

DEPARTMENT: MECHANICAL

SEMESTER : 7

SUBJECT NAME: OPERATION RESEARCH

SUBJECT CODE: 2171901

FACULTY NAME: Assist. Prof. Kedar H Badheka

ASSIGNMENT: 4

<u>UNIT: 2 Exercise and case problems on Dual and Primal LP Problems</u>

1. Find the dual of the following LPP.

Maximize
$$Z = 4x_1 + 5x_2 + 12x_3$$

Subjected to $2x_1 + x_2 + 3x_3 \le 4$
 $3x_1 - 2x_2 + x_3 = 3$ and $x_1, x_2, x_3 \ge 0$

2. Find the dual of the following LPP.

Maximize
$$Z = -x_1 + 2x_2$$

Subjected to $-x_1 + 3x_2 \le 10$
 $x_1 + x_2 \le 6$ and x_1 , x_2 , ≥ 0

