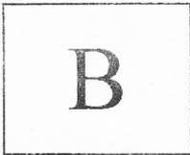


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B.Tech. Degree VII Semester Examination November 2014

EB/EC/CS/EE/EI/IT 701 INDUSTRIAL ORGANIZATION AND MANAGEMENT (2006 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A (Answer ALL questions)

(8 x 5 = 40)

- I. (a) Compare formal and informal organizations.
(b) Briefly explain the objectives of co-operative organizations.
(c) List out the characteristics of management.
(d) What are the contributions of Gilbreth?
(e) Explain about market segmentation.
(f) Explain standard costing.
(g) What are the functions of materials management?
(h) Briefly explain about materials requirement planning.

PART B

(4 x 15 = 60)

- II. Explain different types of organization structures. (15)

OR

- III. (a) What is a joint stock company? Compare private and public limited companies. (8)
(b) Explain the merits and demerits of public sector organizations. (7)
- IV. (a) Explain the levels of management. What are the skills required at different levels? (9)
(b) Explain Neo-classical management theory. (6)

OR

- V. Explain the functions of management. (15)
- VI. Discuss the principles of personnel management. (15)

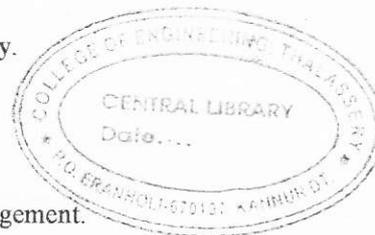
OR

- VII. (a) Differentiate between consumer and industrial markets. (6)
(b) Explain the basics of financial accounting. (9)
- VIII. (a) Differentiate between production and productivity. (5)
(b) A company requires 20,000 units of raw materials costing Rs.20 per unit. The cost of placing an order is Rs.500 and the carrying costs are 10% per year per unit of the average inventory. Determine (i) economic order quantity (ii) cycle time and (iii) total variable cost of managing the inventory. (10)

OR

- IX. (a) Explain the measurement of productivity. (6)
(b) Explain the objectives of storekeeping. (9)

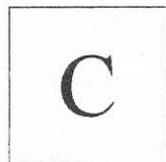
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B. Tech. Degree VII Semester Examination November 2014

CS 702 ADVANCED ARCHITECTURE AND PARALLEL PROCESSING

(2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A

(Answer *ALL* questions)

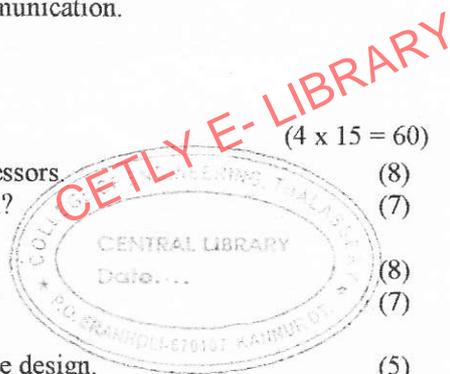
(8 x 5 = 40)

- I. (a) What is meant by array processors?
(b) Write a short note on hierarchical memory systems.
(c) What is meant by forbidden latencies?
(d) Define the terms simple cycles and greedy cycles.
(e) Describe various types of dependencies that may exist between a pair of statements.
(f) Write and explain any two synchronisation primitives available in UNIX.
(g) Describe various techniques for debugging parallel programming.
(h) Describe various operations defined for group communication.

PART B

(4 x 15 = 60)

- II. (a) Describe the desirable characteristics of multiprocessors. (8)
(b) What are the features of distributed memory model? (7)
- OR**
- III. (a) Explain the abstract model of a parallel computer. (8)
(b) Write a short note on NUMA architectural model. (7)
- IV. (a) Write the features of super scalar and super pipeline design. (5)
(b) Describe the structure of a two issue superscalar processor with the help of a sample programme for parallel execution. (10)
- OR**
- V. (a) Compare the features of linear and non linear pipelines. (5)
(b) Describe the structure of a pipelined processor with multiple functional units and distributed reservation stations supported by tagging. (10)
- VI. What are the various programme transformation techniques? (15)
- OR**
- VII. Explain the general model of shared memory programming. (15)
- VIII. (a) Describe various algorithms for parallel machines with the help of examples. (10)
(b) Write a note on deviation computation with threads. (5)
- OR**
- IX. Explain the terminology and architecture of PVM. (15)



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B. Tech. Degree VII Semester Examination November 2014

CS/IT 703 ADVANCED COMPUTER NETWORKS

(2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A

(Answer *ALL* questions)

(8 x 5 = 40)

- I. (a) Explain the properties of Ethernet.
(b) Compare classless internet addressing with classful internet addressing.
(c) Explain Network Address Translation.
(d) How are computer terminals configured automatically in a network? Explain.
(e) Distinguish between IP Unicast, Multicast and Broadcast addressing.
(f) What is Spread Spectrum? Explain.
(g) Compare and contrast infrared and radio transmission.
(h) Write short notes on GPRS and UMTS.

PART B

(4 x 15 = 60)

- II. (a) What is ARP? Explain resolution of address through dynamic binding. (7)
(b) Explain the protocol used to find the internet address for a host when it boots up. (8)
OR
- III. (a) Explain the collision detection and recovery mechanism of Ethernet. (8)
(b) What is subnet mask? Find the broadcast address of the network 10.2.16.0 if it is having a subnet mask of 255.255.240.0. (7)
- IV. Explain ICMP. Describe how the protocol discovers and solicits a router. (15)
OR
- V. Explain BGP and its different message types. (15)
- VI. Explain wireless transmission with its advantages and disadvantages. (15)
OR
- VII. Explain and compare FDMA, TDMA and CDMA. (15)
- VIII. (a) Explain GSM architecture with a neat diagram. (10)
(b) Explain handover by cellular systems. (5)
OR
- IX. (a) Explain infrastructure and ad-hoc networks. (10)
(b) Explain mobile IP. (5)

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D

B.Tech. Degree VII Semester Examination November 2014

CS/IT 704 DISTRIBUTED COMPUTING (2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A (Answer ALL questions)

(8 x 5 = 40)

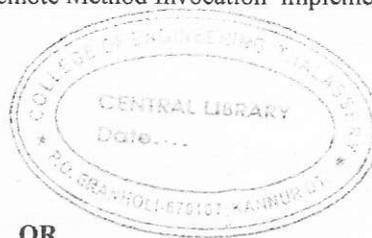
- I. (a) Describe architectural model for Distributed Systems.
- (b) Differentiate client-server communication and group communication.
- (c) Compare microkernel and mono lithic kernal.
- (d) Write a short note on Domain Name System.
- (e) Define Hampart's logical clocks in terms of 'happen before' relation.
- (f) How is a process elected using bully algorithm?
- (g) Describe query decomposition process.
- (h) How deadlock is detected using edge chasing algorithm?

PART B

(4 x 15 = 60)

- II. What are Distributed Systems? Explain the challenges of a Distributed System. (15)
OR
- III. (a) Explain Java API for TCP streams. (8)
(b) What is a Remote Object? How is Remote Method Invocation implemented? (7)
- IV. What is a thread? Explain: (15)
 - (i) Thread Architecture
 - (ii) Thread Scheduling
 - (iii) Thread Synchronization
 - (iv) Thread Lifetimes
 - (v) Thread Implementation**OR**
- V. Explain Distributed File System using File Service Architecture. (15)
- VI. (a) Discuss various algorithms used for synchronizing physical clocks. (7)
(b) Explain mutual exclusion algorithms, with example. (8)
OR
- VII. Explain Replication models, with neat diagrams. (15)
- VIII. With the help of neat diagrams, explain distributed database architecture. (15)
OR
- IX. (a) Describe the following: (8)
 - (i) Time stamp ordering
 - (ii) Optimistic concurrency control
(b) Explain transaction recovery methods. (7)

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B. Tech. Degree VII Semester Examination November 2014

EB/CS/IT 705 (C) ARTIFICIAL NEURAL NETWORKS

(2006 Scheme)

Time: 3 Hours

Maximum Marks: 100

PART A

(Answer ALL questions)

(8 x 5 = 40)

- I. (a) Show how a biological neuron can be represented by an artificial neuron.
(b) Explain any three nonlinear activation functions.
(c) Draw a discrete hopfield network and explain its working. How are its weights initialized?
(d) Explain the learning rule used in the Kohonen layer of a counter propagation network.
(e) Explain the working of a bidirectional associative memory network.
(f) Compare Kohonen self organizing map and learning vector quantization.
(g) What do you mean by simulated annealing?
(h) What do you mean by fuzzy sets and membership functions? Give example.

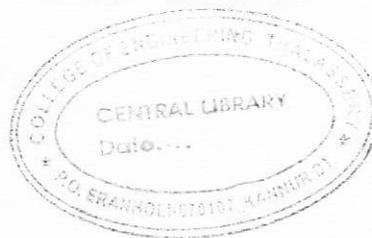
PART B

(4 x 15 = 60)

- II. (a) Draw the architecture of a Hebb net and give the algorithm to train the net. (8)
(b) Form a Hebb net to classify the given 2D input patterns (T and C) (7)
represented as follows:

X	X	X
	X	
	X	

X	X	X
X		
X	X	X



Target of T = +1
Target of C = -1
Assume bipolar data

OR

- III. (a) Show how the AND NOT function is realized using Mc Culloch Pitt's Neuron. (7)
(b) An artificial neural network is to be designed for the following training pairs. (8)
(11100,1), (00111, -1), (11000,1), (00011, -1)
Draw the architecture of the network and explain any learning algorithm that can be applied for the above network.

(P.T.O.)

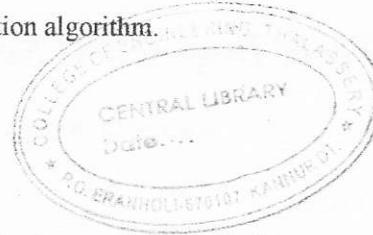
IV. Explain the architecture of a full counter propagation network and explain its training algorithm. (15)

OR

V. (a) Explain the training algorithm of a back propagation algorithm. (9)

(b) In a back propagation network (6)

- (i) how are initial weight assigned?
- (ii) what is the local minima problem?
- (iii) benefit of momentum factor.



VI. (a) Draw a Kohonen net with two cluster units and five input units. The weight vectors for the cluster units are (5)

$$W_1 = (0.1, 0.3, 0.5, 0.7, 0.9)$$

$$W_2 = (0.9, 0.7, 0.5, 0.3, 0.1)$$

Find the winning cluster units for the input patterns 1 1 0 0 1, 0 0 1 1 1 and 1 1 1 0 0.

(b) A maxnet has four neurons and inhibitory weights 0.2 and the initial activations are (10)

$$a_1(0) = 0.1, a_2(0) = 0.6, a_3(0) = 0.3, a_4(0) = 0.5$$

Use the application procedure to find the winning neuron.

OR

VII. (a) Explain the training algorithm of LVQ neural net. What is its stopping condition? (8)

(b) Explain the basic architecture of MEXICAN HAT network. Explain the application algorithm. (7)

VIII. Explain the architecture of a Boltzman machine and describe its application algorithm. (15)

OR

IX. (a) Explain what you mean by neuro fuzzy systems. (7)

(b) What do you mean by (8)

- (i) cognition?
- (ii) support vector machines?

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C

B.Tech. Degree VII Semester Examination November 2014

CS 705(D) WEB COMMERCE AND TECHNOLOGIES (2006 Scheme)

Time : 3 Hours

Maximum Marks : 100

PART A (Answer ALL questions)

(8 × 5 = 40)

- I. (a) Explain the rules for writing well formed XML document.
- (b) Compare XML with HTML.
- (c) Explain the life cycle of Java Applet.
- (d) What is the purpose of Java script? How Javascript is defined in HTML?
- (e) What is SSL?
- (f) Write short notes on legal environment of e-commerce.
- (g) Compare variable declared in JSP declaration with variable declared in JSP scriptlets.
- (h) Write short notes on request object in JSP.

PART B

(4 × 15 = 60)

- II. What is DTD? What is the need of DTD? Explain different types of DTD with example. (15)
- III. Explain the method to convert XML to HTML with XSL style sheets, with suitable example. (15)
- IV. (a) Explain different types of properties of Java bean. (10)
(b) Write Java script to find factorial of a given number using function. (5)
- V. (a) Explain EJB. (5)
(b) Explain various steps involved in creation of Event in JavaBean. (10)
- VI. Explain various e-payment systems. (15)
- VII. (a) What is the role of Firewall in e-commerce? (10)
(b) Explain web auction strategies. (5)
- VIII. (a) Explain different scripting elements in JSP. (10)
(b) Explain working of JSP (5)
- IX. (a) Explain how beans are accessed in JSP via scriptlets. (10)
(b) Compare including file at page translation time with including file at request time. (5)

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