

[212]
E+G

SARDAR PATEL UNIVERSITY

M.com (3rd sem.) Examination

Friday, 26 October 2018

Time: 02:00 P.M to 5:00 P.M.

PB03ECOM27: Operations Research

MARKS: 70

SECTION: 1

Que.1

- (a) Discuss in brief various Models which are used in O.R. (9)
(b) Maximize $Z = 20x + 10y$ under the following constraints: (9)

$$x + 2y \leq 40 ; 3x + y \geq 30 ; 4x + 3y \geq 60 ; x, y \geq 0.$$

O.R

Write short note :

1. Advantages and Limitation of O.R approach 2. Phases of O.R (18)

Que.2

Solve the following L.P. Problem by Simplex Method. (17)

Maximize $Z = 3x_1 + 4x_2$ under the following constraints:

$$2x_1 + 3x_2 \leq 16 ; 2x_1 + x_2 \leq 8 ; x_1, x_2 \geq 0$$

O.R

- (a) Explain following terms : (Any four) (9)

1. Constraints 2. Slack and Surplus variable 3. Objective function
4. Degenerate solution, 5. Unbounded solution.

(b) The question paper of statistics is divided in two section A and B. Each (8)
question in section A carries 4 marks and 2 minutes are required to solve it.
Each question of section B carries 5 marks and 3 minutes are required to
solve it. The total time given for the question paper is of 30 minutes and in
all answers of 12 questions are to be given. Using graphical method find the
number of questions to be attempted from each section to get maximum marks.

SECTION : 2

Que.3

- (a) What is Sequencing Problem? Explain any one Model of it. (9)
(b) A company has 5 jobs and 5 machines. Assign the 5 jobs to the (9)
5 machines as to minimize the total time.

(1)

(P.T.O.)