



IQRA NATIONAL UNIVERSITY

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SUBJECT: BPE

SUBMITTED TO :MAM AASMA KHAN

SEMESTER : SUMMER

Question No: 01

(10)

Compute Load Distance (LD) scores for the below given current and proposed designs and identify which design is the better one;

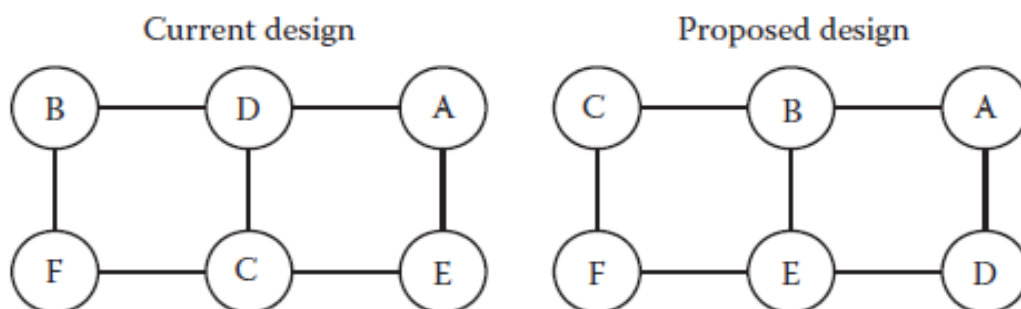


Figure 1 Two Designs

	A	B	C	D	E	F
A		20		20		80
B			10		75	
C				15		90
D					70	

Figure 2 Load Matrix

Ans:

Centers	Load	Distance	LD	Distance	LD
(A,B)	20	2	40	1	20
(A,D)	20	1	20	1	20
(A,F)	80	3	240	3	240
(B,C)	10	2	20	1	10
(B,E)	75	3	225	1	75
(C,D)	15	1	15	3	45
(C,F)	90	1	90	1	90
(D,E)	70	2	140	1	70
TOTAL			790		570

Proposed design is better...

Question No: 02

(10)

A process management team has studied a process and has developed the flowchart in Figure 3. The team also has determined that the expected waiting and processing times (in minutes) corresponding to each activity in the process are as shown in Table 1.

- i. Calculate the average CT for this process.
- ii. Calculate the CT efficiency.

Activity	Waiting Time (Min)	Processing Time (Min)
A	20	12
B	15	18
C	5	30
D	12	17
E	3	12
F	5	25
G	8	7
H	5	10
I	15	25
J	5	20
K	4	10

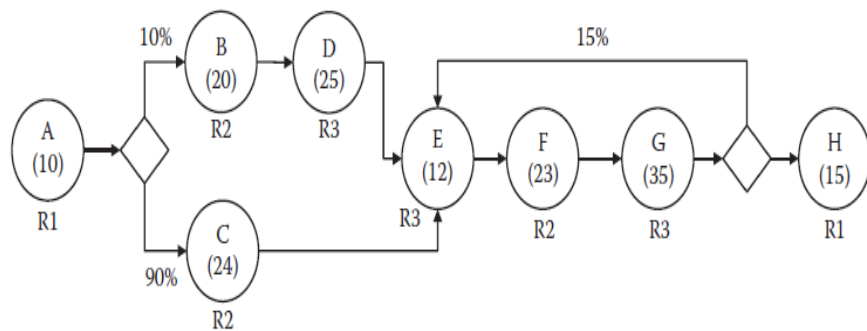


Figure 3 Process Flow Chart

Ans: $CT = 10 + 0.1 * 20 + 25 + 0.9 * 24 + 1.15 * (12 + 23 + 35) + 15 = 140.1$

Process time $= 12 + 0.1 * 18 + 30 + 17 + 0.9 * 15 + 1.15 * (12 + 25 + 7) + 10 = 161.5$

CT Efficiency $= 161.5 / 140.1 = 1.152$

Good Luck ☺