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> IT'S HARD TO BEAT A PERSON
> WHO NEVER GIVES UP.
>
> Babe Ruth, American professional baseball player

Gaming Architecture & Programming

P. Pages : 2

Time : Three Hours

0813

NRT/KS/19/3701

Max. Marks : 80

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Notes : 1. All questions carry marks as indicated.
2. Solve Question 1 OR Questions No. 2.
3. Solve Question 3 OR Questions No. 4.
4. Solve Question 5 OR Questions No. 6.
5. Solve Question 7 OR Questions No. 8.
6. Solve Question 9 OR Questions No. 10.
7. Solve Question 11 OR Questions No. 12.
8. Assume suitable data whenever necessary.
9. Illustrate your answers whenever necessary with the help of neat sketches.

1. a) Discuss the contents of game design document. **5**

b) Explain the steps involved in creating the game specification. **8**

OR

2. a) Define Token, Identify the token of pong game and draw: **7**

i) Token Interaction matrix

ii) Token class hierarchy.

b) What is Abstraction? Explain different types of abstraction in game development. **6**

3. a) What is the research goal and explain blue - sky research. **7**

b) Explain about game programming optimization techniques. **6**

OR

4. a) Write short note on **6**

i) Platform independence

ii) Risk reduction.

b) How 'Tier - based" method involves incremental development for game architecture. **7**

5. a) Explain the seven golden principles of design. **7**

b) Explain the three lead balloons. **6**

OR

6. a) What is game - programming? Explain various activities involved in it. **6**

b) What is Direct - X? Explain in brief how Direct - X can be used in game development. **7**

7. a) Explain the following terms- **8**

    i) System RAM

    ii) Video RAM.

b) Describe a recommended directory structure for starting a project explaining each component and its significance. **6**

OR

8. a) Explain different user interface components in detail. **5**

b) Describe the steps involved in game build process. **5**

c) Explain different game scripting language. **4**

9. a) Write note on chroma keys. **6**

b) What are sprites? Explain in brief, how sprite represents an image or animation on the screen. **7**

OR

10. a) What is the main game loop? Explain different steps and methods involved in the main loop. **8**

b) Explain in detail the cleanup process to be followed during and after the game exit. **5**

11. a) Explain the 3D graphics pipeline in detail. Explain the various inputs to this pipeline and the operations performed on if by graphics pipeline. **7**

b) Explain about art and audio file format. Also state different method of file compression in use. **7**

OR

12. a) Define middleware. Describe the popular 3-D engines currently in use. **7**

b) What are the resource files? Why are they used? **7**

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The secret of getting ahead is getting started.

~ Mark Twain