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NMAM INSTITUTE OF TECHNOLOGY, NITTE

(An Autonomous Institution affiliated to VTU, Belagavi)

Third Semester B.E. (CSE) (Credit System) Degree Examinations

November - December 2016

13CS729 – SOCIAL AND WEB ANALYTICS WITH LAB

Duration: 3 Hours | Max. Marks: 100

*Note: 1) Answer **Five full** questions choosing **One full** question from **each Unit.***
2)

		Unit – I	Marks	BT*
1.	a)	Identify and Explain the terms used by Web Analytics tools	6	L2
	b)	How is Social media analytics different from web analytics?	4	L2
	c)	What is Social Media. Explain the Importance of Social media and the need of applying analytics on Social Media?	10	L1,L2
2.	a)	Explain the impact of social media on Business.	6	L2
	b)	Explain the factors for choosing the right specification and optimal solution.	4	L2
	c)	Create matrices in R and perform the following operations on them. a. Addition, Subtraction and Multiplication of 2 matrices. b. Row Sum, Column Sum, Total Sum and mean of a matrix. c. Sort the matrix elements in ascending/descending order. a. Reverse the matrix	10	L5
		Unit – II		
3.	a)	Create a Data Frame in R for maintaining Employee Details and perform following analysis on it. a. Get the structure of the data frame b. Get the maximum salary c. Get the details of the person with max salary d. Get the persons in IT department whose salary is greater than 600 e. Get the people who joined on or after 2014	10	L5
	b)	Describe the main characteristics of People centric Approach?	5	L2
	c)	Illustrate the different ways of organizing for Social Media - Models?	5	L3
4.	a)	Illustrate how to collect and understand social media data. Also explain the Facebook social APIs.	10	L2,L3
	b)	Explain the various measures to organize the Social Media for success.	5	L2
	c)	Write a note on Social graph and influencers in the social media?	5	L2
		Unit – III		
5.	a)	Describe the stages of social media analytics process.	6	L3
	b)	Elaborate on the SMART Methodology and its applications.	6	L3
	c)	List and explain different types of frequently used R-Data Types with example	8	L3

		for each.		
6.	a)	Describe the key Social media Analytics Techniques.	6	L3
	b)	Interpret how Social Objectives are aligned with Business Goals.	6	L2
	c)	Analyze the following R-functions and explain all the parameters of it with example for each. i. rbind() ii. cbind() iii. pie() iv. barplot()	8	L3
		Unit – IV		
7.	a)	Write a brief note on Social media impact. Describe the issues in content creation?	8	L2,L3
	b)	Explain the following concepts i. Social Signal Potential ii. Social Media Enablement Audit iii. Competitive Intelligence Analysis.	12	L3
8.	a)	Explain the audience identification and segment analysis.	8	L2
	b)	Analyze the case study on twitter mining using R and perform the following operation on the hash tag ***'#rstats'.*** i. Retrieve tweets under the given hash tag (n=100) and remove the retweets. ii. Retrieve the tweet of the specific user and also the find the number of followers. iii. Retrieve the stream of tweets from the timeline of the specific user. iv. Retrieve the popular trends from the specific location.	12	L5
		Unit – V		
9.	a)	Explain the Concept of True profile and the various techniques to achieve it..	10	L3
	b)	Illustrate the various characteristics of a Mashup. Explain the various types of Mashups.	10	L2,L3
10.	a)	Describe the main tasks and responsibilities of Social Media Analytics and Monitoring?	10	L3
	b)	Explain the guidelines for social media data to make better business decisions.	10	L2

BT* Bloom's Taxonomy, L* Level

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NMAM INSTITUTE OF TECHNOLOGY, NITTE

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Seventh Semester B.E. (CSE) (Credit System) Degree Examinations

November - December 2016

13CS729 – SOCIAL AND WEB ANALYTICS WITH LAB

Duration: 3 Hours | Max. Marks: 100

*Note: 1) Answer **Five full** questions choosing **One full** question from **each Unit.***

		Unit – I	Marks	BT*
1.	a)	Explain the various terms used by Web Analytics Tools.	10	L2
	b)	Design user defined functions and its associated function calls for performing the following respective operations in R. a. Check the number is even or odd. b. Create vector of integers and sort them in ascending/descending order. c. Print squares of numbers in sequence. d. Create and display List containing vector, built-in function, and matrix.	10	L6
2.	a)	Explain the basic elements of Google Analytics.	05	L2
	b)	Analyze the Impact of Social Media on Business.	05	L4
	c)	Create a Data Frame in R for maintaining Book Information without using .csv file and perform following analysis on it. a. Get the structure of the data frame b. Get the book details for particular Book ID. c. Get the details of the book with maximum price. d. Get the books published in a particular year. e. Get the details of the book having maximum number of copies.	10	L6
		Unit – II		
3.	a)	Interpret on how various models used in organizing for Social Media.	08	L2
	b)	Formulate the five main steps for creating a word cloud from a text file using R.	12	L6
4.	a)	Describe the following concepts in Social Media Analytics. i) Social Graph ii) Influencers iii) People Centric Approach iv) Data Collection Mechanism	10	L2
	b)	Design R steps to perform the following operations. a. Install and load packages for text mining, word-cloud generator. b. Replace **"/"**, **"@"** and **"|"** with space in the text file. c. Remove numbers in the text file. d. Remove punctuations in the text file. (Assume the text file data is stored in **docs** variable as corpus)	10	L6
		Unit – III		
5.	a)	Identify any five common Social Business Objectives.	05	L1
	b)	Analyze a SMART Methodology with its various applications within an Organization.	10	L4
	c)	Design R steps to perform the following operations in Metrics Visualization. a) Install and load required Google Analytics package. b) Authenticating and Saving the Access Token. c) Get the Profile/View ID.	05	L6
6.	a)	Describe Metrics and KPIs. Explain the Key Characteristics for delivering high-	05	L2

		impact KPIs.		
	b)	Analyze the following Critical Web Metrics. a) Bounce Rate c) Conversion Rate b) Exit Rate d) Engagement	10	L4
	c)	Design R steps to Get the Sessions & Transactions for each country dimension sorted in descending order by the sessions in Metrics Visualization.	05	L6
		Unit – IV		
7.	a)	Explain the following Social Analytics processes. i) Sentiment Analysis ii) Social Media Content Creation.	12	L4
	b)	Describe the Competitive Intelligence (CI) Analysis.	08	L2
8.	a)	Explain the following Social Analytics processes. i) Relationships ii) Website Traffic Analysis.	12	L4
	b)	Describe the various benefits of Social Media Optimization.	08	L2
		Unit – V		
9.	a)	Identify the various benefits of Social Media Integration.	10	L1
	b)	Explain the main tasks and responsibilities of Social Media Analytics and Monitoring.	10	L4
10.	a)	Interpret the Future of Social Media Analytics and Monitoring.	10	L2
	b)	Explain with an example the various characteristics of a Mashup.	10	L4

BT* Bloom's Taxonomy, L* Level

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NMAM INSTITUTE OF TECHNOLOGY, NITTE

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Seventh Semester B.E. (CSE) (Credit System) Degree Examinations

November - December 2016

13CS729 – SOCIAL AND WEB ANALYTICS WITH LAB

Duration: 3 Hours | Max. Marks: 100

*Note: 1) Answer **Five full** questions choosing **One full** question from **each Unit.***
2)

		Unit – I	Marks	BT*
1.	a)	List the three components of Social Media Environment.	1	L1
	b)	Explain the Need of using Analytics. How to leverage Social Media for better services.	9	L2
	c)	Design user defined functions and its associated function calls for performing the following respective operations in R. a. Check the number is positive or negative. b. Create a matrix and compute Row Sum, Column Sum, and Total Sum of it. c. Create and display List containing integer vector, built-in function, and matrix. d. Print cube of numbers in sequence.	10	L6
2.	a)	List Open Source and Licensed Analytics Platforms.	02	L1
	b)	Explain the following terms used in Web Analytics. i) Entry Page & Exit Page iii) Page View ii) Conversion iv) Visitor	08	L2
	c)	Create a Data Frame in R for maintaining Employee Details without using .csv file and perform following analysis on it. a. Get the structure of the data frame. b. Get the maximum salary. c. Get the details of the person with maximum salary. d. Get the persons in IT department whose salary is greater than 20000. e. Get the people who joined on or after year 2014.	10	L6
		Unit – II		
3.	a)	Identify the seven key challenges in the Social Media Data Collection.	7	L1
	b)	Explain the following terms in Social Media Data Collection. i) Profile Data iii) Behavioral Data ii) User Generated Data iv) Qualitative Data	8	L2
	c)	Design R steps to perform the following operations. a. Convert the text to lower case. b. Create a term-document matrix and display the first 10 sorted (decreasing) frequent words from it. c. Generate the Word Cloud. (Assume the text file data is stored in **docs** variable as corpus)	5	L6
4.	a)	Explain the Choosing focused Data Sources and Social Networks.	6	L4
	b)	Explain the following terms in Social Analytics i) Brand Advocates iii) Community Managers ii) Social Media Influencers iv) Facebook Social APIs	8	L2
	c)	Design R steps to perform the following operations. a. Build a term-document matrix and display the first 10 sorted (decreasing) frequent words from it. b. Find words that occur atleast 10 times and analyze the association	6	L6

		between frequent terms (assume any term). c. Plot word frequencies for the frequency of the first 10 frequent words. (Assume the text file data is stored in **docs** variable as corpus)		
		Unit – III		
5.	a)	Describe dashboards. Also explain the various types of dashboards.	10	L2
	b)	Analyze any five specific KPIs.	05	L4
	c)	Design R steps to Get the Sessions & Transactions for each Source Medium sorted in descending order by the Transactions in Metrics Visualization.	05	L6
6.	a)	Analyze the tactics to find the best web and social media metrics.	10	L4
	b)	Identify the various benefits from measuring micro conversions.	05	L1
	c)	Formulate the steps using R to authorize the Google Analytics account.	05	L6
		Unit – IV		
7.	a)	Explain the following Social Analytics processes. i) Evolving Topics ii) Audience Identification and Segmentation Analysis.	12	L4
	b)	Identify the questions that have to be taken care during Social Media Enablement Audit.	08	L1
8.	a)	List the different steps in Social Media Enablement Audit process.	08	L1
	b)	Explain with suitable example the Search and Keyword Analysis.	12	L4
		Unit – V		
9.	a)	Describe the main characteristics of a Mashup.	10	L2
	b)	Analyze the Social Media Integration Solution to share outcome with others.	10	L4
10.	a)	Define Mashup. Also describe the different types of Mashups.	10	L2
	b)	Analyze the several challenges when integrating data from different sources.	10	L4

BT* Bloom's Taxonomy, L* Level

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(An Autonomous Institution affiliated to VTU, Belagavi)

Eighth Semester B.E. (CSE) (Credit System) Degree Examinations

April – May 2018

14CS815 – SOCIAL AND WEB ANALYTICS

ation: 3 Hours

*Note: Answer **Five full** questions choosing **One full** question from **each Unit.***

Max. Marks: 100

Unit – I

		Marks	BT*
a)	Explain the importance of Social Media and its benefits.	10	L*2
b)	Explain the need of Analytics.	10	L2
a)	List the difference between Social Analytics and Web Analytics.	4	L4
b)	Explain different types of Web Analytics.	6	L2
c)	Explain the Impact of Social Media on Business.	10	L2

Unit – II

a)	Explain any five R data types with example.	10	L2
b)	Explain R looping and looping control statements with example.	10	L2
a)	Design R application to solve the following. i) Get the details of the person with max salary ii) Get the people who joined on or after 2014.	10	L2

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id,name,salary,start_date,dept
1,Rick,623.3,2012-01-01,IT
2,Dan,515.2,2013-09-23,Operations
3,Michelle,611,2014-11-15,IT
4,Ryan,729,2014-05-11,HR
5,Gary,843.25,2015-03-27,Finance
6,Nina,578,2013-05-21,IT
7,Simon,632.8,2013-07-30,Operations
8,Guru,722.5,2014-06-17,Finance
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b)	Design R program to create Pie Charts and Bar Charts.	10	L6

Unit – III

a)	Explain common business objectives.	10	L2
b)	Explain various types of standard web analytics metrics.	10	L2
a)	Compare Metrics VS KPI's.	5	L5
b)	Explain measuring Macro and Micro conversions.	10	L2
c)	List KPI's targets.	5	L4

Unit – IV

a)	Explain exploring of Twitter's API.	10	L2
b)	Analyzing Tweets and Tweet Entities with Frequency Analysis.	10	L4
a)	Discuss how to understand the Social Graph API.	10	L6
b)	Apply Graph API to examine the friendships from your own social network.	10	L3

Unit – V

a)	Discuss the issue of data representation for mining social media.	10	L6
b)	Explain the most common data mining applications related to social networking sites.	10	L2
a)	Explain Keyword search over graph data.	10	L2
b)	Explain Text Mining Classification algorithms in social networks.	10	L2

Bloom's Taxonomy, L Level

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