

Date: _____

P-2 1.

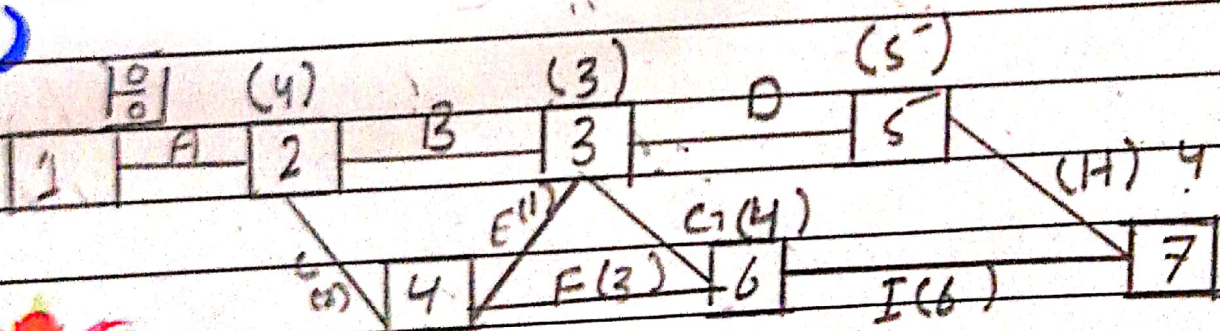
Q.1

The given table show the detail project.

ACTIVITY	PROCEDURE	TIME
A	...	4
B	A	3
C	A	2
D	B	5
E	B, C	1
F	C	3
G	E, F	4
H	D, E	4
I	H, G	6

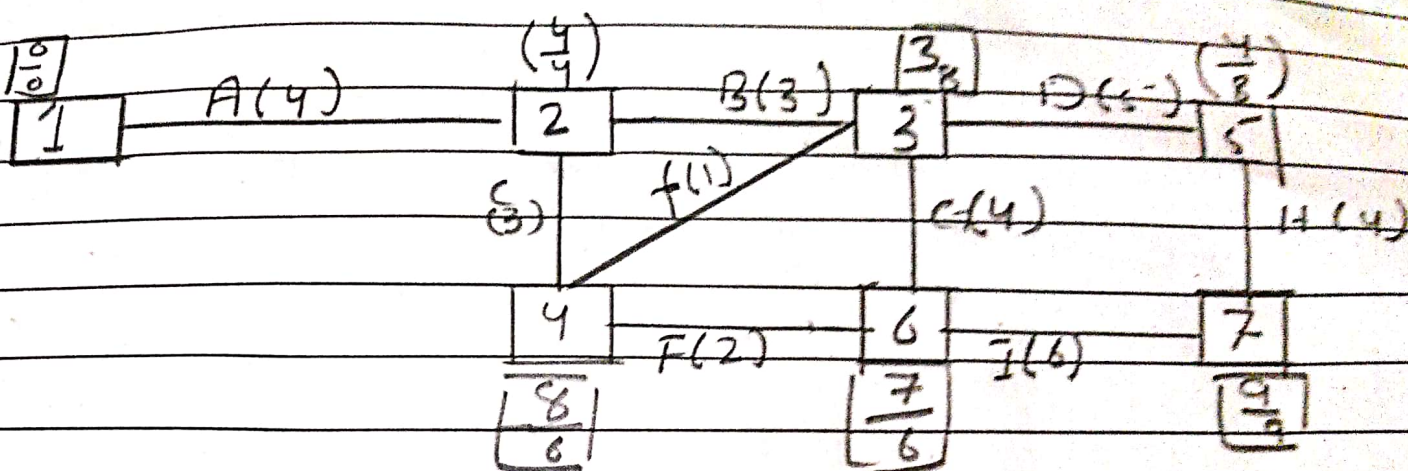
ANS :

(a)



Date: _____

(b)



we know that

$$E_{sj} = \text{Max} (E_{si} + D_{ij})$$

For node 1 = $E_{si} = 0$

Node 2 = $0 + 4 = 4$

Node 3 = $4 + 3 = 7$

Node 4 = $3 + 1 = 4$

Node 5 = $3 + 5 = 8$

Node 6 = $3 + 4 = 7$

Node 7 = $5 + 4 = 9$

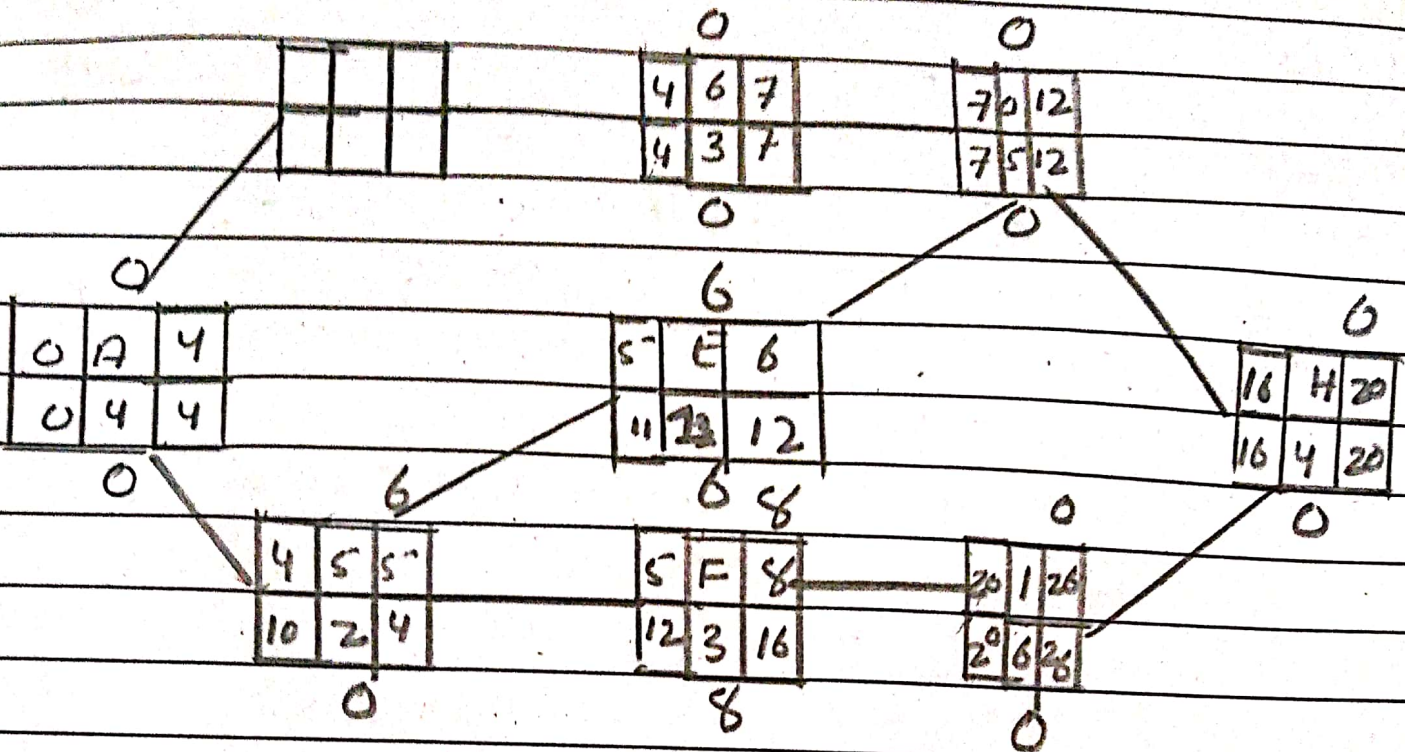
(c):

Presented on NI-Page.



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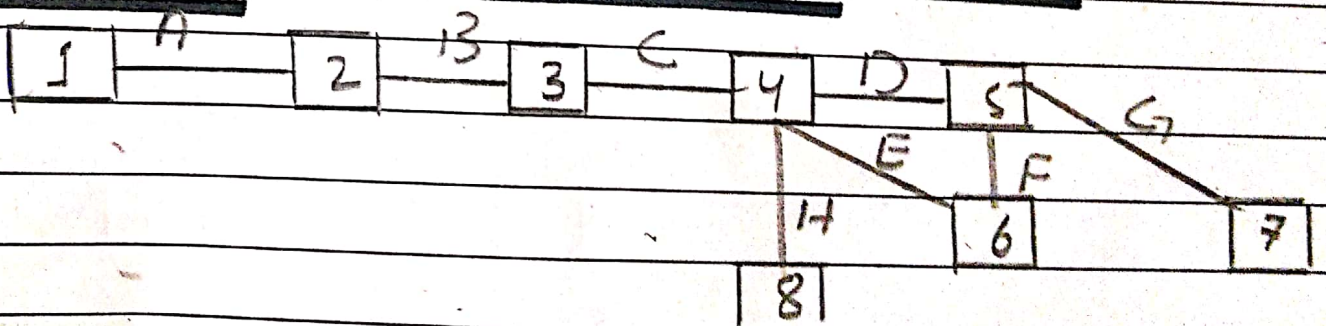


Q2 :

ANS :

ACTIVITY	PROCEDURE	O	T	M	P
A	-				
B	A	4		5	12
C	B	2		3	4
D	C	6		8	27
E	C	4		6	8
F	E	3		4	5
G	D, F	2		4	6
H	C	2		3	4
		5		7	15

(a) : PROJECT NETWORK :



(b)

MEAN :

$$\text{mean} = \frac{t_a + 4t_m + t_b}{6}$$

$$\text{variance} = \frac{(t_b - t_a)^2}{6}$$

$$\text{deviation} = \sqrt{5}$$

INFINITY

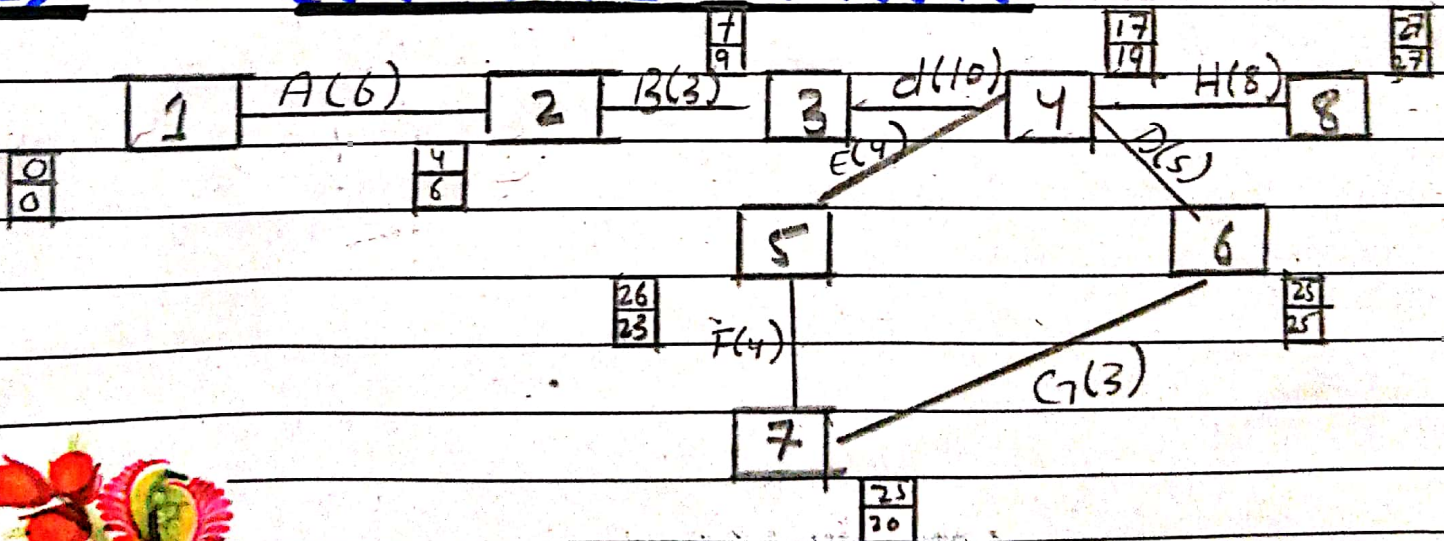


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P - (8)

ACTIVITY	PROCEDURE	O	M	P	M	V
A	-	4	5	12	6	1.77
B	A	2	3	4	3	0.11
C	B	6	8	22	10	7.11
D	C	4	6	8	6	0.44
E	C	3	4	5	4	0.11
F	E	2	4	6	4	0.44
G	D, F	2	3	4	3	0.11
H	C	5	7	15	8	2.77
I						

(C) CRITICAL PATH:

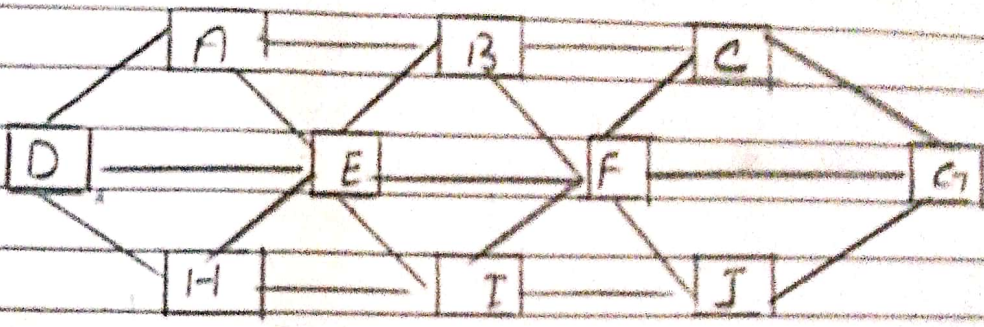


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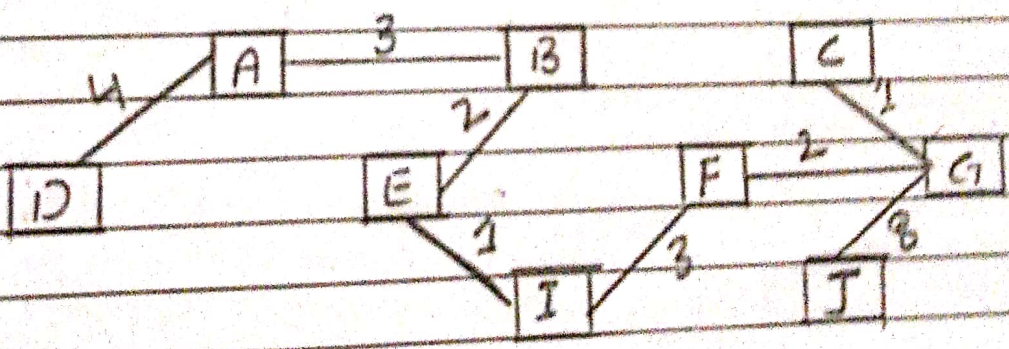
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Q3:

ANS:



MST BY PRIM'S ALGORITHM:



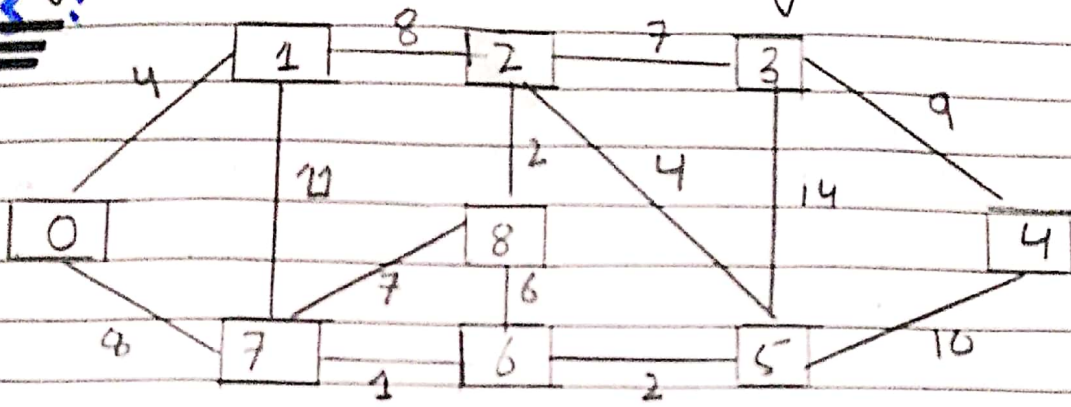
Proved.





Q4: For the following - Find the minimum spanning tree using Kruskal's algorithm.

ANS:



THEORY:
KRUSKAL'S ALGORITHM:

building up MST by adding the edges one by one to the spanning tree one by one.

PSEUDO CODE:

- (1) For each vertex in graph
- (2) Create a set with element v.
- (3) Initialize a priority queue containing all edge in descending order of their weight.
- (4) Define Forest $= \emptyset$



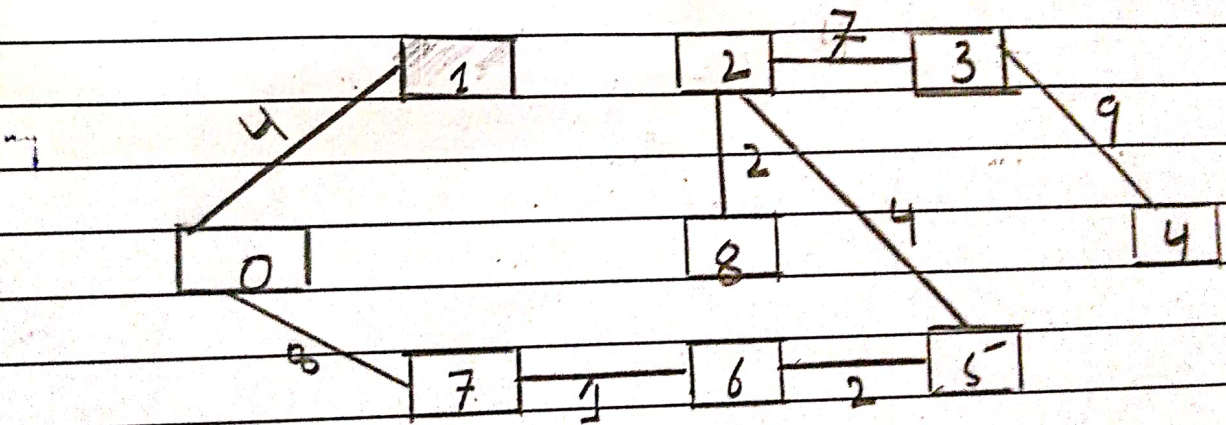
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Q-2

- ⑦ Take all edges.
- ⑧ Select minimum weight
- ⑨ Select minimum weight.

MST ACCORDING TO THE ABOVE DIAGRAM:



$$\text{Sum} = 8 + 4 + 1 + 2 + 4 + 2 + 7 + 9 = 37$$

RESULT:

The answer is 37 of the above given diagram



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Q: Write a detailed note on how to This course will help you in professional career

A: Following are the main important goals that a student can achieved after this course:

(1): HE CAN ABLE TO SOLVE REAL WORLD PROBLEMS:

These problems matter to organization and have an impact. In area such a health care, public policy, resource managements and disaster relief. you can change people life to better.

(2) YOU CAN USE UR SKILL AND CREATIVITY:

Whether your background is math, software engineering, Computer Science or on industry such as healthcare, manufacturing, finance government and there is a job in O-R



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For you.

(3) YOU HAVE MOBILITY ACROSS INDUSTRIES AND CARRIER:

You can apply your core O.R to almost any industry. e.g: Pharmaceutical, law enforcement, orderainment. So you are far more versation. proof than if focused on one cyclical industry. And in O.R training you can move into management consulting, operation, marketing, finance or number of other field.

(4) YOU DON'T HAVE TO SUBSCRIBE TO DOMENENT INWORLD VIEW:

O.R has no single mode of professional practice so you never had to get you board into a specific technique or problem and solving it which never change.



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(5) YOU BECOME A BETTER STRATEGIST:

O-R disipline looking at
problem. creating models
and Setup. analysis that
point to better options.
and results help you in
making personal and
professional carrier.

(6) YOU CAN MAKE A GREAT LIVING:

Starting salary for an
O-R professional is 60,000 to -
70,000 dollars and will
move to 100,000 dollars.

CONCLUSION:

Due to the
above given points it
is concluded that the
O-R you much in the
professional and personal
Carrier. So it is
much helpfull.

