

Saraswati Education Society's
Saraswati College of Engineering, Kharghar
Information Technology Department
Academic Year 2013-14(Odd Sem)
Unit Test-2

Class/Sem: Final Year/ VII

Subject: Data warehousing & Mining & BI

Date: 14/10/2013

Duration: 1 Hrs.

Marks: 25

Note: Question no.1 is **compulsory** and Attempt any **2Q** from remaining.

Q.1]: Use k-means Algorithm to create two clusters for given set of values

(2, 25, 10, 15, 5, 20, 4, 40)

[5M]

Q.2]: Suppose we have six objects (with name A, B, C, D, E and F) and each object have two measured features (X1 AND X2)

[10M]

Object	X1	X2
A	1	1
B	1.5	1.5
C	5	5
D	3	4
E	4	4
F	3	3.5

Apply Single linkage clustering and draw Dendrogram.

Q.3]: Using the given table Create classification model using any algorithm and hence classify following tuple <Red, Domestic, SUV>

[10M]

Car no	Color	Type	Origin	Stolen
1	Red	Sports	Domestic	Yes
2	Red	Sports	Domestic	No
3	Red	Sports	Domestic	Yes
4	Yellow	Sports	Domestic	No
5	Yellow	Sports	Imported	Yes
6	Yellow	SUV	Imported	No
7	Yellow	SUV	Imported	Yes
8	Yellow	SUV	Domestic	No
9	Red	SUV	Imported	No
10	Red	Sports	Imported	Yes

Q.4]: What is web mining? Explain Web usage mining in details?

[10M]

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Subject: DSPIP

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Duration: 1 Hrs.

Marks: 25

Note: Q.1 is compulsory & Solve any two from remaining.

Q.1]: Obtain the digital negative and, intensity level slicing with background $r_1=3$ & $r_2=5$ of the given image. [5M]

2	1	2	2	1
2	3	4	5	2
6	2	7	6	0
2	6	6	5	1
0	3	2	2	1

Q .2]: Given an input image F of size of 3*3.Find the filtered image using median filter mask as given below [10M]

F=

3	2	1
5	2	6
7	9	1

m=

0	1	0
1	1	0
0	1	0

Q.3]: For the given image perform segmentation by region growing. Choose appropriate seeds and threshold [10M]

7	7	7	5	2	2	7	6
6	6	6	5	2	2	7	8
5	5	5	5	0	2	6	8
5	5	0	0	1	1	8	7
5	0	0	2	1	2	6	8
0	0	0	8	8	6	7	7
0	0	8	6	6	6	8	8
8	8	5	6	4	7	8	7

Q. 4]: Given an image perform closing operation.

[10M]

0	0	0	0	0	0	0	0
0	0	1	0	0	1	0	0
0	0	0	1	1	0	0	0
0	0	0	1	1	0	0	0
0	0	1	1	1	1	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

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Unit Test-2

Class/Sem: BE/VII

Subject: Simulation and Modeling

Date: 15/10/2013

Duration: 1Hrs.

Marks: 25

Note: Question no.1 is **compulsory** and Attempt any **3Q.** from remaining **4Q.**

- Q.1]: [a] Explain system, Model, event, delay, activity with example [5M]
- Q.2]: Explain Naylor and Finger Approach [10M]
- Q.3]: What is covariance and correlation [5M]
- Q.4]: Explain Activity scanning Approach [5M]

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Academic Year 2013-14(Odd Sem)
Unit Test-2

Class/Sem: BE/VII

Subject: S/w Testing and Quality Assurance

Date: 15/10/2013

Duration: 1Hrs.

Marks: 25

Note: Question no.1 is **compulsory** and Attempt any **3Q.** from remaining **4Q.**

Q.1]: [a] Discuss the Equivalence Class Partitioning and Boundary Value Analysis and what are the basic guidelines for them? [10M]

Q.2]: What is Regression Tests? Explain with example Load Testing and Stress Testing? [5M]

Q.3]: What is Test –Oracle? And explain the Adaptive Random Testing? [5M]

Q.4]: Show the relationship b/w Quality Factors & Quality Criteria? [5M]

Q.5]: Short notes: (Any Two)

[a] Defect Removal Efficiency [b] Types of Acceptance Testing. [5M]

[c] Test case Design Effectiveness. [d] Beta testing.

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Unit Test-2

Class/Sem: Final Year/ VII

Subject: Artificial Intelligence

Date: 17/10/2013

Duration: 1 Hrs.

Marks: 25

Note: Q.1 is **compulsory** and Attempt any **Q.3.** from remaining **Q.4.**

[1]: Write short notes on:

[a] Learning in neural network

[b] Role of NLP in AI

[c] Uncertainty

[d] Ontology engineering

[1]: From the given table find the probability of having “No cavity when toothache is there”.

	toothache		~toothache	
	Catch	~catch	Catch	~catch
cavity	0.108	0.012	0.072	0.008
~cavity	0.016	0.064	0.114	0.576

[2]: Explain planning algorithm for spare tyre problem.

[3]: How can you define learning? Explain inductive learning.

[4]: What do you mean by Bayesian network? Give algorithm for building a network.