

F 3620

(Pages : 2)

Reg. No.....^{IT}.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch—Computer Science and Engineering/IT

OBJECT ORIENTED MODELLING AND DESIGN (RT)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. What are links and association ? Give an example of a ternary association.
2. What is sample object model ?
3. Discuss the uses of data flow diagrams in object modelling.
4. Compare and contrast object dynamic and functional model.
5. What is concurrency control problem and mention a method to ensure correctness ?
6. Write notes on iterating the analysis.
7. Define physical packaging.
8. Explain briefly the various representations of an object.
9. What are the various views in UML ? Describe.
10. Explain the term "Notations and Models".

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. (a) Discuss in detail about the object oriented modelling concepts with examples. (12 marks)

Or

- (b) Discuss the use of generalization in object modelling. How multiple inheritance is handled. (12 marks)

- 12: (a) Write short notes on :

(i) Events and states. (6 marks)

(ii) Major and minor elements of object model. (6 marks)

Or

Turn over

(b) With neat diagram explain about functional models and also discuss about functions of constraints. (12 marks)

13. (a) Describe the various architectural frameworks common in system. (12 marks)

Or

(b) Discuss in detail about analysis in functional modelling. (12 marks)

14. (a) Explain in detail about design of association and the ways of documenting design objects in OO based design process. How version control is done ? (12 marks)

Or

(b) Explain in detail about :

(i) Object design algorithm with example. (6 marks)

(ii) Implementation of control. (6 marks)

15. (a) Discuss the notations and models used in Booch's methodology. Explain the advantage. (8 marks)

Discuss the difference between Booch and Jacobson methodology. (4 marks)

Or

(b) Explain in detail analysis model and design model with neat diagram. (12 marks)

[5 x 12 = 60 marks]

Part B

Each question carries 12 marks

11. (a) Discuss in detail about the object oriented modelling concepts with examples. (12 marks)

Or

(b) Discuss the use of generalization in object modelling. How multiple inheritance is handled. (12 marks)

12. (a) Write short notes on :

(i) Events and states. (6 marks)

(ii) Major and minor elements of object model. (6 marks)

Or

Turn over

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch—Computer Science and Engineering / I.T.

COMPUTER GRAPHICS (RT)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. What are Interactive graphics system ?
2. Distinguish between Raster scan and vector scan display systems.
3. How does light-pen locate position on screen ?
4. What is the use of Windowing ?
5. Define Resolution and aspect ratio.
6. Explain Scaling and clipping.
7. Define Surface Rendering.
8. What is polygon-rendering method ?
9. Write the matrix form of the 3D rotation of a point through 30 degree in clock-wise direction about X-axis.
10. What are self-squaring Fractals ?

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Explain the construction and working of Graphics Display unit.

Or

12. How will you classify the display devices used in Computer Graphics ?
13. Translate a point (12, 7) by 5 in x direction and 5 in y direction; scale by 2 and 1 in x and y direction, and rotate by 30° in clockwise. Find the final co-ordinates.

Or

Turn over

14. Obtain the reflection of the diamond shaped polygon, whose vertices are A(-1, 0), B(0, -2), C(1, 0) and D(0, 2) about the line $y = -x + 2$.
15. Enumerate and explain the 3D display methods.

Branch--Computer Science and Engineering \ I T.

16. Explain the fundamental principles of 3D transformations.
17. Discuss the various methods of the visible surface detection algorithms.

Or

18. Explain the detailed principle of 3D rendering.
19. Explain the various animation techniques stressing Raster Animation and morphing methods.

Each question carries 4 marks.

20. How to classify the Fractal image and explain methods of Fractal generation ?
1. What are In (5 x 12 = 60 marks)
 2. Distinguish
 3. How does light-pen locate position on screen ?
 4. What is the use of Windowing ?
 5. Define Resolution and aspect ratio.
 6. Explain Scaling and clipping.
 7. Define Surface Rendering.
 8. What is polygon-rendering method ?
 9. Write the matrix form of the 3D rotation of a point through 30 degree in clock wise direction about X-axis.
 10. What are self-similar Fractals ?

(10 x 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Explain the construction and working of Graphics Display unit.

Or

12. How will you classify the display devices used in Computer Graphics ?
13. Translate a point (12, 7) by 5 in x direction and 5 in y direction; scale by 2 and 1 in x and y direction, and rotate by 30° in clockwise. Find the final co-ordinates.

Or

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch : Information Technology

MODERN COMMUNICATION SYSTEMS (T)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. Define numerical aperture of an optical fiber.
2. Distinguish between Step Index and Graded Index fibers.
3. Explain the reason for fading in microwave communication.
4. Compare Microwave and Optical communication systems.
5. Define the following with respect to satellite orbits :—
 - (i) Apogee.
 - (ii) Perigee.
6. List the features of GPS.
7. Why is the cell organized as hexagon in cellular systems ?
8. Define frequency reuse factor in cellular systems.
9. What is meant by virtual channel ?
10. List the features of Bluetooth technology.

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Explain the different types of losses in optical communication systems. (12 marks)

Or
12. Explain the different types of light sources and light detectors used in fiber optic communication system. (12 marks)
13. Sketch the block diagram for a microwave repeater station and explain. (12 marks)

Or
14. With a block diagram, explain FM microwave radio system. (12 marks)
15. Explain code division multiple accessing type of channel accessing method. (12 marks)

Or
16. (a) How is satellite communication helpful in radio navigation ? (4 marks)
(b) Explain the block diagram of a satellite transponder. (8 marks)

Turn over

17. Explain the concept of frequency reuse in cellular systems.

(12 marks)

Or

18. (a) Explain the various sources of interference in cellular communication.

(6 marks)

(b) What is meant by cell splitting? How is it accomplished?

(6 marks)

19. Explain the concept and features of asynchronous transfer mode.

(12 marks)

MODERN COMMUNICATION SYSTEMS (T)

20. Write short notes on :

(Regularly supplementary)

(i) BISDN

(ii) WAP.

Answer all questions.

(6 marks)

Part A

[5 × 12 = 60 marks]

Each question carries 4 marks.

1. Define numerical aperture of an optical fiber.
2. Distinguish between Step Index and Graded Index fibers.
3. Explain the reason for fading in microwave communication.
4. Compare Microwave and Optical communication systems.
5. Define the following with respect to satellite orbits : —
 - (i) Apogee.
 - (ii) Perigee.
6. List the features of GPS.
7. Why is the cell organized as hexagon in cellular systems?
8. Define frequency reuse factor in cellular systems.
9. What is meant by virtual channel?
10. List the features of Bluetooth technology.

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

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12. Explain the different types of light sources and light detectors used in fiber optic communication system. (12 marks)
13. Sketch the block diagram for a microwave repeater station and explain. (12 marks)

Or

14. With a block diagram, explain FM microwave radio system. (12 marks)
15. Explain code division multiple accessing type of channel accessing method. (12 marks)

Or

16. (a) How is satellite communication helpful in radio navigation? (4 marks)
- (b) Explain the block diagram of a satellite transponder. (8 marks)

Turn over

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

**Branch : Information Technology
MULTIMEDIA TECHNIQUES (T)
(Regular/Supplementary)**

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

1. What are authoring tools ? Explain.
2. Compare Analog and Digital video.
3. Write notes on fractals.
4. Explain the JPEG standard.
5. Explain microsoft multimedia extentions.
6. What is CD-I ? Discuss its uses.
7. Discuss transform classes.
8. What is database integration ? Explain.
9. Write notes on video conferencing and its applications.
10. Discuss the applications for image synthesis.

(10 × 4 = 40 marks)

Part B

11. Discuss the commonly used input and output devices in multimedia applications. (12 marks)
Or
12. Write notes on :
(i) Computer animation. (6 marks)
(ii) Digital audio. (6 marks)
13. Explain MIDI. How is it powerful ? What are its limitations ? (12 marks)
Or
14. (i) Explain the MPEG standard. (6 marks)
(ii) Write notes on wavelets. (6 marks)
15. List out the members of CD family. Compare their features and applications. (12 marks)
Or
16. What is a multimedia PC ? What are its components ? What are its uses ? (12 marks)
17. Discuss in detail the classes used in multimedia programming. (12 marks)
Or
18. Discuss the problems in multimedia programming. (12 marks)
19. Explain what is full motion video. Discuss all aspects in designing such systems. (12 marks)
Or
20. Explain what is virtual reability. Discuss its applications and limitations. (12 marks)

[5 × 12 = 60 marks]

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch—Computer Science and Engineering/Information Technology

WEB TECHNOLOGIES (RT)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

*Answer all the questions.
Each question carries 4 marks.*

1. Write the features of SGML.
2. Write about accessing beans via scriptlets.
3. Explain JSP.
4. Explain about Attribute defaults.
5. Write the principle of creating Java Beans.
6. Discuss the basics of EJB.
7. Explain Entity References.
8. What are the features of Entity Beans ?
9. What are Scriptlets ?
10. Write the features of JavaBeans.

(10 × 4 = 40 marks)

Part B

*Answer all questions.
Each question carries 12 marks.*

11. (a) Explain the features of XML. (6 marks)
- (b) Compare in detail XML and HTML. (6 marks)

Or

12. Discuss about the Attributes of Tags. (12 marks)
13. (a) Explain the principle of storing XML data in HTML document. (6 marks)
- (b) Discuss the different XML applications. (6 marks)

Or

Turn over

- ...14... Explain the principle of creating XML DTD. (12 marks)
- ...15... Explain the steps to design Java Beans. (12 marks)

Or
B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

- 16. What is Customisation ? Explain how custom property editors are provided. (12 marks)
- 17. (a) Explain about accessing beans via scriptlets. (6 marks)
- (b) Write about reading and setting properties of Java Beans. (6 marks)

Or

- 18. Explain the principle of creating simple JSP pages in detail. (12 marks)
- 19. Discuss about stateful session beans and its development. (12 marks)

Part A

- 20. Discuss the types of beans in detail. (12 marks)

[5 × 12 = 60 marks]

1. Write the features of GML.
2. Write about accessing beans via scriptlets.
3. Explain JSP.
4. Explain about Attribute defaults.
5. Write the principle of creating Java Beans.
6. Discuss the basics of EJB.
7. Explain Entity References.
8. What are the features of Entity Beans ?
9. What are Scriptlets ?
10. Write the features of JavaBeans.

(10 × 4 = 40 marks)

Part B

Answer all questions.
 Each question carries 12 marks

- 11. (a) Explain the features of XML. (6 marks)
 - (b) Compare in detail XML and HTML. (6 marks)
- Or**
- 12. Discuss about the Attributes of Tags. (12 marks)
 - 13. (a) Explain the principle of storing XML data in HTML document. (6 marks)
 - (b) Discuss the different XML applications. (6 marks)

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch : Computer Science and Engineering/Information Technology

WINDOWS PROGRAMMING—(Elective I) (RT)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all the questions.

Each question carries 4 marks.

1. What are the basic features provided by VB language ?
2. What are the major properties and measurement to be set when working with forms ?
3. List out any *two* standard controls with proper example.
4. Mention the use of directory list box.
5. Write note on dialog controls.
6. Explain the significance of tree view control.
7. Explain the function of MCI control.
8. List out the different multimedia file format which can be used in any VB application.
9. Describe how clipboard help to transfer images and text between applications.
10. Describe the graphic methods and controls used in VB.

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. What is event driven programming ? Also with the help of examples explain how VB handles events ?

(12 marks)

Or

12. Explain the various datatypes and control statements supported by VB with the help of example.

(12 marks)

13. Write notes on the following controls :—

- (a) Frames.
- (b) File.
- (c) Drive.

(12 marks)

Or

14. Compare the features available in MDI with SDI.

(12 marks)

Turn over

15. Describe the various dialog controls with example.

(12 marks)

Or

16. How properties and methods are added to active-X control ?

(12 marks)

17. Explain the various multimedia controls in VB.

(12 marks)

Or

18. Discuss the methods and controls which support graphics in VB.

(12 marks)

19. How databases are accessed using DAO and RDO data control.

(12 marks)

Or

20. (a) How images are captured from screen ? Explain.

(6 marks)

(b) Discuss how mouse operations can be handled outside the program window.

(6 marks)

[5 × 12 = 60 marks]

Part II

Each question carries 12 marks

11. What is event driven programming ? Also with the help of example explain how VB handles events? (12 marks)

12. Explain the various datatypes and control statements supported by VB with the help of examples. (12 marks)

13. Write notes on the following controls -

- (a) Frame
- (b) File
- (c) Drive

(12 marks)

Or

14. Compare the features available in MFC with SBI. (12 marks)

Turn over

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(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, NOVEMBER 2010

Seventh Semester

Branch : Computer Science and Engineering/Information Technology

MOBILE COMPUTING—(Elective I) (RT)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. Discuss about Multicarrier modulation.
2. Write the goals of Mobile IP.
3. Explain LEO satellite system.
4. Explain the term "Frequency Reuse".
5. Write a note on Digital Video Broadcasting.
6. Discuss about Tunnelling and Encapsulation process.
7. Discuss in WML.
8. What is Mobile Computing ?
9. Write the features of WML.
10. What are Adhoc networks ?

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Explain Mobile Telephone System in detail with a neat diagram. (12 marks)

Or

12. Explain :

(a) Cellular systems. (6 marks)

(b) Advantages of mobile computing with an eg. (6 marks)

13. Explain with a neat diagram the system architecture of a GSM system. (12 marks)

Or

14. Explain the different satellite systems GEO and MEO. (12 marks)

Turn over

15. Discuss in detail the protocol layers of Bluetooth.

NOVEMBER 2010 Or

16. (a) Compare 802.11 and 802.16. (6 marks)

(b) Discuss the handover scenarios of ATM. (6 marks)

17. Describe traditional TCP, Indirect TCP, snooping TCP and Mobile TCP transmissions in detail. (12 marks)

(Regular/Supplementary)

Maximum : 100 Marks

(2 1/2) Hours

18. Explain IPV6 in detail.

Answer all questions

19. Describe the architecture of WAP.

Part A

20. Explain the WWW system architecture briefly. (12 marks)

Each question carries 4 marks.

10 marks

2. Write the goals of Mobile IP.

3. Explain IEO satellite system.

4. Explain the term "Frequency Reuse".

5. Write a note on Digital Video Broadcasting.

6. Discuss about Tunneling and Encapsulation process.

7. Discuss in WML.

8. What is Mobile Computing?

9. Write the features of WML.

10. What are Adhoc networks?

(10 x 4 = 40 marks)

Part B

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11. Explain Mobile Telephone System in detail with a neat diagram. (12 marks)

Or

12. Explain : (a) Cellular systems. (6 marks)

(b) Advantages of mobile computing with an eg. (6 marks)

13. Explain with a neat diagram the system architecture of a GSM system. (12 marks)

Or

14. Explain the different satellite systems GEO and MEO. (12 marks)

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