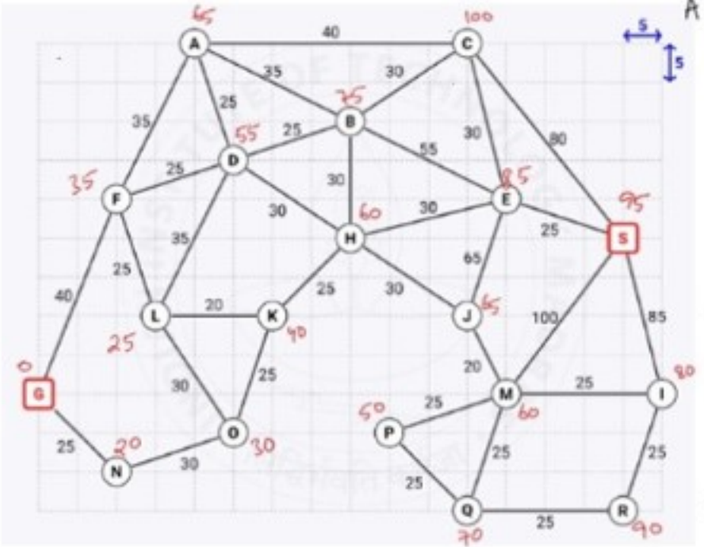
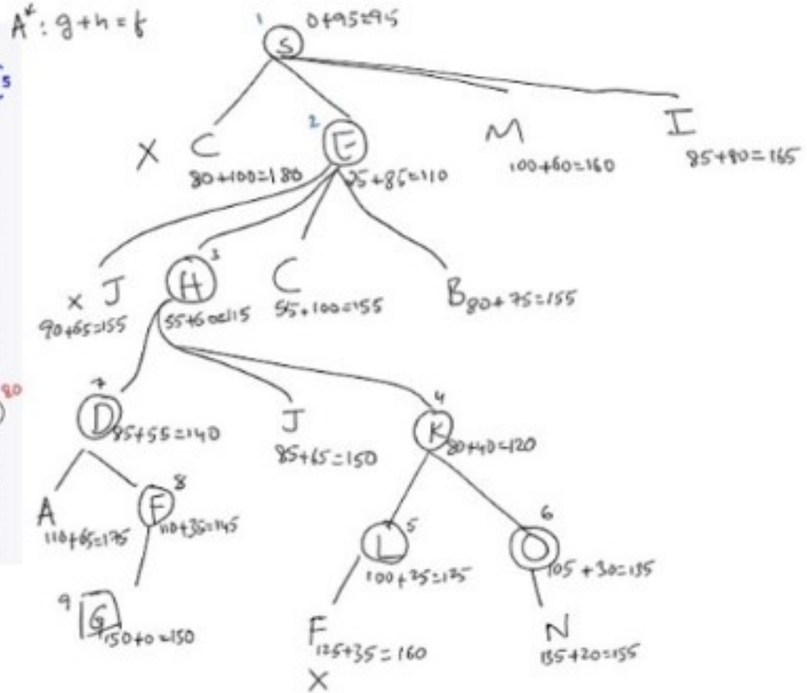


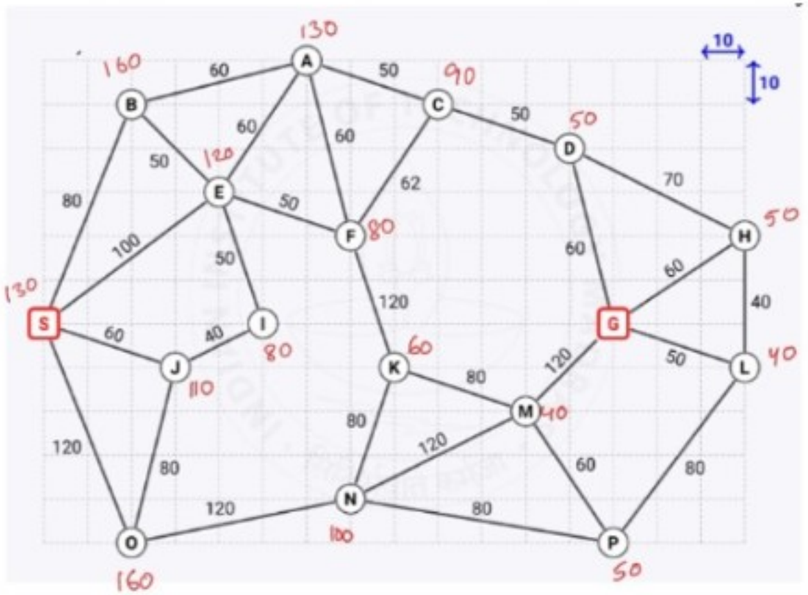


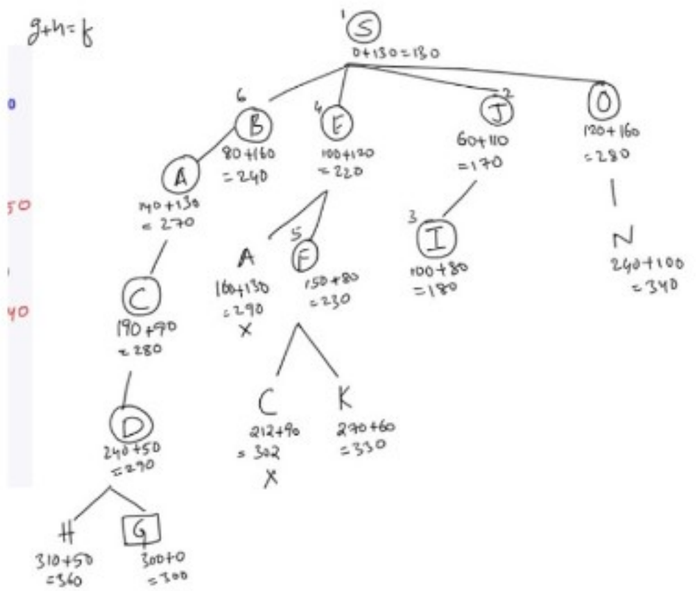
7) Did A* find an optimal path?

a. Yes

Node	Open	boundary	Kernel ----
1 S	F M I C (118 160 165 180)	S	
2 E	H B C J M I (145 155 155 155 160 165)	ES	
3 H	K D J B C M I (120 140 150 155 155 160 165)	HES	
4 K	L O D J B C M I (135 135 140 150 155 155 160 165)	KHES	
5 L	O D J B C F M I (135 140 150 155 155 160 160 165)	LKHES	
6 O 155	D J B C N F M I (140 150 155 155 155 160 160 165)	OLKHES	K
7 D	F J B C N M I A (145 150 155 155 155 160 165 175)	DOLHES	K
8 F	G G B C N M I A (150 150)	FDOLHES	LK
9 G	J B C N M I A	GFDOHES	LK

terminate.





	Node	open	boundary		Kend ____
1.	S	J E B O 170 220 240 280	S	S	-
2.	J	I E B O 180 220 240 280	JS	JS	
			IJS	IJS	
3.	I	E B O 220 240 280	EIJS	EIJS	I
4.	E	F B O A 230 240 280 290	FEJS	FEIJS	I
5	F	B O A C K 240 280 290 302 330	BFEJS	BFEIJS	I
6	B	A O C K 270 280 302 330	AFEJS	ABFEIJS	I
7	A	C O K 280 280 330	CAFJS	CABFEIJS	I
8	C	O D K 280 290 330	OCFJ	OCABFEIJS	I
9	O	D K N 290 330 340	DOCF	JABE	(S)
10	D	G K N H 300 330 340 360	GDOF	CJAB	(S)
11	G	K N H 330 340 360		CJAB	(S)

BEI

ABEI

when Kend is full, remove everything

J - - -

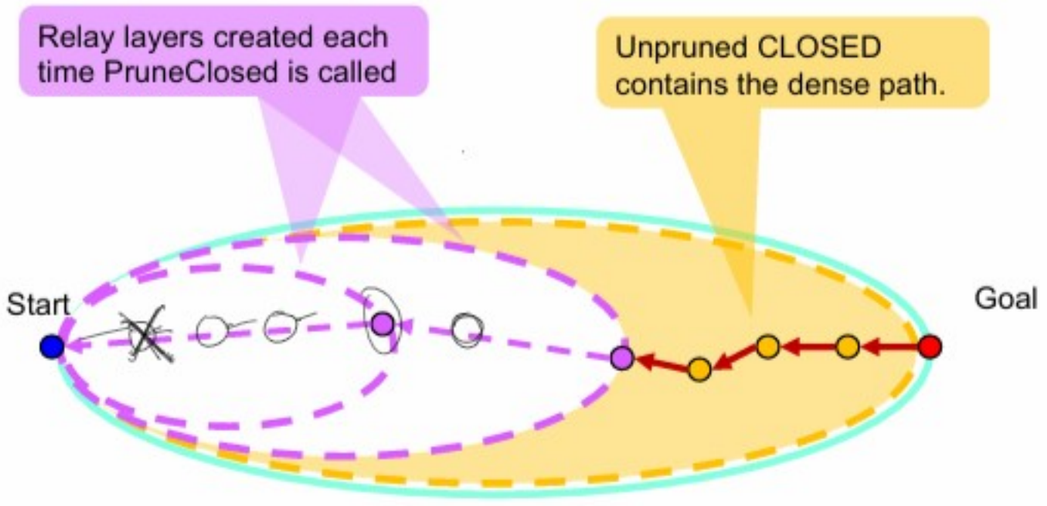
C J - -

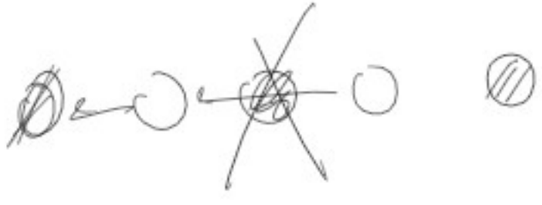
J - - -

O C F J

S S S S

SMGS breaks up the problem into many subproblems if needed





22f2001590:

Q1. When two nodes in bounday become eligible to go to kernel, can we insert them to the head of kernel in alphabetical order? [row no 7]

KERNEL layer is part of the CLOSED list.
KERNEL layer can use the same ordering as in the CLOSED list.

22f2001590:

Q2. When kernel space is full, In what order to remove "old" nodes from kernel to make space for new nodes? [row no 9 and 10, I removed from the tail of kernel]. What qualifies a node in kernel as relay node?

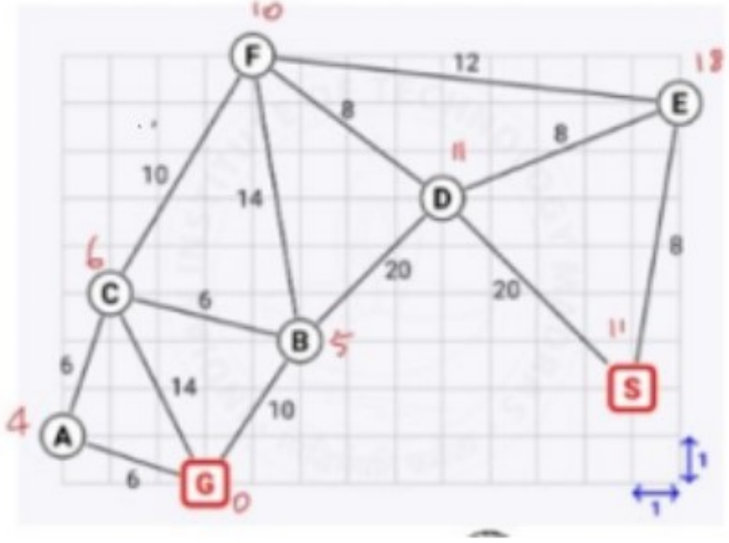
When KERNEL gets full,

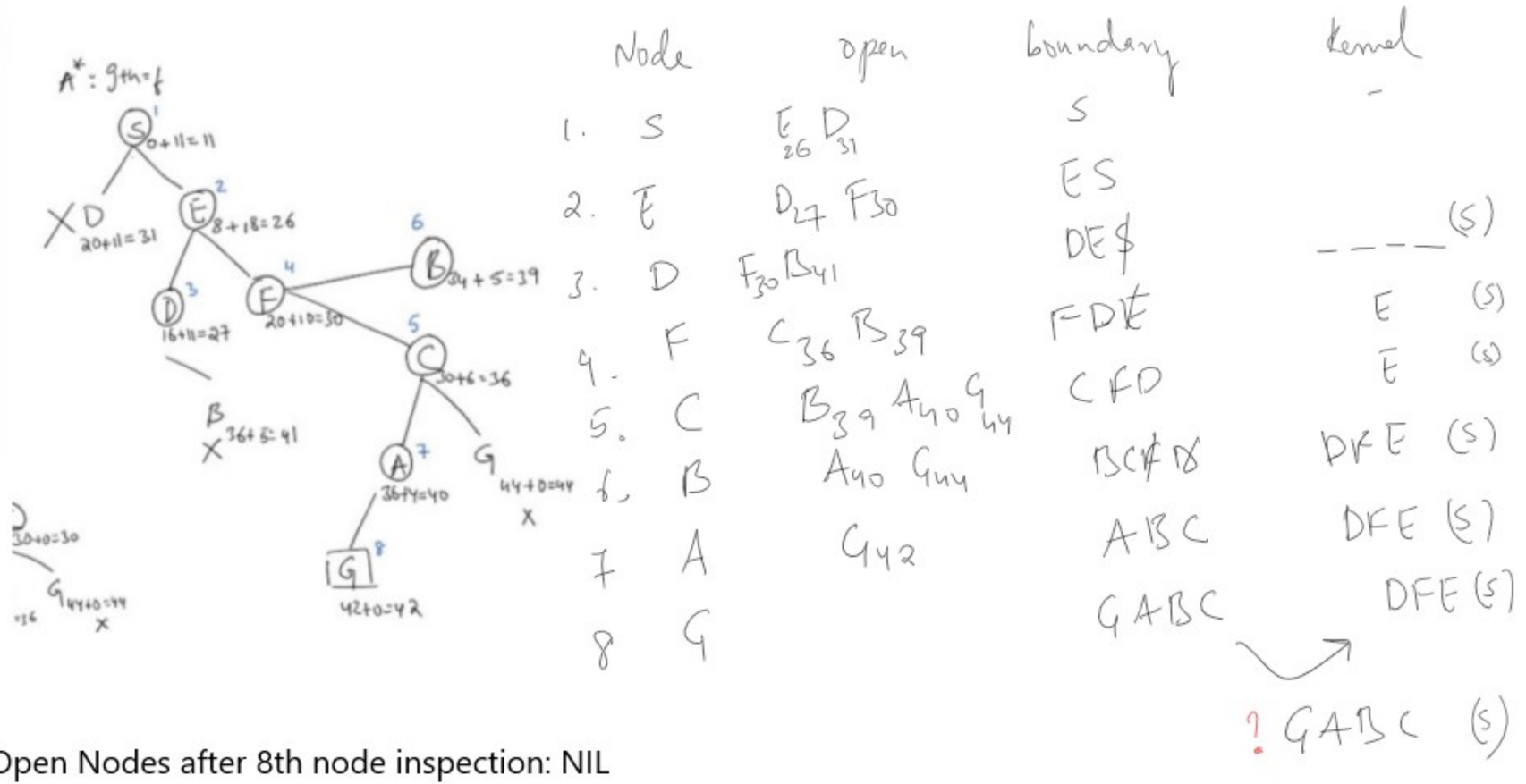
- convert the BOUNDARY layer into a new RELAY layer,
- update the parent pointers in the new RELAY layer to point to ancestors in the previous RELAY layer (or point to the START node in the case of the first RELAY layer),
- then remove all the KERNEL nodes.

22f2001590:

Q3. Its mentioned that S will have special space in kernel other than alloted 4 space for kernel, while answering in the exam, should we include S also while typing the answer. [row 9, 10, 11]

KERNEL status and KERNEL storage (memory).
START node may have KERNEL status and resides outside KERNEL storage.
All other KERNEL nodes reside in KERNEL storage.





List of Open Nodes after 8th node inspection: NIL

List of Boundary Nodes after 8th node inspection: NIL

List of Kernel Nodes after 8th node inspection: G,A,B,C