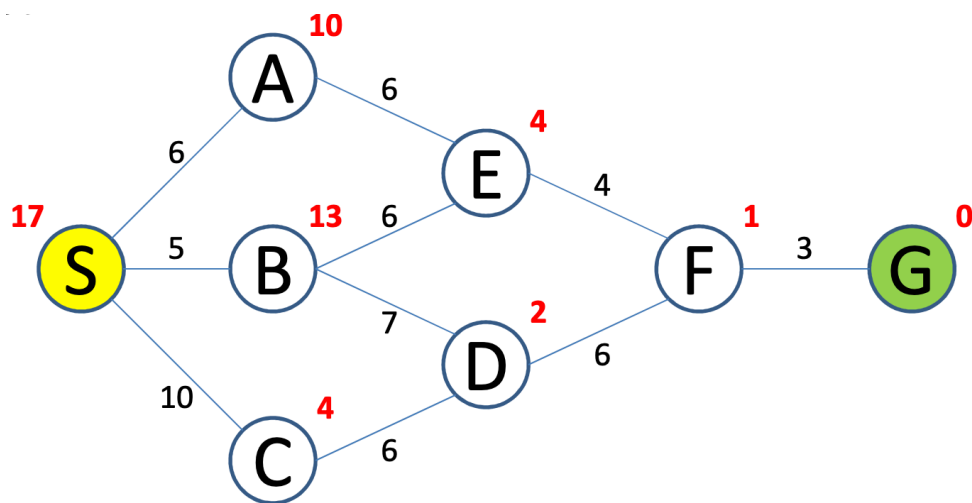


CSCI3230 Fundamentals of Artificial Intelligence  
Informed and Stochastic Search Algorithms  
Due date: 23:59:59 (GMT +08:00), 11 th December, 2019

I. Questions

- a) 1. Describe the most important property for the heuristic used in A\* search. (8 Marks)
2. Explain the term "admissible heuristic" used in the A\* search. (8 Marks)

- b) Perform the A\* Search on the following figure. Explicitly write down the queue at each step. S denotes as the start node. (16 Marks)



- c) 1. For the single and multiple point stochastic search algorithms, please give an example for each respectively and describe them briefly. (9 Marks)
2. For the stochastic and deterministic search algorithms, please give an example for each respectively and describe them briefly. (9 Marks)

## II. Assignment Submission

You MUST complete this assignment by using any one of the computer text editors (e.g. MS Word, WordPad, iWork Pages... etc.) and then save the document to PDF format with A4 printable page size. Scan version of the hand written work is NOT accepted. Please limit the file size of the PDF file less than 1MB.

You MUST submit the PDF file to the submission system on our course homepage (within CUHK network), otherwise, we will NOT mark your assignment.

## III. Important Points You MUST STRICTLY follow these points:

- a. You MUST strictly follow the submission guidelines.
- b. Remember to type your FULL NAME, STUDENT ID on the assignment.
- c. Late submission will NOT be entertained according to our submission system settings.
- d. Plagiarism will be seriously punished.

## IV. Late Submission According to the course homepage, late submission will lead to marks deduction.

No. of Days Late	Marks Deduction
1	10%
2	30%
3	60%
4 or above	100%