G 7067 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Computer Science and Engineering/IT

CLIENT-SERVER COMPUTING (Elective II) (RT)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries **4** *marks.*

1. What is the need of client-server computing ?
2. Differentiate client server computing and heterogenous computing.
3. Write short note on client server interaction management.
4. Give examples for client server implementations.
5. Differentiate multi-programming and multi-tasking.
6. List the advantages of multi-processor.
7. Write short note on semaphores. Explain its wage with an example.
8. Define processing queues.
9. Discuss the different communication protocols.
10. Differentiate n/w communication and inter process communication protocols.

(10 × 4 = 40 marks)

Part B

Each question carries **12** *marks.*

11. List the advantages and disadvantages of client server computing. (12 marks)

Or

12. Explain the client server databases. How it is useful for client server communication ? (12 marks)

13. Explain the following : —

    (i) Communication Technique Protocols. (6 marks)

    (ii) Client Server Interaction Protocols. (6 marks)

Or

Turn over

14. Explain the preparation and optimization of applications for client server. (12 marks)

15. Define processor. Note on cheld and parent processor. (12 marks)

Or

16. Discuss the server communication model. (12 marks)

17. What do you mean by Scheduling ? How scheduling is implemented in client server model ? (12 marks)

Or

18. Define context switching. What do you mean by context switching pre emptive systems ? (12 marks)

19. Explain the inter process communication. How it is achieved ? (12 marks)

Or

20. Discuss the client server applications. How to build the portable client server applications. (12 marks)

[5 × 12 = 60 marks]

G 7068 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Computer Science and Engineering/Information Technology

2. DISTRIBUTED COMPUTING—(Elective II) (RT)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

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

1. Write a note on the evolution of distributed systems.
2. Write short note on IP protocol.
3. Explain the distributed file system requirements.
4. With figure explain the NFS architecture.
5. Differentiate closed groups and open groups.
6. Define the term trashing.
7. Explain the process migration. When it is needed ?
8. Explain load balancing and load sharing.
9. What do you mean by the term intention lists ?
10. What is a deadlock in distributed systems ?

(10 × 4 = 40 marks)

Part B

Answer any **five** *questions.*
Each question carries 12 *marks.*

11. List the advantages and disadvantages of distributed system. (12 marks)

Or

12. Give description about the following : —
    (i) Process management in MACH. (4 marks)
    (ii) Memory management in MACH. (4 marks)
    (iii) Communication in MACH. (4 marks)
13. Explain the different ways of dealing with the shared files in distributed systems . (12 marks)

Turn over

Or

14. Explain the names and attributes used in CDDA. (12 marks)

15. Discuss the different classes of failures that can occur in RPC systems. (12 marks)

Or

16. Define mutual exclusion. What are various algorithms used in distributed systems ? (12 marks)

17. With figure explain the receiver initiated algorithm. (12 marks)

Or

18. Discuss various approaches of task management. (12 marks)

19. Discuss the transaction recovery methods. (12 marks)

Or

20. With figure explain :

    (i) Initialized deadlock detection. (6 marks)

    (ii) Distributed deadlock detection. (6 marks)

[5 × 12 = 60 marks]

G 7070 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Information Technology

HIGH PERFORMANCE COMPUTING – Elective II (T)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Compare and contrast Multiprogramming and Time sharing.
2. Do you consider MIMD Computer Organization as a tightly coupled one or loosely couple one. Justify your answer.
3. Distinguish between Static and Dynamic pipeline.
4. What do you mean by Vector processing.
5. Define Blocking and Non-blocking networks. Give example.
6. Specify the significance of associative memory in SIMD processor.
7. Define a multiprocessor system. What are the two architectural models for a multiprocessor system.
8. How Fork and Join statements are used to implement concurrency?
9. What is a data flow computer?
10. How languages influence data flow computer in achieving parallelism?

(10 × 4 = 40 marks)

Part B

Answer **all** *questions.*

Each question carries 12 *marks.*

11. (a) Explain briefly the trend toward parallel processing.

    (b) With a neat sketch, explain the classical computer memory hierarchy.

(7 + 5 = 12 marks)

Or

12. Discuss the various architectural classification schemes based on parallelism and pipelining.

Turn over

13. Design a pipelined instruction unit for an IBM system with a neat sketch.

Or

14. Explain the architecture of Cray-1 Vector processor.

15. Discuss on the different steps in any two parallel algorithms for Array processors.

Or

16. Explain the Associative Memory Organisation in SIMD Array Processor.

17. Describe in detail the different classification scheme for an interconnection network based on its physical forms and organisation.

Or

18. With the help of a multiprocessor configuration, explain how communication is carried out in tightly coupled system.

19. Explain the architecture of static data flow computer.

Or

20. What are the Design Alternatives used in data flow approach.

[5 × 12 = 60 marks]

G 7037 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Computer Science and Engineering/Information Technology

ARTIFICIAL INTELLIGENCE (RT)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

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

1. Why do we go for AI to solve a problem rather than conventional methods ?
2. What are methods of BFS and DFS ?
3. Define Heuristic functions.
4. What is meant by stimulated annealing ?
5. Differentiate games and search.
6. What are frames and semantic nets ?
7. Define Modus Ponen's rule.
8. What is meant by Resolution ?
9. How facts can be represented in prolog ?
10. What are Facts and Rules in Prolog ?

(10 × 4 = 40 marks)

Part B

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

11. What are objectives of AI problems ?

Or

12. Compare various searching strategies.

13. What is meant by constraint satisfaction search ? Explain with example.

Or

14. Explain the HILL climping algorithm.

15. Draw and explain use of semantic network for the following statement "Raju went to Calicut to deposit fees to write MBA examination".

Or

Turn over

16. Compare the methodoligies in Crames and Search problems.

17. Prove by resolution that "Collins should not be a suspect". From the premises : Victim died of a heart attack Killer was friend of victim. Apartment was blue and infact. Murder occurred in midnight. There is a reason to suspect that Collins murdered the victim.

Or

18. Explain an algorithm to compute well formed formula into the clausal form.

19. What are the important abstract data types of prolog ?

Or

20. Discuss with examples the Meta Predicates and Meta interpreters.

(5 × 12 = 60 marks)

G 7101 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Computer Science Engineering/Information Technology

NEURAL NETWORKS—(Elective III) (R, T)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Define an activation function.
2. Explain the terms threshold and bias.
3. What are the advantages of back propagation network ?
4. What is meant by temporal instability ?
5. What are the advantages of CPN Compared to BPN ?
6. Discuss the two different types of layers used in CPN.
7. What are the characteristics of Boltzman's training ?
8. Explain the artificial specific heat method.
9. What is an associative memory ?
10. Explain the architectural classification of ART networks.

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. Explain with diagrams the training process of ANNs.

Or

12. Describe the training algorithms used for ANN.
13. Define the back propagation algorithm. Describe an application of BPN.

Or

Turn over

14. What is network, paralysis ? Explain the methods to avoid the situation.

15. Describe the architecture of a full CPN. Discus its training process also.

Or

16. Explain with diagrams an application of forward only CPN.

17. Describe the architecture and training of Cauchy's machine.

Or

18. Explain the role of ANN in general non-linear optimization problems.

19. Explain the discrete Hopfield network with its architecture.

Or

20. Explain the basic concept behind ART. What are the applications of ART networks ?

(5 × 12 = 60 marks)

G 7010 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Computer Science/Information Technology

SECURITY IN COMPUTING (RT)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

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

1. Describe the relevance of network security.
2. Write a note on viruses.
3. Describe the official levels of computer security.
4. What are the protection mechanisms adopted for OS security ?
5. With figure, explain encryption and decryption mechanisms.
6. What do you mean by crypt analysis ?
7. Differentiate blue and application security.
8. Define applet security.
9. Describe SQL security.
10. Define Statistical database security.

(10 × 4 = 40 marks)

Part B

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

11. Explain the following :—

    (a) Hackers. (6 marks)

    (b) Crackers. (6 marks)

Or

12. What are the different services and mechanisms for providing network security ? (12 marks)

13. Explain access control mechanism. What do you mean by discretionary and mandatory access control ?

Or

14. What are the different authentication mechanisms associated with OS Security ?

Turn over

15. With an example, explain the Dittie-Hellman key exchange algorithm.

Or

16. Compare RSA and DFS algorithms. List the merits and demerits of each.

17. Explain the IP security architecture with relevant figures.

Or

18. With an example, explain the E-mail security.

19. What is the relevance of database security and explain statistical database security ?

Or

20. Explain how MAC provides multilevel security for database.

(5 × 12 = 60 marks)

G 7019 (Pages : 2) Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Information Technology

INFORMATION SYSTEMS AND MANAGEMENT (T)

(Regular/Supplementary)

Time : Three Hours Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. Explain the concept of situational model of leadership.
2. What are the major functions of Management ?
3. List out the steps involved in the conversion of manual to computer based systems.
4. Write a note on Databank concept.
5. Explain the establishing of constrains of an Information system with the help of an example.
6. What are the important characteristics of the conceptual design flow chart ?
7. Explain the meaning of ERP.
8. What are the guide lines for ERP implementation ?
9. What is meant by knowledge management ?
10. Give the major features of a DSS.

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. (a) Explain the system view of business. Discuss the influence of information feedback systems on system approach.

Or

(b) Define "Organisational effectiveness". How can it be enhanced ? Discuss.

12. (a) Write notes on MIS and EIS. How can they be criticized for decision assistance ?

Or

(b) Discuss the key features of Hierarchical and Network structures of DBMS.

Turn over

13. (a) With the help of examples, explain the characteristics, development and implementation of a production information systems.

Or

(b) With the help of Schematic diagrams, explain the Planning Cycle of MIS.

14. (a) Discuss about the possible future developments in ERP systems.

Or

(b) Explain the multi-layer architecture of an ERP system.

15. (a) Explain the basic features of Data mining and Data warehousing.

Or

(b) What is meant by knowledge audit ? List out the steps involved in it.

[5 × 12 = 60 marks]

G 7030

(Pages : 2)

Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, APRIL 2011

Eighth Semester

Branch : Information Technology

E-COMMERCE (T)

(Regular/Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer **all** *questions.*

Each question carries 4 *marks.*

1. With figure explain the quick response retailing.
2. With block diagram depict the *e*-commerce architecture ?
3. Describe smart cards.
4. Define the properties of *e*-cash.
5. Define EDI.
6. Explain the structure of EDI -transactions.
7. With relevant figure explain the private and public electronic commerce.
8. Describe the supply chain management.
9. Explain the cell relay structure.
10. Compare CDMA with TDMA.

(10 × 4 = 40 marks)

Part B

Each question carries 12 *marks.*

11. List the consumer oriented applications and services.

Or

12. Explain the architectural frame work for E-Commerce ? (12 marks)

13. Explain the different types of *e*-payment systems. (12 marks)

Or

Turn over

14. With neat figure explain the payment transaction sequence in an electronic check system ? List its advantages. (12 marks)

15. Write a note on MIME ? List its advantages and disadvantages. (12 marks)

Or

16. What are the legal, security and privacy issues associated with EDI ? (12 marks)

17. Describe the following : —

    (i) Pull based supply chain. (6 marks)

    (ii) Push based supply chain. (6 marks)

Or

18. What are the different types of digital documents ? (12 marks)

19. Explain the ATM system architecture. (12 marks)

Or

20. Explain the mobile computing applications. (12 marks)

[5 × 12 = 60 marks]