H.T No: | | | | | | | | | | | **R18** | Course Code: A30157

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: GROUND IMPROVEMENT TECHNIQUES

(Civil Engineering)

Date: 18.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. Name any three methods for in situ densification of cohesive soil. 2 M
2. Differentiate between mechanical and hydraulic properties of soils. 2 M
3. How does compaction affect the shear strength of soil? 2 M
4. Name two types of blasting techniques used for soil compaction. 2 M
5. How are sumps and ditches used in dewatering? 2 M
6. What are the advantages of preloading methods? 2 M
7. Write any four factors affecting grouting? 2 M
8. What is meant by displacement grouting? 2 M
9. Name the components of reinforced earth. 2 M
10. Write the uses of soil reinforcement. 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Discuss the challenges associated with the identification and characterization of expansive soils. How can these challenges be mitigated during construction? 10M

OR

11. B). What is meant by the term Ground Improvement? Mention various modification methods that are used in practice for improvement of ground along with their applications. 10M

12. A). Describe the principle behind the use of blasting as a deep compaction technique. Discuss the advantages and disadvantages associated with this method. 10M

OR

12. B). Compare and contrast the three deep compaction techniques: vibro-compaction, dynamic tamping, and compaction piles. Discuss their suitability for different soil types and site conditions. 10M

13. A). Explain the electro-osmotic method of dewatering and Vacuum dewatering methods for ground improvement 10M

OR

13. B). How is single stage well point system different from multi- stage well point system. Explain with the help of suitable diagrams. 10M

(P.T.O..)

14. A). Explain compaction grouting and its suitability with respect to soil type. What are its advantages and disadvantage? 10M

OR

14. B). i) What is grout injection measurement? Why is grout monitoring necessary? 5M
ii) Explain the principle of soil-lime stabilization. 5M

15. A). Discuss the assumptions and principles of reinforced earth mechanism. Explain the design steps of reinforced earth walls. 10M

OR

15. B). i) Write short notes on rock bolts. 5M
ii) Explain the procedure for the construction of soil nail. Also mention different materials used for soil nailing. 5M

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H.T No: | | | | | | | | | | | **R18** | **Course Code: A30246**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: ELECTRICAL ENERGY CONSERVATION & AUDITING

(Electrical & Electronics Engineering)

Date: 18.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Define noncommercial energy.	2 M
2.	What is meant by conservation of energy?	2 M
3.	What are the electricity tariffs?	2 M
4.	List out basic fuels.	2 M
5.	What is the need of energy audit?	2 M
6.	Define 'energy management'.	2 M
7.	Define electricity billing concept.	2 M
8.	List the types of losses in motors.	2 M
9.	Define maximum demand.	2 M
10.	What is the need of energy saving?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	What are the primary energy sources and explain?	10M
	OR	
11. B).	Discuss about energy conservations and its importance.	10M
12. A).	Explain in detail load management and maximum demand control.	10M
	OR	
12. B).	Illustrate sensible and latent heat in energy system.	10M
13. A).	Describe the procedure for energy audit, step by step.	10M
	OR	
13. B).	Discuss the methods for preparing process flow.	10M
14. A).	Explain power factor improvements and its benefits.	10M
	OR	
14. B).	How energy efficiency improves with energy efficient motors?	10M
15. A).	Illustrate variable speed drives technique for energy efficiency.	10M
	OR	
15. B).	Explain in detail lighting control for efficient energy system.	10M

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H.T No: | | | | | | | | | | | **R18** | Course Code: A30366

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: TOOL DESIGN

(Mechanical Engineering)

Date: 18.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. List the different cutting tool materials. 2 M
2. What is the major constituent of cutting tool materials? 2 M
3. List any two shapes of cemented carbide bits used in brazed single-point tools. 2 M
4. Enumerate the methods of machining a surface using broaching machine. 2 M
5. What are the parts of a twist drill? 2 M
6. List any two parameters needed for design of reamers. 2 M
7. List any two parameters needed for design of thread cutting dies. 2 M
8. What is spinning forming process? 2 M
9. List any two errors which you should overcome by proper design of a jig/fixture. 2 M
10. What is vacuum clamping? 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Enumerate and explain the desired properties of cutting tool materials. 10M

OR

11. B). Explain the classification and coding of crabides. 10M

12. A). How do you design a Single-Point Cutting Tool? Explain. 10M

OR

12. B). Explain the parameters in the design of a plain milling cutter. 10M

13. A). Explain the geometry and design of manufacturing of twist drill. 10M

OR

13. B). Write and explain the process of design and manufacturing of taps and dies. 10M

14. A). Explain the bending process along with its allowances and spring back. 10M

OR

14. B). How do you design a die for blanking? 10M

15. A). Sketch and explain fixed and adjustable locators used in the design of Jigs & Fixtures 10M

OR

15. B). Draw and explain the types of drill jigs. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30453**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: WIRELESS COMMUNICATION NETWORKS

(Electronics & Communication Engineering)

Date: 18.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What is meant by frequency reuse?	2 M
2.	Define hand off and mode of hand off.	2 M
3.	What is free space propagation model?	2 M
4.	What are merits and demerits of Okumara's model?	2 M
5.	What is the Doppler Spread?	2 M
6.	Define Coherence time.	2 M
7.	What is meant by Polarization diversity?	2 M
8.	What is the purpose of an equalizer?	2 M
9.	Define wireless PAN.	2 M
10.	Discuss about WLL.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the concept of lowering the antenna height to decrease the co-channel interference	10M
	OR	
11. B).	i) Discuss advantages of delayed handoffs. ii) Briefly explain about Trunking and Grade of service.	5M 5M
12. A).	Discuss in detail about the indoor propagation using Ericsson Multiple Breakpoint Model.	10M
	OR	
12. B).	Discuss in detail: i) The propagation in near distance ii) Long distance propagation.	10M
13. A).	Explain impulse response model of a multipath channel.	10M
	OR	
13. B).	Discuss Clarke's model for flat fading.	10M
14. A).	i) What are the steps in training a Generic Adaptive Equalizer? Explain. ii) Differentiate between Linear and Non-linear equalizer.	5M 5M
	OR	
14. B).	With a neat block diagram explain about RAKE receiver	10M
15. A).	i) What are the enhancements of IEEE 802.16? Discuss. ii) List out briefly the different WLAN topologies.	5M 5M
	OR	
15. B).	What are the functions of 802.11 Medium Access Control Layer? Explain.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A30544

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: INTERNET OF THINGS

(Common for CSE & IT)

Date: 18.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What are the characteristics of IOT?	2 M
2.	What is 6LoWPAN?	2 M
3.	List the wireless medium access issues.	2 M
4.	What is MAC protocol survey?	2 M
5.	Is the IoT device is scalable, Justify.	2 M
6.	What is the need for interoperability in between IoT devices?	2 M
7.	List the IoT applications of health sector.	2 M
8.	What types of detectors are used to detect smoke/gas?	2 M
9.	Why python is more suitable to design IoT applications?	2 M
10.	List the packages that are frequently used while implementing IoT with python.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	i) Describe the functional blocks of logical design of IoT.	5M
	ii) Explain about communication APIs with an example.	5M
	OR	
11. B).	i) Distinguish between IoT and M2M.	5M
	ii) Explain about software defined networking architecture.	5M
12. A).	Describe about sensor deployment and node discovery.	10M
	OR	
12. B).	Explain about data aggregation and dissemination.	10M
13. A).	Describe the security challenges of IoT.	10M
	OR	
13. B).	Describe the development challenges of IoT.	10M
14. A).	Explain the following industry applications: i) Machine diagnosis and prognosis ii) Indoor air quality monitoring	10M
	OR	
14. B).	Determine the IoT-levels for designing home automation IoT system including smart lighting and intrusion detection.	10M
15. A).	Describe how the sensor-based applications developed through embedded system platform.	10M
	OR	
15. B).	Explain how the applications developed through IoT tools.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A36224

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: OS SECURITY

(CSC)

Date: 18.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Summarize the advantages of Secure OS.	2 M
2.	Identify the need of Protection Systems.	2 M
3.	Write about Multices.	2 M
4.	Define Multics Security.	2 M
5.	Elaborate Windows Security.	2 M
6.	Show the Challenges of Trusted Process.	2 M
7.	Illustrate usage of Security Kernels.	2 M
8.	How can you adapt Type Enforcement.	2 M
9.	Categorize Multilevel Services.	2 M
10.	Classify about the Trusted Extensions.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Show the Trust Model of Secure OS.	10M
	OR	
11. B).	Demonstrate about Mandatory Protection System.	10M
12. A).	Elaborate Multics Vulnerability Analysis.	10M
	OR	
12. B).	Can you build Multics Protection System Model.	10M
13. A).	Discuss about Information Flow Integrity Model.	10M
	OR	
13. B).	i) Identify the need of Covert Channels.	5M
	ii) Determine the usage of UNIX Security.	5M
14. A).	Summarize about Gemini Secure OS.	10M
	OR	
14. B).	Identify the need of Retrofitting Security into a Commercial OS.	10M
15. A).	Illustrate the Case Study about Solaris Trusted Extensions.	10M
	OR	
15. B).	Determine the usage of Networking Trusted Extensions.	10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A36624**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: ARTIFICIAL INTELLIGENCE IN HEALTHCARE (CSM)

Date: 18.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What is the purpose of medical imaging?	2 M
2.	What is the difference between computed tomography and MRI?	2 M
3.	What is hyper parameter search?	2 M
4.	Define semi supervised learning and unsupervised learning.	2 M
5.	List the advantages of applying AI in medical imaging.	2 M
6.	Which deep learning model is best for medical image classification?	2 M
7.	Define Radiomics.	2 M
8.	What is the role of big data in radiology?	2 M
9.	List few examples of software as a medical device.	2 M
10.	What you need to know about Clinical Evaluation and Validation for SaMD?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Enumerate the differences between conventional radiology and interventional radiology.	10M
	OR	
11. B).	What is the use of computed tomography? Explain how it will be useful in medical imaging.	10M
12. A).	Explain any four data augmentation techniques used for medical images.	10M
	OR	
12. B).	Discuss the procedure involved in a neural network for image recognition.	10M
13. A).	What is quantitative image analysis? Explain with an example.	10M
	OR	
13. B).	Define CAD. Discuss the purpose of CAD in medical image processing.	10M
14. A).	Discuss the potential benefit of using radiomics in breast tomosynthesis and treatment planning.	10M
	OR	
14. B).	List some applications of AI within radiology that are beyond image interpretation. Explain how these applications are useful in clinicals.	10M
15. A).	What is the purpose of reference standards? Explain with example.	10M
	OR	
15. B).	What is the need for clinical validation of image biomarkers? Discuss.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A30162

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Supplementary Examinations April-2024

Course Name: GREEN BUILDINGS

(Electrical & Electronics Engineering)

Date: 20.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	List the Objectives of sustainable design.	2 M
2.	What is the basis of green design?	2 M
3.	Define Green Buildings.	2 M
4.	What is sustainable architecture?	2 M
5.	What is passive design?	2 M
6.	How does material choice impact sustainable architecture?	2 M
7.	Differentiate between passive and active solar gain.	2 M
8.	Define insulation in the context of building design.	2 M
9.	List the parameters of sustainability explored in design studio.	2 M
10.	What is the goal of design development?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the general premises for sustainable and green design.	10M
	OR	
11. B).	How does bio-mimicry serve as a design tool based on the ecosystem analogy?	10M
12. A).	Explain LEED and Green Globe Certification.	10M
	OR	
12. B).	Explain a case study that demonstrates an environmental approach in sustainable architecture.	10M
13. A).	Explain the importance of envelope material in controlling internal temperatures within a building.	10M
	OR	
13. B).	Explain the strategies to be employed to manage humidity effectively.	10M
14. A).	Explain the health benefits associated with sustainable materials.	10M
	OR	
14. B).	Explain the concept of Eco house with a case study.	10M
15. A).	Explain the objectives of green building design studio.	10M
	OR	
15. B).	Explain the sustainability parameters that could be integrated into the design development process.	10M

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H.T No: | | | | | | | | | | | **R18** | Course Code: A30164

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: BASICS OF CIVIL ENGINEERING

(Common for EEE, ME, CSE & CSC)

Date: 20.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. List any four types of industrial buildings. 2 M
2. List any two uses of institutional buildings. 2 M
3. Name various objectives of surveying. 2 M
4. What is the difference between carpet area and floor area. 2 M
5. Name any four physical tests conducted on cement. 2 M
6. Tell any four modern surveying instruments with their uses. 2 M
7. Name any four types of foundations. 2 M
8. What does a decorative finish mean? 2 M
9. Name various types of chimneys used in kitchen. 2 M
10. What are the building materials that are used in construction of towers? 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Explain about various principles of building planning and drawing. 10M

OR

11. B). List and explain about various types of buildings as per National Building Code. 10M

12. A). The following offsets are taken from a chain line to an irregular boundary towards right side of the chain line. Distinguish the area using Average ordinate rule and Simpson's rule 10M

Chainage	0	5	10	15	20	30	40	60	80
Offset 'm'	2.50	3.80	4.60	5.20	6.10	4.70	5.80	3.90	2.20

OR

12. B). Classify various building area terms using a floor plan of a residential building. 10M

13. A). The following staff readings were observed successively with a level. The instrument has been shifted after the second and fifth reading: 0.675, 1.230, 0.750, 2.565, 2.225, 1.935, 1.835, 3.220. The first reading was with staff held on benchmark of RL 100.000 m. Determine the RL of all points. 10M

OR

13. B). Categorize various types of steel in construction of buildings, draw their stress-strain diagrams. 10M

(P.T.O..)

14. A). Analyze and list out the factors that are affecting the selection of flooring. 10M

OR

14. B). Explain any four various types of bonds in Brick Masonry with neat sketches. 10M

15. A). Explain in detail about the various types of water tanks used in India. 10M

OR

15. B). Explain about the necessity of air conditioning in a building. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: C30166**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: BUSINESS ETHICS & CORPORATE GOVERNANCE

(Common for CE, EEE, ME, ECE, CSE, IT, CSC & CSM)

Date: 20.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What are the potential consequences of prioritizing profit over ethical considerations?	2 M
2.	How do personal values and ethics influence an individual's behavior in a business context?	2 M
3.	Outline the main cause of ethical dilemmas.	2 M
4.	Why is it important for professionals to adhere to ethical standards?	2 M
5.	What are the social impacts of Cybercrimes?	2 M
6.	What distinguishes information warfare from traditional forms of conflict?	2 M
7.	What are the primary objectives that corporate governance seeks to achieve?	2 M
8.	What are the Principles of Corporate Governance	2 M
9.	Why is effective information communication essential for corporate governance?	2 M
10.	Interpret the Importance of Internal Controls in Corporate Governance Mechanisms.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the role of leadership and management in shaping the ethical climate of a business?	10M
	OR	
11. B).	Why did Kohlberg believed that moral development is closely tied to cognitive development? Explain.	10M
12. A).	Why Should companies provide ethics training for marketing professionals, and what should that training entail?	10M
	OR	
12. B).	Explain in detail about the Ethics in HRM?	10M
13. A).	How might the qualities like mindset, curiosity, and problem-solving skills that hackers often possess be harnessed for positive purposes?	10M
	OR	
13. B).	Explain the danger to Intellectual Property in the cyber space.	10M
14. A).	Explain the key challenges faced by companies in India in maintaining strong corporate governance practices.	10M
	OR	
14. B).	Explain Various committees of the Board in detail.	10M

(P.T.O..)

15. A). Explain the key recommendations made by the Irani Committee for enhancing corporate governance. 10M

OR

15. B). How does effective corporate governance contribute to the stability and integrity of financial institutions? 10M

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H.T No: | | | | | | | | | | | **R18** | Course Code: A30166

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: ENVIRONMENTAL PROTECTION AND MANAGEMENT

(Common for EEE, ME, ECE, CSE, IT, CSC & CSM)

Date: 23.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Tell about environmental stewardship.	2 M
2.	List the unique characteristics of environmental problems.	2 M
3.	Infer the functions of CPCB.	2 M
4.	What do mean by environmental bench marking?	2 M
5.	List the stages of EMS as per ISO 14001.	2 M
6.	What is Environment Management Programs?	2 M
7.	Define Audit Management.	2 M
8.	What is waste audit?	2 M
9.	Name the measures to prevent air pollution.	2 M
10.	Infer any two waste minimization techniques.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain environmental management principles.	10M
	OR	
11. B).	Discuss the barriers for sustainable development.	10M
12. A).	Illustrate the environmental quality objectives.	10M
	OR	
12. B).	Outline the environmental bench marking in EMS.	10M
13. A).	Describe in detail about environmental policy.	10M
	OR	
13. B).	Explain the contents of ISO 14001.	10M
14. A).	Discuss the role and qualifications of environmental auditors.	10M
	OR	
14. B).	Summarize environmental due diligence audit with an example.	10M
15. A).	Explain pollution prevention methods adapted in Sugar Industry.	10M
	OR	
15. B).	Describe hazard waste Disposal Methods.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: C30167

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: MARKETING MANAGEMENT

(Common for CE, EEE, ME, ECE, CSE, IT & CSC)

Date: 23.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	How does marketing mix work together to achieve marketing objectives? Enumerate.	2 M
2.	Differentiate between marketing strategy and marketing plan.	2 M
3.	List the process of identifying market segments and target audiences for a brand.	2 M
4.	Outline the steps involved in conducting effective marketing research.	2 M
5.	Define integrated marketing communications (IMC).	2 M
6.	List the challenges involved in introducing a new product or service to the market.	2 M
7.	List the roles of wholesalers in distribution process.	2 M
8.	Highlight the importance in delivering value to customers.	2 M
9.	List the significance of sales management.	2 M
10.	What are the 6 essential skills required for a successful sales manager?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Analyze the key factors that contribute to creating and maintaining long-term customer loyalty in today's competitive market.	10M
	OR	
11. B).	Explain the core concepts of marketing and how they relate to the overall business strategy. Provide examples to illustrate your points.	10M
12. A).	Discuss the various factors that influence consumer behavior and illustrate how can a deep understanding of consumer behavior lead to the development of effective branding and marketing campaigns?	10M
	OR	
12. B).	Describe the key information and insights a company can gain from competitor analysis, and illustrate with real examples on how this knowledge can inform brand strategy and positioning.	10M
13. A).	Analyze the significance of digital communication in modern marketing with examples by highlighting the challenges and opportunities of digital marketing.	10M
	OR	
13. B).	Deliberate different pricing strategies, and when each is most appropriate with examples.	10M

(P.T.O..)

14. A). Define the logistics and explain the delivering models of logistics. 10M

OR

14. B). Identify the challenges and opportunities presented by multi-channel retailing, including online, mobile, and brick-and-mortar channels. 10M

15. A). Explain the types of sales objectives, such as volume, revenue, and market share goals, and how they align with a company's overall business objectives. 10M

OR

15. B). Define the sales management and explain the nature and importance of sales management. 10M

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H.T No: | | | | | | | | | | | **R18** Course Code: A30378

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: WASTE TO ENERGY

(Common for CE, EEE, ECE, CSE, CSC & CSM)

Date: 23.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What is meant by Agro based waste?	2 M
2.	Classification of waste as fuel.	2 M
3.	Define Fast Pyrolysis methods.	2 M
4.	How syngas is produced?	2 M
5.	Write shore notes on Updraft gasifers.	2 M
6.	What is gasifier burner arrangement for thermal heating?	2 M
7.	What is meant by exotic design of Biomass Stove?	2 M
8.	Define Inclined Grate Combustors.	2 M
9.	What is meant by Biomass resources?	2 M
10.	What is meant by Biomass Energy Programme?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Classification of waste fuel and explain about MSW (Manipal Solid Waste).	10M
	OR	
11. B).	Discuss Agro based waste and Forest residue briefly.	10M
12. A).	Explain the following types of charcoal production processes (i) Earth kiln (ii) Brick kiln (iii) Metal kiln	10M
	OR	
12. B).	What are the various types of pyrolysis? Comparison between methods.	10M
13. A).	Explain the design, construction and operation of Downdraft gasifier.	10M
	OR	
13. B).	Explain the design, construction and operation of fluidized bed gasifier.	10M
14. A).	Compare the following combustors with respect to operational and constructional features. (i) Fixed bed (ii) Inclined Grate (iii) Fluidized bed	10M
	OR	
14. B).	Explain Design, Construction and Operation of Fixed bed combustor.	10M
15. A).	Explain Bio-diesel production in detail.	10M
	OR	
15. B).	Discuss Thermo-chemical conversion processes.	10M

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H.T No: | | | | | | | | | | | **R18** | Course Code: A30543

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/ Supplementary Examinations April-2024
Course Name: NATURAL LANGUAGE PROCESSING
(Common for CSE & CSE Honor)

Date: 25.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1. List the methods of Word components. 2 M
2. What is Natural Language Processing? Discuss with some applications. 2 M
3. What is the use of Treebank? 2 M
4. What are the rules of CNF? 2 M
5. What is Semantic Interpretation? 2 M
6. Define named entity recognition. 2 M
7. What is Prop Bank? 2 M
8. Define representation in NLP. 2 M
9. What is meant by cohesion in NLP? 2 M
10. What is the formula for probability of n-Gram model? 2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A). Compare and contrast agglutinative and fusional morphological models. How do these models differ in their treatment of morphemes and their combinations? 10M

OR

11. B). Describe the metrics commonly used to evaluate the performance of document structure analysis approaches. How do these metrics measure the effectiveness of the methods? 10M

12. A). Find out the probability for the grammar 10M

S ->NP VP [0.80]
NP->Det N [0.3]
VP->V NP [0.20]
V->includes [0.05]
Det->the [0.4]
Det->a [0.4]
N->meal [0.013]
N->flight [0.02] for the input string " The flight includes a meal"

OR

12. B). i) With the help of a neat diagram, explain the Representation of Syntactic Structure. 5M

ii) Elaborate the tokenization and parsing challenges in multilingual content. 5M

(P.T.O..)

13. A). Give an overview of various approach for syntactic representation. 10M

OR

13. B). i) Given there is a train on platform 6.
Its Destination is Vijayawada.
There is another train is in platform 7.
Its destination is Kerala.
Write Procedure for Anaphora Resolution 7M
ii) Explain Word Sense Disambiguation 3M

14. A). i) Describe the supervised system in predicate structure. 5M
ii) Illustrate the Frame Net of predicate argument structure. 5M

OR

14. B). Explain the architecture of a typical software tool for semantic analysis, including modules for parsing, semantic interpretation, and meaning representation generation. 10M

15. A). Consider the following training set and implement Bi-gram model to calculate the probability of given Test sentence. 10M
Training set: She said thank you.
She said bye as she walked through the door.
She went to San Diego
Test sentence: She thanked and walk through the door.

OR

15. B). What is the need of language model adaptation? 10M

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H.T No: | | | | | | | | | | | **R18** | Course Code: A36642

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VIII Semester Regular Examinations April-2024

Course Name: ROBOTICS PROCESS AUTOMATION

(Minor in AIML)

Date: 25.04.2024 AN | **Time: 3 hours** | **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	Define RPA.	2 M
2.	List the components of Anywhere Automation.	2 M
3.	What is feature panel?	2 M
4.	Role of Dashboard.	2 M
5.	What are different administrative tools in RPA?	2 M
6.	What is Audit log?	2 M
7.	Define Screen recording.	2 M
8.	Distinguish attended and unattended bots.	2 M
9.	Define object cloning.	2 M
10.	List out errors in RPA.	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Explain the significance of RPA with different tools.	10M
	OR	
11. B).	Define RPA with different use-cases and explain the steps involved in creating a bot.	10M
12. A).	What is web control room? Discuss about different panels involved.	10M
	OR	
12. B).	What is variable? List out different types of variables with suitable examples.	10M
13. A).	Explain the demo of expose APIs in detail.	10M
	OR	
13. B).	What is client introduction and conclusion? Explain in detail.	10M
14. A).	Discuss about command library in detail.	10M
	OR	
14. B).	What is recording in RPA? Explain different types of recorders in detail.	10M
15. A).	How FTP and PGP commands utilized in Automation Anywhere? Discuss in detail.	10M
	OR	
15. B).	Discuss the error handling commands in RPA in detail.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A36724

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VIII Semester Regular/ Supplementary Examinations April-2024

Course Name: DATA SCIENCE APPLICATIONS

(Minor in DS)

Date: 25.04.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions (Compulsory)

Each question carries TWO marks. **10x2=20M**

1.	What is a recommender system?	2 M
2.	Explain the importance of data science in personalized marketing strategies.	2 M
3.	Explain the significance of forecasting stock market index movements.	2 M
4.	Discuss the role of data analytics in optimizing inventory management.	2 M
5.	Explain the concept of sentiment analysis in social media data.	2 M
6.	How can data analysis improve student performance in educational institutions?	2 M
7.	Discuss one challenge in implementing data science solutions in healthcare.	2 M
8.	How machine learning algorithms can assist in medical diagnosis.	2 M
9.	Discuss the role of data visualization in optimizing datasets using Python.	2 M
10.	What do you mean by data optimization?	2 M

PART-B

Answer the following. Each question carries TEN Marks. **5x10=50M**

11.A).	Compare and contrast different tools used by data scientists for various tasks such as data preprocessing, analysis, and visualization.	10M
	OR	
11. B).	Explain the challenges faced in developing and deploying recommender systems in today's dynamic digital environments.	10M
12. A).	i) Explain the complexities involved in managing supply chains using time series data analysis.	5M
	ii) Discuss how factors like demand variability, supply disruptions, and market dynamics impact supply chain performance and resilience.	5M
	OR	
12. B).	Using a real-world case study in logistics, analyze the application of time series data analysis in supply chain management.	10M
13. A).	Analyze the impact of social media data on various aspects of society, including communication, marketing, and public opinion. Discuss its challenges.	10M
	OR	
13. B).	i) Explain innovative applications of data science in education and social media.	5M
	ii) Discuss emerging trends such as personalized learning, adaptive content delivery, sentiment analysis, and community detection.	5M

(P.T.O..)

14. A). Explain the field of bioinformatics and its significance in analyzing biological data. 10M

OR

14. B). i) Analyze the potential of data science in driving innovation in healthcare. 5M

ii) Discuss recent advancements such as precision medicine, drug discovery, and genomics-based therapies, and their implications for the future of healthcare and life sciences. 5M

15. A). Illustrate with examples how Python libraries such as NumPy, SciPy, and Pandas are utilized for data optimization tasks. Discuss the advantages of using these libraries. 10M

OR

15. B). Explain the case studies where Python has been successfully employed for data optimization in diverse domains such as finance and manufacturing. 10M

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