7-4-2016

DOON UNIVERSITY, DEHRADUN
School of Management
Mid Term Examination, 2016
(MBA-2 yrs 2nd Sem)
MMS-510 ~~(MBA 202)~~ **Management Science**

Time Allowed: 2 Hours *Maximum Marks: 30*

SECTION- A **(10*1=10)**

1. Determine an initial basic feasible solution to the following transportation method by using **(a) NWCM and (b) VAM**

Destinations

Sources	D1	D2	D3	D4	Supply
S1	21	16	15	2	11
S2	17	18	14	23	13
S3	32	27	18	41	19
Demand	6	10	12	15	43

SECTION- B **(2.5*4=10)**

2. **Write short notes on any 4:**
   (a) Two-person zero sum game
   (b) Dominance principle
   (c) Decision making process
   (d) Characteristics of operation research
   (e) Assignment problem

SECTION- C **(5*2=10)**

Attempt any two:

3. What do you mean by operation research? Discuss its scope.

4. Find the sequence that minimizes the total time required in performing the following jobs on 3 machines in the order ABC. Processing time (in hours) are given in the following table:

Job	:	1	2	3	4	5
Machine A	:	8	10	6	7	11
Machine B	:	5	6	2	3	4
Machine C	:	4	9	8	6	5

5. A department has five employees with five jobs to be performed. The time (in hours) each man will take to perform each job in the effectiveness matrix.

Employees

Jobs	I	II	III	IV	V
A	10	5	13	15	16
B	3	9	18	13	6
C	10	7	2	2	2
D	7	11	9	7	12
E	7	9	10	4	12

How should the jobs be allocated, one per employee, so as to minimize the total man-hours?