CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: GROUND IMPROVEMENT TECHNIQUES
(Civil Engineering)

Date: 28.04.2023 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 necessity of ground improvement? — 2 M
2. List out the methods of ground improvement. — 2 M
3. List the deep compaction techniques of soil modification. — 2 M
4. What is Dynamic Compaction? — 2 M
5. What is dewatering? What are various methods of dewatering? — 2 M
6. What is a well point? In which types of soil, it is effective? — 2 M
7. Define hydraulic fracturing. — 2 M
8. Write a short note on grouting. — 2 M
9. Enumerate the uses of soil reinforcement. — 2 M
10. Write a note on importance of grain size analysis of soil in selection of grouting method. — 2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A). Describe various methods of ground improvement suitable for cohesive soils. Discuss in brief. — 10M

OR

11. B). Explain the factors influencing the choice of method of ground improvement project. — 10M

12. A). Discuss blasting technique used in in-situ densification. Give an expression for calculating the radius of influence of a blasting technique. — 10M

OR

12. B). What is the difference between vibro compaction and vibro replacement? Explain in detail. — 10M

13. A). Explain how vacuum well points can be effectively used for dewatering in cohesive soils? — 10M

OR

13. B). What is dewatering? Explain the practical situation and purpose with examples where the dewatering techniques are employed commonly. — 10M

(P.T.O..)

14. A). Explain shortcreating and guinting technology of ground modification. 10M

OR

14. B). Discuss cement, lime and bitumen stabilization along with its merits and demerits. 10M

15. A). Explain with clear illustrations, the principle involved in geotextile materials reinforcement for improving the bearing capacity of soil. 10M

OR

15. B). Explain about the procedure involved in soil nailing with a neat sketch. 10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: ELECTRICAL ENERGY CONSERVATION & AUDITING
(Electrical & Electronics Engineering)

Date: 28.04.2023 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 commercial energy sources?	2 M
2.	What is meant by non commercial energy sources?	2 M
3.	What is meant by electric tariff?	2 M
4.	What are the fuels used in thermal power plant?	2 M
5.	What is energy audit? Why it is important?	2 M
6.	How energy audit done?	2 M
7.	List the types of losses in an induction motor.	2 M
8.	What is electricity billing?	2 M
9.	What is energy saving potential?	2 M
10.	What is energy efficiency potential?	2 M

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

11.A).	Explain in detail about long term energy scenario.	10M
	OR	
11. B).	Explain energy conservation Act-2001 and it's futures.	10M
12. A).	Discuss about thermal basic fuels, temperature and pressure.	10M
	OR	
12. B).	Compare various methods of power factor improvement and location of capacitor.	10M
13. A).	Classify the energy instruments in the context of energy management and explain how they are used?	10M
	OR	
13. B).	Discuss the working of power analyzer and its core in energy management.	10M
14. A).	Discuss the methods of conservation of electric energy in domestic buildings.	10M
	OR	
14. B).	Discuss the concept of energy efficient motors.	10M
15. A).	Discuss the features of energy efficient motors.	10M
	OR	
15. B).	Discuss the concept of automatic power factor controllers.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: TOOL DESIGN

(Mechanical Engineering)

Date: 28.04.2023 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 tool Materials.	2 M
2.	What is the significance of various tool angles?	2 M
3.	Why chip formation in milling is more complicated than in single point turning?	2 M
4.	Define face milling operation.	2 M
5.	Why reaming speed is slower than the drilling?	2 M
6.	List any two differences between reaming and broaching operation.	2 M
7.	Why is die clearance increased for harder materials?	2 M
8.	What is meant by die clearance?	2 M
9.	What is the standard method of holding parts for surface grinding operation?	2 M
10.	What is difference between a drill jig and fixture?	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A). What are the desirable characteristics of a cutting tool material? Explain how these are in the case of high speed steel tools.   10M

OR

11. B). How are the cemented carbides classified by ISO? Explain general application of each category.   10M

12. A). Draw a neat sketch, showing the nomenclature of single point cutting tool and explain various tool angles.   10M

OR

12. B). What are the main elements to be considered while designing plain milling cutter? Explain anyone with a sketch   10M

13. A). Consider the design of drill bit, explain the following elements: i) back taper, ii) web thickness, iii) land width, iv) margin and v) Tool geometry.   10M

OR

13. B). Explain the design and manufacturing of taps and dies.   10M

(P.T.O..)

14. A). i) Sketch and explain the components of a simple die.   5M
    ii) Explain in brief center of pressure and strip layout in press tool design.   5M

OR

14. B). i) Explain the importance of die allowance in bending die design.   5M
    ii) What methods are used to remove work piece from the punch or die cavity after a forming operation.   5M

15. A). Explain 3-2-1 principle of location   10M

OR

15. B). Briefly explain with neat sketches: 10M
    i) Swinging leaf jig and ii) Box type jig.

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: WIRELESS COMMUNICATION NETWORKS
(Electronics & Communication Engineering)

Date: 28.04.2023 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 Mobile Assisted Handoff (MAHO).	2 M
2.	What is Trunking?	2 M
3.	List the three basic propagation mechanisms.	2 M
4.	Define partition loss in indoor propagation models.	2 M
5.	List the physical factors influencing small scale fading.	2 M
6.	Define Frequency Selective Fading.	2 M
7.	What is zero forcing algorithms?	2 M
8.	What is polarization diversity?	2 M
9.	List the advantages of wireless Local Area Networks.	2 M
10.	List the various standards in IEEE 802.11.	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A). Explain Frequency reuse in Cellular Radio systems.   10M

OR

11. B). Explain the concept of Improving Coverage and capacity in cellular Systems.   10M

12. A). Describe the concept of Ground Reflection (Two-Ray) model.   10M

OR

12. B). Explain Outdoor Propagation Models-Longley Rice and Okumura model.   10M

13. A). Consider a transmitter which radiates a sinusoidal carrier frequency of 1850MHz. For a   10M
vehicle moving 60mph.Compute the received carrier frequency if the mobile is moving
(i) directly towards the transmitter, (ii) directly away from the transmitter and (iii) in a
direction which is perpendicular to the direction of arrival of the transmitted signal.

OR

13. B). Describe the concept of small scale multipath measurements.   10M

14. A). Explain Equalizers in communications receivers and Linear Equalizers.   10M

OR

14. B). Explain practical space diversity considerations.   10M

15. A). Describe the frame formats of IEEE 802.11 Medium Access Control.   10M

OR

15. B). Explain Hyper LAN standard.   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/May-2023
Course Name: NATURAL LANGUAGE PROCESSING
(Computer Science & Engineering)

Date: 28.04.2023 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 Morphology?	2 M
2.	List the applications of NLP.	2 M
3.	What is POS tagging in NLP?	2 M
4.	What is a Treebank? Explain briefly.	2 M
5.	Define Word Sense Disambiguation.	2 M
6.	What is meant by Semantic Translation?	2 M
7.	What are the applications of Semantic Role Labeling?	2 M
8.	Give an example of AMR using a directed graph.	2 M
9.	How does a language model work?	2 M
10.	What do you mean by reference resolution?	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	Illustrate the different steps involved in NLP.	10M
	OR	
11. B).	Explain the various morphological models of NLP.	10M
12. A).	Discuss about syntax analysis using dependency graph with an example.	10M
	OR	
12. B).	Elaborate Probabilistic Context Free Grammar with example.	10M
13. A).	Explain the Simplified Lesk Algorithm with appropriate examples.	10M
	OR	
13. B).	Explain the various categories of Word Sense Systems.	10M
14. A).	Differentiate Propbank and Framenet with suitable examples.	10M
	OR	
14. B).	Explain the approaches to Meaning Representation Systems.	10M
15. A).	Discuss about cross lingual and multilingual models architectures.	10M
	OR	
15. B).	Explain about the language models of NLP.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: BLOCK CHAIN TECHNOLOGIES
(Computer Science & Engineering)

Date: 28.04.2023 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 advantages of Block chain.   2 M
2. What are the fundamental activities of a Smart contracts?   2 M
3. Identify the needs of Bit Coins.   2 M
4. Interpret the need of Consensus.   2 M
5. Discuss about the need of KYC.   2 M
6. Formulate the purpose of Food Security.   2 M
7. Infer a short note on Technical Challenges in Blockchain.   2 M
8. What is meant by Legal/Regulator Barriers?   2 M
9. Elaborate about the Hyperledger.   2 M
10. Distinguish between Hyperledger Identities and Polices.   2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A). Summarize the following: 10M
i) Crypto Currency to Block Chain, ii) Merkel Tree

OR

11. B). i) Discuss the Digital Signature.   5M
ii) Develop a detailed differences between Public & Private Block Chain.   5M

12. A). Examine the working with consensus in Bitcoin Networks.   10M

OR

12. B). Categorize the Hashcash PoW & Bitcoin PoW.   10M

13. A). i) Construct the process of Cross border Payments.   5M
ii) Compile the purpose of Blockchain enabled trade.   5M

OR

13. B). i) Build the Supply Chain Financing.   5M
ii) Determine the Trade Finance Networks.   5M

(P.T.O..)

14. A). Analyse clearly about Market/Business Challenges Market/Business challenges.   10M

OR

14. B). Summarize the Blockchain Applications in Financial Services.   10M

15. A). i) Justify the need of Bitcoin Security.   5M
         ii) Explain the factors that affect Transaction Validation.   5M

OR

15. B). i) Summarize about Reinventing of Blockchain.   5M
         ii) List the Ten rules to never break on the Blockchain.   5M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular Examinations April/May-2023
Course Name: INTERNET OF THINGS
(Common for CSE & IT)

Date: 28.04.2023 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 Internet of Things.	2 M
2.	List various application areas of IoT.	2 M
3.	What is the use of sensor deployment?	2 M
4.	What are the applications of sensor data aggregation?	2 M
5.	Why security is required in IoT?	2 M
6.	List the various challenges in IoT.	2 M
7.	What is smart home?	2 M
8.	What are the specific applications of IoT?	2 M
9.	What are the sensor based applications in IoT?	2 M
10.	How python can be used in IoT?	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	Explain characteristics and physical design of IoT.	10M
	OR	
11. B).	Describe Machine to Machine concept & difference between IoT and M2M.	10M
12. A).	Describe network & Communication aspects and wireless media access.	10M
	OR	
12. B).	Explain the concept of sensor deployment & node discovery.	10M
13. A).	Discuss IoT design challenges.	10M
	OR	
13. B).	Describe security challenges in IoT.	10M
14. A).	Determine the IoT levels for designing home automation IoT systems including smart lighting and intrusion detection.	10M
	OR	
14. B).	Determine the IoT levels for designing structural health monitoring system.	10M
15. A).	Discuss different IoT tools.	10M
	OR	
15. B).	Describe how IoT concepts are implemented with python.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: PYTHON PROGRAMMING
(Common for CE, EEE, ME, ECE & IT)

Date: 01.05.2023 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 in operator in Python? give an example.	2 M
2.	Develop a line of code that prompts the user for his or her name and saves the user's input in a variable called name.	2 M
3.	Generalize the uses of Python Module.	2 M
4.	Write a while loop that computes the factorial of a given integer N.	2 M
5.	Differentiate Tuple and List.	2 M
6.	Point out the difference between recursive and iterative technique.	2 M
7.	List out the basic concepts of OOPS.	2 M
8.	Compare overloading and overriding.	2 M
9.	Demonstrate the major steps used to create widgets.	2 M
10.	Define Pixel and Why RGB System used.	2 M

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

11.A). i) Explain the salient features of python programming language.　　6M
ii) Develop a Python Code to check the given number is even or odd.　　4M

OR

11. B). Explain for, while, break and continue statements in python with examples for each.　　10M

12. A). Explain in briefly, what are the different methods of file operations supports in python shutil module.　　10M

OR

12. B). Demonstrate about Handling Exceptions in detail with examples.　　10M

13. A). Explain Indexing and Slicing operation for string manipulation with example in python.　　10M

OR

13. B). What is dictionary in Python? Review built-in dictionary methods with example.　　10M

14. A). Explain how to implement Polymorphism in Python with suitable example.　　10M

OR

14. B). i) Analyze Costs and Benefits of Object-Oriented Programming.　　5M
ii) What are the benefits of having class B extend or inherit from class A?　　5M

(P.T.O.)

15. A). i) Describe what usually happens in the __init__ method of a main window class. 4M

ii) Summarize the types of Window Components. 6M

OR

15. B). i) Describe the Methods and Image Manipulation operations used for image processing. 7M

ii) Develop a Python Program to Convert an Image to Gray Scale. 3M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: BUSINESS ETHICS & CORPORATE GOVERNANCE
(Common for CE, ME, ECE, CSE & IT)

Date: 01.05.2023 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 business ethics?	2 M
2.	What are the major ethical issues that business faces today?	2 M
3.	What is corporate governance?	2 M
4.	List the five myths about business ethics.	2 M
5.	What is cyber terrorism?	2 M
6.	Brief about Information warfare.	2 M
7.	Define the Corporate social responsibility.	2 M
8.	Discuss the following: i) Institutional investors and ii) Directors.	2 M
9.	What is Internal Control and assurance? Interpret.	2 M
10.	What is Information communication? Explain.	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	Discuss in detail the Carol Gilligan's theory and stages of moral development.	10M
	OR	
11. B).	Discuss various principles of ethics and is implications in the modern business world.	10M
12. A).	What are the marketing ethics? Why should a firm follow these? Explain.	10M
	OR	
12. B).	Analyze the major issues involved in false advertising?	10M
13. A).	Define Cyber Crime with ethically related challenges in detail.	10M
	OR	
13. B).	What is Information Security and Threats? Write the related ethical elements.	10M
14. A).	Define Corporate governance. Explain its importance in business.	10M
	OR	
14. B).	"Directors are the key persons in corporate governance structure". Comment.	10M
15. A).	Examine the OECD principles of corporate governance.	10M
	OR	
15. B).	What are the aspects of corporate governance reporting and disclosures?	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular Examinations April/May-2023

Course Name: GREEN BUILDINGS
(Common for EEE, ME, ECE & CSE)

Date: 01.05.2023 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 Green Building.	2 M
2.	Infer the term Bio-mimicry.	2 M
3.	What is meant by sustainable architecture?	2 M
4.	List different rating systems for green building.	2 M
5.	What is meant by passive design?	2 M
6.	Name the material which controls the temperature.	2 M
7.	Differentiate house and eco house.	2 M
8.	Name some sustainable materials.	2 M
9.	Define Sustainability.	2 M
10.	List the objectives of green building design.	2 M

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

11.A).	Enumerate the strategies for green design in buildings.	10M
	OR	
11. B).	Explain the design tool based on ecosystem analogy.	10M
12. A).	Illustrate any case study with respect to environment design and evaluation.	10M
	OR	
12. B).	Summarize the various techniques in managing the environment in buildings.	10M
13. A).	Discuss in detail about any four traditional building materials.	10M
	OR	
13. B).	Outline the specifications for wall and roof in different climate condition.	10M
14. A).	Categorize the various building concepts for an Eco House.	10M
	OR	
14. B).	Explain any six green building materials.	10M
15. A).	Describe the various parameters for a green building design.	10M
	OR	
15. B).	Explain about Green Building Studio.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: BASICS OF CIVIL ENGINEERING
(Common for ME & ECE)

Date: 01.05.2023 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 super structure? Distinguish between load bearing and framed structure.	2 M
2.	Mention the any four components of the building.	2 M
3.	Define sill level.	2 M
4.	What is meant by Principles of surveying?	2 M
5.	Mention the objectives of the leveling.	2 M
6.	List out the various uses of the cement.	2 M
7.	Differentiate between plastering and pointing.	2 M
8.	State any four types of roofs.	2 M
9.	What is the role of Ramp?	2 M
10.	List out the different types of water tanks.	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	Discuss about various components of the residential building.	10M

OR

11. B).	Explain about the various factors need to be consider for planning of the industrial building.	10M

12. A).	Define surveying and discuss about the objective and uses of surveying.	10M

OR

12. B).	Explain in detail about two methods of ranging.	10M

13. A).	Discuss about dumpy level and Levelling staff.	10M

OR

13. B).	Explain in detail about the various Properties of Bricks.	10M

14. A).	Discuss about the various types of bonds used in brick masonry.	10M

OR

14. B).	Discuss about the different types of flooring used in construction.	10M

15. A).	Explain about various materials used for sound proofing in construction.	10M

OR

15. B).	Discuss in detail about intelligent buildings and their advantages.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
CMR EXPLORE TO INVENT

(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: MARKETING MANAGEMENT
(Common for CE, EEE, ME, ECE, CSE & IT)

Date: 03.05.2023 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 Marketing.	2 M
2.	Explain Marketing Strategy.	2 M
3.	Describe Market Segmentation.	2 M
4.	Write short notes on branding Positioning.	2 M
5.	Enumerate Integrated Marketing Mix.	2 M
6.	Discuss Personal selling.	2 M
7.	Explain the Functions of Retailing.	2 M
8.	Discuss the importance of logistics.	2 M
9.	List the skills needed for sales manager.	2 M
10.	Describe the sales objectives.	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	A Describe the four distinct stages of product life cycle and illustrate appropriate marketing strategies during each stage.	10M

OR

11. B).	Discuss the elements of Marketing Mix with suitable illustrations.	10M
12. A).	Demonstrate how the study of consumer behavior can be utilized in marketing.	10M

OR

12. B).	Define marketing research and explain the scope of market research.	10M
13. A).	Enumerate the major modes of marketing communication mix.	10M

OR

13. B).	What are the goals of advertising? In which situation can sales and behavioral change in the target audience be considered the advertising goal.	10M
14. A).	What is marketing channel system? What decisions do companies face in managing their channels? Explain.	10M

OR

14. B).	'Studying market logistics leads managers to find the most efficient ways to deliver values'. Do you agree? Discuss the important issues in logistics.	10M
15. A).	Define sales organization. Discuss the purpose of sales organization.	10M

OR

15. B).	Explain the nature and importance of sales management in the present pandemic scenario.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular Examinations April/May-2023

Course Name: WASTE TO ENERGY

(Common for CE, EEE & CSE)

Date: 03.05.2023 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 different waste conversion devices.   2 M
2. Explain the composition of municipal solid wastes.   2 M
3. List the methods to produce charcoal.   2 M
4. List any four applications of pyrolytic oils.   2 M
5. Define gasification.   2 M
6. List the different elements in gasifier engine arrangement.   2 M
7. List different types of fixed bed combustors.   2 M
8. Write any four advantages of Chullahs program.   2 M
9. List properties of biogas.   2 M
10. Define anerobic digestion.   2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A). Explain the importance of Industrial waste utilization with neat sketches.   10M

OR

11. B). Discuss the following briefly:
     i) Agro based waste,   5M
     ii) Forest residue.   5M

12. A). i) Explain the process of pyrolysis in detail.   5M
     ii) Compare Slow and Fast Pyrolysis methods.   5M

OR

12. B). Define pyrolytic oil? Explain the manufacturing process of pyrolytic oils briefly.   10M

13. A). Explain the following gasifiers with neat sketches.
     (i) Updraft gasifier   5M
     (ii) Down draft gasifier   5M

OR

13. B). Discuss the following (i) Equillibrium   4M
     (ii) Kinetic considerations of gasifier in detail.   6M

(P.T.O..)

14. A). i) What is meant by exotic design of Biomass Stove?   3M
         ii) Explain the design, construction and operation of fluidized bed gasifier.   7M

<div align="center">**OR**</div>

14. B). i) Write Short notes on Biomass stoves.   3M
         ii) Explain Design, Construction and Operation of Inclined Grate Combustor.   7M

15. A). Write short notes on:
         (i) Thermo Chemical Conversion   5M
         (ii) Direct combustion of Biomass   5M

<div align="center">**OR**</div>

15. B). Write short notes on:
         (i) Urban Waste to Energy Conversion   5M
         (ii) Biomass Energy Program.   5M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VIII Semester Regular/Supplementary Examinations April/May-2023
Course Name: ENVIRONMENTAL PROTECTION & MANAGEMENT
(Common for EEE, ME, ECE, CSE & IT)

Date: 03.05.2023 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.	Give impacts of air Pollution.	2 M
2.	What do you mean by sustainability?	2 M
3.	What is cleaner production technology?	2 M
4.	Define zero discharge technology.	2 M
5.	Give the barriers on implementing environment standards.	2 M
6.	Define hazardous waste.	2 M
7.	Give any two roles of an environmental auditor.	2 M
8.	What is waste audit?	2 M
9.	Name some metals present in textile industry effluent.	2 M
10.	How do you dispose hazardous waste?	2 M

PART-B
Answer the following. Each question carries TEN Marks.   5x10=50M

11.A).	Write in brief about the organizational drivers to the implementation of environmental management systems.	10M

OR

11. B).	What is abatement of pollution. Discuss the major activities initiated under the various schemes on pollution abatement.	10M

12. A).	Write in brief about use of clean technologies as part of EMS in an organization.	10M

OR

12. B).	State the objectives and benefits of an environmental performance evaluation program.	10M

13. A).	Discuss the merits and barriers in implementing ISO 14001 in an organization.	10M

OR

13. B).	i) Discuss the objectives and targets of an environmental management programme.	5M
	ii) Appraise the significance of training awareness on environmental protection.	5M

14. A).	Write a process flow diagram for the Management of an Audit Programme as per ISO-19011.	10M

OR

14. B).	Explain briefly:	
	i) Non- conformity	
	ii) Roles and Qualifications of Auditors.	5M
		5M

(P.T.O..)

15. A).   i) Explain the concept of Transboundary of Pollutants.   5M
          ii) Write a note on Hazardous Waste classification and characteristics   5M

OR

15. B).   Discuss Pollution Prevention Opportunities in Pulp Paper and Sugar mills.   10M

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