**BTM5**

**Fifth Semester B. Tech Mechanical Engineering**

**Examination Aug/Sep-2015**

**Operation Research**

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

**SECTION-A**

**Answer any five questions: (5\*5)**

1. What are the various methods that are used for obtaining Solution to an Operation Research model?
2. Write a short note on Unbounded Solution.
3. What do you mean by Slack and surplus Variables?
4. Define the Resolution of Degeneracy.

5. What are the multiple optimal Solutions?

1. Write a short note on Tie for the Key Row (Degeneracy).
2. How will you interpret Primal-Dual Optimal Solutions?

**SECTION-B**

**Answer any two questions: (10\*2)**

1. Discuss the Dual Simplex Method.
2. What happens when Demand Exceeds Supply?
3. Enumerate the Basic Components of the Queuing System.

**SECTION-C**

**Answer any two questions: (15\*2)**

1. Discuss the Degeneracy in the Transportation problem.
2. Explain the Time- Cost Trade-off in the Transportation problem.
3. Examine the Inventory Control Models. What are the Principle Categories of Inventories and their functions?