

G 6953

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch—Computer Science and Engineering

ADVANCED SOFTWARE ENVIRONMENTS (R)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 4 marks.

1. What are the First Operating system and windows version ?
2. Define API.
3. What is event handling ?
4. Explain features of cwin App class.
5. What is "STUB and Skeleton" ?
6. Define "CORBA" factories.
7. Explain X-windows.
8. What is life-cycle of an MFC ?
9. Describe features in distributed objects.
10. What is meant by child windows ?

(10 × 4 = 40 marks)

Part B

Answer all questions.

Each question carries 12 marks.

11. What are components of Windows API ?

Or

12. Explain Menus and Baffons. How do they help windows Drawing ?
13. What are Menus and Baffons ? Explain mouse and keyboard event.

Or

14. Discuss MFC classes and CW in App classes.

Turn over

15. Explain features in CORBA.

Or

16. What is meant by CORBA server and CORBA client in Distributed applications ?

17. Differentiate CORBA object creation in C++ and JAVA.

Or

18. What is meant by destroying CORBA objects and explain its applications ?

19. Discuss the Architecture of the X-windows systems.

Or

20. Explain the method of X-windows programming with command line options and resources.

(5 x 12 = 60 marks)

1. What are the basic Operating system and windows version ?
2. Define API.
3. What is event handling ?
4. Explain features of twin App class.
5. What is "STUB and Skeleton" ?
6. Define "CORBA" protocol.
7. Explain X-windows.
8. What is life-cycle of an XERO ?
9. Describe features in distributed objects.
10. What is meant by child windows ?

Part B

Answer all questions.
Each question carries 12 marks.

11. What are components of Windows API ?

Or

12. Explain Menu and Buttons. How do they help window drawing ?

13. What are Menu and Buttons ? Explain mouse and keyboard event.

Or

14. Discuss MVC design and CW in App class.

(10 x 6 = 60 marks)

Part A

G 6926

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch—Computer Science and Engineering/Information Technology

OBJECT ORIENTED MODELLING AND DESIGN (RT)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 4 marks.

1. Justify why inheritance should be used with caution in OOA.
2. Explain briefly the various kinds of relationship among objects.
3. Discuss the relationship of object and dynamic model.
4. Explain the terms event, states and concurrency.
5. What is meant by handling boundary condition ?
6. Write notes on managing of data stores.
7. Explain about design optimization.
8. Explain about adjustment of inheritance.
9. What are the major advantages of UML ?
10. Write short note on sequence diagram and activity diagram.

(10 × 4 = 40 marks)

Part B

Answer all questions.

Each question carries 12 marks.

11. (a) Discuss the concepts in advanced object modelling with example.

Or

(b) Write notes on :

(i) Metadata and constraints.

(6 marks)

(ii) Multiple inheritance.

(6 marks)

12. (a) Write short notes on :

(i) Data flow diagram.

(6 marks)

(ii) Nested state diagram.

(6 marks)

Or

- (b) Discuss the process of analysis with respect to object model, dynamic and functional model.

Turn over

13. (a) Write a short note on the following :-

- (i) Breaking system into subsystem. (6 marks)
- (ii) Allocating subsystems to processors and tasks. (6 marks)

Or

(b) Describe dynamic modelling with respect to any application.

- 14. (a) (i) Discuss in detail about design of association. (6 marks)
- (ii) Compare different object design methodologies. (6 marks)

Or

(b) Discuss in detail about designing algorithms.

15. (a) Discuss in detail about Jacobson methodology with example.

Or

- (b) (i) List out the difference between implementation model and test model. (6 marks)
- (ii) With an example, show how sequencing in time is represented in UML. (6 marks)

[5 × 12 = 60 marks]

(10 × 4 = 40 marks)

Part B

Answer all questions.

Each question carries 12 marks.

11. Discuss the concepts in advanced object modelling with example.

Or

12. Write notes on

(6 marks)

(i) Distinction and comparison

(6 marks)

(ii) Multiple inheritance

(6 marks)

13. Write short notes on

(6 marks)

(i) Data flow diagrams

(ii) Nested state diagrams

Or

14. Discuss the process of analysis with respect to object model, dynamic and functional model.

(12 marks)

G 6935

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch : Computer Science and Engineering

COMPUTER GRAPHICS (R T)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. Explain a Vector Refresh system.
2. Enumerate the fields of application of Computer Graphics.
3. What is Bresenham's line drawing algorithm?
4. Explain the non-zero winding number rule.
5. What is meant by scan converting a polygon?
6. Explain mid-point subdivision algorithm for polygon clipping.
7. Distinguish between Window and View point.
8. What is meant by black-face detection?
9. Define illumination model and shading.
10. What are Fractals?

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Briefly explain working of any *two* interactive graphic input devices. What is the general structure of the input device?

Or

12. Compare the functions performed by display processors in random scan and in vector scan systems.
13. Distinguish between single DDA algorithm and symmetrical DDA algorithm.

Or

Turn over

14. A point defined by the co-ordinates P (3, 4) is translated by 5 units in x and y divisions; scaled by 2 units x and y and then rotated by 45° in clock-wise then what will be transformed point?
15. Explain the use of Bezier curves in 3D and the 3D object representation.
- Or
16. Discuss applications of Gourand Shading and Ray-Tracing methods.
17. Make a comparative analysis of the visible surface detection algorithm in 3D rendering.
- Or
18. Explain the Gourand shading and Ray-Tracing methods.
19. Discuss the Animation technique stressing Raster Animation and Morphing methods.
- Or
20. Write a Fractal Image generation algorithm and show how it can be used in Animation application.

(5 × 12 = 60 marks)

G 6943

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch : Computer Science and Engineering

THEORY OF COMPUTATION (R)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

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

1. Define Countable and Uncountable sets.
2. What is a Primitive Recursive function.
3. Define regular expression.
4. Draw a DFA for the regular expression $((a^* + b^*)^*)a^*$.
5. Differentiate a DFA and NFA.
6. Show that $L = \{0^n 1^{2n} / n \geq 1\}$ is not regular.
7. Define a context free language.
8. What are the languages accepted by a Turing machine ?
9. Define Godelization ?
10. What are complexity classes ?

(10 × 4 = 40 marks)

Part B

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

11. (a) Show that 2^n is uncountable.
(b) For n is an integer ≥ 0 , $n^3 + 2n$ is divisible by 3.

Or

12. (a) Show that a problem whose language is recursive is undecidable.
(b) If Z is the decimal expansion of π , then show that the function $f(x) = 1$ for exactly x consecutive 3's in z and $f(x) = 0$, otherwise.

Turn over

13. (a) If ' r ' is a regular expression, then show that there is an NFA that accepts $L(r)$.

(b) Design a minimized FSA that recognize $(1110/100)^* 0^*$.

Or

14. Construct content free grammar to generate $\{W \in W^R / W \in \{a, b\}^*\}$.

15. If L is given by $L = \{a^n b^n c^n\} / n \geq 1$, check whether L is CFL or not? Prove.

Or

16. Design a turing Machine with the initial tape as 0111011110 and the output pattern 0111101110

17. Show that halting problem of a turing machine is undecidable. Explain Godelization with example.

Or

18. Design a m -tape turing machine that works as a copying machine.

19. Is travelling salesman problem is NP-complete or not? Prove.

Or

20. Explain any *two* problems that are algorithmically undecidable.

(5 × 12 = 60 marks)

G 6964

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch : Computer Science and Engineering/IT

WEB TECHNOLOGIES (RT)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

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

1. Write the features of XML.
2. Explain JSP.
3. Write the principle of designing Java Beans.
4. Discuss the Attribute types.
5. Write a note on Serialized beans.
6. What are entity beans ?
7. Explain about the views of an XML document.
8. What are the types of beans ?
9. Write about bean info clauses.
10. Write the applications of XML.

(10 × 4 = 40 marks)

Part B

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

11. Explain the features of SGML. Explain how XML forms a subset of SGML. (12 marks)
- Or*
12. (a) Discuss about Entity References. (8 marks)
- (b) Write a brief note on CDATA section. (4 marks)
13. Explain the principle of displaying XML data in HTML browser as HTML tables. (12 marks)
- Or*
14. Write a brief note on :
 - (a) Attribute defaults.
 - (b) Attribute type declaration and element type declaration.

(6 + 6 = 12 marks)

Turn over

15. (a) Discuss the features of Java Beans. (6 marks)

(b) Discuss about (i) bound and constrained properties of Java Beans ; (ii) creating properties of Java Beans.

(3 + 3 = 6 marks)

Or

16. Explain about :

(a) Creating and using Bean info clauses. (6 marks)

(b) Customisation. (6 marks)

17. Explain the loops and execution handling in JSP with scriptlets.

(12 marks)

Or

18. Explain about :

(a) Using Java Beans in JSP. (6 marks)

(b) Reading properties of Java Beans. (6 marks)

19. Explain the steps involved in the development of Session Beans. (12 marks)

Or

20. Explain the features of Entity Beans in detail. (12 marks)

[5 × 12 = 60 marks]

G 6996

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Seventh Semester

Branch—Computer Science and Engineering/IT

MOBILE COMPUTING (RT) (Elective I)

(Improvement/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Answer all questions.

Part A

Each question carries 4 marks.

1. What are cellular systems ?
2. Write the applications of Bluetooth.
3. What is Handover ?
4. Explain GEO satellite system.
5. What is WAP ?
6. What are the requirements of Mobile IP ?
7. What is WML ?
8. Discuss briefly about ACP.
9. What is Mobile computing ?
10. Discuss about Multimedia Object Transfer Protocol.

(10 × 4 = 40 marks)

Part B

Each question carries 12 marks.

11. Write briefly about :
- (a) Multicarrier Modulation. (6 marks)
 - (b) Advantages of Mobile computing. (6 marks)

Or

12. Explain Mobile Telephone system in detail. (12 marks)

Turn over

13. Explain the system architecture of a DECT system. (12 marks)
- Or
14. Describe the different satellite systems LEO, GEO and MEO in detail. (12 marks)
15. Explain the architecture of Bluetooth. (12 marks)
- Or
16. Discuss :
- (a) the services of wireless ATM. (4 marks)
 - (b) Reference model of ATM. (4 marks)
 - (c) Handover scenarios of ATM. (4 marks)
17. Explain DSDV, DSR and Hierarchical algorithms. (12 marks)
- Or
18. Explain the steps involved in the packet delivery process from end to a mobile node. (12 marks)
19. (a) Explain the features of WML. (6 marks)
- (b) Explain the concept of WAP using its architecture. (6 marks)
- Or
20. (a) What is HTTP ? (3 marks)
- (b) Explain www system architecture. (9 marks)
- [5 × 12 = 60 marks]