4112114

M.E comp II Storage Area Network Dec-2014 CBGS

QP Code : 14786

(3 Hours) **[Total Marks : 80**

N.B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **three** from remaining **five** questions.
(3) Drawthe **relevant** diagram neatly.

1. (a) Which components constitute the disk service time? Which component contributes the largest percentage ofthe disk service time in a random I/O operation ? **5**
   (b) Explain Topologies for iSCCI connectivity. **5**
   (c) Compare Storage Area Network and Network Attached Storage. **5**
   (d) Write the names ofthe protocols those are transmitting Storage Data Traffic over TCP/IP ? Explain. **5**

2. (a) An application have 1000 IOPS and the read-write ratio is 3:7, Compute the IOPS required for RAID3,RAID5,RAID 1+0 and conclude which one is good configuration. **10**
   (b) Explain how Copy-on-Write technology minimizes the impactofbackup oltapplication. **10**

3. (a) Explain in detail about Disaster Recoverability as killer application. **10**
   (b) Explain FC-AL and FC-SW. **10**

4. (a) Define incremental and cumulative backup. Explain difference between them with respect to **10**
   (b) Explain in detail about Object Storage and Retrieval is CAS. **10**

5. (a) What is NAS?List the components ofNAS? Explain various benefits ofNAS. **10**
   (b) Explain various benefits of storage virtualizations. **5**
   (c) Explain various FC ports with neat diagram. **5**

6. Write short note on (any **two**) :– **20**
   (a) Basic SAN Security.Mechanism.
   (b) Roll of Qualityofl/O Performance Service in San Management.
   (c) Off-Host NAS backup as backup killer application.

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M.E Computer Sem II (LB45)
Cyber Security 24/11/14.

QP Code : 14780

(3 Hours) **[Total Marks : 80**

N. B. : (1) Question No. **1** is **compulsory**.
(2) Attempt any **three** questions from remaining.
(3) Assume suitable data if necessary & state it clearly.

1. (a) List types of cybercriminals. **5**
   (b) What is cyberfraud? **5**
   (c) What is antiforensies? **5**
   (d) How to prevent being a victim of ID theft? **5**

2. (a) What is cloud computing? Is it safe from cyberattacks, explain in details. **10**
   (b) How do you setup computer forensics laboratory? **10**

3. (a) What are the strengths & limitations of Indian IT Act-2000 (ITA-2000)? **10**
   (b) How wireless mobile networks can compromise? **10**

4. (a) What is endpoint security of organization? Why it is important? **10**
   (b) Differentiate between proxyserver and anonymizer. **10**

5. (a) What is "social networking" site? What are the security threats that can emanate from social networking sites? **10**
   (b) What are the various phases and activities involved in the life cycle of forensics investigation process? Support your answer through various examples. **10**

6. Write short notes on :–
   (a) New amendments in Indian IT Act-2008 **10**
   (b) Global cooperation against cybercrimes **10**

ME (comp) Sem II CBGS 28/11/2014
– DMABI

QP Code :14783

(3 Hours) **[Total Marks : 80**

N. B. : (1) Question No. **1** is **compulsory.**
(2) Attempt any **three** questions out of remaining **five** questions.
(3) Assume suitable data wherever necessary & justify the same.

1. (a) Discuss the difference between on ordinary and stochastic hill climber. **5**
   (b) Explain WPM with suitable example. **5**
   (c) Explain data preparation in prefiction model. **5**
   (d) Explain the inference system of the fuzzy logic. **5**

2. (a) Discuss any three parameter for evaluation of pretiction model. **10**
   (b) Describe the steps in decision making process in detail **10**

3. (a) Discuss the different types of ANN. **10**
   (b) Explain Ant colony optimization with suitable example. **10**

4. (a) Explain the characteristics of complex business problem. **10**
   (b) Explain Tabu search with suitable example. **10**

5. (a) Design the hybrid systemm for car distribution system. **10**
   (b) Find the most satisfied school using SAW and AHP method. The hievachy representation and pair wise comparison to select the most satisfied school is shown fig 1 & fig 2 respectively. You have 3 alternatives : School A, School B & School C. The criteria are **10**
   (1) learning (2) friends (3) School life (4) Vocational training (5) College prep.
   (6) Music classes

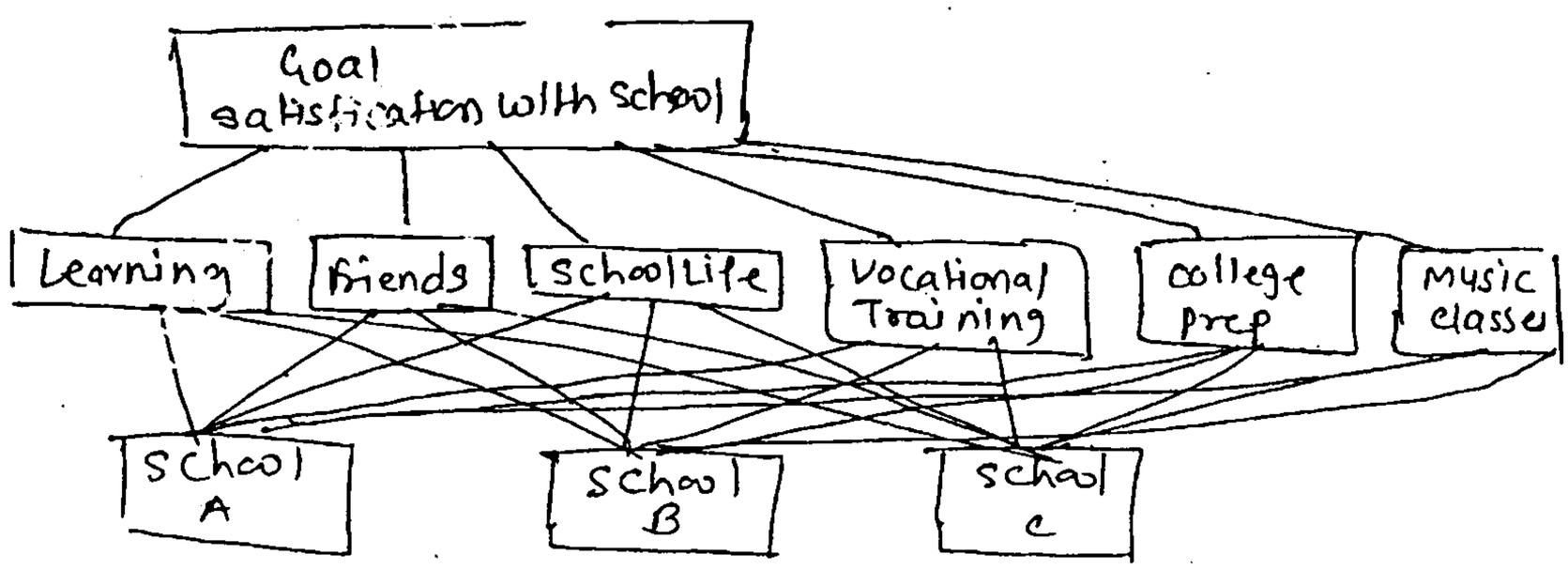

fig 1 : Hierarchy representation

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Pairwise comparisons for school selection :–

	L	F	SL	VT	CP	MC	Weight
Learning	1	4	3	1	3	4	32
Friends	1/4	1	7	3	1/5	1	14
SchoolLife	1/3	1/7	1	1/5	1/5	1/6	0.3
Vocational Training	1	1/3	5	1	1	1/3	13
College Prep.	1/3	5	5	1	1	3	24
Music Classes	1/4	1	6	3	1/3	1	14

Fig. 2

6. Write short notes on :– **20**
   (a) Emergency Response Services
   (b) Constraint handling in optimization

ME Sem II CBGS
Computer
Sub E.W.T.F.M.I

10/12/14

QP Code : **14801**

(3Hours) **[Total Marks : 80**

N. B. : (1) **Attempt** any **Four** questions
(2) Assume **suitable** data, if **necessary**.

1. (a) What are the different radio technologies using next generation wireless standard **10**
(b) Explain Tiny DB for sensor network and compare the same with trickle for Wireless Sensor Network. **10**

2. (a) Explain the DCF access mechanism of IEEE 802.11 WLAN. What is the impact of size of contention window on its performance? **10**
(b) Explain AODV protocol with its advantages and limitations. **10**

3. (a) Explain emerging GEO-protocols for vehicular networks. **10**
(b) Explain SDR architecture and discuss how to overcome its limitations. **10**

4 (a) List and explain the characteristics for design of a new architecture for Opportunistic communication and delay-tolerant networking **10**
(b) What is cognitive Radio Network? Explain with diagram. **10**

5 (a) Explain the functions of LTE PHY layer? **10**
(b) Explain responsibilities of UMB MAC layer in brief. **10**

6 Write a note on : **20**
(a) Virtual link layer of KioskNet
(b) Power saving option in UMB
(c) Security Challenges of future wireless internet
(d) UMB protocol stack

AIE Sem II CBGS
Computer
Sub – S.W.T.

10/12/14

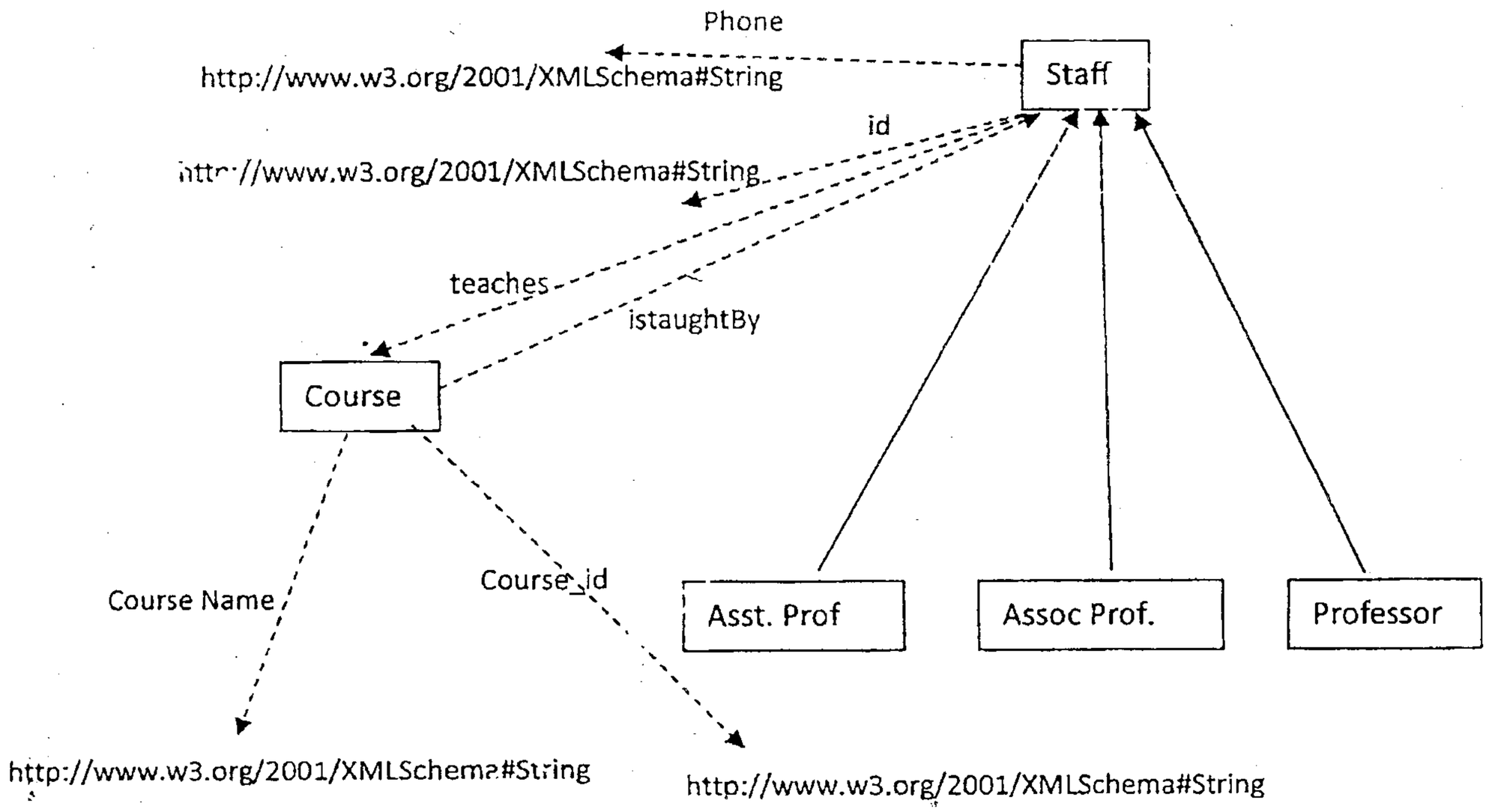
QP Code : **14795**

(3 Hours) **[Total Marks : 80**

N.B. : (1) Question No.**1** is **compulsory.**
(2) **Attempt** any **three** questions from the remaining **five** questions.
(3) Assume suitable data wherever **necessary.**
(4) **Figures** in the **right** indicate **full** marks.

1. (a) Explain in detail ontology alignment process **10**
(b) Write note on data driven ontology changes **10**

2. (a) Give the OWL syntax for the following vocabulary. **12**



(b) Explain the concept of FOAF with an example. **8**

3. (a) Write note Semantic web service ontology (SWSO) **10**
(b) Explain different data grounding approaches **10**

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4.	(a)	Define the following terms: Methodology, method, process, activity, task. What are the activities that need to be considered in an Ontology Engineering Methodology?	10
	(b)	Discuss a logical architecture to support the evolution of ontologies.	10
5.	(a)	What is semantic annotation? Explain WSDL-S elements used for Semantic Annotation.	10
	(b)	Explain how search engine works in tradition web environment? Compare Semantic web search with tradition search process.	10
6.	(a)	Explain the architecture and working of PION in detail.	12
	(b)	What is Usage-driven Hierarchical pruning? Explain with example.	8

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10/12/14

QP Code : 14798

(3 Hours) **[Total Marks : 80**

NOTE: 1) QUESTION NO. 1 IS COMPULSORY

2) ATTEMPT ANT THREE QUESTIONS FROM REMAINING.

3) ASSUME SUITABLE DATA IF NECESSARY.

Q1. DESIGN UBIQUITOUS SYSTEM FOR MODERN KITCHEN DEVELOPMENT. ASSUME NECESSARY SPECIFICATIONS AND DATA. [20]

Q2. A) EXPLAIN DEI MODEL IN DETAIL. [10]

B) DISCUSS UBICOM RESEARCH PROJECTS. [10]

Q3. A) EXPLAIN PARTIONING AND DISTRIBUTION. [10]

B) STATE DIFFERENT DIMENSIONS OF DEVICE MOIBILITY. [10]

Q4. A) EXPLAIN HUMAN CETERED DESIGN LIFE CYCLE. [10]

B) EXPLAIN RFID TAGS. [10]

Q5. A) STATE DIFFERENT ISSUES WHICH MAKES ADAPTIVITY IN CONTEXT DIFFICULT. [10]

B) WRITE SHORT NOTE ON INTELLIGENCE SYSTEMS. [10]

Q6. A) WHAT DO YOU MEAN BY UBIQUITOUS COMMUNICATION? [10]

B) WHAT ARETHE DIFFERENT CHALLENGES FACED BY UBIQUITOUS SYSTEM. [10]

M.E sem II (CBGS)
Computer
Sub – A.C.D.

10/12/14

QP Code : 14792

(3 Hours) **[Total Marks : 80**

N.B. (1) Question No. **1** is **compulsory**.
(2) Solve any **three** questions from the **remaining** questions.
(3) **Figures** to the **right** indicate **full** marks.

1. Solve any **four** from the following :—
   (a) Explain scaler replacement with aggregates along with example. **5**
   (b) Apply common sub expression elimination, Reassociation on the following code : **5**

```
do    k = m, n
      a = b + k
      c = a – k
      d = b + k
end do
```

   (c) Use of DAG with reference to code generation. **5**
   (d) Comment whether the following grammar is LL(1) or not. **5**

$S \rightarrow aAbB \mid bAaB \mid \varepsilon$ (epsilon)
$A \rightarrow S$
$B \rightarrow S$

   (e) What is code hoisting. **5**

2. (a) Write semantic actions, annotated parse free and three address code for the following assignment **10**

$x = a[i][j] + b[i][j]$

   (b) Explain global register allocation algorithm. How graph coloring is applicable to it. **10**

3. (a) What are the different issues in the design of a code generator. **10**
   (b) Explain global value numbering with example. **10**

4. (a) How run time storage management is done using static allocation and stack allocation. **10**
   (b) Show that the following grammar is LR(1) but not LALR (1). **10**

$S \rightarrow Aa \mid bAc \mid Bc \mid bBa$
$A \rightarrow c$
$A \rightarrow d$

5. (a) Apply free transformations to simplify following addressing expression 10

a [i] [j] is denoted by

base_a + ((i – lo1) * (hi2 – lo2 + 1) + j – lo2) * w

(b) Consider the basic block given below 10

$t_1 = a + b$

$t_2 = c * d$

$t_3 = t_1 - t_2$

$t_4 = e / f$

$t_5 = t_3 * e$

$t_6 = t_5 * f$

$t_7 = t_1 * t_4$

$t_8 = t_7 + t_6$

Construct DAG.

Apply heuristic ordering (optimal) to it.

Apply code generation algorithm to generate the code.

Justify the optimal order of evaluation.

6. Explain the following code optimization techniques with suitable examples :— 20

(a) loop simplification

(b) tail merging

(c) Branch prediction

(d) Copy propogation.
