

enough:
0-19
201914032
node 2005 associated edges

- ① graph
- ② BFS+DFS tree
- ③ complexity

① min weight

② weight equal
2005 alphabetical
order

$$① \left(\left(201914032 \% 20 \right) + 1 \right) \% 20$$

$$= (12 + 1) \% 20$$

$$= 13$$

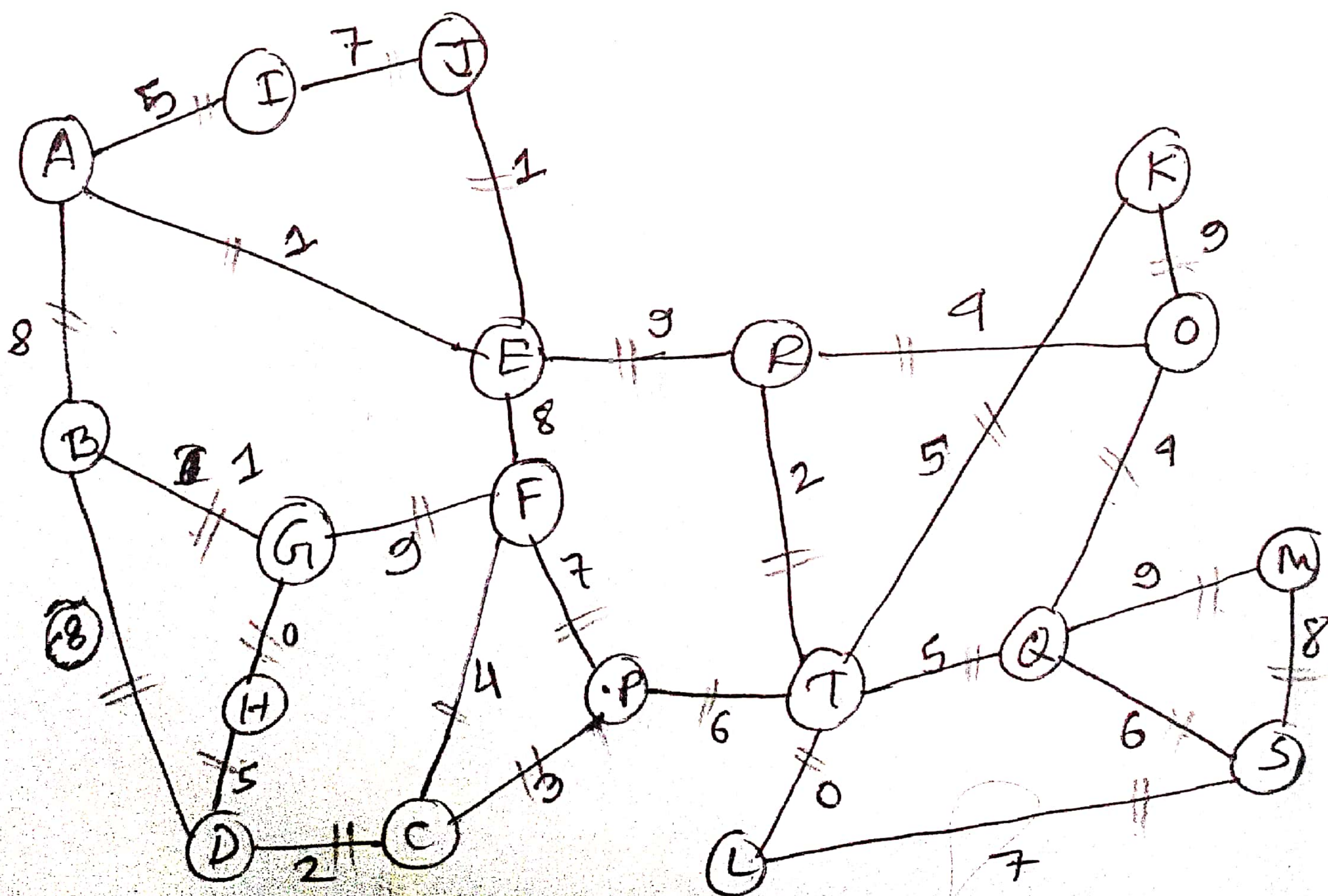
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20 | 13 | 0
0
13

A	B	C	D	E	F	G	H	I	J	K	L	M	(N)	0
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

P	Q	R	S	T	U	V	W	X	Y	Z
15	16	17	18	19	20	21	22			

new graph : After discarding 13th node: (N)



$$\text{Node } x = 201914032 \% 8$$

$$= 0 \text{ (A)}$$

$$\text{Node } Y = (201914032 \% 5) + 15$$

$$= 2 + 15$$

$$= 17 \text{ (R)}$$

$$T \rightarrow R, P, K$$

$$\begin{matrix} \downarrow & \downarrow & \downarrow \\ 2 & 5 & 6 \end{matrix}$$

$$2 \ 5 \ 6$$

cost

$$\text{cost}[i][j] =$$

$$2 \ 5 \ 6$$

$$2 \ 5 \ 6$$

W

$$\begin{matrix} 1 & 2 & 3 \\ 2 & 6 & 5 \end{matrix}$$

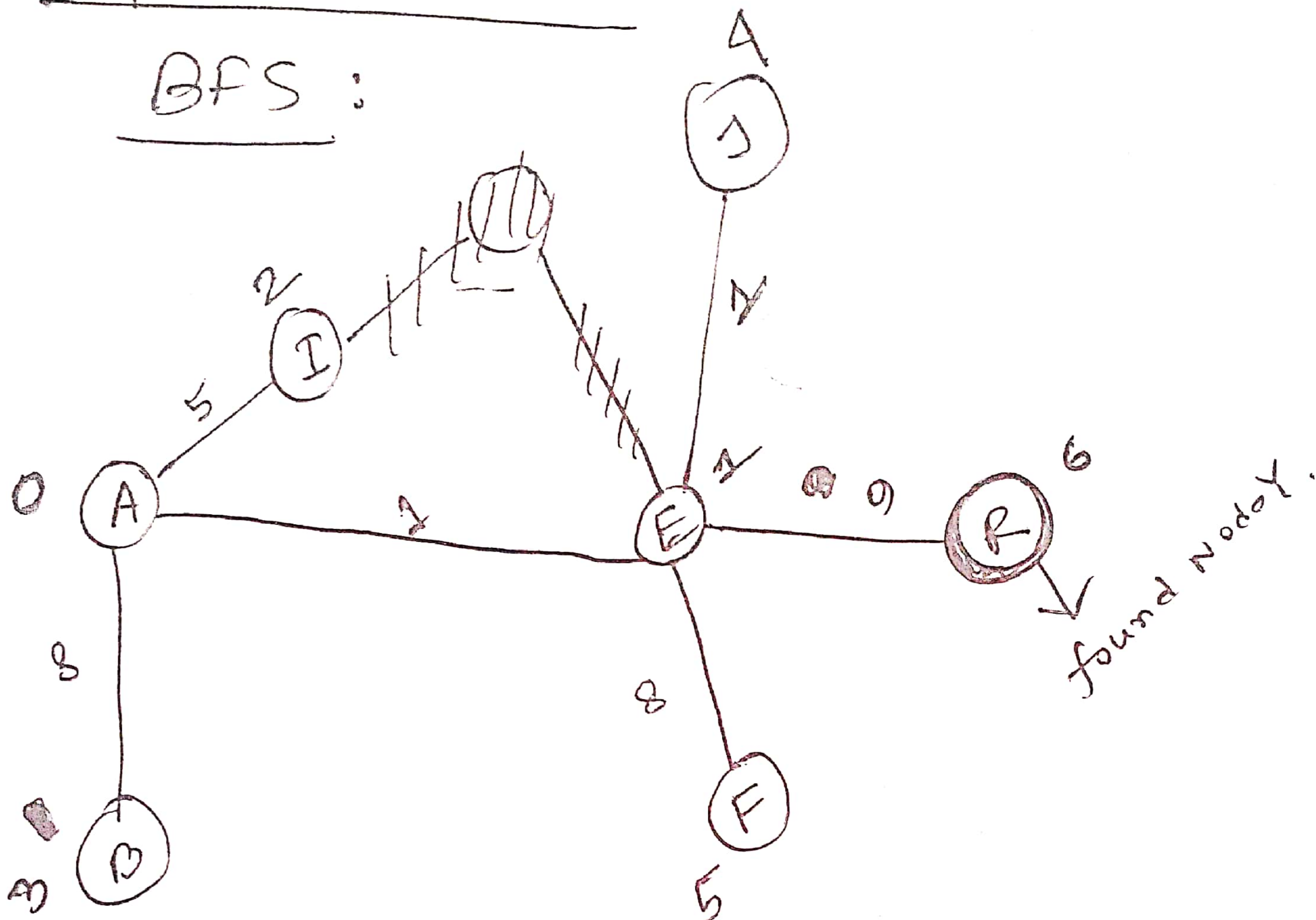
$$\begin{matrix} 1 & 3 & 2 \\ 2 & 5 & 6 \end{matrix}$$

$$\boxed{2 \ 5 \ 6}$$

$$2 \ 5$$

Exploration tree

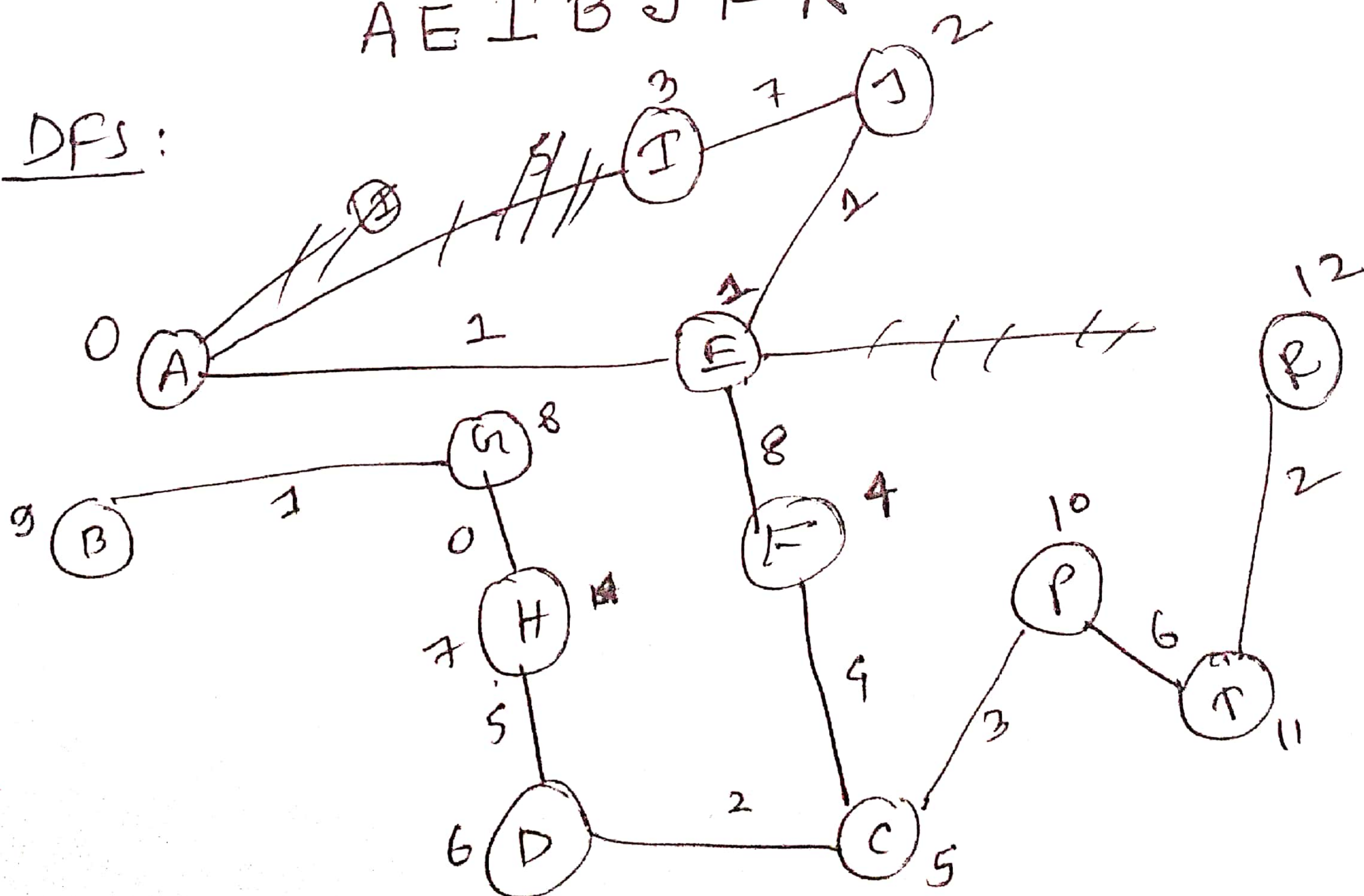
BFS :



Exploration sequence:

A E I B J F R

DFS :



Exploration sequence: A E J I F C D H G B P T R