



# Vidyavardhini's College of Engineering and Technology

## Department of Artificial Intelligence & Data Science

AY: 2024-25

Class:	TE	Semester:	V
Course Code:		Course Name:	Artificial Intelligence

Name of Student:	Sainath Khot
Roll No. :	20
Assignment No.:	3
Title of Assignment:	
Date of Submission:	
Date of Correction:	

### Evaluation

Performance Indicator	Max. Marks	Marks Obtained
Completeness	5	
Demonstrated Knowledge	3	
Legibility	2	
Total	10	

Performance Indicator	Exceed Expectations (EE)	Meet Expectations (ME)	Below Expectations (BE)
Completeness	5	3-4	1-2
Demonstrated Knowledge	3	2	1
Legibility	2	1	0

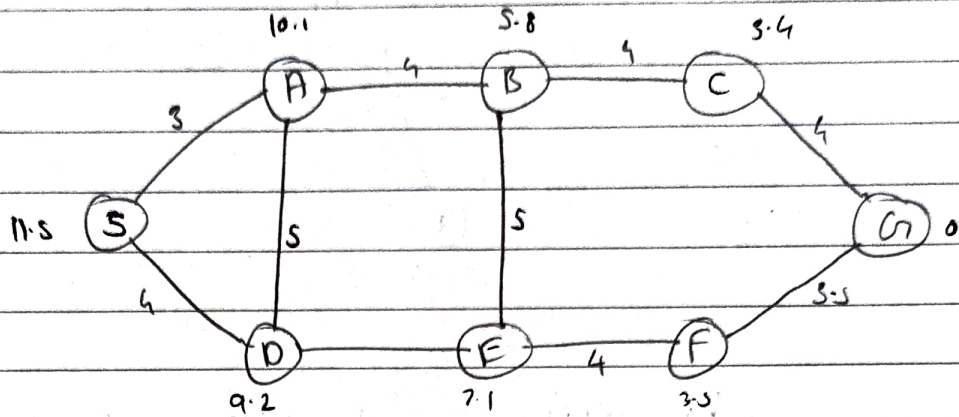
### Checked by

Name of Faculty :

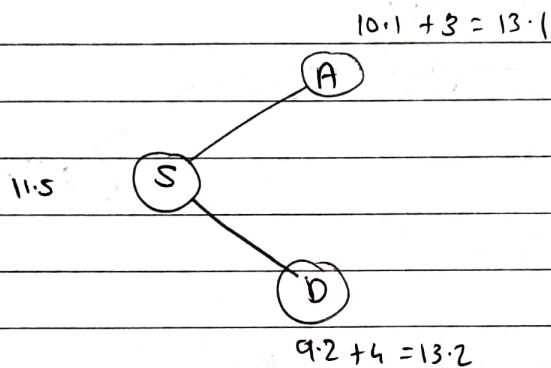
Signature :

Date :

Q1 Apply A\* Algorithm

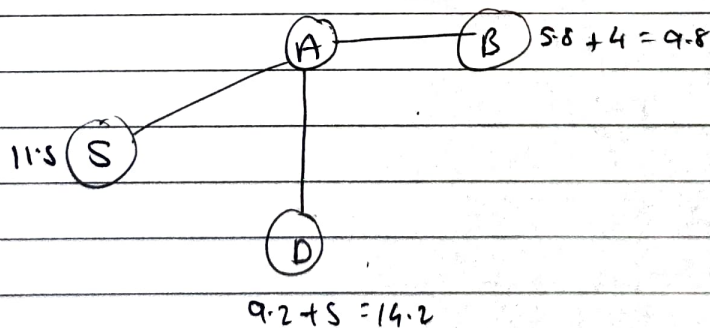


S1

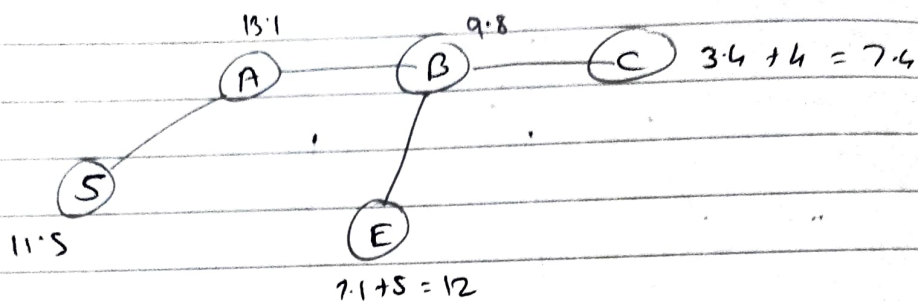


∴ A has minimum path cost. We choose A

Step 2:

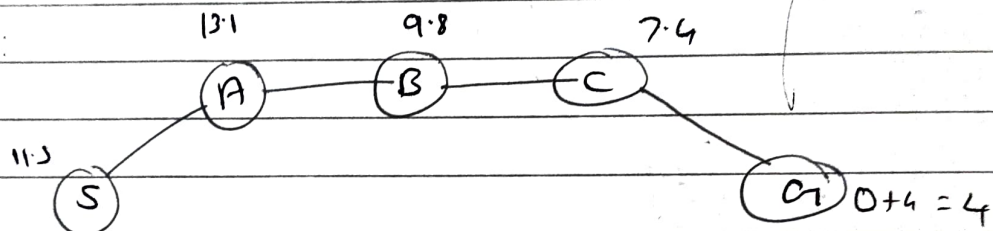


$\therefore B$  has minimum cost path  $\therefore$  we choose  $D$



$\therefore C$  has minimum cost path  $\therefore$  we choose  $C$

Step 4



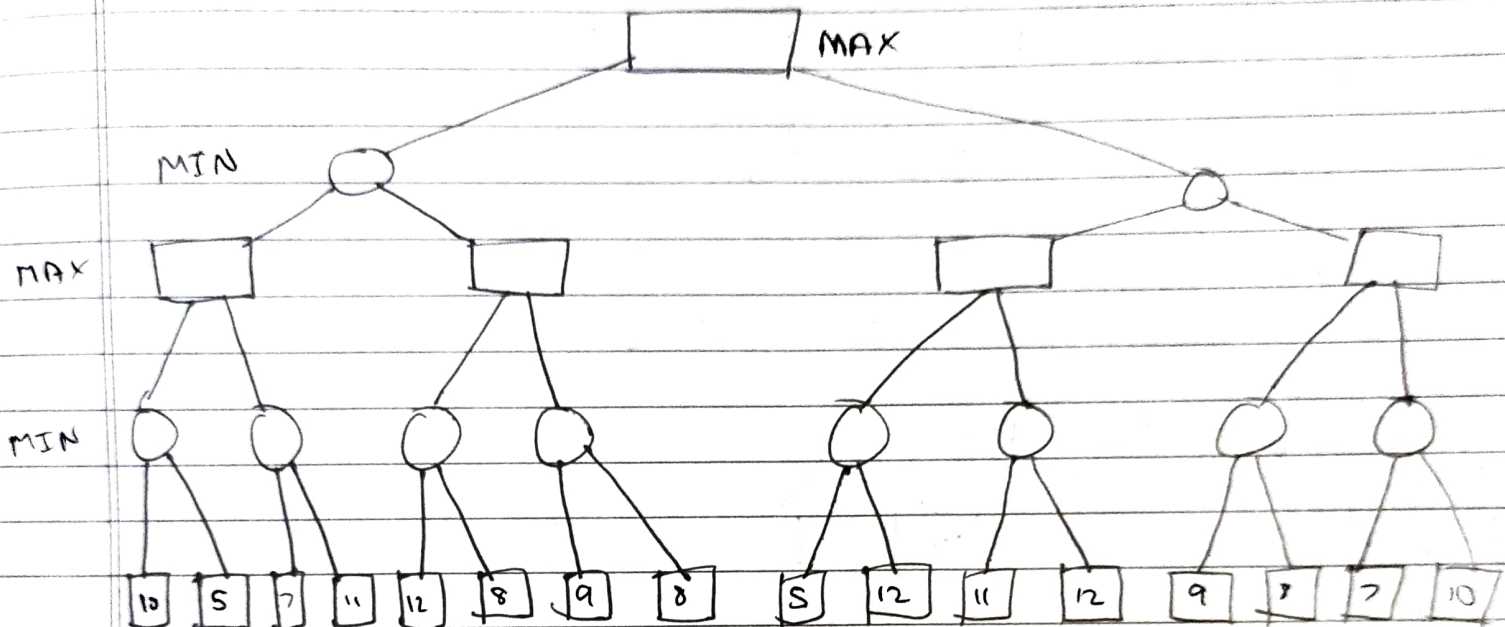
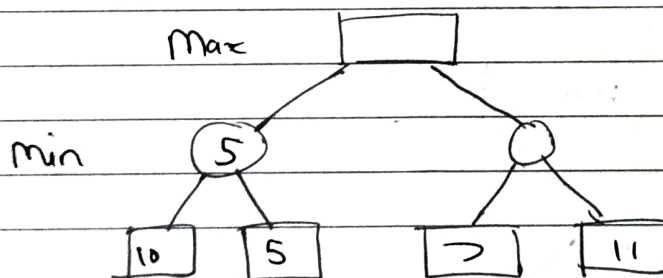
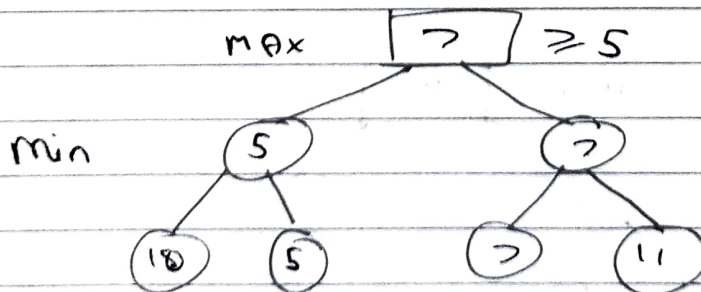
$\therefore$  Total path cost from S to G

$$= 3 + 4 + 4 + 4$$

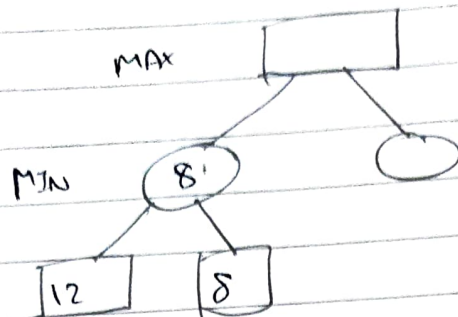
$$= 15$$



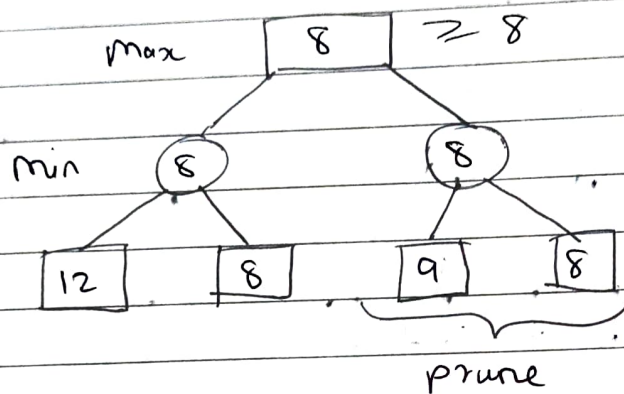
Q2

Apply  $\alpha$ - $\beta$  pruning for shortest path $\Rightarrow$ S1S2

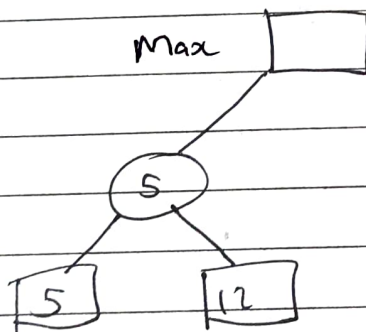
S3



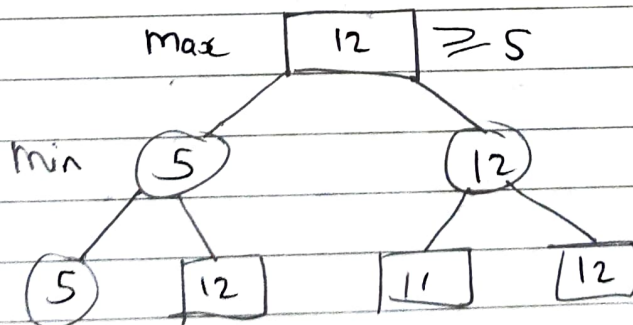
S4



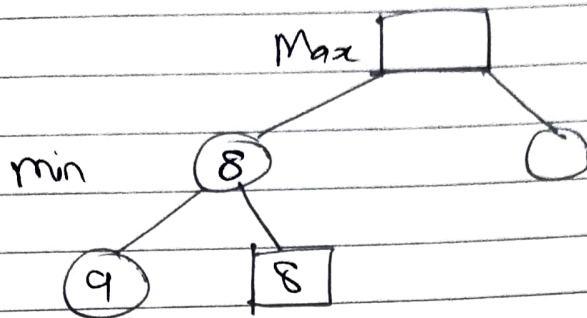
S5



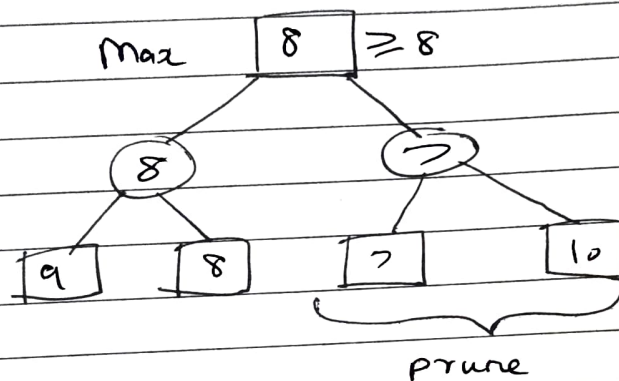
S6



S7



S8



S9

