

**UNIT - III**

3 (a) Solve the following Minimal assignment problem :

	1	2	3	4	5
1	2.5	5	1	6	2
2	2	5	1.5	7	3
3	3	6.5	2	8	3
4	3.5	7	2	9	4.5
5	4	7	3	9	6

(b) A department head has four subordinates and four tasks have to be performed. Subordinates differ in efficiency and tasks differ in their intrinsic difficulty. Time each man would take to perform each task is given in the effectiveness matrix. How the tasks should be allocated to each person so as to minimize the total man-hours.

Tasks	I	II	III	IV
A	8	26	17	11
B	13	28	4	26
C	38	19	18	15
D	19	26	24	10

**OR**

3 (a) Six jobs go first to machine I then to machine II. The order in which the jobs are completed has no significance. The following gives the machine time in hours for six jobs and two machines. Find the sequence of jobs that minimizes the total elapsed time to complete the job :

Job	1	2	3	4	5	6
Machine I	5	9	4	7	8	6
Machine II	7	4	8	3	9	5

(b) Construct a network for the project whose activities and their precedence relationships are given below :

Activity	A	B	C	D	E	F	G	H	I	J	K
Immediate Predecessor	-	-	-	A	B	B	C	D	E	H, I	F, G

