

**SUBJECT CODE NO:- P-8195**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**M.E. (Comp.Sci.& Engg.) Examination May/June 2017**  
**Data Mining & Big Data**  
**(Revised)**

[Time : Three Hours]

[Max Marks :80]

Please check whether you have got the right question paper.

- N.B i) Solve any two question from each section  
ii) Assume suitable data, if necessary and state it clearly
- Section A
- Q.1 a) Describe Generation of Association rules from frequent item sets in Apriori method with an example database 10  
b) What is k-means algorithm? What are its limitations 10
- Q.2 a) Describe agglomerative and divisive hierarchical clustering 10  
b) What are outliers? Describe any three methods of outlier detection. What is the importance of outliers? 10
- Q.3 a) Explain the scale-free network with an example. What is a heavy-tailed distribution? 10  
b) What is Link Based Object Ranking (LBR)? What are the challenges in link mining? 10
- Section B
- Q.4 a) With an example describe the process of designing objective – based data product? 10  
b) Distinguish Clearly between Map Reduce and parallel DBMS Technology. Describe in detail an application of Big data technology 10
- Q.5 a) Describe Apache Hadoop Architecture. Explain the role of coordination and workflow using zookeeper and Oozie 10  
b) How will you apply drive train approach for recommender system? Design and explain the steps 10
- Q.6 a) What are the issues in mining Temporal sequences? 10  
b) Describe in brief: 10  
i) 'Personalization' and 'discrimination' in big data  
ii) Machine Learning products  
iii) web mining