Register Number:
Date:

ST. JOSEPH'S COLLEGE (AUTONOMOUS), BANGALORE – 27
M.Sc BIG DATA ANALYTICS – I SEMESTER
SEMESTER EXAMINATION –OCTOBER 2018
BDA 1418: COMPUTING FOR DATA SCIENCE

Time: 1 1/2 hrs. **Maximum marks: 35 marks**

This Question Paper Contains one Printed Pages and One Part

Answer any FIVE of the following

1. What are the key points to be noted by a programmer when developing an application? Write the steps involved writing an algorithm. (7 Marks)
2. List the different sorting algorithm. Which algorithms are having maximum and minimum time complexity? Justify the time complexity. (7 Marks)
3. Write briefly about Linear and Non-linear function. (7 Marks)
4. Find the optimal solution for the problem using Gradient Descent Method

$$max\ f(x,y) = 5x^2 + 4xy + 14x - 6y - y^2 + 20$$

(7 Marks)

5. Explain the properties for random numbers. Why is simulation important in business analysis? (7 marks)
6. Generate 10 random numbers using calculator and use frequency test to test whether the numbers generated are Independent or Not. (7 Marks)

7. Theodore's gift shop places orders for Christmas items during a trade show in July. One item to be ordered is a dated sterling silver tree ornament. The ornament will sell for $80. The best estimate for demand is:

Demand	Probability
5	0.2
6	0.25
7	0.3
8	0.25

The ornaments cost $55 when ordered in July. Ornaments unsold by Christmas are marked down to half price and always sell during January. How many ornaments should be ordered? (7 marks)