



Register Number:

DATE:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BENGALURU-27
M.Sc. BIG DATA ANALYTICS – II SEMESTER
SEMESTER EXAMINATION: APRIL 2019
BDA 2118: FOUNDATION OF DATA SCIENCE

TIME 2.5 HOURS

MAXIMUM MARKS 70

This Question Paper Contains TWO Printed Paper And ONE Part

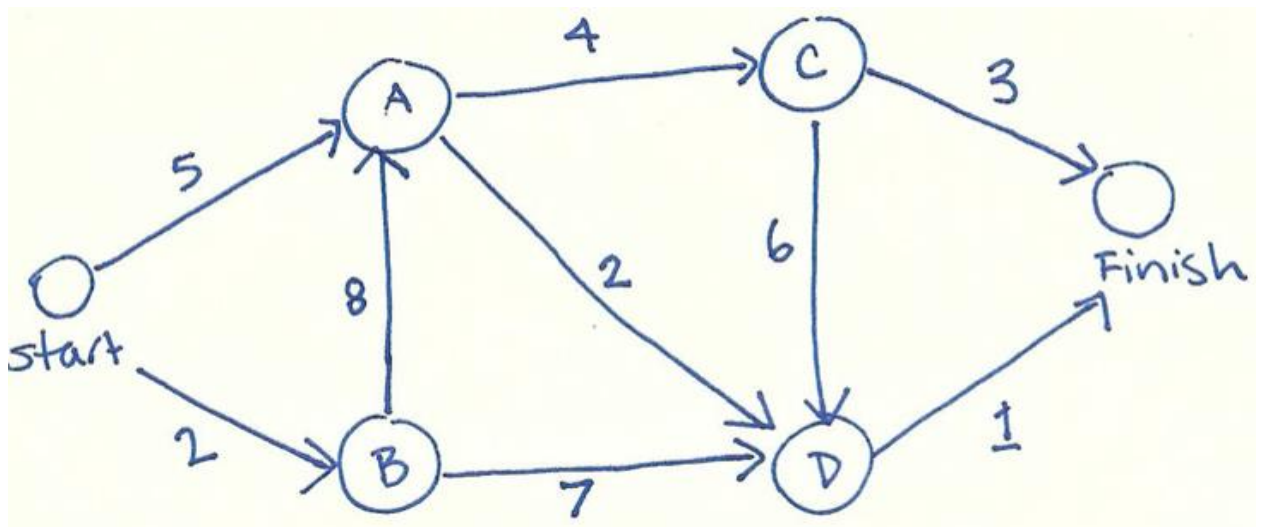
ANSWER ANY SEVEN QUESTIONS

7 X 10 = 70

- 1) Define with diagram
 - a) Regular Graph
 - b) Directed Graph
 - c) Path and Trail
 - d) Incidence matrix
 - e) Circuit matrix

(5 X 2=10)

- 2) Using Dijkstra's Algorithm find the shortest path



- 3) Explain Kruskal's Algorithm with a suitable example.

- 4) a) Explain properties of High dimensional space.
b) State and prove Chebychev's inequality. (5+5)
- 5) Prove that at a high dimension the volume of the sphere becomes Zero.
- 6) a) What do you mean by giant Component?
b) Compare and contrast $G(n,m)$, $G(n,p)$ model. (2+8)
- 7) Write and explain the algorithm for finding SVD using Power method.
- 8) a) Define simple random walk with respect to reflection principle.
b) What is stream model? How is it different from DBMS? (5+5)
- 9) Explain the frequency moment of data stream.