

BIM / Fifth Semester / IT 221: Computer Graphics

Candidates are required to answer all the questions in their own words as far as practicable.

Group “A”**1. Brief Answer Questions:** **[10 × 1 = 10]**

- i. In which package of java classes that implement shape interface is defined?
- ii. Why normalized space is used while mapping window to device co-ordinate system?
- iii. Write the 3D scaling about arbitrary point in homogenous matrix form.
- iv. Write a piece of code in Java to specify thickness of a line equal to 2.
- v. How machine independent graphical languages help programmers?
- vi. Write the relationship between simulation and virtual reality.
- vii. Define intensity attenuation.
- viii. Calculate the size of video of 15 fps if the video run for 4 minutes and if one frame is represented by 64 bit.
- ix. Make distinction between specular and diffuse reflection.
- x. In which condition A buffer is used rather than Z buffer?

Group “B”**Exercise Problems:** **[5 × 4 = 20]**

2. Write a program in Java to draw a circle with radius 8 and center (4, 2) using midpoint circle algorithm.
3. Reflect rectangle PQRS, P(1,2), Q(1,6), R(9,6) and S(9,2) on y=5 axis, then scale about (2,3) with scale factor (4,2) and finally rotate with rotation angle +45o about origin. Use homogenous coordinate system to calculate transformed rectangle coordinates.
4. Derive parallel and perspective projection matrix.
5. Digitize the line with endpoints A(1, 9) and B(6, 1) using Bresenham’s line drawing algorithm. Show all necessary steps.
6. You are provided with the clipping rectangle with co-ordinates A(10, 10), B(10, 20), C(20, 10) and D(20, 20). Clip the given polygon PQRS with coordinates P(-10, -20), Q(10, 60), R(0, 10) and S(10, 10) using Sutherland - Hodgeman polygon clipping algorithm.

Group “C”**Comprehensive Questions:** **[2 × 5 = 10]**

7. What is visible surface should detection? Compare scan-line and painter’s algorithm method.
8. What do you mean by lighting model? Write the procedure to implement constant shading and also mention applications of this method.

(Note: The students should not limit themselves to the chapters mentioned in this Model Questions as questions can be asked from any chapter (within the syllabus) in the examination.)



BIM / Fifth Semester / IT 222: Java Programming - II

Candidates are required to answer all the questions in their own words as far as practicable.

Group “A”

1. Brief Answer Questions:

[10 × 1 = 10]

- i. Which method is used to create session in java?
- ii. What do you mean by delegation model?
- iii. What is component?
- iv. How is radio button created in Applet?
- v. Write a statement to create a JTable.
- vi. Write a statement to create a connection object to make connection with database of your choice.
- vii. What is use of Document Type Definition?
- viii. Which Application Programmer Interface (API) is used to compile servlet?
- ix. What is use of MouseListener interface?
- x. What are the two exceptions related with Servlet?

Group “B”

Exercise Problems:

[5 × 4 = 20]

2. Write a program to illustrate how to use session state in servlet.
3. Write a program in which user can select one of the options and display the selected option.
4. Write a code to display records of database. (Make your assumptions about database).
5. Write a servlet which displays factorial of a integer.
6. Write a JSP program to display text “Apache Tomcat”.

Group “C”

Comprehensive Questions:

[2 × 5 = 10]

7. Differentiate between JSP and Servlet. Explain the use of web.xml file with an example.
8. Differentiate between Applet and Swing. Explain the BorderLayout manager.

(Note: The students should not limit themselves to the chapters mentioned in this Model Questions as questions can be asked from any chapter (within the syllabus) in the examination.)



BIM / Fifth Semester / IT 223: Advance Internetworking

Candidates are required to answer all the questions in their own words as far as practicable.

Group “A”

1. **Brief Answer Questions:** **[10 × 1 = 10]**

- i. List the function of Network Layer.
- ii. List the issues of IPv4.
- iii. Define Routing.
- iv. Define multicast.
- v. Differentiate between Integrated and differentiate service.
- vi. Define playback buffer.
- vii. What is virtual circuit forwarding table?
- viii. Differentiate between client server and peer to peer architecture.
- ix. What is multi homing.
- x. What is IP aggregation?

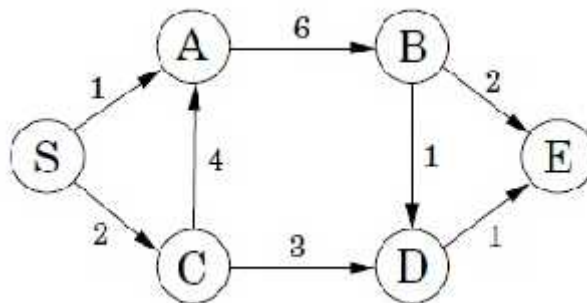
Group “B”

Exercise Problems: **[5 × 4 = 20]**

- 2. How Packet loss in RTP protocol can be recovered?
- 3. From the following information, map IP multicast address with ethernet address.

Physical Address: 68-94-23-40-E9-9C
IP multicast Address :229.122.54.99

- 4. If you are assigned an IP address 92.16.1.0/24 and plans to deploy CIDR. Here are some requirement which you have to fulfill for Subnet A = 120 Host, Subnet B = 60 Host, Subnet C = 30 Host, Subnet D = 10 Host Subnet E=5. You are also required to calculate subnetmask, range, netid, broadcast id for each subnet.
- 5. Identify the first six /42 address blocks out of ABCD:EFAB::/32
- 6. From the following figure find the shortest path from node S to all other nodes.



Group “C”

Comprehensive Questions:

[2 × 5 = 10]

7. Explain DCCP Connection Initiation and Connection Termination process. Explain how congestion is controlled with CCID 2.
8. List the difference between peer to peer network and client server network. Explain various peer discovering methods in P2P network.

(Note: The students should not limit themselves to the chapters mentioned in this Model Questions as questions can be asked from any chapter (within the syllabus) in the examination.)

