Paper Code : CSCHCT 31

M.Sc. III Semester (CBCS) Degree Examination, June/July 2023
Subject : COMPUTER SCIENCE
Paper : Advanced Java

Time : 3 Hours | Max. Marks : 80

Instructions : *1) Section – **A** is **compulsory**.*
*2) Answer **any five** questions from Section – **B**.*

SECTION – A

Answer the following questions. **(10×2=20)**

1. a) Define Inheritance.
   b) What are packages ?
   c) What is meant by access protection ?
   d) Define exception.
   e) Define runnable interface.
   f) What is messaging in java threads ?
   g) How to read and write from console and files ?
   h) What is an event ? Mention a method handling events.
   i) Define JDBC.
   j) List the various advance swing techniques.

SECTION – B

2. a) What are the features of JAVA programming language ? **(6+6=12)**
   b) What is constructor ? Explain constructor overloading.

3. a) With an example explain multilevel inheritance. **(6+6=12)**
   b) Write a program to demonstrate the uses of implementing interfaces.

P.T.O.

UN3.U2 1
1368

4. a) How to create a package ? Explain with example programs. **(6+6=12)**

   b) Write a program to illustrate the use of try block with finally clause.

5. a) Explain the life cycle of an applet. **(6+6=12)**

   b) What is thread ? Write a program to implement thread by extending thread class.

6. a) Explain the different AWT controls. **(6+6=12)**

   b) Explain the JDBC programming concepts in detail.

7. a) How java beans can be used to build an application ? Explain with example. **(6+6=12)**

   b) Explain the concept of swing with the help of a programme.

8. Write a note on **any two** of the following : **(2×6=12)**

   a) Method overloading.

   b) JAR file.

   c) Event handling.

   d) Byte code interpretation.

Paper Code : CSCHCT 32

M.Sc. III Semester (CBCS) Degree Examination, June/July 2023
Subject : COMPUTER SCIENCE
Paper : Software Engineering

Time : 3 Hours

Max. Marks : 80

Instructions : *i) Section – **A** is **compulsory**.*

*ii) Answer **any 5** questions from Section – **B**.*

SECTION – A

(10×2=20)

1. a) Define software engineering. **2**

   b) Define requirement engineering. **2**

   c) Define software process. **2**

   d) Define function-oriented software design. **2**

   e) Define testing. **2**

   f) Define software design. **2**

   g) Define unit testing. **2**

   h) What is boundary value analysis ? **2**

   i) What is CMM model. **2**

   j) Define software scope for the project planning. **2**

SECTION – B

2. a) With a neat diagram, explain evolutionary process model. **6**

   b) Explain the process of developing use cases in software engineering. **6**

3. a) Explain scenario-based modeling. **6**

   b) Explain relationship between coupling and cohesion. **6**

4. a) Explain object-oriented design. **6**

   b) Explain verification and validation in software engineering. **6**

P.T.O.

Paper Code : CSCHCT 32

5. a) Explain alpha-beta testing. 6

b) Explain black-box testing. 6

6. a) Explain top down and bottom-up integration testing. 6

b) Explain boundary value analysis. 6

7. a) Explain project planning process. 6

b) Explain COCOMO II model. 6

8. a) Explain specialized estimation techniques for project planning. 6

b) Explain different software improvement frame-works. 6

Paper Code : CSCSCT 32

M.Sc. III Semester (CBCS) Degree Examination, June/July 2023
Subject : COMPUTER SCIENCE
Paper : Computer Graphics

Time : 3 Hours

Max. Marks : 80

Instructions : *1) Section – **A** is **compulsory**.*
*2) Answer **any five** questions from Section – **B**.*

SECTION – A

(10×2=20)

1. Answer the following questions :
   a) Define pixel and resolution.
   b) List any four application areas of computer graphics.
   c) State any two graphics functions with its syntax.
   d) Write the properties of video display devices.
   e) List any four interactive input devices.
   f) List down any two attributes of line.
   g) Write down the different types of animations.
   h) Give the matrix representation for 2D scaling.
   i) What is basic transformations ?
   j) Define key-frame animation.

SECTION – B

2. a) Explain 2D transformations with its basic types.
   b) Differentiate between vector scan display and raster scan display. **(6+6=12)**

3. a) Explain the steps in DDA line generating algorithm.
   b) Explain the algorithm for drawing an ellipse. **(6+6=12)**

4. a) Explain the steps in Bresenham's circle drawing algorithm.
   b) What is transformation ? Explain the rotation transformation. **(6+6=12)**

P.T.O.

5. a) Explain shearing transformation and reflection transformation.
   b) Discuss the various color models used in the graphics system. (6+6=12)

6. a) Write a note on video file formats.
   b) Explain mid point circle algorithm. (6+6=12)

7. a) Explain random scan system.
   b) Explain the various color models in detail. (6+6=12)

8. Write a note on **any two** of the following : (2×6=12)
   a) Computer animation.
   b) Random scan.
   c) Line clipping algorithm.
   d) 3-D transformation.