Code No. 6306 / O

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Old) Examination, June 2014

Subject : Information Retrieval Systems (Elective – III)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Define Information retrieval systems.	3
2	What is precision and recall?	3
3	List the similarities between information retrieval systems and data warehouses.	2
4	Which would you prefer Boolean queries or Natural languages queries? Why?	2
5	Briefly discuss about PAT data structure.	3
6	What are the objectives of indexing process?	3
7	Discuss about Hypertext linkages.	3
8	What do you mean by ranking?	2
9	Describe the need for information visualization.	2
10	List some hardware text search system.	2

PART – B (50 Marks)

11	Give the functional overview of a typical IRS.	10
12	a) Discuss various search capabilities of an information retrieval system. b) Compare and contract digital libraries and information retrieval system.	7 + 3
13	What is stemming? Discuss Porter's stemming algorithm.	10
14	a) Briefly explain about automatic indexing. b) Compare term clustering and item clustering.	5 + 5
15	Discuss about relevance feedback techniques.	10
16	Explain various text searching algorithms.	10
17	Write short notes on : a) Text normalization process b) Bayesian Model in statistical indexing	5 + 5

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Code No. 6568 / N

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (New) (Main) Examination, June 2014

Subject : Information Retrieval System (Elective – III)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Define Boolean model and what are the advantages of Boolean model.	3
2	What is the difference between data retrieval and information retrieval?	3
3	Define recall and precision.	3
4	What are context queries?	2
5	Define metric clusters.	2
6	What are metadata?	2
7	What is an inverted file? Give an example.	3
8	What is multimedia?	2
9	Define pattern matching.	3
10	Discuss sequential searching.	2

PART – B (50 Marks)

11	Define fuzzy set theory. How is it used in fuzzy information retrieval?	10
12	a) What are the different types of structural queries?	6
	b) What are the various query protocols?	4
13	Explain about different types of mark-up languages used in IR system.	10
14	Explain the procedures of document preprocessing.	10
15	a) Explain query processing in a distributed IR system.	5
	b) Explain the disadvantages of sequential search in IR system.	5
16	What is stemming? Discuss Porter's stemming algorithm.	10
17	Write short notes on :	
	a) Bayesian Networks	5
	b) User relevance Feedback	5

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Old) Examination, June 2014

Subject : Real Time Systems (Elective – III)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part - B.

PART – A (25 Marks)

1	Define RTS and list the applications of RTS.	2
2	What are the different types of real time tasks?	3
3	Define priority inversion.	2
4	Describe RMA.	3
5	List the features of real time operating system.	2
6	Differentiate between static and dynamic allocation of tasks.	3
7	What is real time communications?	2
8	Give QOS framework.	3
9	What is temporal data?	2
10	Define 2PL – HP.	3

PART – B (50 Marks)

11 Explain the characteristics of real time systems in detail.

12 Explain the real time task scheduling algorithms using illustrative examples.

13 Explain in detail about Unix based real time operating systems.

14 With example explain hard real time communication in a LAN.

15 Explain the various concurrency control issues in a real time systems.

16 With example explain priority inheritance protocol.

17 Write short note on :
   a) POSIX
   b) Resource Reservation Protocol (RSVP)

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FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (Old) Examination, June 2014

Subject : Advanced Databases (Elective – III)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Define a view with example.	3
2	Explain aggregation associations with example.	3
3	Explain about complex types.	2
4	Define shared and sub classes.	3
5	Define structured types and distinct types.	3
6	What is X-Query?	2
7	Difference between vertical and horizontal fragmentation.	3
8	Define Inter query parallelism.	2
9	What is directory systems?	2
10	Define cursor with one example.	2

PART – B (50 Marks)

11 a) What are the typical entity relationship design issues?
b) What is specialization and how is generalization different from specialization with example?

12 a) Explain about functions and procedures with example.
b) Explain ODMG OQL standards.

13 Explain deadlock handling.

14 a) Explain server system architecture.
b) What is the difference between XML DTD and XML schema?

15 a) Reasons for building distributed database systems.
b) Explain Directory systems.

16 Explain the usage of table hierarchies in SQL standard.

17 Write a short notes on the following :
a) O-O versus O-R systems
b) Fragmentation transparency

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Code No. 6570 / N

FACULTY OF ENGINEERING

B.E. 4/4 (CSE) II – Semester (New) (Main) Examination, June 2014

Subject: Advances Databases (Elective – III)

Time: 3 Hours **Max.Marks: 75**

Note: Answer all questions from Part A. Answer any five questions from Part B.

PART – A (25 Marks)

1	Why is it difficult to access data fresh in RDBus from C++ / Java programs?	2
2	What is a persistent point?	3
3	What are different changes in xarus?	2
4	How do you specify a foreign user in XML DTD?	3
5	What is materialized views?	3
6	Write the differences between Demand-driven pipeline and producer – drive – pipeline.	2
7	What is interquery parallelism?	2
8	Briefly explain the role of transaction manager and transaction co-ordinator in distributed databases.	3
9	What are the three broad levels at which database system can be tuned to improve the performance.	3
10	Describe about spatial and geographic data.	2

PART – B (50 Marks)

11	(a)	Differentiate between object-oriented databases and object-relational databases.	5
	(b)	Explain object identity and reference types in SQL with an example.	5
12	(a)	discuss different ways of storing XML data.	5
	(b)	Explain about SAX (Simple API for XML) and DOM (Document Object Model).	5
13	(a)	Briefly discuss about cost-based optimization and Heuristics optimization.	5
	(b)	Explain external-sorting technique using sort merge.	5
14	(a)	Differentiate between inter-operation parallelism and intra-operation parallelism.	5
	(b)	Briefly explain different types of locking protocols in distributed databases.	5
15	(a)	Describe about TPC bench marks.	5
	(b)	Explain the concept of multimedia database.	5
16	(a)	Write the differences between homogeneous databases and heterogeneous distributes databases.	5
	(b)	Explain two different approaches for evaluation of expression in query processing.	5
17	Write short notes on the following:		
	i)	Persistent Java system	3
	ii)	XML DTD	3
	iii)	Temporal Database	4

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B.E. 4/4 (CSE) II – Semester (New) (Main) Examination, June 2014

Subject : Cloud Computing (Elective – III)

Time : 3 hours **Max. Marks : 75**

Note: Answer all questions from Part-A. Answer any FIVE questions from Part-B.

PART – A (25 Marks)

1	Mention the various deployment models of a cloud environment.	3
2	What are the characteristics of a cloud?	2
3	Differentiate between full and para virtualization.	3
4	Define memory migration.	2
5	How is Paas different from Iaas? Illustrate.	2
6	Define a modular data center and explain its usage.	3
7	What are the 4 security improvements suggested for crypt DB?	2
8	Write short notes on securing overlays to prevent DDOS.	3
9	What is an AMI in EC2? Write steps to configure it.	3
10	Define few security challenges on cloud computing.	2

PART – B (50 Marks)

11	a)	What are the desired features of a cloud?	4
	b)	What are the various risks and challenges in a cloud environment?	6
12		How are cloud differs from a grid? Explain the evolution of cloud computing.	10
13	a)	Explain the process of live migration steps and its performance effects.	5
	b)	Explain how Microsoft Azure does virtualization. Illustrate with a neat diagram.	5
14		How is the generic cloud architecture used for building compute/storage clouds? Explain how layered architecture could serve better.	10
15	a)	Explain adjustable query based encryption in crypt DB.	5
	b)	What are the sequence of actions triggered when the uses program calls the Map reduce function.	5
16	a)	Describe any two security mechanisms to overcome the cloud security challenges.	5
	b)	Explain the features of Amazon AWS.	5
17		Write short notes on :	
	a)	Para virtualization	3
	b)	Google App engine sandbox	3
	c)	Examples of end user access to cloud computing	4

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