

MGM University, Aurangabad



University Department of Information and Communication Technology

Mid Semester Examination – March 2024

Course: B. Tech in IT/ AIML/ DS

Sem: V

Subject Name: DBMS

Subject Code: BTIT3205

Max Marks: 20

Date: 08/03/24

Duration:- 1 Hr.

Instructions to the Students:

1. All questions are compulsory.
2. Draw neat and labeled diagrams wherever necessary.

		CO	Marks
Q. 1	Write answers for the following:		6
Q. 1	Solve the following		
	1. Write a statement that will select the <u>student_ID</u> from the Student table.	CO3	
	2. Write query: To Select all the <i>different</i> values from the <u>Marks</u> column in the Result table.	CO3	
	3. The description of database is called as _____.	CO2	
	4. An attribute derived from the value of another attribute then it is referred as _____.	CO1	
	5 Mention the participation type for-If a company policy states that every employee must work for a department.	CO2	
	6. Write query: To select <u>names</u> of the students in descending order who got <u>marks</u> more than 60.	CO3	
Q.2	Solve Any Two of the following.		3 X 2
(A)	Write a short note on: a) Actors on the scene b) Database Designers c) Database Administrator	CO1	
(B)	Enlist DML commands in SQL with suitable examples.	CO3	
(C)	Explain different components of ER model.	CO2	
Q. 3	Solve Any Two ^{One} of the following.	4X2	8
(A)	Define and explain Data Model in brief.	CO1	
(B)	Explain with suitable example Specialization and Generalization.	CO2	
(c)	Enlist SQL joins. Also explain each join with suitable examples.	CO3	

End

TY-MSE



MGM UNIVERSITY

Chh.Sambhajinagr

UNIVERSITY DEPARTMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY

Mid Semester March 2024

Course: TY : Information and Technology

Sem: VI

Subject Name: IoT Networking (BTIT3208)

Subject Code: BTIT3208

Max Marks: 20

Date: 08.04.2024

Duration:- 1Hr.(11 to 12n)

Instructions				
1. Assume suitable data wherever necessary.				
Q.1	Solve the following question.	CO	Level 1	1 X 6=6
(A)	What are some protocols commonly used in IoT communication?	CO1	I	1
(B)	Which interface module is particularly well-suited for LAN connections in IoT applications?	CO1	I	1
(C)	What is the full form of ESP?	CO2	I	1
(D)	Define the term "baud rate" in the context of data transmission.	CO2	I	1
(E)	In Arduino sketching, what is the purpose of the delay function?	CO2	II	1
(F)	What does MQTT stand for?	CO2	II	1
Q.2				2X 3= 6
(A)	Explain the architecture of Arduino with the help of a neat diagram.	CO2	I	3
(B)	Describe various libraries used in IoT, including their installation procedures, in detail.	CO2	II	3
(C)	Draw and label the pin diagram of ESP8266, highlighting its functionalities.	CO2	II	3
Q.3	ANSWER ANY TWO QUESTIONS			2 X 4=8
(A)	Explain the block diagram of ESP8266 with the help of a clear diagram	CO1	I	4
(B)	Discuss the different protocols used in Wireless Sensor Networks	CO2	II	4
(C)	Write a program to transmit sensor data to a server.	CO2	II	4

***** The End*****

18 MAR 2024 | TY | IT - AIML | MSE | P2 | 23-24



MGM UNIVERSITY		
University Department of Information and Communication Technology		
Mid-Semester Examination – Mar 2024		
Course: TY AIML	Sem: VI	
Subject Name: CSCF	Subject Code: BITOEC505B	
Max Marks: 20	Date: 08/03/2024	Duration: 01Hr.
Instructions to the Students:		
1. Assume suitable data wherever necessary.		
2. All questions are compulsory.		
	(Level/CO)	Marks
Q. 1	Solve Any Four of the following.	4 X 5
1	Discuss categories of cybercrimes in detail.	BL2/CO1
2	Enlighten: "The legal perspectives on cyber security in Global Perspective."	BL3/CO1
3	What are Proxy Servers and Anonymizers?	BL2/CO2
4	What are Keyloggers and Spywares? Explain Antikeylogger.	BL2/CO2
5	What is computer forensics? Explain the role of computers in crime.	BL2/CO3
*** End ***		

MGM UNIVERSITY		
University Department of Information and Communication Technology		
Mid-Semester Examination – Mar 2024		
Course: TY AIML	Sem: VI	
Subject Name: CSCF	Subject Code: BITOEC505B	
Max Marks: 20	Date: 08/03/2024	Duration: 01Hr.
Instructions to the Students:		
1. Assume suitable data wherever necessary.		
2. All questions are compulsory.		
	(Level/CO)	Marks
Q. 1	Solve Any Four of the following.	4 X 5
1	Discuss categories of cybercrimes in detail.	BL2/CO1
2	Enlighten: "The legal perspectives on cyber security in Global Perspective."	BL2/CO1
3	What are Proxy Servers and Anonymizers?	BL2/CO2
4	What are Keyloggers and Spywares? Explain Antikeylogger.	BL2/CO2
5	What is computer forensics? Explain the role of computers in crime.	BL2/CO3
*** End ***		

18 MAR 2024 | TY/IT - AIML/MSE/P2/23-24

MGM University
University Department of Information and Communication Technology
Mid Semester Examination – March 2024

Program : B. Tech in Artificial Intelligence and Machine Learning (AIML)

Sem: VI

Course Name: Data Visualization (DV)

Subject Code: BTAM3204

Max Marks: 20

Duration:- 1 Hr

Instructions to the students:

1.All questions are compulsory 2.Assume suitable data, if required 3.Figures to the right indicate full marks

Q No		C.O	B.L	Marks
Q 1	Solve any THREE of the following?			6
a.	Explain context of Visualization.	1	Understand	
b.	Differentiate between exploratory and explanatory analysis?	1	Understand	
c.	Explain visual encoding.	2	Understand	
d.	Discuss open source tools for data visualization.	2	Remember	
Q 2	Solve any two of the following			3 * 2
a.	What is the importance of visual encoding?	1	analyze	
b.	What are the ingredients of successful visualization?	2	Understand	
c.	Write a short note on Info graphics.	1	analyze	
Q 3	Solve any one TWO of the following.			8
a.	What are the steps in data visualization?	2	Remember	
b.	Discuss types of data visualization.	2	analyze	
c.	Write a short note on type of data used in data visualization.	1	analyze	

“The greatest value of a picture is when it forces us to notice what we never expected to see” – John W Tukey (An American mathematician and statistician, best known for the development of the fast Fourier Transform (FFT) algorithm and box plot.)

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University Department of Information and Communication Technology
Academic Year (2023-24) Part 1

Class: TY B .Tech.(IT) (Sem-V)

EXAM: MSE

Date: 7/03/2024

Total Marks: 20

Time: 1 Hour

Subject: Internet of Things Communication (BTIT3205)

NOTE: Figures to the right indicates full marks

Q.1 Attempt Any four	4X5=20Marks	
		Co
1. Describe Any 5 characteristics of IoT		1
2. Draw and Explain Architecture of IoT		1
3. Compare Sensors and Actuators		2
4. Explain any two Sensors used in IoT		2
5. Draw the Architecture Diagram of Arduino		3
6. Write a Program for Blinking LED after every 1 sec. using Arduino		3

University Department of Information and Communication Technology
Academic Year (2023-24) Part 1

Class: TY B .Tech.(IT) (Sem-V)

EXAM: MSE

Date: 7/03/2024

Total Marks: 20

Time: 1 Hour

Subject: Internet of Things Communication (BTIT3205)

NOTE: Figures to the right indicates full marks

Q.1 Attempt Any four	4X5=20Marks	
		Co
1. Describe Any 5 characteristics of IoT		1
2. Draw and Explain Architecture of IoT		1
3. Compare Sensors and Actuators		2
4. Explain any two Sensors used in IoT		2
5. Draw the Architecture Diagram of Arduino		3
6. Write a Program for Blinking LED after every 1 sec. using Arduino		3

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MGM University
University Department of Information and Communication
Technology

Academic Year (2023-24) Part 1

Class: TY IT/AIML

Date: 06/03/2024

Time: 1 Hour

Class Test: MSE

Total Marks: 20

Subject: ITC

Note: 1) Attempt all the questions.

2) Draw diagram where ever necessary.

Q1) Choose the correct option	5M	Level	CO
1. When the base of log e, unit of measure the information. a) bits b) bytes c) Nats d) None of these		L	1
2. Entropy is _____. a) Average information per message b) Information in signal c) Amplitude of signal d) All of the Above		M	1
3. When the base of log ₂ then unit of measure information ____ a) Bits b) Bytes c) nats d) None		M	1
4. In discrete memoryless source, the current letter produce by a source is stastically independent of. a) Past output b) Future output c) Both d) None		M	1
5. Mutual information is ____ a) Symmetric b) Non-negative c) a&b d) None		M	1
Q2) Attempt Any Three of the Following			
1) Explain Groups, Fields with properties.	5M	M	2
2) Construction Galois field of GF(7)	5M		
3) Generator matrix of (6,3) LBC 1) find the codeword for message 011 2) Decode received message 101101.		M	2
$G = \begin{bmatrix} 1 & 0 & 0 & 1 & 1 & 0 \\ 0 & 1 & 0 & 0 & 1 & 1 \\ 0 & 0 & 1 & 1 & 0 & 1 \end{bmatrix}$			
4) If 5 bits data 01101 is given, represent given data in hamming code	5M	M	2

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MGM UNIVERSITY

University Department of Information and Communication Technology

MSE Examination – March 2024

Class: TY AIML

Sem: VI

Subject Name: Convolutional Neural Network

Subject Code: BTAM3201

Date: 04/03/2024

Time: 60 min

Total Marks: 20

Q.	Solve any FIVE of the following Questions.	CO	Marks
1)	What is use of activation function in neural network? Explain any two activation functions in detail.	CO2	4
2)	Explain use of auto encoder in neural network.	CO2	4
3)	What is Restricted Boltzmann Machine? Explain working and use of RBM.	CO2	4
4)	How human face is identified by human eye in view of vision? What is role of feature selection in human vision?	CO2	4
5)	Explain drawback of vanilla deep neural networks.	CO2	4
6)	Explain back propagation with example.	CO1	4

MGM UNIVERSITY

University Department of Information and Communication Technology

MSE Examination – March 2024

Class: TY AIML

Sem: VI

Subject Name: Convolutional Neural Network

Subject Code: BTAM3201

Date: 04/03/2024

Time: 60 min

Total Marks: 20

Q.	Solve any FIVE of the following Questions.	CO	Marks
1)	What is use of activation function in neural network? Explain any two activation functions in detail.	CO2	4
2)	Explain use of auto encoder in neural network.	CO2	4
3)	What is Restricted Boltzmann Machine? Explain working and use of RBM.	CO2	4
4)	How human face is identified by human eye in view of vision? What is role of feature selection in human vision?	CO2	4
5)	Explain drawback of vanilla deep neural networks.	CO2	4
6)	Explain back propagation with example.	CO1	4

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MGM University
University Department of Information and Communication Technology
Mid Semester Examination – March-2024

Program : TY IT-1/IT-2

Course Name: Web Enabled Software Engineering

BTIT3201

Max Marks: 20

1 Hr

Sem: VI

Subject Code:

Date:- 04/03/2024

Duration:-

Instructions to the students				
1. Solve any four questions.				
		C.O	B.L	Marks
Q No-1	Draw and Explain incremental model	1	Remember	5M
Q No-2	Explain building the analysis model	2	Remember	5M
Q No-3	Explain the different types of architectural style in detail	3	Understand	5M
Q No-4	Explain agile view of process	3	Understand	5M
Q No-5	Define Behavioral Models. Explain Behavioral Models in detail	1	Understand	5M
Q No-6	Explain eliciting requirement.	2	Understand	5M

MGM University
University Department of Information and Communication Technology
Mid Semester Examination – March-2024

Program : TY IT-1/IT-2

Course Name: Web Enabled Software Engineering

BTIT3201

Max Marks: 20

1 Hr

Sem: VI

Subject Code:

Date:- 04/03/2024

Duration:-

Instructions to the students				
1. Solve any four questions.				
		C.O	B.L	Marks
Q No-1	Draw and Explain incremental model	1	Remember	5M
Q No-2	Explain building the analysis model	2	Remember	5M
Q No-3	Explain the different types of architectural style in detail	3	Understand	5M
Q No-4	Explain agile view of process	3	Understand	5M
Q No-5	Define Behavioral Models. Explain Behavioral Models in detail	1	Understand	5M
Q No-6	Explain eliciting requirement.	2	Understand	5M

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Class: Third Year UDICT **Class Test:** MSE **Date:** 05/03/2024 **Subject:** CVPR **Total Marks:** 20

Sr. Q1	Solve all of the following Questions (1 Mark each)	6 Marks
1.	_____ in computer vision involves the use of various sensors to capture visual data, followed by the processing and interpretation of that data to enable machines to understand and interact with the visual world. a) Seeing b) Sensing c) Tracking d) Perceiving	1
2.	_____ in computer vision refers to the comprehensive understanding and interpretation of visual information, incorporating both sensing and seeing. a) Seeing b) Sensing c) Tracking d) Perceiving	1
3.	The opencv command <code>cv2.imread</code> Reads an image from a file. When it reads it, the image is loaded as a _____. a) NumPy array b) NumPy list c) NumPy Set d) NumPy Dictionary	1
4.	The _____ is a flat surface located on the opposite side of the pinhole from the scene. a) Camera Roll b) Sunlight c) Aperture d) Image Plane	1
5.	_____ is assigning pixels in the image to categories or classes of interest. a) Filtering b) Detection c) Classification d) Sharpening	1
6.	_____ is a computer vision technique for locating instances of things in images or videos. a) Filtering b) Detection c) Classification d) Sharpening	1
Q2	Solve any two of the following Questions (3 Mark each)	6 Marks
1.	Explain various types of Color formats.	3
2.	Explain Coordinate Transformations and Transformation matrices.	3
3.	Write short note on (Any one): a) Object Detection b) Image Segmentation	3
Q3	Solve any two of the following Questions (4 Mark each)	8 Marks
1.	What is Lens Distortion and how to overcome it.	4
2.	Explain Sampling and Quantization Concepts.	4
3.	Provide Examples of Recent advancements in surveillance technology enabled by image processing and computer vision techniques.	4

-----End-----

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