C–5330

Sub. Code
83711

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Game Technology

GAME DEVELOPMENT PROCESS

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is a game design document?

2. What is the difference between game design and development?

3. What is loop of interaction?

4. Define modelling.

5. Is story better than graphics?

6. Define pitch.

7. Write a short note on game mechanics.

8. What are the ethics in game design?

9. Write about the value of aesthetics.

10. Define orthogonality.

Part B (5 × 5 = 25)

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

11. (a) Explain Human computer interaction.

Or

(b) What is New Media? Explain how New media supports the game development process.

12. (a) Define :

(i) Linear plot

(ii) Braided plot

(iii) Branching tree.

Or

(b) Outline the merits of aesthetics.

13. (a) Discuss about hard and soft architectures.

Or

(b) Discuss briefly about python.

14. (a) Explain the design pattern used for developing a game.

Or

(b) Write briefly on the laws of computer game design.

15. (a) Briefly explain on game balancing methodologies.

Or

(b) What are the common elements used in game architecture?

Part C (3 × 10 = 30)

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

16. (a) What are the two methods of drawing text on screen and what are the advantages and disadvantages?

Or

(b) What are the methods of compression used in game technology process?

17. (a) What are smart pointers? Write short notes on the different ways in which they can be implemented.

Or

(b) Define middle ware. Describe the popular 3-D engines currently in use.

18. (a) Explain in detail on the game development models.

Or

(b) Explain in detail about the architecture of game development.

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C–5331	Sub. Code
	83712

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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 array?

2. What is 1 bit game?

3. Why do we need twitch skill?

4. Define tactics.

5. List the merits of games.

6. What is sequels?

7. Mention any two online games.

8. What is a leader board on a website?

9. Why is game testing done?

10. What is UI stand for?

Part B (5 × 5 = 25)

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

11. (a) What is the core game? Explain the core of game design.

Or

(b) What are game mechanics and dynamics? Explain.

12. (a) What is the difference between a game of skill and a game of chance?

Or

(b) Explain the role and types of decisions.

13. (a) Define and explain the advantages of target marketing.

Or

(b) Explain the process of setting and character in a game.

14. (a) What is slowing the speed? Explain.

Or

(b) Distinguish the concept - Multiplayer Multipurpose and Multiplatform games with examples.

15. (a) 'Games as Art' – support your view with suitable examples.

Or

(b) What is difference between serious and causal games?

Part C (3 × 10 = 30)

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

16. (a) Write a note on types of design and approaches with examples.

Or

(b) Define puzzle. Explain its design, types and level.

17. (a) Write a essay on elements of chance and its pros and cons.

Or

(b) (i) 'Games are used to tell stories' – Justify your views with suitable examples.

(ii) Explain the types of stories, story telling methods and story arc.

18. (a) Discuss the Goals, feedback and process of UI Design with examples.

Or

(b) Elaborately discuss the role of social networks and future of social networks and games.

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C–5332	Sub. Code
	83713

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Game Technology

VISUALIZATION

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Visual composition.

2. Define color contrast.

3. What is line of action?

4. Two point perspective.

5. What is overlapping?

6. Define color theory

7. What is scale and proportion?

8. What are the types of scenes?

9. Define Silhouettes.

10. Define Graphics.

Part B (5 × 5 = 25)

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

11. (a) Outline on Relative proportion in visualization.

Or

(b) Explain different types of shapes with the help of examples.

12. (a) Write about three point perspective.

Or

(b) Write a note on line of action, balance, contour.

13. (a) Outline the different character sketching Techniques.

Or

(b) Design a character and demonstrate the effect of color harmony using it.

14. (a) Discuss about the merits of typography.

Or

(b) Explain types of scenes with suitable diagram.

15. (a) Write about the different shots.

Or

(b) What are the characteristics of transitions?

Part C (3 × 10 = 30)

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

16. (a) Explain about hybrid environment, color psychology and cylindrical forms.

Or

(b) Write a detailed note on overlapping and balance with suitable illustrations.

17. (a) Explain in detail on the elements of story.

Or

(b) Illustrate the importance liner perspective vs aerial perspective in detail.

18. (a) Explain in detail the importance of visual composition with illustration.

Or

(b) Explain Gestalt principles and types of graphics in detail.

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C–5333	Sub. Code
	83714

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

First Semester

Game Technology

PROGRAMMING FOR GAMES

(2019 onwards)

Duration: 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define Operating system? What are its types?

2. List any two translator Programs.

3. Write short note on Recursion.

4. Define Constant Give examples.

5. Differentiate between structure and union.

6. Define Pointer. What are its operators?

7. Write short note on Enumeration data type.

8. Define polymorphism. What are its types?

9. What do you meant by List? Give example.

10. List the applications of stack data structure.

Part B (5 × 5 = 25)

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

11. (a) Briefly discuss the functions of operating system with neat sketch.

Or

(b) Discuss about any two Output devices with neat diagram.

12. (a) Explain about various operators supported in C++. Give example.

Or

(b) How will you define access function. Give example.

13. (a) How will you define and access two dimensional array? Give example.

Or

(b) Write a C++ program to illustrate array of pointers.

14. (a) Briefly explain about function overriding. Give example.

Or

(b) Discuss about parameterised constructors with suitable example.

15. (a) Elucidate about search elements using binary search technique. Give example.

Or

(b) Write short note on: Containers and sequences.

Part C (3 × 10 = 30)

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

16. (a) Discuss in detail about generations of computers with its merits and demerits.

Or

(b) Narrate the working functionality of various types of input devices with suitable diagram.

17. (a) Explain in detail about the 'if and 'switch' statements with example.

Or

(b) Define Union. Write a C++ program to display your date of birth using union.

18. (a) What is exception? How will you handle exception? Give example.

Or

(b) Show how circular queue operations are implemented using arrays.

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C-2453

Sub. Code
83721

M.Sc. DEGREE EXAMINATION,NOVEMBER 2021

Second Semester

Game Technology

2D GAME ART

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is scope of flash in animation industry?
2. What is raster graphics?
3. Define graphics.
4. Name any four photo editing tools.
5. Which software is used for matte painting?
6. Define texture.
7. Define interface.
8. What does rush strokes mean?
9. What is the use of gradient map?
10. What is mesh in animation?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) Explain the different types of image formats in export menu.

Or

(b) Explain the different types of graphics.

12. (a) Differentiate between vector and raster graphics.

Or

(b) Explain briefly about dodge and burn tools

13. (a) Explain

(i) Gradient overlay

(ii) Bevel and emboss.

Or

(b) What is rule of third? Explain.

14. (a) Name and explain any two types of compositions.

Or

(b) Explain the importance of graphics in games.

15. (a) Distinguish between storyboarding and story writing.

Or

(b) What are the different types of text? Explain in brief.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write a note on bone animation and character design.

Or

(b) What is game asset? List out its importance for games.

17. (a) Briefly explain the process of character designing.

Or

(b) Write a short note on

(i) Logo design

(ii) Digital illustrations

18. (a) Name any five important digital painting tools and explain its importance.

Or

(b) Explain

(i) Scene Management

(ii) Story Writing.

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C–2454	Sub. Code 83722

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. What level maps in games?
2. How to set tags for the game object?
3. What are the events handled in games?
4. What is navigation?
5. State Lighting and shading.
6. How to set the camera lighting properties?
7. Define HUD.
8. What is Clean up code?
9. How to build the games?
10. State game mechanics.

Part B (5 × 5 = 25)

Answer **all** questions

11. (a) Write short notes on screen positions in games.

Or

(b) Explain about game engines in current scenario?

12. (a) Write short note on 3D physics.

Or

(b) Explain about how to handle the frame rate in games.

13. (a) Explain about sky rendering in detail.

Or

(b) Discuss about GUI properties in game engines.

14. (a) How to add sound and music in the game scene?

Or

(b) Explain in detail about HUD in games.

15. (a) How to write the algorithm for AI elements?

Or

(b) Write the algorithm to follow the player in AI

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write brief notes about working with animation.

Or

(b) Write a 2D game mechanics concepts with example.

17. (a) How to convert the object rendering to texturing? Explain it with example.

Or

(b) Discuss briefly about Rendering with example.

18. (a) Explain in detail about the sound and audio management for more events.

Or

(b) Discuss in detail about building different level platforms in UI Layout.

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C–2455

Sub. Code
83723

M.Sc DEGREE EXAMINATION,NOVEMBER 2021

Second Semester

Game Technology

3D GAME ART

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Name the list of tools available in Maya tool bar.
2. Write down the names of the three orthographic Views.
3. What is a CV Curve?
4. Write down the names of NURBS Primitives.
5. What is Cut Curve used for?
6. What is diffuse map?
7. What is meant by Retopology?
8. What is a Polygon?
9. What is uniform scaling?
10. What is a Bump Map?

Part B (5 × 5 = 25)

Answer **all** questions.

11. (a) List out the names of the Maya shaders and its uses.

Or

(b) Explain Topology and Retopolgy.

12. (a) Write a short note on NURBS curves.

Or

(b) List out Maya lights Names and its uses with Examples.

13. (a) Write a note on view port options.

Or

(b) What is the use of Perspective camera view?

14. (a) Write a short note on UV Unwrapping.

Or

(b) Explain Ray tracing and its uses.

15. (a) Explain UV layout and UV Snapshot.

Or

(b) Explain soft Selection Modeling method.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Write a detailed note on Maya workspace

Or

(b) Write a detailed note on NURBS patch modeling technique.

17. (a) Discuss in detail about unwrapping Process and uses of UV Texture Editor.

Or

(b) Explain clearly the methods involved in Exterior and Interior Lighting.

18. (a) Give a detailed Study on Set design for games.

Or

(b) Explain in detail about the process of modeling and sculpting.

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C–2456	Sub. Code 83724

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. Define HTML5.
2. Write syntax to create the canvas.
3. Define java script.
4. What is call back functions?
5. Define web and its features.
6. What is Image manipulation?
7. Define shapes in canvas.
8. List out the basic drawing shapes in canvas.
9. Define Listeners.
10. What is the role of UI in game development?

Part B (5 × 5 = 25)

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

11. (a) Write the code to create a canvas and display the shapes.

Or

(b) Explain canvas properties and write the code to display the canvas.

12. (a) Explain the form validation process with example.

Or

(b) Write the script to call the canvas in HTML5

13. (a) Discuss the file handling techniques in web development.

Or

(b) Explain the role of API in web devlopment.

14. (a) Explain about the game development in canvas.

Or

(b) List out the mouse events in canvas.

15. (a) Explain about the interactions with in game play.

Or

(b) Discuss about the different listener's classes in canvas.

Part C (3 × 10 = 30)

Answer **all** questions.

16. (a) Create timer for the game using java script inside the canvas.

Or

(b) Illustrate Inheritance and its types.

17. (a) Create a canvas and draw the basic shapes using java script.

Or

(b) Write the code with all the tag properties and display the page.

18. (a) Discuss the JSON parsing methods in detail.

Or

(b) Explain in detail about the asynchronous webpage updates.

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C–5334	Sub. Code 83731

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. What is OOPS?

2. Enlist the types of inheritance.

3. What are mobile platforms?

4. Define emulator.

5. What is manifest file?

6. Write note on scene transition.

7. Illustrate the game life cycle.

8. List any four animated games in mobile.

9. What are design levels?

10. Highlight the mobile sensor used for gaming.

Part B (5 × 5 = 25)

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

11. (a) Describe the OOPS concept in game development.

Or

(b) Differentiate array vs list.

12. (a) Explain the role of mobile platforms.

Or

(b) Write short note on IDE interface.

13. (a) Highlight the basic configuration of mobile for gaming.

Or

(b) Discuss the game implementation issues in mobile.

14. (a) Discuss the game life cycle.

Or

(b) Write note on touch and gesture in mobile application.

15. (a) Highlight the particle effect.

Or

(b) Describe the basic interaction in mobile with gaming.

Part C (3 × 10 = 30)

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

16. (a) Explain in detail the overloading and overriding methods in mobile game development.

Or

(b) Explain the application of emulator in game development for mobile.

17. (a) Explain the android application components.

Or

(b) Write a program to play a simple game in an android platform.

18. (a) What are the different types of handling sensor? Explain briefly.

Or

(b) With an example explain the complete game development for mobile.

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C–5335	Sub. Code 83732

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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 the importance of texture?

2. What is painting texture?

3. What are texture maps?

4. Give the material nodes.

5. What is colour theory?

6. Define baking maps.

7. List out the types of layouts.

8. What is texture meshing?

9. What is character modelling?

10. How to assign colour map in gaming?

Part B (5 × 5 = 25)

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

11. (a) Describe the surface luminance in texture.

Or

(b) Explain the colour theory.

12. (a) Explain the creation of texture maps.

Or

(b) Explain UV texture editor window.

13. (a) Discuss the 3-point lighting.

Or

(b) Write short notes on photoshop.

14. (a) Write short note on car modelling.

Or

(b) Briefly discuss the smart materials for lightings.

15. (a) What are the types of mesh? With an example.

Or

(b) Explain the character to crate games.

Part C (3 × 10 = 30)

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

16. (a) Explain the colour and roughness in texture.

Or

(b) Discuss the various types of texturing methods in detail.

17. (a) Briefly explain the creation of various maps.

Or

(b) Explain the various rigging model.

18. (a) Discuss how to model a car game in Maya light attributes.

Or

(b) Explain the character development of animated games in detail.

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C–5336	Sub. Code 83733

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

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. What is UI?

2. Give the importance of editing.

3. What are opacity masks?

4. What is quick level streaming?

5. How to create basic enemy?

6. What are blueprint variables?

7. What is GPU sprite?

8. Highlight the functions of check point system.

9. What is popup message?

10. What are the issues in battery in gaming?

Part B (5 × 5 = 25)

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

11. (a) Describe the primitive geometry.

Or

(b) Discuss the characteristics of lighting.

12. (a) Write note on normal and emissive maps.

Or

(b) How to create swimming pool in game engine?

13. (a) Write note on blueprint math functions.

Or

(b) Describe the UMG UI animation.

14. (a) Explain the spark emitter.

Or

(b) Elaborate the Functions of fuel system in game mechanics.

15. (a) How to create enemy bot?

Or

(b) Describe the animated popup messages.

Part C (3 × 10 = 30)

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

16. (a) Explain in detail the installation process of game engine.

Or

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

17. (a) How to create a cinematic scene using particle system? Explain in detail.

Or

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

18. (a) Explain the cascade GPU sprites in detail.

Or

(b) How to regenerate health system? Explain in detail.

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C–5337	Sub. Code
	83734

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021.

Third Semester

Game Technology

GAME PSYCHOLOGY

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. Define psychology.

2. Write about health psychology.

3. Define intelligence.

4. What do you mean by remembering?

5. Define cognitive process.

6. What is emotion?

7. Define the term immersion in video game.

8. Define game psychology.

9. What is gamification?

10. What is social consequence?

Part B (5 × 5 = 25)

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

11. (a) Write a paragraph on the various psychology.

Or

(b) Write a note on industrial psychology.

12. (a) Describe about the memory.

Or

(b) Discuss the personality theory.

13. (a) Describe the cognitive learning.

Or

(b) Write note on theories of motivation.

14. (a) Explain the board game psychology.

Or

(b) Describe the game learning curve.

15. (a) Highlight the benefits of educational game.

Or

(b) Compare game addiction and cognitive addiction.

Part C (3 × 10 = 30)

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

16. (a) Explain in detail the application of psychology in gaming.

Or

(b) Describe the symbol and concepts of memory with examples.

17. (a) Write in detail about learning methods.

Or

(b) Explain in detail about operant conditioning.

18. (a) Discuss in detail the educational game with an example.

Or

(b) Explains the theories of game psychology.

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C–5340	Sub. Code
	83745

M.Sc. DEGREE EXAMINATION, NOVEMBER 2021

Fourth Semester

Game Technology

RESEARCH METHODOLOGY

(2019 onwards)

Duration : 3 Hours Maximum : 75 Marks

Part A (10 × 2 = 20)

Answer **all** questions.

1. What is algorithmic research?

2. What is extraneous variable?

3. What is literature survey?

4. What is completely randomized design?

5. What do you mean by controlled and uncontrolled observation?

6. Compare nominal scale with ordinal scale.

7. What is null hypothesis?

8. What do you mean by two tailed tests in hypotheses testing?

9. What is interpretation in research methodology?

10. What is popular report?

Part B (5 × 5 = 25)

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

11. (a) Briefly discuss the types of research process.

Or

(b) Compare research methods and methodology.

12. (a) Discuss the various research design.

Or

(b) Pen down the theoretical framework.

13. (a) Pen down the types of hypotheses.

Or

(b) Discuss the types of sample design.

14. (a) Describe the application of statistics in research.

Or

(b) Explain the data collection methods.

15. (a) Highlight the interpretation technique.

Or

(b) Describe the evaluation forms in research.

Part C (3 × 10 = 30)

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

16. (a) Briefly explain the objective and the types of research with example for each.

Or

(b) Explain the literature review in detail with a suitable game study.

17. (a) Describe the criteria of selecting a sampling procedure.

Or

(b) Explain in detail the different methods of collecting data.

18. (a) Illustrate the components of a technical report and specify the format for each.

Or

(b) Explain in detail the computer ethics and player game interaction.

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