

# UNIVERSITY OF CALCUTTA

FAKIR CHAND COLLEGE

B.SC. SEM-IV (H) EXAMINATION : 2020

CMSA

PAPER : CC9

F.M. : 50(10 + 25 + 15)

TIME : 2 Hrs

## **(Internal Assessment)**

10

1. **Answer any two Questions :**

2 X 5 = 10

- a) Define algorithm with its properties.
- b) Distinguish between recursive and non-recursive algorithm.
- c) Explain the properties of P and NP.

B.SC. SEM-IV (H) EXAMINATION : 2020

CMSA

PAPER : CC9

**(Theory Examination)**

25

2. **Answer any five questions :**

5 X 5 = 25

- a) Compare BFS and DFS algorithms.
- b) Write Prim's algorithm to find shortest path with example.
- c) Describe Kruskal's algorithm with example.
- d) Write BFS algorithm .
- e) Explain Dijkstra's algorithm with suitable example.
- f) What is the purpose of Floyd's algorithm ?
- g) What are asymptotic notations? Explain.

B.SC. SEM-IV (H) EXAMINATION : 2020

CMSA

PAPER : CC9

**(Practical Examination)**

15

1. Answer the questions :

3 X 5 = 15

- a) Write advantages DFS algorithm.
- b) Define minimum spanning tree with an example.
- c) Define dynamic programming with an example.