G 818   (Pages : 2)   Reg. No.................................

Name....................................

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Information Technology (T)

E-COMMERCE (T)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours   Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 4 marks.

1. Define e-commerce. List some important applications.

2. What are the benefits of hypermedia documents ?

3. What are the main security issues regarding the electronic payment system ?

4. Write a note on e-cash.

5. What is EDI ? Give the layered architecture of EDI system.

6. What are the importance of internet based EDI ?

7. Write a note on digital document management scheme.

8. What are the characteristics of supply chain management in e-commerce ?

9. Write a note on ISDN.

10. Explain the features of Switched Multi-megabit Data Service.

(10 × 4 = 40 marks)

Part B

Answer all questions.
Each question carries 12 marks.

11. Describe consumer e-commerce applications.

Or

12. What is meant by supply chain management ? Briefly explain the functions.

13. Briefly explain about the credit card based electronic payment system.

Or

14. Discuss the various types of electronic tokens for e-payment.

Turn over

15. Explain the benefits and application of EDI in e-commerce.

Or

16. Explain the features of internet based EDI.

17. Discuss the concept of workflow automation and co-ordination.

Or

18. Discuss the characteristics, classification and advantages of data warehouses.

19. Discuss the features of cell relay and frame relay.

Or

20. Explain the concept and features of mobile and wireless computing.

(5 × 12 = 60 marks)

G 826

Reg. No....................................

Name..

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Computer Science and Engineering/Information Technology

ARTIFICIAL INTELLIGENCE (R, T)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 4 marks.

1. What are the requisites for an AI representation language ?

2. Briefly explain the propositional calculus semantics.

3. Explain the depth first search with iterative deepening.

4. What is meant by informedness of a heuristic ? Explain.

5. State the conditions under which admissibility of a heuristic imply monotonicity.

6. Differentiate between inheritable knowledge and relational knowledge.

7. Explain how backward chaining rule system can be used for goal directed problem solving.

8. Explain how heuristics can be used in constraint satisfaction problem.

9. Explain the need for using meta-predicates in PROLOG.

10. Discuss the use of semantic nets in PROLOG.

(10 × 4 = 40 marks)

Part B

Answer all questions.
Each question carries 12 marks.

11. Explain the bidirectional search algorithm and uniform cost search algorithm. Also compare the performance.

Or

12. Explain the breadth first search algorithm and depth first search algorithm. Give an example of a problem for which depth first search would work better than the former one.

Turn over

13. Explain A* algorithm and substantiate how it is capable of generating an optimal solution in an AI problem.

Or

14. Explain the steepest ascent hill climbing algorithm.

15. Discuss the use of semantics and frames in knowledge structures.

Or

16. Explain alpha-beta pruning. Also explain how it improves the search efficiency in two person games.

17. Distinguish between default reasoning and minimalist reasoning.

Or

18. Explain the unification algorithm.

19. Explain in detail the various abstract data types in PROLOG.

Or

20. Explain how best first search is carried out in PROLOG.

(5 × 12 = 60 marks)

G 855

(Pages : 2)

Reg. No...............................

Name...................................

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Computer Science and Engineering/Information Technology

CLIENT-SERVER COMPUTING (Elective II) (R T)

(Old Scheme—Prior to 2010 Admissions)

[Supplementary/Mercy Chance]

Time : Three Hours

Maximum : 100 Marks

Part A

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

1. Write down the features of client server computing.

2. What are the main components of client server computing ?

3. Explain briefly about any *two* client server interaction protocols.

4. Write short notes on Remote Procedure Call.

5. What are the advantages of multitasking ?

6. What is the use of Threads ?

7. Explain briefly about multilevel feedback queue scheduling.

8. What is a semaphore? What are its operations ?

9. Write briefly about the concept of web services.

10. What is the role of network protocols in communication ?

(10 × 4 = 40 marks)

Part B

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

11. Write briefly about the various costs in implementing a client server system.

Or

12. Briefly explain the architecture of client server databases ? What are its advantages ?

13. What are the various ways of optimizing applications for client server ?

Or

14. Illustrate client server implementation with an example.

Turn over

15. (a) Differentiate between Process and Threads.

    (b) Explain about user and kernel threads.

Or

16. Explain briefly about multitasking in Novell Netware.

17. Explain briefly about context switching with a neat labeled diagram.

Or

18. Write briefly on :

    (a) A SJF Scheduling.

    (b) Priority Scheduling

19. Explain briefly the different techniques of inter process communication.

Or

20. Discuss about client server applications.

(5 × 12 = 60 marks)

G 890 (Pages : 2) Reg. No..............................

Name...........................

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Computer Science and Engineering / Information Technology

NEURAL NETWORKS (Elective III) (R, T)

(Old Scheme—Supplementary/Mercy Chance—Prior to 2010 Admissions)

Time : Three Hours
Maximum : 100 Marks

Part A

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

1. Distinguish between supervised learning and unsupervised learning techniques.

2. Write the algorithm for perception learning rule.

3. What is meant by temporal instability? Explain.

4. What is K-means algorithm? Explain.

5. Explain the operation of Grossberg layer.

6. How the weights of output layer are adjusted in back propagation training?

7. Explain the need for negative phase and its implications in Boltzmann learning.

8. Explain the limitations of Boltzmann training.

9. Compare continuous BAM and adaptive BAM.

10. What are the advantages of recurrent networks?

(10 × 4 = 40 marks)

Part B

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

11. (a) What is multilayer perceptron? Explain how it can solve XOR problem. (6 marks)

   (b) Explain the architectural graph of a multilayer perception with two hidden layers. (6 marks)

Or

12. (a) How to activate the functions of neurons? Explain different types of activation methods.

(6 marks)

   (b) Explain perceptron convergence theorem. (6 marks)

13. Initialize a perception with zero weights. Use input patterns (0, 0) (0, 1) (1, 0), (1, 1) as training data for two class problem and assign two pattern to each class (use targets + 1, − 1). Illustrate the training procedure for one set pattern. Check whether at the end of the epoch the pattern are classified.

Or

14. With neat diagrams, explain neural network based model reference adaptive control.

Turn over

15. Draw the structure of a feed forward MLP with a single hidden layer. Write down the expression for the output vector y^o as a function of the input vector x. Show that if both layers (hidden and output) of the above MLP use linear activations, the two layer network is equivalent to a single layer network.

Or

16. Explain the applications where counter propagation networks are superior to other networks.

17. Explain simulated annealing. Explain how the principle of simulated annealing is useful for stochastic machines.

Or

18. (a) With necessary examples, describe Cauche training.   (6 marks)

    (b) Derive back propagation algorithm. What are its applications?   (6 marks)

19. (a) Explain the method of character retrieval using Hopfield networks.   (8 marks)

    (b) What is a recurrent network? What are its uses?   (4 marks)

Or

20. Explain how a Hopfield network can be approximated as a gradient system and an autoassociative system.

                                                              [5 × 12 = 60 marks]

G 990

(Pages : 2)

Reg. No.............................

Name.................................

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Computer Science and Engineering / Information Technology

CS 010 802 / IT 010 803 – ARTIFICIAL INTELLIGENCE (CS, IT)

(New Scheme–2010 Admissions)

[Regular]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.
Each question carries 3 marks.

1. Mention any two features of python.

2. What are OR graphs ?

3. What are predicates ?

4. What is learning ?

5. Write a note on domain knowledge.

(5 × 3 = 15 marks)

Part B

Answer all questions.
Each question carries 5 marks.

Discuss Production system with an example.

7. Write a note on MIN MAX procedure.

8. Explain backward chaining with an example.

9. Describe the learning by chunking.

Differentiate Ordinary sets and Fuzzy sets.

(5 × 5 = 25 marks)

Part C

Answer all questions.
Each question carries 12 marks.

Implement hill climbing using Python.

Or

Turn over

12. Explain the significance of search methods in AI with an example.

13. Explain the A* algorithm.

Or

14. Explain the method of problem reduction using AND-OR graphs.

15. Explain the unification algorithm with an example.

Or

16. Discuss the importance of predicate logic in knowledge representation.

17. Explain learning by parameter adjustment using an example.

Or

18. Explain the ID3 decision tree induction algorithm.

19. Describe how fuzzy sets are useful in implementing fuzzy logic.

Or

20. How do you use and represent domain knowledge in an expert system?

$(5 \times 12 = 60 \text{ marks})$

G 1005

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Information Technology

IT 010 802 – CRYPTOGRAPHY AND NETWORK SECURITY (IT)

(New Scheme–2010 Admission onwards)

[Regular]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. What do you mean by Modular Arithmetic?

2. What is the difference between a Mono-alphabetic cipher and a Poly-alphabetic cipher?

3. What do you mean by message authentication code?

4. What is PGP? How authentication and confidentiality is maintained in PGP?

5. What is the necessity of firewalls?

$(5 \times 3 = 15 \text{ marks})$

Part B

Answer all questions.

Each question carries 5 marks.

6. State and prove Chinese Remainder theorem.

7. Write a note on traffic confidentiality.

8. Briefly describe about the Secure Hash Algorithm.

9. Briefly explain Encapsulating Security Payload (ESP).

10. Write short notes on Types of Firewalls.

$(5 \times 5 = 25 \text{ marks})$

Part C

Answer all questions.

Each question carries 12 marks.

11. Explain about Fermat's theorem. Using Fermat's theorem, find the remainder after dividing 5^{301} mod 11.

Or

Turn over

12. Explain about Linear and Quadratic congruence.

13. Explain the encryption and decryption techniques for AES with neat diagrams.

Or

14. Write a note on :

    (a) Substitution cipher.

    (b) Transposition cipher.

15. Describe the following asymmetric key cryptographic algorithms :

    (a) El Gamal Cryptosystem.

    (b) Elliptic Curve Cryptosystem.

Or

16. Explain the key management of public key encryption in detail.

17. Describe the services provided by X.509 authentication service.

Or

18. Explain IP Security and analyze its architecture in detail.

19. Explain the following :

    (a) Password management.

    (b) Trusted systems.

Or

20. What are viruses? Explain the virus related threats and the counter measures applied.

                                     (5 × 12 = 60 marks)

B.TECH. DEGREE EXAMINATION, MAY 2014

Eighth Semester

Branch : Information Technology

IT 010 805 G04 – ELECTRONIC BUSINESS AND SERVICES (Elective IV) [IT]

(New Scheme–2010 Admissions)

[Regular]

Maximum : 100 Marks

Time : Three Hours

Give figure wherever necessary.

Part A

Answer all questions.

Each question carries 3 marks.

1. Discuss the relevance of E-commerce.

2. What is meant by digital signature scheme ?

3. What are the advantages of *e*-payment systems ?

4. What do you mean by *e*-fraud ?

5. Define E-Commerce multimedia.

(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

1. Explain about XML formats for C2C E-Commerce.

2. What is the need for Tripple DES ?

3. Outline the procedure for EFT.

4. List out the traditional approaches for fraud detection.

5. Describe the applications of multimedia in E-commerce.

(5 × 5 = 25 marks)

Part C

*Answer **all** questions.*

Each question carries 12 marks.

1. (a) Discuss about various types of E-commerce classifications.

Or

 (b) Describe about EDI standards.

2. (a) Discuss about Diffie-Hellmann key Exchange in detail.

Or

 (b) Explain any one of public key cryptography scheme.

3. (a) Discuss about different Types of payment systems.

Or

 (b) What do you mean by electronic cash? Explain different types of payment gateways.

4. (a) With respect to Information Technology Act, 2000 explain the following :

 (i) Its objectives.

 (ii) Highlights.

 (iii) Short comings.

Or

 (b) What are *e*-books? Explain music and videos related to *e*-commerce.

5. (a) Compare CCFD with TWO STAGE CCFD.

Or

 (b) Explain various computer related application for Bayesian Inference.

 (c) What are the recent advancements in CCFD?

(5 × 12 = 60 marks)