer?

Answer **all** questions.

11. (a) Write short notes on level design mock up.

Or

(b) Discuss about the significance of level design analysis.

12. (a) Explain how to make bumps and bits to the models in games.

Or

(b) How to assign and modify wind flow in action video games?

13. (a) Explain how to create level mock up.

Or

(b) Write short notes on standard difficulty curve.

14. (a) Identify the characteristics of shadows and occlusion shaders.

Or

(b) Explain the significance of lighting in games.

15. (a) What is the use of multiplayer map in level design software?

Or

(b) Describe the process of making a map for RPG game.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write an essay on Level based games and its uniqueness.

Or

(b) Explain in detail about the use of height map and normal map in level design software.

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17. (a) Explain the different types of lights.

     Or

    (b) What are the basic steps involved in drawing the difficulty curve? Explain.

18. (a) Discuss about the use of ambient light in game environments.

     Or

    (b) Write an essay on the various formats of Level Design Document.

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M.Sc. DEGREE EXAMINATION, APRIL 2022.

Fourth Semester

Game Technology

RESEARCH METHODOLOGY

(2019 onwards)

Duration : 3 Hours   Maximum : 75 Marks

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

Answer **all** questions.

1.   What is sampling error?

2.   What is meant by scientific method?

3.   Define Sample

4.   What are the basic sources of data collection?

5.   Define hypothesis

6.   List the types of hypothesis.

7.   Define experimental research.

8.   What do you understand by structured questionnaire?

9.   How criticism in games is important?

10.   Define the term "Central tendency".

Part B   (5 × 5 = 25)

Answer **all** questions.

11. (a) Briefly explain the process of Research.

Or

(b) What are the features of good research?

12. (a) Explain the process of designing a questionnaire

Or

(b) Write the advantages and disadvantages of secondary data.

13. (a) What are the characteristics of hypothesis?

Or

(b) What is probability and non-probability sampling?

14. (a) Explain the types of research report.

Or

(b) Write a brief note on computer ethics.

15. (a) What is interpretation of data? Explain its significance.

Or

(b) What is research Problem? Explain the steps in formulating the research problem.

Part C   (3 × 10 = 30)

Answer **all** questions.

16. (a) Differentiate between qualitative and quantitative research.

Or

(b) Compare Probability and Non probability sampling techniques.

2   C–6575

17. (a) Explain the various stages for preparing the data for research analysis.

Or

(b) What is a report and explain its purpose in research?

18. (a) Explain the various sources of developing hypothesis.

Or

(b) What are the essentials of a good research design?

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