IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Advanced Computer Architecture
(Computer Science & Engineering)

Max. Marks: 70   **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)
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1. a) Draw and Explain the architecture of Vector Supercomputers?   7M

   b) Explain the parameters: Node Degree and Network Diameter, Bisection width, Permutations, Perfect Shuffle and Exchange, Broadcast and Multicast and Hypercube Routing Function.   7M

2. a) Describe in detail the Amdahl's law for a fixed workload.   7M

   b) Explain in detail about Hierarchical memory technology.   7M

3. a) Explain about Associative and Set associative caches.   7M

   b) Draw and Explain about Synchronous and Asynchronous models.   7M

4.   Draw and explain "Routing in Omega network"   14M

5. a) Explain about Types of Vector instructions.   7M

   b) Draw and explain the MasPar MP-1 SIMD architecture.   7M

6. a) List the steps involved in performing multithreaded communication.   7M

   b) Draw and explain the structure of the KSR-1 architecture.   7M

7. a) Give a sequence of code that has True dependence, Anti dependence and Control dependence in it

LOOP: L.D	F0, 0(R1)	; F0=Array element
ADD.DF4, F0, F2		; add scalar in F2
S.D	F4, 0(R1)	; store result
DADDUI	R1, R1, #-8	; decrement pointer 8 bytes
BNE	R1, R2, LOOP	; branch R1!=R2

                                                                                    7M

   b) Discuss in brief about operand forwarding.   7M

8. a) Discuss in brief about Semiconductor technology.   7M

   b) Explain the differences between structural and instruction level parallelism. 7M

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IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Data Warehousing and Mining
(Computer Science & Engineering)

Max. Marks: 70   **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)
****

1.	a)	Explain various Data Mining functionalities	7M
	b)	What are the alternative names for Data Mining? How do you classify data mining systems	7M
2.	a)	Why do we need to Preprocess data for Data Mining? Justify.	7M
	b)	For the following vectors, x and y, calculate the similarity or distance measure using cosine, correlation and Euclidean methods.	
		X=(0,-1,0,1), y=(1,0,-1,0)	7M
3.	a)	Explain with neat sketch a three tier data warehousing architecture	7M
	b)	Flipkart went live in 2007 with the objective of making books online shopping experience easily available to anyone who had internet access. Today, they sell various categories including movies, music, games, mobiles, cameras, computers, healthcare and personal products, home appliances and electronics, stationery, etc. Flip cart would like to have a Data Warehouse. Identify important components. Draw Fact Constellation schema for their E-commerce business.	7M
4.	a)	Explain about the general approach in solving a Classification problem.	5M
	b)	Build a Decision tree for the given example and derive the rules	

TID	Refund	Material Status	Taxable Income	Cheat
1	Yes	Single	135K	No
2	No	Married	100K	No
3	No	single	70K	No
4	Yes	Married	120K	No
5	No	Divorced	95K	Yes
6	No	Married	60K	No
7	Yes	Divorced	220K	No
8	No	Single	85K	Yes
9	No	Married	75K	No
10	Yes	Single	90K	Yes

			9M
5.	a)	Define conditional Probability and Bayes theorem.	7M
	b)	Using Bayes theorem calculate the probabilities for the data given in the question 4b (table given in the Question 4 b)	7M
6.		A database has four transactions .Let *min_sup* = 60% and *min_conf* = 80%.	

TID	Items bought
T100	C,O,O,K,I,E
T200	M,U,C,K,Y
T300	M,O,N,K,E,Y
T400	M,A,K,E
T500	D O N K E Y

		Generate frequent item sets using FP Growth method	14M
7.	a)	Explain about different types of Clustering	5M
	b)	Explain about the K means clustering. Explain various Proximity functions.	9M
8.	a)	What are the general characteristics of clustering algorithms/	7M
	b)	How do you evaluate the cluster quality? Explain.	7M

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IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Mobile Communications
(Common to CSE & IT)

Max. Marks: 70   **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)
****

1.	a)	Distinguish mobile terminated call and mobile originated call.	7M
	b)	Write about new data services in GSM.	7M
2.	a)	How MACA can avoid hidden terminal? Explain.	6M
	b)	Explain in detail about CDMA.	8M
3.	a)	Discuss about entities in Mobile IP.	6M
	b)	Give a brief note on registration request and write the registration reply codes.	8M
4.		Explain in detail about classical TCP improvements.	14M
5.	a)	List the differences between wired networks and ad-hoc wireless networks.	7M
	b)	Discuss about Security in MANETS.	7M
6.	a)	Explain about Bluetooth MAC layer and Security.	7M
	b)	How J2ME used in Wireless Application Protocol.	7M
7.	a)	Write a short note on power-aware and context-aware computing.	7M
	b)	Explain Query processing Mechanism in Mobile Communications.	7M
8	a)	What are the disadvantages of push based mechanism.	5M
	b)	Explain various Indexing Techniques in data dissemination.	9M

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IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Management Science
(Common to EEE & CSE)

Max. Marks: 70   **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)
****

1.	a)	Discuss on Line, Line and Staff, Functional and Matrix Organisations	8M
	b)	Discuss the Meaning, Nature, Importance of-Taylor's Scientific Management	6M
2.	a)	Discuss about Job, Batch and Mass Production systems	6M
	b)	Define Work Study. And describe various steps involved for Method study and Work -measurement.	8M
3.	a)	Discuss the role of Product Life Cycle in marketing	7M
	b)	Discuss the Core Concepts and Functions of Marketing	7M
4.	a)	What is HRM? Discuss basic functions of HR Manager	7M
	b)	Discuss any two modern HR practices for productivity	7M

5. The following table gives the activities in construction project and time duration.

Activity	Preceding activity	Normal time(days)
1-2	--	20
1-2	-	25
2-3	1-2	10
2-4	1-2	12
3-4	1-3,2-3	05
4-5	2-4,3-4	10

a) Draw activity network of project.   6M

b) Find the total float and free float for each activity.   4M

c) Determine the critical path and project duration.   4M

6.	a)	Discuss on elements of Corporate Planning Process	7M
	b)	SWOT Analysis is vital in corporate planning. justify	7M
7	a)	Discuss the basic concepts and overview of Management Information System (MIS)	7M
	b)	What are the elements in Value Analysis?	7M
8.	a)	Discuss Normative Ethical Theories on Egoism, Utilitarianism and Altruism	7M
	b)	Discuss the Ethical Issues In Operations Management	7M

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IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Open Systems for Web Technologies
(Computer Science & Engineering)

Max. Marks: 70   **Time: 03 Hours**

Answer *any five* questions
All Questions carry equal marks (14 Marks each)
****

1. a) Explain installation process of Apache web server?   8M

   b) Explain client server architecture   6M

2. a) Write a short notes on problems with other technologies (like servlets and JSP) while comparing with PHP?   7M

   b) Explain briefly about programming paradigms in PHP with suitable sample program   7M

3. a) Explain PHP concepts like arrays and strings with suitable examples   7M

   b) Write about functions in PHP. Give example for call by reference.   7M

4. a) What is interface? Give an example   7M

   b) Explain function overriding and overloading in object oriented PHP using sample program   7M

5. a) How to authenticate the user in PHP? Explain about date and time with examples   10M

   b) Briefly Explain Environment Variables.   4M

6. a) Explain how to query the databases from PHP with suitable code   7M

   b) Explain MVC architecture with neat diagram and give advantages.   7M

7. a) Write a program copy the content of one file to variable and displays on web page   8M

   b) Explain common form issues   6M

8.   Explain validation process in XML?   14M

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Code : 1G173

IV B.Tech. I Semester Regular Examinations Nov/Dec 2014
Software Project Management
(Computer Science & Engineering)

Max. Marks: 70   **Time: 03 Hours**
Answer *any five* questions
All Questions carry equal marks (14 Marks each)
****

1.	a)	Explain the evolution of software economies.	7M
	b)	How is the software cost estimated pragmatically?	7M
2.	a)	Discuss the trends involved in reducing software product size.	7M
	b)	What are the steps followed to improve team effectiveness?	7M
3.	a)	What are the principles of conventional software engineering?	7M
	b)	Explain the phases in the production stage of the life cycle process.	7M
4.	a)	Give the outline of typical software development plan.	7M
	b)	Explain software architecture from technical perspective.	7M
5.	a)	Explain cost and schedule estimating process.	7M
	b)	What is workflow? Explain the workflow of an iteration.	7M
6.	a)	Explain the mapping of roles and responsibilities to a default line of business organization.	7M
	b)	Discuss the tools available to automate software development process.	7M
7.	a)	What are the characteristics of a good software metric?	7M
	b)	Mention the differences in the process primitives for small and large projects.	7M
8.		Explain next generation software economics.	14M

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