



# **UNITED INSTITUTE OF TECHNOLOGY**

**(An Autonomous Institution)**

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Periyanaickenpalayam, Coimbatore – 641020



## **MASTER OF ENGINEERING**

### **DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

#### **QUESTION BANK**

#### **I YEAR**

#### **EVEN SEMESTER**

**ACADEMIC YEAR: 2025 – 2026**

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**HEAD OF THE DEPARTMENT**

**IQAC DIRECTOR**

**PRINCIPAL**

**CHAIRMAN**

**24AIPPC201**  
**WEB ANALYTICS AND INTELLIGENCE**

**UNIT I  
INTRODUCTION AND DATA COLLECTION**

Definition, Process, Key terms: Site references, Keywords and Key phrases; building block terms: Visit characterization terms, Content characterization terms, Conversion metrics; Categories: Offsite web, On site web; Web analytics platform, Web analytics evolution, Need for web analytics, Advantages, Limitations. Clickstream Data: Web logs, Web Beacons, JavaScript tags, Packet Sniffing; Outcomes Data: E-commerce, Lead generation, Brand/Advocacy and Support; Research data: Mindset, Organizational structure, Timing; Competitive Data: Panel-Based measurement, ISP-based measurement, Search Engine data.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define Web Analytics.	CO1	RE	2
2.	What are keywords and key phrases in web analytics?	CO1	RE	2
3.	What is visit characterization in web analytics?	CO1	UN	2
4.	Differentiate between On-site web analytics and Off-site web analytics.	CO1	UN	2
5.	List any two advantages of web analytics.	CO1	RE	2
6.	What is Clickstream Data?	CO1	RE	2
7.	What are Web Beacons?	CO1	RE	2
8.	What are conversion metrics?	CO1	UN	2
<b>PART-B</b>				
1.	Explain the concept of Web Analytics. Discuss its process and key terms used in web analytics.	CO1	UN	16
2.	Explain the need for Web Analytics and discuss its advantages and limitations.	CO1	UN	16
3.	Describe the different categories of Web Analytics such as On-site and Off-site web analytics with examples.	CO1	AP	16
4.	Explain Clickstream Data collection methods such as Web logs, Web Beacons, JavaScript tags, and Packet Sniffing.	CO1	AN	16

**UNIT II**  
**QUALITATIVE AND WEB ANALYTICS FUNDAMENTALS**

Heuristic evaluations: Conducting a heuristic evaluation, Benefits of heuristic evaluations;  
Site Visits: Conducting a site visit, Benefits of site visits; Surveys: Website surveys, Post-visit surveys, Creating and running a survey, Benefits of surveys. Capturing data: Web logs or JavaScripts tags, Separate data serving and data capture, Type and size of data, Innovation, Integration, Selecting optimal web analytic tool, Understanding clickstream data quality, Identifying unique page definition, Using cookies, Link coding issues.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define heuristic evaluation.	CO2	RE	2
2.	Explain the benefits of heuristic evaluations.	CO2	UN	2
3.	Describe the concept of a site visit in web analytics.	CO2	RE	2
4.	List any two benefits of site visits.	CO2	RE	2
5.	Define website survey.	CO2	RE	2
6.	Describe post-visit survey.	CO2	RE	2
7.	Explain cookies in web analytics.	CO2	UN	2
8.	Describe clickstream data quality.	CO2	UN	2
<b>PART-B</b>				
1.	Explain heuristic evaluation and describe the process of conducting a heuristic evaluation with its benefits.	CO2	UN	16
2.	Explain the concept of site visits and discuss the steps involved in conducting a site visit and its benefits.	CO2	AP	16
3.	Explain different types of surveys used in web analytics such as website surveys and post-visit surveys. Also explain how to create and run a survey.	CO2	AP	16
4.	Explain different methods of capturing web data such as web logs and JavaScript tags.	CO2	AN	16

**UNIT III  
WEB METRICS**

Common metrics: Hits, Page views, Visits, Unique visitors, Unique page views, Bounce, Bounce rate, Page/visit, Average time on site, New visits; Optimization (e-commerce, non e-commerce sites): Improving bounce rates, Optimizing adwords campaigns; Real time report, Audience report, Traffic source report, Custom campaigns, Content report, Google analytics; Introduction to KPI, Characteristics, Need for KPI, Perspective of KPI, Uses of KPI.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define web metrics.	CO3	RE	2
2.	List any four common web metrics.	CO3	RE	2
3.	Define page views.	CO3	RE	2
4.	What is meant by unique visitors?	CO3	RE	2
5.	Explain bounce rate.	CO3	UN	2
6.	What is average time on site?	CO3	RE	2
7.	What is a real-time report in web analytics?	CO3	UN	2
8.	Define Key Performance Indicator (KPI).	CO3	RE	2
<b>PART-B</b>				
1.	Explain the common web metrics such as hits, page views, visits, unique visitors, and bounce rate.	CO3	UN	16
2.	Discuss the importance of web metrics such as page/visit, average time on site, and new visits in analyzing website performance.	CO3	AP	16
3.	Explain the optimization techniques used in e-commerce and non e-commerce websites to improve bounce rates and optimize adwords campaigns.	CO3	AN	16
4.	Explain different types of reports available in web analytics such as real-time report, audience report, traffic source report, and content report.	CO3	AP	16

**UNIT IV**  
**WEB ANALYTICS 2.0**

Web Analytics 1.0, Limitations of Web Analytics 1.0, Introduction to Analytics 2.0, Competitive Intelligence Analysis (CI Data Sources – Toolbar Data, Panel Data, ISP Data, Search Engine Data, Hybrid Data), Website Traffic Analysis, Comparing Long-Term Traffic Trends, Analyzing Competitive Site Overlap and Opportunities.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define Web Analytics 1.0.	CO4	RE	2
2.	List any two limitations of Web Analytics 1.0.	CO4	RE	2
3.	What is meant by Web Analytics 2.0?	CO4	RE	2
4.	Define Competitive Intelligence (CI) in web analytics.	CO4	RE	2
5.	What are CI data sources?	CO4	UN	2
6.	What is Toolbar Data in competitive intelligence analysis?	CO4	UN	2
7.	What is meant by Panel Data?	CO4	RE	2
8.	Define ISP Data in web analytics.	CO4	RE	2
<b>PART-B</b>				
1.	Explain the concept of Web Analytics 1.0 and discuss its limitations in modern web analysis.	CO4	UN	16
2.	Describe the introduction and importance of Web Analytics 2.0 in digital business environments.	CO4	UN	16
3.	Explain Competitive Intelligence (CI) analysis and discuss the different CI data sources such as toolbar data, panel data, ISP data, search engine data, and hybrid data.	CO4	UN	16
4.	Analyze the role of website traffic analysis in understanding user behavior and improving website performance.	CO4	AN	16

**UNIT V**  
**GOOGLE ANALYTICS AND RELEVANT TECHNOLOGIES**

Brief introduction and working of Google Analytics, AdWords, Benchmarking, Categories of Traffic (Organic Traffic, Paid Traffic), Google Website Optimizer, Implementation Technology, Limitations, Performance Concerns, Privacy Issues, Internet & TCP/IP, Client/Server Computing, HTTP (HyperText Transfer Protocol), Server Log Files & Cookies, Web Bugs.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define Google Analytics.	CO5	UN	2
2.	What is Google AdWords?	CO5	RE	2
3.	What is meant by benchmarking in web analytics?	CO5	RE	2
4.	Define organic traffic.	CO5	UN	2
5.	What is paid traffic?	CO5	RE	2
6.	What is Google Website Optimizer?	CO5	RE	2
7.	What are cookies in web technology?	CO5	RE	2
8.	Define HTTP (HyperText Transfer Protocol).	CO5	UN	2
<b>PART-B</b>				
1.	Explain the working of Google Analytics and discuss its importance in analyzing website performance.	CO5	UN	16
2.	Describe Google AdWords and explain how it helps in generating paid traffic to websites.	CO5	AP	16
3.	Explain the categories of website traffic and compare organic traffic and paid traffic with examples.	CO5	AP	16
4.	Discuss the implementation technology of web analytics and explain its limitations, performance concerns, and privacy issues.	CO5	AN	16

**24AIPPC202**  
**DATA HANDLING AND VISUALIZATION**

## UNIT I- INTRODUCTION TO DATA VISUALIZATION AND DATA FOUNDATIONS

Definition and importance, Relationship between Visualization and Other Fields, Types of Data, Data Preprocessing, The Visualization Process, Semiology of Graphical Symbols, The Eight Visual Variables, Visualization Taxonomies.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1	Define data visualization and state its primary objective.	CO1	RE	2
2	List any four types of data used in visualization.	CO1	RE	2
3	Recall the eight visual variables proposed by Bertin.	CO1	RE	2
4	State the significance of data preprocessing in visualization.	CO1	RE	2
5	Identify the key stages of the visualization process.	CO1	RE	2
6	What is semiology of graphical symbols?	CO1	RE	2
7	Distinguish between quantitative and qualitative data in the context of visualization.	CO1	UN	2
8	Summarize the relationship between data visualization and fields such as statistics and computer graphics.	CO1	UN	2
<b>PART B</b>				
1.	Explain the visualization process in detail, illustrating each stage with appropriate examples relevant to AI applications.	CO1	UN	16
2.	Describe the various types of data employed in visualization systems and discuss how each type influences the choice of visual representation	CO1	UN	16
3.	Apply the concept of the eight visual variables to encode a multivariate dataset, justifying the selection of each variable for a specific data attribute.	CO1	AP	16
4.	Illustrate the role of semiology of graphical symbols in constructing unambiguous visual representations, with suitable examples from data science.	CO1	AP	16

## UNIT II- VISUALIZATION TECHNIQUES

Visualization Techniques for Spatial Data, Visualization Techniques for Geospatial Data, Visualization Techniques for Multivariate Data, Visualization Techniques for Trees, Graphs, and Networks, Text and Document Visualization

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1	Define spatial data visualization and mention its primary objective.	CO2	RE	2
2	List two commonly used techniques for geospatial data visualization.	CO2	RE	2
3	State the meaning of multivariate data visualization.	CO2	RE	2
4	What is tree visualization? Give one practical example.	CO2	RE	2
5	Define network visualization and identify its core components.	CO2	RE	2
6	Recall two standard methods used in text visualization.	CO2	RE	2
7	What is document visualization, and when is it applied?	CO2	RE	2
8	Name two visualization tools suitable for rendering geospatial data.	CO2	RE	2
<b>PART B</b>				
1.	Explain the principal visualization techniques used for spatial data, describing how each technique encodes location and attribute information effectively.	CO2	UN	16
2	Discuss the diverse approaches employed in geospatial data visualization, comparing choropleth maps, cartograms, and heat maps with respect to their use cases.	CO2	UN	16
3	Apply appropriate tree and graph visualization techniques to represent hierarchical knowledge structures in an AI-based recommendation system.	CO2	AP	16
4	Demonstrate the use of scatter plot matrices and parallel coordinate plots to visualize a high-dimensional dataset, highlighting patterns and correlations.	CO2	AP	16

## UNIT III-INTERACTION CONCEPTS AND TECHNIQUES

### Interaction Operators, Interaction Operands and Spaces, Interaction Techniques

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Define interaction operators in the data visualization.	CO3	RE	2
2.	State the meaning of interaction operands and give one example.	CO3	RE	2
3.	List any two types of interaction spaces used in visualization systems.	CO3	RE	2
4.	Recall two commonly used interaction techniques in visual analytics.	CO3	RE	2
5.	What is the significance of user interaction in data visualization?	CO3	RE	2
6.	Define the term 'zoom and pan' as an interaction technique in visualization.	CO3	RE	2
7.	Name two benefits of incorporating interaction mechanisms in visualization tools.	CO3	RE	2
8.	What role do interaction operands play in modifying a visual representation?	CO3	RE	2
<b>PART B</b>				
1.	Explain the various interaction operators available in data visualization systems, describing the function of each operator with illustrative examples.	CO3	UN	16
2.	Describe the concept of interaction operands and interaction spaces, discussing how they collectively govern the scope of user manipulation in a visualization.	CO3	UN	16
3.	Apply a set of interaction techniques including brushing, linking, and dynamic querying to explore patterns in a multivariate healthcare dataset.	CO3	AP	16
4.	Illustrate the implementation of focus-and-context interaction techniques in a large-scale network visualization, demonstrating their impact on user comprehension.	CO3	AP	16

## UNIT IV-DESIGNING EFFECTIVE VISUALIZATIONS

### Steps in Designing Visualizations, Problems in Designing Effective Visualizations

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Define user tasks in visualization and give two examples.	CO5	RE	2
2	List two user characteristics that influence the design of a visualization system.	CO5	RE	2
3	State two data characteristics that affect the selection of a visualization technique.	CO5	RE	2
4	Recall the meaning of visualization benchmarking.	CO5	RE	2
5	What are the issues of cognition in the context of visualization evaluation?	CO5	RE	2
6	Identify two system design issues that arise in large-scale visualization applications.	CO5	RE	2
7	Name two criteria used to evaluate the effectiveness of a visualization technique.	CO5	RE	2
8	State the role of hardware capabilities in the deployment of advanced visualization systems.	CO5	RE	2
<b>PART B</b>				
1	Explain the various user tasks and user characteristics relevant to visualization evaluation, discussing how these parameters guide the selection and refinement of visualization techniques.	CO5	UN	16
2	Describe the benchmarking procedures used to evaluate visualization systems, outlining the criteria, metrics, and datasets employed in a structured assessment framework.	CO5	UN	16
3	Apply a structured evaluation framework to assess the usability and effectiveness of a time-series visualization tool deployed in a predictive analytics application.	CO5	AP	16
4	Demonstrate how data characteristics—including volume, velocity, and variety—influence the choice of visualization technique and its subsequent evaluation criteria.	CO5	AP	16

## UNIT V

### EVALUATING VISUALIZATION TECHNIQUES AND RESEARCH DIRECTIONS IN VISUALIZATION

User Tasks, User Characteristics, Data Characteristics, Visualization Characteristics, Structures for Evaluating Visualizations, Benchmarking Procedures, Issues of Data, Issues of Cognition, Perception, and Reasoning, Issues of System Design, Issues of Evaluation, Issues of Hardware, Issues of Applications.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1	List the sequential steps involved in the design of an effective visualization.	CO5	RE	2
2	Define visualization aesthetics and state its influence on data perception.	CO5	RE	2
3	Recall two common challenges encountered in designing effective visualizations.	CO5	RE	2
4	What is meant by user-centered design in the visualization?	CO5	RE	2
5	State the role of color schemes in communicating data insights effectively.	CO5	RE	2
6	Define the concept of visual clutter and its impact on visualization clarity.	CO5	RE	2
7	Name two factors that directly influence the effectiveness of a visualization.	CO5	RE	2
8	What is the function of feedback mechanisms in iterative visualization design?	CO5	RE	2
<b>PART B</b>				
1	Explain the step-by-step process of designing an effective visualization, elaborating on the role of task analysis, data mapping, and visual encoding at each stage.	CO5	UN	16
2	Describe the common problems encountered in designing effective visualizations, such as overplotting, inappropriate chart selection, and misleading scales, with corrective measures.	CO5	UN	16
3	Apply user-centered design principles to develop a visualization dashboard for monitoring the performance metrics of a deep learning model.	CO5	AP	16
4	Demonstrate the use of pre-attentive attributes and Gestalt principles in constructing a visualization that facilitates rapid pattern recognition in large datasets.	CO5	AP	16

**24AIPPC203**

**COMPUTER VISION**

**UNIT I**  
**INTRODUCTION TO CYBER CRIME AND FORENSICS**

Image Processing, Computer Vision and Computer Graphics, Computer Vision Applications: Document Image Analysis, Biometrics, Object Recognition, Tracking Medical Image Analysis, Content-Based Image Retrieval, Video Data Processing, Multimedia, Virtual Reality and Augmented Reality.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define Computer Vision.	CO1	RE	2
2.	Differentiate between Image Processing, Computer Vision, and Computer Graphics.	CO1	UN	2
3.	List any two applications of Computer Vision	CO1	RE	2
4.	What is Document Image Analysis?	CO1	RE	2
5.	Mention two applications of Biometrics in Computer Vision.	CO1	RE	2
6.	What is Content-Based Image Retrieval (CBIR)?	CO1	RE	2
7.	How is Computer Vision used in Medical Image Analysis?	CO1	RE	2
8.	What is the difference between Virtual Reality (VR) and Augmented Reality (AR)?	CO1	UN	2
<b>PART-B</b>				
1.	Explain the differences between Computer Vision, Image Processing, and Computer Graphics with examples.	CO1	UN	16
2.	Discuss various applications of Computer Vision such as Biometrics, Medical Imaging, and Augmented Reality.	CO1	UN	16
3.	Apply CBIR to retrieve images based on visual features in a real-world application.	CO1	AP	16
4.	Demonstrate how Computer Vision techniques are utilized in Virtual Reality and multimedia applications to enable interaction, tracking, and immersive experiences.	CO1	AP	16

## UNIT II-IMAGE REPRESENTATION AND ANALYSIS

Image representation, Image processing techniques like color and geometric transforms, Edge-detection Techniques, Filtering, Mathematical operations on image and its applications like convolution, filtering

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is Image Representation?	CO2	RE	2
2.	Define Geometric Transformation.	CO2	RE	2
3.	What is Convolution in Image Processing?	CO2	RE	2
4.	List two types of Image Filtering techniques.	CO2	RE	2
5.	What is the significance of Edge Detection?	CO2	RE	2
6.	Explain the purpose of Color Transformation in Image Processing.	CO2	UN	2
7.	How does Image Filtering help in noise reduction?	CO2	RE	2
8.	What is the role of Mathematical Operations in Image Processing?	CO2	RE	2
<b>PART-B</b>				
1.	Explain different Image Processing techniques like Color Transformations, Geometric Transformations, and Filtering.	CO2	UN	16
2.	Describe various Edge Detection techniques with their mathematical representation.	CO2	UN	16
3.	Examine the impact of Convolution and Filtering in image processing.	CO2	AN	16
4.	Investigate how Convolution and Filtering support real-world applications.	CO2	AN	16

### UNIT III-MOTION ESTIMATION

Introduction to motion, Regularization theory, Optical computation, Stereo Vision, Motion estimation, Structure from motion and models

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is Motion Estimation?	CO3	UN	2
2.	Define Optical Flow.	CO3	RE	2
3.	What is Stereo Vision?	CO3	RE	2
4.	Differentiate between Motion Estimation and Structure from Motion.	CO3	UN	2
5.	State the purpose of Regularization Theory in computer Vision.	CO3	UN	2
6.	Mention the applications of Optical Computation in Motion Estimation.	CO3	RE	2
7.	How does Stereo Vision help in depth perception?	CO3	UN	2
8.	What is the importance of Structure from Motion?	CO3	UN	2
<b>PART-B</b>				
1.	Explain the concept of Motion in Computer Vision and discuss the importance of Motion Estimation.	CO3	UN	16
2.	Describe the principles of Stereo Vision and explain how it is used to obtain depth information.	CO3	UN	16
3.	Apply Motion Estimation techniques to solve practical problems in Computer Vision.	CO3	AP	16
4.	Demonstrate how Structure from Motion models are utilized in real-world applications.	CO3	AP	16

**UNIT IV  
TRANSFORMING REQUIREMENTS**

Hough transforms and other simple object recognition methods, Shape correspondence and shape matching, Principal component analysis, Shape priors for recognition

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is the Hough Transform?	CO4	RE	2
2.	Define shape correspondence.	CO4	UN	2
3.	What is PCA (Principal Component Analysis) in object recognition?	CO4	RE	2
4.	Mention the advantages of shape priors in recognition.	CO4	RE	2
5.	How does shape matching help in object recognition?	CO4	RE	2
6.	What is the role of eigenfaces in face recognition?	CO4	RE	2
7.	Define active appearance models in object recognition.	CO4	RE	2
8.	What are the applications of object recognition in real-world scenarios?	CO4	RE	2
<b>PART-B</b>				
1.	Explain the concept of Hough Transform and describe how it is used for detecting lines and shapes in images.	CO4	UN	16
2.	Describe the principles of Principal Component Analysis and explain its role in object recognition systems.	CO4	UN	16
3.	Demonstrate how Hough Transform can be applied to detect geometric shapes such as lines and circles in digital images.	CO4	AP	16
4.	Apply Principal Component Analysis to reduce the dimensionality of image features for improving object recognition performance.	CO4	AP	16

## UNIT V-APPLICATIONS

Photo album, Face detection, Face recognition, Eigenfaces, Active appearance and 3Dshape models of faces Application: Surveillance, foreground - background separation, particle filters, Chamfer matching, tracking, and occlusion, combining views from multiple cameras, human gait analysis Application: In vehicle vision system: locating roadway, road markings, identifying road signs, locating pedestrians.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is Eigenface in face recognition?	CO5	RE	2
2.	Define foreground-background separation.	CO5	RE	2
3.	What is particle filtering in tracking?	CO5	RE	2
4.	Mention two applications of human gait analysis.	CO5	RE	2
5.	How does an in-vehicle vision system work?	CO5	RE	2
6.	Define chamfer matching in object tracking	CO5	RE	2
7.	What is occlusion in tracking?	CO5	RE	2
8.	Mention two applications of Computer Vision in road safety.	CO5	RE	2
<b>PART-B</b>				
1.	Apply the concept of Face Detection and Face Recognition in organizing and searching images in a digital photo album.	CO5	AP	16
2.	Demonstrate how Eigenfaces can be used to recognize faces in a biometric authentication system.	CO5	AP	16
3.	Apply Particle Filter techniques for tracking moving objects in video surveillance systems.	CO5	AP	16
4.	Illustrate how computer vision techniques are applied in an in-vehicle vision system to locate roadways, detect road markings, identify road signs, and locate pedestrians.	CO5	AP	16

**24AIPPC204**  
**DEEP LEARNING TECHNIQUES**

**UNIT I**  
**INTRODUCTION**

Introduction to machine learning- Linear models (SVMs and Perceptrons, logistic regression)- Intro to Neural Nets: What a shallow network computes- Training a network: loss functions, back propagation and stochastic gradient descent- Neural networks as universal function approximates.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Define Deep Learning.	CO1	RE	2
2.	State the meaning of a perceptron in machine learning.	CO1	RE	2
3.	Explain the role of activation functions in neural networks.	CO1	UN	2
4.	Compare perceptron and logistic regression models.	CO1	UN	2
5.	Illustrate the working principle of stochastic gradient descent.	CO1	UN	2
6.	Explain how logistic regression performs classification.	CO1	RE	2
7.	Describe how backpropagation works in training a neural network.	CO1	UN	2
8.	List two examples of linear models in machine learning.	CO1	RE	2
<b>PART B</b>				
1.	Explain the role of machine learning in deep learning and compare Support Vector Machines (SVM), perceptron, and logistic regression models.	CO1	UN	16
2.	Describe the training process of a neural network with a suitable example.	CO1	UN	16
3.	Illustrate the process of backpropagation in neural networks and demonstrate its significance in updating weights during training.	CO1	AP	16
4.	Analyze the different types of loss functions used in neural networks and compare their applications in various learning tasks.	CO1	AN	16

**UNIT II**  
**DEEP NETWORKS**

History of Deep Learning- A Probabilistic Theory of Deep Learning- Backpropagation and regularization, batch normalization- VC Dimension and Neural Nets-Deep Vs Shallow Networks- Convolutional Networks- Generative Adversarial Networks (GAN), Semi-supervised Learning.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	What is the difference between deep and shallow networks?	CO2	RE	2
2.	Illustrate the concept of batch normalization in neural networks.	CO2	UN	2
3.	Interpret the role of VC dimension in neural networks.	CO2	UN	2
4.	List two advantages of generative adversarial networks (GANs).	CO2	RE	2
5.	Recall the working principle of convolutional networks.	CO2	RE	2
6.	What is regularization in neural networks?	CO2	RE	2
7.	Outline the concepts of semi-supervised learning	CO2	RE	2
8.	Compare deep networks and shallow networks.	CO2	UN	2
<b>PART B</b>				
1.	Apply the concept of probabilistic theory to explain how deep learning models handle uncertainty in predictions.	CO2	AP	16
2.	Construct a neural network model and apply backpropagation to update the weights during training.	CO2	AP	16
3.	Summarize the concept of a convolutional neural network (CNN) model and apply it to image recognition applications.	CO2	UN	16
4.	Analyze the working and applications of generative adversarial networks (GANs)..	CO2	AN	16

## UNIT III- DIMENSIONALITY REDUCTION

Linear (PCA, LDA) and manifolds, metric learning - Auto encoders and dimensionality reduction in networks - Introduction to Convnet - Architectures – AlexNet, VGG, Inception, ResNet - Training a Convnet: weights initialization, batch normalization, hyperparameter optimization

Q.No	Question	CO	BT L	Marks
<b>PART A</b>				
1	Define dimensionality reduction.	CO3	RE	2
2	What are autoencoders?	CO3	RE	2
3	Explain metric learning in brief.	CO3	UN	2
4	Define PCA and LDA.	CO3	RE	2
5	What are manifolds in dimensionality reduction?	CO3	RE	2
6	List two applications of convolutional neural networks.	CO3	RE	2
7	What is hyperparameter optimization?	CO3	RE	2
8	Name two architectures used in deep learning.	CO3	RE	2
<b>PART B</b>				
1	Illustrate autoencoders and their role in dimensionality reduction	CO3	UN	16
2	Compare principal component analysis (PCA) and linear discriminant analysis (LDA).	CO3	UN	16
3	Organize the architecture and working of AlexNet and VGG.	CO3	AP	16
4	Analyze hyperparameter optimization techniques used in deep learning.	CO3	AN	16

**UNIT IV**  
**OPTIMIZATION AND GENERALIZATION**

Optimization in deep learning– Non- convex optimization for deep networks- Stochastic Optimization- Generalization in neural networks- Spatial Transformer Networks- Recurrent networks, LSTM - Recurrent Neural Network Language Models- Word-Level RNNs & Deep Reinforcement Learning - Computational & Artificial Neuroscience..

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	State the meaning of non-convex optimization.	CO4	RE	2
2.	Explain how stochastic optimization improves the training of deep learning models.	CO4	UN	2
3.	List two difficulties faced while training deep neural networks.	CO4	UN	2
4.	what is meant by generalization in neural networks.	CO4	RE	2
5.	Define LSTM.	CO4	RE	2
6.	Describe how recurrent neural networks process sequential information.	CO4	UN	2
7.	What is computational neuroscience?	CO4	RE	2
8.	Define Spatial Transformer Network (STN).	CO4	RE	2
<b>PART B</b>				
1.	Interpret the working principles of major training algorithms used in deep learning.	CO4	UN	16
2.	Summarize the structure and functioning of recurrent neural networks and their practical uses.	CO4	UN	16
3.	Break down the internal structure of LSTM cells and evaluate the function of its gating mechanisms.	CO4	AN	16
4.	Compare and categorize various generalization approaches based on their impact on model accuracy and overfitting.	CO4	AN	16

**UNIT V**  
**CASE STUDY AND APPLICATIONS**

Imagenet- Detection-Audio WaveNet-Natural Language Processing Word2Vec - Joint  
Detection- BioInformatics- Face Recognition- Scene Understanding- Gathering Image Captions

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	State what WaveNet is in deep learning.	CO5	RE	2
2.	Explain how deep learning contributes to natural language processing tasks.	CO5	UN	2
3.	Define ImageNet used in computer vision research.	CO5	RE	2
4.	Describe the concept of object detection and its purpose in computer vision.	CO5	UN	2
5.	List the main applications of deep learning in real-world systems.	CO5	RE	2
6.	Give the definition of face recognition in deep learning.	CO5	RE	2
7.	Explain the idea of scene understanding in deep learning systems.	CO5	UN	2
8.	Identify the concept of bioinformatics applications in deep learning	CO5	RE	2
<b>PART B</b>				
1.	Explain how deep learning techniques are used in image recognition systems with suitable examples.	CO5	UN	16
2.	Apply deep learning models to demonstrate how images can be classified or recognized in computer vision applications.	CO5	AP	16
3.	Analyze the working of deep learning architectures used for image recognition and evaluate their effectiveness in real-world applications.	CO5	AN	16
4.	Explain the significance of deep learning methods in bioinformatics research.	CO5	UN	16

**24CSPPE209**  
**HIGH PERFORMANCE COMPUTING FOR BIG DATA**

**UNIT XVI**  
**INTRODUCTION**

The Emerging IT Trends- IOT/IOE-Apache Hadoop for big data analytics-Big data into big insights and actions – Emergence of BDA discipline – strategic implications of big data – BDA Challenges – HPC paradigms – Cluster computing – Grid Computing – Cloud computing – Heterogeneous computing – Mainframes for HPC - Supercomputing for BDA – Appliances for BDA.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Define Big Data.	CO1	RE	2
2.	Define IOE.	CO1	RE	2
3.	Distinguish Cluster and Grid Computing.	CO1	UN	2
4.	Write the applications of BDA.	CO1	RE	2
5.	Define Apache Hadoop and its role in big data analytics.	CO1	RE	2
6.	How does Big Data Analytics (BDA) provide strategic business insights?	CO1	UN	2
7.	How does heterogeneous computing enhance high-performance computing (HPC)?	CO1	UN	2
8.	What is cluster computing?	CO1	RE	2
<b>PART B</b>				
1.	Explain working of the following phases of Map Reduce with one common example (i) Map Phase, (ii) Shuffle and sort phase, and (iii) Reducer Phase	CO1	UN	16
2.	Illustrate in detail about grid computing and Cluster computing.	CO1	AN	16
3.	Explain in detail about the main frames of HPC with suitable example.	CO1	UN	16
4.	Write in detail about the real time applications of Big data Analytics.	CO1	AN	16

## UNIT II

### NETWORK & SOFTWARE INFRASTRUCTURE FOR HIGH PERFORMANCE BDA

Design of Network Infrastructure for high performance BDA – Network Virtualization – Software Defined Networking – Network Functions Virtualization – WAN optimization for transfer of big data – started with SANs- storage infrastructure requirements for storing big data – FC SAN – IP SAN – NAS – GFS – Panasas – Luster file system – Introduction to cloud storage.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Write short notes on Network Functions Virtualization	CO2	UN	2
2.	Define SAN. List out some advantages of SAN.	CO2	RE	2
3.	Differentiate FC SAN and IP SAN	CO2	RE	2
4.	What is Luster file System?	CO2	UN	2
5.	What is the role of WAN optimization in big data transfer?	CO2	RE	2
6.	How does NAS differ from SAN in big data storage?	CO2	RE	2
7.	Compare GFS and Panasas in terms of big data storage performance.	CO2	UN	2
8.	How does Luster File System enhance high-performance data storage?	CO2	UN	2
<b>PART B</b>				
1.	Discuss about the storage infrastructure requirements for storing big data.	CO2	AP	16
2.	Generalize the following in detail. (i) Google Bigtable Datastore (ii) Mobile Me.	CO2	AN	16
3.	Explain about the Network function virtualization for high performance for big data	CO2	UN	16
4.	Find the different file systems used in cloud environment and Explain in detail about the file systems used GFS and Amazon S3	CO2	UN	16

**UNIT III**  
**REAL TIME ANALYTICS USING HIGH PERFORMANCE COMPUTING**

Technologies that support Real time analytics – MOA: Massive online analysis – GPFS: General parallel file system – Client case studies – Key distinctions – Machine data analytics – operational analytics – HPC Architecture models – In Database analytics – In memory analytics				
Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	State Massive Online Analysis.	CO3	UN	2
2.	Outline the challenges in implementing HPC Architecture	CO3	UN	2
3.	What is real-time analytics?	CO3	RE	2
4.	What is GPFS (General Parallel File System)?	CO3	RE	2
5.	Define In-Database Analytics	CO3	RE	2
6.	Give an example of a real-world application of in-memory analytics.	CO3	UN	2
7.	What are the key distinctions between traditional analytics and real-time analytics?	CO3	RE	2
8.	How does HPC architecture support real-time analytics?	CO3	UN	2
<b>PART B</b>				
1.	You are required to make a case study on STOCK MARKET PREDICTION with following requirements: (i) Briefly introduce about Stock market and its prediction (ii) The Solution Path of the stock Market Prediction. (iii) Do the Empirical Study of the Stock Market Prediction.	CO3	AP	16
2.	Discuss in detail about (i) Tabulate the short notes on GPFS (ii) Compare and contrast- In Database analytics–In memory analytics.	CO3	AN	16
3.	Describe Massive Online Analysis (MOA) and its role in real-time big data processing. How does it compare with traditional analytics models?	CO3	AP	16
4.	Explain High-Performance Computing (HPC) architecture models and their role in real-time analytics. Discuss how they help in processing big data efficiently.	CO3	UN	16

**UNIT IV**  
**SECURITY AND TECHNOLOGIES**

Security, Privacy and Trust for user – generated content: The challenges and solutions – Role of real time big data processing in the IoT – End to End Security Framework for big sensing data streams – Clustering in big data.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	What are the key challenges in ensuring security for user-generated content?	CO4	RE	2
2.	Define real-time big data processing.	CO4	RE	2
3.	What is an end-to-end security framework?	CO4	RE	2
4.	What is clustering in big data	CO4	RE	2
5.	Give an example of a security solution for protecting big data streams.	CO4	UN	2
6.	How is clustering used for analyzing big data in IoT?	CO4	RE	2
7.	Compare different security challenges in user-generated content.	CO4	UN	2
8.	What are the advantages and disadvantages of clustering in big data?	CO4	RE	2
<b>PART B</b>				
1.	Discuss the security, privacy, and trust issues related to user-generated content. What are the key challenges and solutions in managing secure content?	CO4	AP	16
2.	Provide examples of IoT applications using real-time data processing.	CO4	AN	16
3.	Explain the importance of security in data streams and discuss the techniques used to secure data from collection to storage and analysis	CO4	UN	16
4.	Explain the risks and threats associated with big data analytics. How do organizations address these challenges in real-time big data applications?	CO4	UN	16

**UNIT V**  
**EMERGING BIG DATA APPLICATIONS**

Deep learning Accelerators – Accelerators for clustering applications in machine learning - Accelerators for classification algorithms in machine learning – Accelerators for Big data Genome Sequencing				
<b>Q.No</b>	<b>Question</b>	<b>CO</b>	<b>BTL</b>	<b>Marks</b>
<b>PART A</b>				
1.	What are deep learning accelerators?	CO5	RE	2
2.	Define clustering in machine learning.	CO5	RE	2
3.	What is a classification algorithm in machine learning?	CO5	UN	2
4.	What is genome sequencing in big data analytics?	CO5	RE	2
5.	Compare CPUs, GPUs, and TPUs in deep learning acceleration.	CO5	UN	2
6.	What are the challenges in accelerating big data genome sequencing?	CO5	RE	2
7.	How can TPUs improve deep learning performance?	CO5	UN	2
8.	How do accelerators enhance clustering applications?	CO5	RE	2
<b>PART B</b>				
1.	Explain deep learning accelerators and their role in high-performance computing. Compare different accelerators such as GPUs, TPUs, and FPGAs used in deep learning.	CO5	UN	16
2.	Discuss the role of accelerators in clustering applications in machine learning. How do they improve the efficiency of clustering algorithms?	CO5	AP	16
3.	Explain the use of accelerators in classification algorithms. Discuss different accelerators and their impact on the accuracy and speed of classification tasks.	CO5	UN	16
4.	Compare different accelerators used for machine learning applications, including clustering, classification, and genome sequencing. Discuss their advantages and limitations	CO5	AP	16

**24AIPPE205**  
**VIDEO ANALYTICS**

**UNIT I**  
**INTRODUCTION TO BIG DATA & DATA ANALYSIS**

Introduction to Big Data Platform – Challenges of Conventional systems – Web data- Evolution of Analytic scalability- analytic processes and tools- Analysis Vs Reporting- Modern data analytic tools- Data Analysis: Regression Modeling- Bayesian Modeling- Rule induction.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Define Big Data platform.	CO1	RE	2
2.	Recall challenges of conventional systems.	CO1	RE	2
3.	Identify features of web data.	CO1	RE	2
4.	Differentiate analysis and reporting.	CO1	UN	2
5.	Outline analytic scalability.	CO1	UN	2
6.	Classify types of regression models.	CO1	UN	2
7.	Summarize Bayesian modeling.	CO1	UN	2
8.	Interpret rule induction mechanism.	CO1	UN	2
<b>PART B</b>				
1.	Examine the lifecycle of analytic processes.	CO1	UN	16
2.	Apply regression and Bayesian modeling in a real dataset.	CO1	AP	16
3.	Analyze the effectiveness of modern analytic tools.	CO1	AN	16
4.	Compare Big Data systems with traditional systems highlighting performance.	CO1	AN	16

**UNIT II**  
**MINING DATA STREAMS**

Introduction to Stream concepts- Stream data model and architecture – Stream Computing- Sampling data in a Stream- Filtering Streams- Counting distinct elements in a Stream- Estimating moments- Counting oneness in a window- Decaying window- Real time Analytics platform(RTAP) applications- case studies.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Specify the stream data model.	CO2	RE	2
2.	List stream architecture components.	CO2	RE	2
3.	State objectives of stream computing.	CO2	RE	2
4.	Distinguish sampling from filtering.	CO2	UN	2
5.	Tabulate window models.	CO2	UN	2
6.	Relate decaying window with time-based models.	CO2	UN	2
7.	Discuss real-time analytics platforms.	CO2	UN	2
8.	Mention RTAP applications.	CO2	RE	2
<b>PART B</b>				
1.	Apply stream processing architecture in real-time systems.	CO2	AP	16
2.	Examine sampling techniques for continuous data streams.	CO2	UN	16
3.	Analyze distinct counting and moment estimation methods.	CO2	AN	16
4.	Investigate the performance of decaying window models.	CO2	AN	16

**UNIT III**  
**VIDEO ANALYTICS**

Introduction- Video Basics - Fundamentals for Video Surveillance- Scene Artifacts- Object Detection and Tracking: Adaptive Background Modelling and Subtraction- Pedestrian Detection and Tracking-Vehicle Detection and Tracking- Articulated Human Motion Tracking in Low-Dimensional Latent Spaces.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	Label elements of video basics.	CO3	RE	2
2.	Point out components of video surveillance.	CO3	RE	2
3.	Recognize types of scene artifacts.	CO3	RE	2
4.	Categorize object detection techniques.	CO3	UN	2
5.	State purpose of background subtraction.	CO3	RE	2
6.	Clarify pedestrian tracking logic.	CO3	UN	2
7.	Indicate vehicle detection methods.	CO3	UN	2
8.	Examine latent space concept.	CO3	UN	2
<b>PART B</b>				
1.	Apply object detection in surveillance scenarios.	CO3	AP	16
2.	Analyze the impact of scene artifacts.	CO3	AN	16
3.	Develop adaptive background modeling method.	CO3	AP	16
4.	Examine pedestrian and vehicle tracking systems.	CO3	UN	16

**UNIT IV**  
**BEHAVIOURAL ANALYSIS & ACTIVITY RECOGNITION**

Event Modelling- Behavioural Analysis- Human Activity Recognition-Complex Activity Recognition- Activity modelling using 3D shape, Video summarization, shape based activity models- Suspicious Activity Detection.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	What is event modelling ?	CO4	RE	2
2.	Give examples of behavioural patterns.	CO4	RE	2
3.	Identify human activity types.	CO4	RE	2
4.	Contrast simple and complex activities.	CO4	UN	2
5.	Map 3D shape modelling steps.	CO4	UN	2
6.	Relate video summarization with activity extraction.	CO4	UN	2
7.	Infer importance of activity modelling.	CO4	UN	2
8.	Report suspicious activity indicators.	CO4	UN	2
<b>PART B</b>				
1.	Design event modelling framework for surveillance.	CO4	AP	16
2.	Analyze human activity recognition techniques used in video analytics.	CO4	AN	16
3.	Organize complex activity recognition pipeline.	CO4	AP	16
4.	Validate suspicious activity detection methods.	CO4	AN	16

**UNIT V**  
**HUMAN FACE RECOGNITION & GAIT ANALYSIS**

Introduction: Overview of Recognition algorithms – Human Recognition using Face: Face Recognition from still images, Face Recognition from video, Evaluation of Face Recognition Technologies- Human Recognition using gait: HMM Framework for Gait Recognition, View Invariant Gait Recognition, Role of Shape and Dynamics in Gait Recognition.

Q.No	Question	CO	BTL	Marks
<b>PART A</b>				
1.	What is biometric recognition?	CO5	RE	2
2.	Identify face recognition techniques.	CO5	RE	2
3.	Name evaluation metrics.	CO5	RE	2
4.	Select suitable face recognition algorithm.	CO5	UN	2
5.	Match face and gait recognition features.	CO5	UN	2
6.	Rearrange gait cycle phases.	CO5	UN	2
7.	Outline view invariant gait recognition.	CO5	UN	2
8.	Interpret system accuracy metrics.	CO5	UN	2
<b>PART B</b>				
1.	Compose workflow of face recognition system.	CO5	AP	16
2.	Diagnose performance limitations in biometric systems.	CO5	AN	16
3.	Build HMM-based gait recognition model.A	CO5	AP	16
4.	Measure impact of shape and dynamics in gait accuracy.	CO5	AN	16

**24CSPAC202  
DISASTER MANAGEMENT**

**UNIT I  
INTRODUCTION**

Disaster: Definition, Factors and Significance; Difference between Hazard And Disaster;  
Natural and Manmade Disasters: Difference, Nature, Types and Magnitude.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is a disaster?	CO1	RE	2
2.	Define hazard.	CO1	RE	2
3.	Differentiate between a hazard and a disaster.	CO1	UN	2
4.	What are the factors contributing to a disaster?	CO1	RE	2
5.	What is the significance of disaster management?	CO1	RE	2
6.	Differentiate between natural and man-made disasters.	CO1	UN	2
7.	Name two types of manmade disasters.	CO1	RE	2
8.	Define the magnitude of a Disaster.	CO1	RE	2
<b>PART-B</b>				
1.	Explain the definition, factors, and significance of Disaster in detail.	CO1	UN	16
2.	Describe the differences between Hazard and Disaster with suitable examples.	CO1	UN	16
3.	Discuss the nature, types, and magnitude of natural disasters with examples.	CO1	UN	16
4.	Explain man-made disasters and describe their causes and impacts on society.	CO1	UN	16

**UNIT II**  
**REPERCUSSIONS OF DISASTERS AND HAZARDS**

Economic Damage, Loss of Human and Animal Life, Destruction Of Ecosystem. Natural Disasters: Earthquakes, Volcanisms, Cyclones, Tsunamis, Floods, Droughts And Famines, Landslides And Avalanches, Man-made disaster: Nuclear Reactor Meltdown, Industrial Accidents, Oil Slicks And Spills, Outbreaks Of Disease And Epidemics, War And Conflicts.

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What are the primary effects of earthquakes on the environment?	CO2	RE	2
2.	Define loss of human and animal life due to disasters.	CO2	RE	2
3.	List out the major consequences of volcanic eruptions.	CO2	RE	2
4.	What is the impact of cyclones on human settlements?	CO2	RE	2
5.	What are the economic consequences of droughts and famines?	CO2	RE	2
6.	Explain how landslides can lead to destruction of infrastructure.	CO2	UN	2
7.	What is a Cyclone?	CO2	RE	2
8.	Define Tsunami.	CO2	RE	2
<b>PART-B</b>				
1.	Explain the various types of natural disasters such as Earthquake, Cyclone, and Tsunami with examples.	CO2	UN	16
2.	Describe the different types of man-made disasters including nuclear reactor meltdown, industrial accidents, oil spills, and epidemics.	CO2	UN	16
3.	Apply appropriate disaster management measures to reduce economic damage and loss of human life during floods and cyclones.	CO2	AN	16
4.	Illustrate how preventive measures can be applied to control industrial accidents and oil spills.	CO2	AN	16

**UNIT III  
DISASTER PRONE AREAS IN INDIA**

Study of Seismic Zones; Areas Prone To Floods and Droughts, Landslides And Avalanches; Areas Prone To Cyclonic and Coastal Hazards with Special Reference To Tsunami; Post-Disaster Diseases and Epidemics

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is the primary cause of earthquakes in seismic zones?	CO3	RE	2
2.	Define Flood-prone areas.	CO3	RE	2
3.	What is the primary cause of droughts in semi-arid regions?	CO3	RE	2
4.	What is an avalanche?	CO3	RE	2
5.	Explain the importance of seismic zones in disaster management.	CO3	UN	2
6.	What is the role of vaccines in controlling post-disaster epidemics?	CO3	RE	2
7.	Define coastal hazards.	CO3	RE	2
8.	Differentiate between Flood and Drought.	CO3	UN	2
<b>PART-B</b>				
1.	Explain the concept of seismic zones and their importance in disaster management.	CO3	UN	16
2.	Describe areas prone to floods, droughts, landslides, and avalanches with examples.	CO3	UN	16
3.	Apply appropriate measures to identify and manage cyclone-prone and coastal hazard areas with special reference to Tsunami.	CO3	AP	16
4.	Illustrate how disaster preparedness strategies can be applied in regions prone to floods and landslides.	CO3	AP	16

**UNIT IV  
DISASTER PREPAREDNESS AND MANAGEMENT**

Hough transforms and other simple object recognition methods, Shape correspondence and shape matching, Principal component analysis, Shape priors for recognition

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	Define Cyber-Physical Systems.	CO4	RE	2
2.	What is symbolic synthesis in the context of Cyber-Physical Systems (CPS)?	CO4	RE	2
3.	Differentiate between symbolic synthesis and real-time scheduling in Cyber-Physical Systems.	CO4	UN	2
4.	Explain the importance of CPS synchronization for realtime scheduling in safety-critical systems.	CO4	UN	2
5.	What is real-time scheduling in the context of CPS, and why is it important?	CO4	RE	2
6.	What is a real-time system?	CO4	RE	2
7.	What is the primary challenge in real-time scheduling for CPS?	CO4	RE	2
8.	What are the benefits of symbolic synthesis in CPS security?	CO4	RE	2
<b>PART-B</b>				
1.	Examine the role and significance of symbolic synthesis in Cyber-Physical Systems.	CO4	AN	16
2.	Evaluate the importance of security in Cyber-Physical Systems and assess the various types of threats involved.	CO4	AN	16
3.	Apply symbolic synthesis techniques to design a simple controller for a CPS application.	CO4	AP	16
4.	Demonstrate how synchronization techniques can be applied in CPS to ensure proper coordination between system components.	CO4	AP	16

**UNIT V  
RISK ASSESSMENT**

Disaster Risk: Concept and Elements, Disaster Risk Reduction, Global and National Disaster Risk Situation. Techniques of Risk Assessment, Global Co-Operation in Risk Assessment and Warning, People's Participation in Risk Assessment. Strategies for Survival

Q.No	Question	CO	BTL	Marks
<b>PART-A</b>				
1.	What is disaster risk?	CO5	RE	2
2.	Differentiate between Disaster Risk and Disaster Risk Reduction (DRR).	CO5	UN	2
3.	What is meant by risk assessment?	CO5	RE	2
4.	What role do historical data play in risk assessment?	CO5	RE	2
5.	What is the role of early warning systems in disaster management?	CO5	RE	2
6.	What is the national disaster risk situation?	CO5	RE	2
7.	List the strategy for survival during a natural disaster	CO5	RE	2
8.	What is the role of evacuation plans in survival strategies during disasters?	CO5	RE	2
<b>PART-B</b>				
1.	Explain the concept and elements of Disaster Risk in detail.	CO5	UN	16
2.	Describe the global and national disaster risk situation and its significance in disaster management.	CO5	UN	16
3.	Apply techniques of risk assessment to evaluate disaster-prone areas in a given scenario.	CO5	AP	16
4.	Illustrate how people's participation can be applied in disaster risk assessment and reduction.	CO5	AP	16

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