

BVCOEW, Pune-43

Class - BE (Computer)

subject: D.A.A.

Unit Test-I

Attempt Any three questions.

Q1. Prove by mathematical Induction that the sum of the cubes of the first n positive integers is equal to the square of the sum of these integers. (10)

Q2. For the Experiment of drawing 5 cards out of a deck of 52 cards, what is the sample space? If X is defined to be the number of hearts in the 5 cards drawn, what is the distribution of X ? What is mean of X ? (10)

Q3. What is divide & Conquer method? Explain Merge sort Algorithm? Describe worst-case and best case time complexity? (10)

Q4. Find an Optimal solution to the Knapsack instance.
 $n=7, m=15, (P_1, P_2, \dots, P_7) = (10, 9, 15, 7, 6, 18, 3)$ &
 $(w_1, w_2, w_3, \dots, w_7) = (2, 3, 5, 7, 1, 4, 1)$. (10)

**Bharati Vdyapeeth's
College of Engg. For Women
UNIT TEST -I**

Class : B.E.Computer Engg.

Subject : OOMD

Academic Year -2011-12

Marks : 30

- Q.1 A) Explain different diagrams used in UML 2.0 (10)
B) Write a short note on UML System Architecture. (08)
- Q.2 Explain the difference between :
1) UP and RUP (04)
- OR
- Q.3 Explain the difference between :
1) Include and Extend Relationship in Use case diagram. (04)
- Q.4 A) Draw use case diagram for Hospital Management System. (08)
- OR
- Q.5 A) Draw use case diagram for Credit Card System. (08)

B.E. (Comp) Software Testing & Quality Assurance

Marks:-30

NOTE:- All Questions are Compulsory.
Each Question is carrying 10 marks.

Q.1 Suppose we are developing a program which decides in a two-dimensional co-ordinate system, whether a point P falls in a circle C or on its edge. The program reads five real numbers. The first two numbers are x & y co-ordinate of the centre of C , third number is radius of C , fourth & fifth numbers represent the co-ordinate of P . Develop test cases that you feel are adequate for this program.

Q.2 You are writing a program that counts the number of alphanumeric characters in a string. Can we apply equivalence partitioning for this program? What about boundary value analysis? Justify.

Q.3 Describe in your own words difference between validation & verification?

Bharati Vidyapeeth,s College OF Engineering For Women,Pune.

Unit Test-I

Class: B.E.(Computer)

Subject: Artificial Intelligence

Marks:30

Date/Time:-10/8/2011,10:00-11:30

Instructions:1) Figures to the right indicate full marks.

2)All the questions are Compulsory

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|---|---|
| 1) Define AI. List & explain various application of AI. | 8 |
| 2) What is an agent. Detail the architecture of an agent. | 8 |
| 3) State the issues in the design of search programs. | 6 |
| 4) Explain Breadth first & Depth first search with example. | 8 |

BEST OF LUCK