Course: F.Y. M. Tech (CSE-Digital Transformation)

Subject Name: Digital Architecture and Digital Business Models

Subject Code: 20PCS101D

Max Marks: 60   Date: - 24/Feb/2022

Note: (1) Q1 is Compulsory.

(2) **Attempt ANY 6 questions from Q2.**

(3) **Assume suitable data and mention it clearly**

(4) **Draw neat diagrams, wherever necessary**

Q.1		CO	BT level	Marks
a)	Which of the following is the most important area of concern in cloud computing? a) Security b) Storage c) Scalability d) All of the mentioned View Answer	CO4	2	1
b)	Which of the following architectural standards is working with cloud computing industry? a) Service-oriented architecture b) Standardized Web services c) Web-application frameworks d) All of the mentioned	CO1	3	1
c)	Which segment do Amazon.com belong? a) B2Bs b) B2Cs c) C2Bs d) C2Cs	CO5	2	1
d)	Value creation system consists of a) Core Assets b) Core Competencies c) Both (a) and (b) d) Neither (a) nor (b)	CO5	3	1
e)	_____ offering provides the tools and development environment to deploy applications on another vendor's application. a) PaaS b) IaaS	CO2	3	1

MGM University, Aurangabad

End Semester Examination [AY: 2021 – 2022 Part-1]

Course: F.Y. M. Tech (CSE-Digital Transformation)

Subject Name: Artificial Intelligence

Subject Code: 20PCS103D

Max Marks: 60

Date: - 28/Feb/2022

Note: (1) Attempt all questions

    (2) Each question carries 10 marks

    (3) Assume suitable data and mention it clearly

    (4) Draw neat diagrams, wherever necessary

		CO	BT level	Marl s
1.	A. How Support Vector Machine is different from linear regression? OR	CO2	3	10
	B. Demonstrate project cycle for AI with example	CO1		
2.	A. Illustrate the term of POS Tagging in NLP OR	CO6	2	10
	B. What is structured & unstructured data in deep learning	CO4		
3.	A. Differentiate between Supervised and Unsupervised Learning OR	CO1	1	10
	B. Explain the steps for Edge detection and Contours using opencv	CO5		
4.	A. How to select the feature for analyze and design of Machine Learning Models OR	CO3	3	10
	B. How Word Embeddings take place in NLP	CO6		
5.	A. Evaluate the different ways to handle Null Values in the dataset? OR	CO3 CO2	2	10
	B. Describe Logistic Regression in details			
6.	A. Which techniques require for text data pre-processing. OR B. Elaborate the term Data Augmentation in image	CO4	3	10
		CO5		

MGM University, Aurangabad
End Semester Examination [AY: 2021 – 2022 Part-1I]

Course:	**F.Y. M. Tech (CSE-Digital Transformation)**	
Subject Name:	Data Science & Business Intelligence	**Subject Code: - 20PCS209E**
Max Marks:	60 **Time : Three Hours**	**Date: - 01st July 2022**

Note: (1) Attempt ANY 2 sub questions from each question

    (2) **Each question carries 05 marks**

    (3) **Assume suitable data and mention it clearly wherever necessary**

    (4) **Draw neat diagrams, wherever necessary**

Question	Marks
Q.1 Solve Any Two 1. Differentiate between BI & Data Science. 2. Explain two most common operations that can be performed on a file in R 3. How to Use aggregate Function in R	10
Q.2 Solve Any Two 1. List and explain the barriers of NoSQL. 2. What is the difference between NoSQL and RDBMS? 3. List the features of JSON format.	10
Q.3 Solve Any Two 1. How to solve a problem in Data Science using Machine learning algorithms? 2. Explain the steps of k-Means Clustering Algorithm. 3. Can Naive Bayes be considered a log linear model? If so, explain why; if not, explain why not.	10
Q.4 Solve Any Two 1. How can Neural Networks be Unsupervised? 2. What are the basics of sampling theory in machine learning? 3. What are some advantages of using Multilayer Perceptron *over a* Single-layer Perceptron?	10
Q.5 Solve Any Two 1. What are some important features of good data visualization? 2. What are the key components or grammar for the visualization in the ggplot2 library in R. Give Example 3. What are the main features of Tableau?	10
Q.6 Solve Any Two 4. Why is ownership of data important? 5. Discuss the need for ethics in data science? 6. Write short note on data forging and fabrication	10

F.Y. M. Tech (CSE-Digital Transformation)

Name: Digital Marketing & Organizational Behavior

Code: 20PCS102D

arks: 60   **Date: - 25ᵗʰ Feb 2022**

) **Each question carries 10 marks**

) **Assume suitable data and mention it clearly wherever necessary**

) **Draw neat diagrams, wherever necessary**

Questions	Marks
Solve Any two 1.1 What is Ad Placement and how will you improve the same? 1.2 What is Ad Rank, and explain how it effects your add performance? 1.3 Explain the different types of display Ads.	10
Solve Any two 1.1 For a B2B SAAS setup explain the setups for Lead Generation through LinkedIn. 1.2 Create a Content Strategy for LinkedIn 1.3 On Twitter explain the Analytics and Targeting strategies.	10
Solve Any two 1.1 What is the difference between SEO(Search Engine Optimization) and Paid Ads? 1.2 What is On-Page and explain the steps in detail. 1.3 What is Email Marketing and its effect on business?	10
Solve Any two 1.1 What are the Foundations of Individual Behavior.? 1.2 Explain the Nature and Scope of Organizational Behavior. 1.3 How will you measure Attitude in an organization.	10
Solve Any two 1.1 How will you influence Group Decision Making in an organization. 1.2 How will you facilitate Negotiations within your organization. 1.3 What are behavioral and situational leadership styles.	10
Solve Any two 1.1 What is Quality of working Life (QWL) and how will you improve QWL. 1.2 How to mitigate Fear at Workplace. 1.3 Describe the steps to manage Stress at a workplace and how will you conduct counseling.	10

MGM University, Aurangabad
End Semester Examination [AY: 2021 – 2022, Part-2]

: F.Y. M. Tech (CSE-Digital Transformation)

t Name: **Digital Transformation & Project Management**

t Code: 20PCS202D

Date: - 25/ 06 /2022

larks: 60

1) Attempt ANY 2 sub questions from each question
2) Each question carries 05 marks
3) Assume suitable data and mention it clearly wherever necessary
4) Draw neat diagrams, wherever necessary

	Marks
lv any two What are the general, strategic, and managerial challenges associated with digitalization? What is Times to market analysis What is your opinion on effect of internal organizational structures when entering into a digital transformation?	10
lve any two hat is the Smile Shaped Curve What is Integral systems and Modularized systems How Production leverage, Innovation leverage, and Transaction leverage are important in strategic Management.	10
olve any two What is Digital Trace Data, How it plays role in business growth What are the different types of data How businesses have the potential to benefit from the data that is being generated.	10
Solve any two What Is Project Management? What is relationship between performance, time, and scope What are the Steps in Managing a Project	10
Solve any two What is PMBOK? What are the things to be included in scope statement? What are the tools and techniques for estimating activity resources?	10
Solve any two What are four basic ways to handle a risk? What are the different categories for potential risks? What do you mean by Contingency Plan, What is its importance?	10

Course: **F.Y. M. Tech (CSE-Digital Transformation)**

Subject Name: ELE-I (Advanced Database Management Systems)

Subject Code: 20PCS105E

Max Marks: 60   **Time : Three Hours**   **Date: - 01ˢᵗ March 2022**

Note: (1) Attempt ANY 2 sub questions from each question

    (2) Each question carries 05 marks

    (3) Assume suitable data and mention it clearly wherever necessary

    (4) Draw neat diagrams, wherever necessary

	Question	Marks
Q.1	Solve Any Two	10
	1. Why are parallel databases usually homogenous?	
	2. In what way does shared nothing architecture resemble a distributed database?	
	3. Why load balancing is required in parallel database? How it is performed?	
Q.2	Solve Any Two	10
	1. What is object-oriented database? Differentiate it with relational database. Discuss the characteristics of object oriented data model.	
	2. Discuss the performance issues of OODBMS.	
	3. Discuss the concept of encapsulation, and tell how it is used to create abstract data types.	
Q.3	Solve Any Two	10
	1. What are primary components of web-based database applications?	
	2. What is the difference between attributes and elements in XML? List some of the important attributes used to specify elements in XML schema	
	3. How does web database architecture work?	
Q.4	Solve Any Two	10
	1. Why do we need multimedia database?	
	2. What are the main obstacles for Mobile databases?	
	3. Describe any mobile transaction Model?	
Q.5	Solve Any Two	10
	1. Compare Deductive and Active Databases	
	2. Discuss the generalized model for active databases along with some applications of them.	
	3. Will functional dependencies be preserved if a relation is converted to a temporal relation by adding a time attribute? How is the problem handled in a temporal database?	
Q.6	Solve Any Two	10
	1. What is Database as a Service (DBaaS)?	
	2. What does a consumer gain when opting to utilize a virtual machine and set up a database on it?	
	3. How is data stored in cloud database?	

Course: F.Y. M. Tech (CSE-Digital Transformation)

Subject Name: Research Methodology

Subject Code: 20PCS110D

Max Marks: 25 Marks   Date: - 03/March/2022

Note: (1) Q1 is Compulsory.

        (2) Attempt ANY 4 questions from Q2.

        (3) Assume suitable data and mention it clearly

        (4) Draw neat diagrams, wherever necessary

Q. No.		CO	BT level	Marks
1.	What is the first stage of a systematic review? a) Assess the relevance of each study to the research question(s) b) Define the purpose and scope of the review c) Appraise the quality of studies from the previous step d) Survey all of the literature contained within a single library	CO4	2	1
2.	An example of non-personal method of Data collection is a) Interview b) Group Interview c) Schedule d) Telephone Interview	CO1	1	1
3.	.... prevent a researcher from blind search and intellectual wandering a) Data b) Sample c) Research tools d) Research design	CO5	2	1
4.	A short summary of Technical Report is called a) Article b) Research Abstract c) Publication d) Guide	CO3	1	1
5.	The first step in formulating a problem is a) Statement of the problem b) Gathering of Data c) Measurement d)Survey	CO2	2	1

MGM University, Aurangabad

End Semester Examination [AY: 2021 – 2022 Part-1]

Course: F.Y. M. Tech (CSE - Digital Transformation)

Subject Name: Information Retrieval

Subject Code: 20PCS107E

Max Marks: 60   **Date: - 02nd March 2022**

Note: (1) Q1 is Compulsory.

    (2) Attempt ANY 6 questions from Q2.

    (3) Assume suitable data and mention it clearly.

    (4) Draw neat diagrams, wherever necessary.

Q.1		CO	BT level	Marks
a)	Direct indexing and searching on compressed text provides better (sometimes much better) _____ at the same time. a) time performance and less space overhead b) time performance and less complexity c) time performance and less computational overhead d) time performance and less management	CO1	1	1
b)	Given the Boolean Query (Brutus OR Caesar) AND Mary, which of following is optimized one of the above given query? a) Brutus OR (Caesar and MARY) b) Details not enough to predict the answer c) (Brutus AND Mary) OR (Caesar AND Mary) d) (Brutus OR Caesar) AND Mary	CO1	3	1
c)	Which of the following is False with respect to Boolean model? a) It does not perform query spell checking b) It does not capture information regarding term position in the document c) It does not consider the document structure d) It uses term frequency information to rank results	CO2	2	1
d)	Which is true about clustering algorithms? Select one: a) Flat algorithms are those which create unrelated partitioning of documents into clusters. b) Soft clustering algorithms are those in which a document belongs to exactly one cluster. c) Hard clustering algorithms are those in which a document can belong to more than one cluster. d. All of the above.	CO3	1	1

			CO		
e)	The similarity between two clusters is defined as a) the maximum of the similarities between all pairs of outer-cluster documents the minimum of the similarities between all pairs of inter-cluster documents b) The minimum of the similarities between all pairs of inter-cluster documents the minimum of the similarities between all pairs of inter-cluster documents c) the maximum of the similarities between all pairs of inter-cluster documents the minimum of the similarities between all pairs of outer-cluster documents d) the minimum of the similarities between all pairs of inter-cluster documents the minimum of the similarities between all pairs of outer-cluster documents	CO3	2	1

f)	A metric derived by taking the log of N divided by the document frequency where N is the total number of documents in a collection is called:
	    a. Document frequency
	    b. tf-idf weight
	    c. collection frequency
	    d. inverse document frequency
		CO3	1	1

g)	The application of relevance feedback to the _____ considers that the term-weight vectors of the documents identified as relevant (to a given query) have similarities among themselves
	
	    a. Vector model
	    b. Boolean model
	    c. Probabilistic model
	    d. Fuzzy set model
		CO4	2	1

h)	For a moderately large collection of static documents maintained on a single system the most appropriate indexing algorithm would be:
	    a) Block sort-based indexing algorithm
	    b) Single-pass in memory indexing algorithm
	    c) Distributed Map-Reduce indexing algorithm
	    d) Dynamic indexing process employing an auxiliary index
		CO5	3	1

i)	A web server communicates with a client (browser) using which protocol:
	    a) HTML
	    b) HTTP
	    c) FTP
	    d) Telnet
		CO5	1	1

j)	Relevance is determined by
	
	    a. structure of document
	    b. structure of query
	    c. the similarity matching function
	    d. structure of query and document both
		CO4	1	1

k)	In page Rank computation in a web a Dead Ends are the pages with no _____ in the web graph. a. Trust Rank b. In links c. out links d. Hub Score	CO6	2	1
l)	Which search engine is well supported with multiple languages? a) Bing b) Google c) Ask d) Yahoo	CO6	1	1

Q2	Attempt ANY 6 questions	CO	BT level	Marks
1.	Explain architecture of Information Retrieval with its application and functions.	CO1	1	8
2.	Explain Boolean model for IR.	CO2	2	8
3.	Consider interactive IR environments. How can we evaluate an information retrieval system? What would be your own suggestion explain.	CO3	3	8
4.	Define Latent Semantic Indexing Model.	CO3	2	8
5.	Define Precision and Recall? Draw the Trade-off between Recall and Precision?	CO4	2	8
6.	How can you find similarity between doc and query in probabilistic principle using Bayes' rule?	CO4	3	8
7.	Discuss different forms of searching the web. Differentiate between Data vs. Text-centric XML.	CO5	3	8
8.	What are the components of search engine? Explain them.	CO6	1	8
9.	List and explain the advantages of using Probabilistic Model.	CO2	2	8
10.	Elaborate the web search architectures.	CO6	1	8

Program: Computer Science and Engineering
Course: Data Security and Compliance
Course Code: MCSET1203

M. Tech SEM-II
Marks: 60
Time: 03 Hrs

Instructions to the students
1. Each question carries 10 marks.
2 All questions are compulsory.
3. Illustrate your answers with neat sketches, diagram etc wherever necessary
4. If some part or parameter is noticed to be missing, you may appropriately assume it and should mention it clearly

	Marks
Q1. Solve any two	
a) What is Data Security? Explain CIA Triad or the three primary security principles.	(5)
b) Differentiate between symmetric & asymmetric ciphers?	(5)
c) Describe recommended uses of digital signature.	(5)
Q2. Solve any two	
a) What is compliance and why it is important?	
b) Explain compliance framework in security.	(5)
c) Explain industry standards and its relation to cyber security.	(5)
	(5)
Q3. Solve any two	
a) Define a client? Explain common type of end point attacks	
b) Explain characteristics of client system administration?	(5)
c) Describe why effective client system administration important to cyber security?	(5)
	(5)
Q4. Solve any two	
a) Explain patching process in detail.	
b) Define Patching? Why patching is important to avoid cyber security threats?	(5)
c) Differentiate between end point protection and detection	(5)
	(5)
Q5. Solve any two	
a) Explain the features of user mode and kernel mode of windows operating system.	(5)
b) Describe an overview of features and tools within the windows administration centre.	(5)
c) Linux File Systems and Directory Structure.	(5)
Q6. Solve any two	
a) Describe hashing and its purpose in encryption.	(5)
b) Explain cryptography & encryption with suitable example.	(5)
c) How to protect data at rest and in transit?	(5)

******End of paper******