



**AKHAND OPEN UNIVERSITY, HALDWANI (NAINITAL)**

***MBA Fourth Semester Assignment***

*Last date of Submission-15<sup>th</sup> June, 2012*

**Programme Name-MBA-Fourth Semester Programme Code-MBA-10**  
**Course Name-Applied Operations Research**  
**Course Code:MU2407** **Maximum Marks-40**  
**Session: 2011-12 (Summer)**

**Section-A**

Section 'A' contains 08 short answer type questions of 5 marks each. Learners are required to answers 4 questions only. Answers of short answer-type questions must be restricted to 250 words approximately.

**Discuss the following (1-8)-**

1. Quadratic Programming
2. Optimal Replacement
3. Decision Tree and Bell man's principle of optimality
4. PERT
5. Deterministic Model III : Purchasing model without shortage
6. Duality
7. The annual demand and unit price of an item are 392 units and Rs 8 respectively. If the order cost is Rs 5 per order and holding cost is 10% of unit price, determine
  - A) The EOQ in units
  - B) The total variable cost
  - C) EOQ in years of supply
  - D) Number of orders per year

**Section-B**

Section 'B' contains 04 long answer-type questions of 10 marks each. Learners are required to answers 02 questions only.

1. "Operations Research increases creative and judicious capabilities of a decision maker". Comment
2. Describe the problem of replacement of items whose maintenance cost increases with time. Assume that the value of money remains constant. Also describe some important replacement situations.
3. Explain the use of sensitivity analysis with the help of real life problem.
4. Explain single-channel model and multiple channel queuing models.