H.T No: | | | | | | | | | | | R18 | Course Code: A30555

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Introduction to Database Management Systems

(Common for CE, EEE, ME & ECE)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Summarize the components of query processor.	2 M
2.	Define single valued and multi valued attributes.	2 M
3.	Give the syntax for table creation with an example.	2 M
4.	What is view in SQL? How is it defined?	2 M
5.	What is meant by role in SQL? Give an example?	2 M
6.	How do you sort the records in SQL? Give an example.	2 M
7.	What is assignment operator in SQL? Give an example.	2 M
8.	What is the need for triggers?	2 M
9.	List any two problems related to decomposition.	2 M
10.	What is 2 NF? Give an example.	2 M

PART-B

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

11.A). Explain the architecture of database system with a diagram. 10M

OR

11. B). Considerthebankdatabase as given below. 10M

branch(branchname,branchcity,assets)
customer(customername,customerstreet,customercity)
loan(loannumber,branchname,amount) *borrower(customername,loannumber)*
account(accountnumber,branchname,balance) *depositor(customername,accountnumber)*

Give an expression in the relational algebra for each of the following queries.

a. Find the names of all branches located in "Chicago".

b. Find the names of all borrowers who have a loan in branch "Downtown".

c. Find all loan numbers with a loan value greater than $10,000.

d. Find the names of all depositors who have an account with a value greater than $6,000.

e. Find the names of all depositors who have an account with a value greater than $6,000 at the "Uptown" branch.

12. A). Explain in detail the operators SELECT, UNION, INTERSECT with suitable examples. 10M

OR

12. B). What is meant by integrity constraints? Explain the different types of constraints in detail with examples. 10M

(P.T.O..)

13. A). Explain about the operators renaming, Aggregate functions in SQL. Give examples. 10M

OR

13. B). Explain the following: 10M

i) Data Manipulation Language (DML)
ii) Data Definition Language (DDL)
iii) Transaction Control Statements (TCS)
iv) Data Control Language (DCL)

14. A). Discuss the Declarations, Assignments and Control statements of SQL programming language. Give an example of function. 10M

OR

14. B). What is a trigger? Explain with an example. 10M

15. A). Illustrate and explain the following with an example: 10M

i) Normalization
ii) Functional dependency

OR

15. B). Explain with example the third normal form (3NF). 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30531**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Python Programming

(Common for CE, ME & ECE)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	List the Conditional statements in Python.	2 M
2.	How can you take input from the user in Python?	2 M
3.	How do you open a file in Python for reading?	2 M
4.	Define conditional iteration and provide a simple example.	2 M
5.	What is recursion in programming?	2 M
6.	What is the difference between a dictionary and a set in Python?	2 M
7.	Give an example of how to use the super() function in Python.	2 M
8.	Define encapsulation with an example.	2 M
9.	Define tkinter and its role in Python.	2 M
10.	What is an event loop in GUI programming?	2 M

PART-B

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

11.A).	Describe input validation and how it is handled using loops in Python.	10M
	OR	
11. B).	Develop a program to display the initials of a person's name. For example, if the user enters "John Doe Smith," the output should be "J.D.S."	10M
12. A).	Analyze how to generate random numbers in Python and give examples of its applications.	10M
	OR	
12. B).	Explain how exceptions are handled in Python. Write a program that reads numbers from a file and handles possible exceptions such as FileNotFoundError and ValueError.	10M
13. A).	Explain the dimensionality of list, tuple, dictionary and set with syntax example.	10M
	OR	
13. B).	Write a Python program that demonstrates the use of list methods like append(), remove(), pop(), and sort().	10M
14. A).	Demonstrate the difference between procedural and object oriented programming with example.	10M
	OR	
14. B).	Explain the different types of methods in Python with examples. Write a Python class that demonstrates each type of method.	10M

(P.T.O.)

15. A). Explain the basics of the tkinter module. Write a simple tkinter program to create a window with a Label widget displaying "Hello, World!" and a Button widget to close the window. 10M

OR

15. B). Explain the concept of event-driven programming in GUI applications. Write a program with multiple buttons that trigger different actions when clicked. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30383**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Supplementary Examinations November-2024

Course Name: Fundamentals of Engineering Materials

(Civil Engineering)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1. What is meant by an alloy? 2 M
2. Define metallic bonding. 2 M
3. Define equilibrium diagram. 2 M
4. Write a eutectoid reaction? 2 M
5. Define hardenability. 2 M
6. Draw TTT diagram for eutectoid steel. 2 M
7. Write the properties of malleable cast iron. 2 M
8. Write any 4 properties of copper. 2 M
9. Define composite. 2 M
10. What are the types of manufacturing methods for composites? 2 M

PART-B

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

11.A). i) Explain crystallization of metals. 5M
ii) Explain comparison method of grain size measuring technique. 5M

OR

11. B). i) How does grain size affect the mechanical properties? Explain. 5M
ii) How do you determine the Miller indices? Explain it with example. 5M

12. A). Draw iron-carbon equilibrium diagram and mark on it all salient temperatures, composition and phases involved. 10M

OR

12. B). i) What is phase rule? Give suitable example? 5M
ii) Draw and explain Isomorphous system. 5M

13. A). i) Compare annealing and normalizing. 5M
ii) Explain in detail about different types of carburizing methods. 5M

OR

13. B). Draw the Fe-Fe3C Diagram and label all the points, lines, temperatures and reactions. 10M

14. A). i) What is cast Iron and classify it and write the properties? 5M
ii) Write notes on Al-Cu alloys. 5M

OR

14. B). i) Explain the properties and applications of aluminum and its alloys. 5M
ii) Explain any four properties of alpha-beta titanium alloys. 5M

(P.T.O..)

15. A). Enumerate the characteristics, properties and applications of composites and polymers. 10M

OR

15. B). i) What are ceramics? Write with examples. 5M

ii) Write the classification of composites? Also indicate their typical applications. 5M

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H.T No: | | | | | | | | | | | R18 | Course Code: A30160

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Disaster Management and Mitigation

(Common for ME, CSE, IT, CSC, CSD, AID, CSM & AIM)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Differentiate between hazard and risk.	2 M
2.	Define the term ecosystem.	2 M
3.	Give examples of man induced disasters.	2 M
4.	What is meant by planetary hazards?	2 M
5.	List the methods of mitigation of earthquakes.	2 M
6.	What are the causes of Volcanoes?	2 M
7.	Mention different types of cyclones.	2 M
8.	Define soil erosion.	2 M
9.	Discuss about the disaster management.	2 M
10.	Define post-disaster stages.	2 M

PART-B

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

11.A).	Explain the various hazards affecting the environment	10M
	OR	
11. B).	Explain the human ecology and its application in geographical research.	10M
12. A).	Describe the different type of natural and man induced hazards.	10M
	OR	
12. B).	Discuss about endogenous hazards and exogenous hazards.	10M
13. A).	What are the environmental impacts of volcanic eruptions? Explain.	10M
	OR	
13. B).	Explain the causes, measurement and effects of earthquake in detail	10M
14. A).	Explain the reason that drought and floods occur in the same region but at different times.	10M
	OR	
14. B).	Discuss about the global sedimentation problems and regional sedimentation problems.	10M
15. A).	Explain in detail role of preparedness in disaster management.	10M
	OR	
15. B).	Explain the various stages in the disaster management.	10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30475**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular Examinations November-2024

Course Name: Data Communications

(Common for CSE, CSC, CSD, AID, CSM & AIM)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	How can we check the effectiveness of data communication?	2 M
2.	Define bit rate and baud rate.	2 M
3.	Mention the purpose of cladding in Optical Fibres?	2 M
4.	What is the equivalent circuit model for a metallic transmission line?	2 M
5.	Define pulse modulation.	2 M
6.	Define FDM and TDM.	2 M
7.	Define any two types of Call progress tones.	2 M
8.	What is a Local Loop?	2 M
9.	What is Hamming distance? What is its significance in error detection?	2 M
10.	What is Character synchronization and when is it required?	2 M

PART-B

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

11.A).	What is information capacity and how is its expression derived?	10M
	OR	
11. B).	Discuss about OSI reference model with neat sketch.	10M
12. A).	Describe the block diagram of an optical fiber communication system and explain its components.	10M
	OR	
12. B).	Write the characteristics of Electromagnetic waves.	10M
13. A).	Explain in detail about the operation of PCM transmitter and receiver.	10M
	OR	
13. B).	With a neat sketch, explain the Wavelength Division Multiplexing (WDM)?	10M
14. A).	What is a paging system? Describe in detail with a neat block diagram how a paging system work?	10M
	OR	
14. B).	Analyze the impact of channel noise on telephone message transmission.	10M
15. A).	What are the different methods of error detection and explain any two methods.	10M
	OR	
15. B).	Explain briefly about various data communication codes.	10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: C30162**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Knowledge Management

(Common for CSE, IT, CSC, CSD, AID, CSM & AIM)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Explain Leveraging knowledge.	2 M
2.	Infer the term, "Building Knowledge Societies".	2 M
3.	List out the Knowledge Management Tools.	2 M
4.	Discover the essence of Data Warehousing.	2 M
5.	Name any four Companies which are on the road to Knowledge Management.	2 M
6.	Examine the Challenges of Knowledge Management.	2 M
7.	Distinguish Knowledge Capital from physical Capital.	2 M
8.	Summarize the concept Customer Relationship Management.	2 M
9.	Interpret the roadblocks to the success of Knowledge Management.	2 M
10.	What is a learning Organization?	2 M

PART-B

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

11.A).	Explain the Characteristics and Components of Organizational Knowledge.	10M
	OR	
11. B).	Formulate the measures for meeting the challenges of implementing Knowledge Management Programs.	10M
12. A).	Examine the role played by Information Technology in Knowledge Management Systems.	10M
	OR	
12. B).	Summarize the significance of ERP and BPR in Knowledge Management.	10M
13. A).	Critically appraise the Knowledge Management in Manufacturing Industry.	10M
	OR	
13. B).	Discuss the future of Knowledge Management.	10M
14. A).	Explain various stages of Knowledge Management process.	10M
	OR	
14. B).	Analyze the imperatives of new age in Knowledge Management process.	10M
15. A).	Explain the 10 Step KM Road Map of Amrit Tiwana.	10M
	OR	
15. B).	Elaborate on the role of Knowledge Management in Organizational Restructuring.	10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30554**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Java Programming

(Common for ME & ECE)

Date: 30.11.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1. Define Type casting. 2 M
2. Describe scope and life time of variable. 2 M
3. List types of Inheritances in java. 2 M
4. Distinguish between interface and Abstract class. 2 M
5. How to create and import packages? 2 M
6. Distinguish between Exception and error. 2 M
7. What is Thread? 2 M
8. Distinguish between process and thread. 2 M
9. How to import scanner class in Java? 2 M
10. Distinguish between FileInputStream and FileOutputStream in java. 2 M

PART-B

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

11.A). Distinguish between procedure oriented and object oriented programming. 10M

OR

11. B). What are conditional statements? Discuss various types with examples. 10M

12. A). How do you construct a class from another class? Explain with example. 10M

OR

12. B). Write the initialization of array. Write a java program to add two matrices using two dimensional arrays. 10M

13. A). Explain in detail about accessing a package. 10M

OR

13. B). What is Exception? How can java handle the Exceptions? Illustrate with an example. 10M

14. A). Explain the various ways of creation of thread with an example. 10M

OR

14. B). Distinguish between Thread and Process with suitable examples. 10M

15. A). Explain briefly about RandomAccessFile. 10M

OR

15. B). Explain about various java.io Packages. 10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30163**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Air Pollution and Control

(Common for ECE, CSE, IT, CSC, CSD, AID, CSM & AIM)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	What is air borne contaminants?	2 M
2.	Define the different sources of air pollution.	2 M
3.	Write the structure of atmosphere.	2 M
4.	What is significance of windrose diagram?	2 M
5.	Enumerate the physical parameters of air.	2 M
6.	Write the criteria for adopting a sampling procedure for monitoring gaseous pollutants.	2 M
7.	Enumerate the three mechanisms through which particulates from gas stream is separated.	2 M
8.	Write the advantages and disadvantages of wet scrubbers.	2 M
9.	What is exhaust gas recirculation?	2 M
10.	Write the main parts of sound level meter.	2 M

PART-B

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

11.A).	With neat sketches, explain the types of Inversions.	10M
	OR	
11. B).	Discuss the effects of air pollutants on vegetation.	10M
12. A).	With neat sketches, explain the various types of plume behaviour.	10M
	OR	
12. B).	A boiler with stack of 200m height and 0.4m diameter is releasing flue gas at a velocity of 15.5m/s at a temperature of 170° C. The wind speed at the stack height is 6m/s and ambient temperature is 35°C . Estimate the plume rise (a) when the environmental lapse rate is -2.5°C/100m (b) +2.0°C/100m.	10M
13. A).	Compare the gravitational and filtration method of particulate sampling.	10M
	OR	
13. B).	Illustrate the gas chromatographic method for CO analysis.	10M
14. A).	With neat sketches, explain the working principles of any two types of scrubbers.	10M
	OR	
14. B).	With neat sketch, explain the principle of Electrostatic precipitator.	10M
15. A).	Briefly explain the effects of noise on people.	10M
	OR	
15. B).	Discuss the automobile pollution preventive measures and control measures.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: C30165

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Supplementary Examinations November-2024

Course Name: Basics of Insurance & Taxation

(CSM)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	What is the concept of pensions and annuities?	2 M
2.	Differentiate between personal insurance and general insurance.	2 M
3.	What is the concept of claim settlement?	2 M
4.	Discuss the consequences of increasing retention limits in Insurance business.	2 M
5.	What is Income Tax Slab?	2 M
6.	List out the conditions for opting new tax regime.	2 M
7.	What is Fringe Benefit Tax?	2 M
8.	What are the Capital Gains?	2 M
9.	What is Tax Refund? Who is eligible for income tax refund?	2 M
10.	What is the concept of advance payment of tax?	2 M

PART-B

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

11.A).	Elaborate the types and features of General Insurance Products with examples.	10M
	OR	
11. B).	Define Insurance. Explain the cost and benefits associated with Insurance.	10M
12. A).	Examine the legal framework associated with claim management and settlement in Insurance contracts.	10M
	OR	
12. B).	Define Reinsurance. Explain various methods of reinsurance.	10M
13. A).	What is meant by Fiscal Policy? Explain the Government financial policies relating to taxation in India.	10M
	OR	
13. B).	Explain the concept of Previous year and Assessment year as per Income Tax Act, 1961. Write a note on Tax Structure in India.	10M
14. A).	Elaborate the list of income from other sources taxed in India.	10M
	OR	
14. B).	Explain the basics of house property tax. Elaborate the steps in calculating income from house property.	10M
15. A).	List out the steps for filing income tax return.	10M
	OR	
15. B).	Write a detailed note on Tax Collection at Source, covering the classification of buyers and sellers.	10M

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

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Business Ethics & Corporate Governance

(Common for CSE, IT, CSC, CSD, AID, CSM & AIM)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Define Business Ethics and its importance.	2 M
2.	Explain is the main focus of Gilligan's theory.	2 M
3.	What do you mean by Ethical Dilemma?	2 M
4.	Outline the Preporatory Ethics?	2 M
5.	What is Hacking?	2 M
6.	What is meant Cyber Criminal?	2 M
7.	What is meant by Corporate Crimes?	2 M
8.	List out any two benefits of Corporate Governance.	2 M
9.	State any two methods of Reducing Risk.	2 M
10.	OECD stands for-----	2 M

PART-B

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

11.A).	Define ethical culture and explore Five Levels of Business Ethics.	10M
	OR	
11. B).	How did the Gilligan recast Kohlberg levels of Moral Development?	10M
12. A).	Elaborate the major issues involved in Advertising.	10M
	OR	
12. B).	How do ethics impact the Production of Products?	10M
13. A).	Bring out the issues related to the Intellectual Property in Cyberspace.	10M
	OR	
13. B).	Outline the dimensions and principles of Cyberspace?	10M
14. A).	Explain Corporate Governance. And list out the features and principles of good corporate governance.	10M
	OR	
14. B).	Outline various types of board committees in corporate governance?	10M
15. A).	Elaborate the Recommendations of J.J. Irani Committee on Corporate Governance.	10M
	OR	
15. B).	What are the five internal controls followed for Good Corporate Governance?	10M

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

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Supplementary Examinations November-2024

Course Name: Marketing Management

(Information Technology)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	What do you mean by marketing strategy?	2 M
2.	What is a customer loyalty program?	2 M
3.	What is market research?	2 M
4.	What is consumer behavior?	2 M
5.	What do you mean by pricing strategy?	2 M
6.	How does digital communication through online happen?	2 M
7.	What do you mean by retailing?	2 M
8.	Give a note on logistics.	2 M
9.	Write the nature of sales management.	2 M
10.	Give a note on importance of sales management.	2 M

PART-B

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

11.A).	Develop a loyalty program for electronics company products.	10M
	OR	
11. B).	Illustrate the product life cycle of an automobile of your choice.	10M
12. A).	How do we analyze our competitors? Discuss.	10M
	OR	
12. B).	Elaborate on the brand positioning with the help of an example.	10M
13. A).	What are the critical aspects involved in designing and managing an IMC?	10M
	OR	
13. B).	Inspect the role of advertising and sales promotion as part of IMC.	10M
14. A).	Give a note on wholesaling and logistics operations.	10M
	OR	
14. B).	Elaborate on the challenges involved in managing the IMC.	10M
15. A).	What are sales objectives? Explain the skills of a sales manager.	10M
	OR	
15. B).	Explain in detail the types of sales organizations.	10M

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H.T No: | | | | | | | | | | | **R18** **Course Code: A30357**

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Supplementary Examinations November-2024

Course Name: Fundamentals of Manufacturing Process

(Civil Engineering)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Define Refractoriness and permeability.	2 M
2.	List the ingredients of moulding sand.	2 M
3.	Differentiate between Soldering and Brazing.	2 M
4.	What is Heat Affected zone in welding?	2 M
5.	Compare Blanking and Piercing processes.	2 M
6.	List the types of presses and press tools.	2 M
7.	Outline the principle of extrusion.	2 M
8.	Compare hot extrusion and cold extrusion.	2 M
9.	List the defects of forging.	2 M
10.	Predict the forces in forging operations.	2 M

PART-B

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

11.A).	Explain the different types of patterns with appropriate sketches.	10M
	OR	
11. B).	Discuss the reasons for various types of defects in castings.	10M
12. A).	Explain the types of welded joints and welding positions with appropriate sketches.	10M
	OR	
12. B).	Classify the various welding defects their causes and remedies.	10M
13. A).	Analyze the importance of Recovery, Recrystallisation and Grain growth with a neat sketch.	10M
	OR	
13. B).	Summarize Cold working and Hot working processes with respect to the process, advantages and disadvantages.	10M
14. A).	Illustrate the principle of extrusion process. Compare the forward and backward extrusion processes with sketches.	10M
	OR	
14. B).	Explain Impact extrusion and Hydrostatic extrusion with appropriate sketches.	10M
15. A).	Elaborate the principle and various passes of Drop forging process.	10M
	OR	
15. B).	Assess the various operations and methods of forging.	10M

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H.T No: | | | | | | | | | | | R18 | Course Code: A30559

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Introduction to Data Science

(Common for CE, EEE, ME & ECE)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1. What is the main purpose of Data Science? 2 M
2. What is the difference between structured and unstructured data? 2 M
3. What is data munging? 2 M
4. What is dimensionality reduction, and how does it benefit data analysis? 2 M
5. What is overfitting in machine learning, and how does it affect model performance? 2 M
6. How does a Support Vector Machine (SVM) work in classification tasks? 2 M
7. What is classification error, and how do you calculate it? 2 M
8. What is rule induction in machine learning? 2 M
9. How is data science applied in weather forecasting? 2 M
10. How do convolutional neural networks (CNNs) contribute to object recognition? 2 M

PART-B

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

11.A). Compare Analysis vs Reporting in the context of data-driven decision-making. 10M

OR

11. B). How does Python support Natural Language Processing (NLP)? Give examples. 10M

12. A). What is the difference between reshaping and pivoting data in Pandas? Provide examples where each would be used. 10M

OR

12. B). Explain how you would use the Twitter API to collect data on tweets related to a specific hashtag. 10M

13. A). How does Bayes' Theorem work in a classification problem, and why is the "naive" assumption made in Naive Bayes? 10M

OR

13. B). Determine the output class for the data point X=1, Y=1 by K-Nearest neighbor classifier where K=3 using the following data. Write the step by step calculations performed in determining output class. 10M

X	Y	CLASS
-1	1	No
0	1	Yes
0	2	No
1	-1	No
1	0	Yes
1	2	Yes
2	2	No
2	3	Yes

(P.T.O..)

14. A). What is the generalization problem in neural networks, and how can it be mitigated? 10M

OR

14. B). Compare deep learning and traditional machine learning. List the advantages of deep learning over traditional methods? 10M

15. A). Explain how stock market prediction models can incorporate external data like news sentiment. 10M

OR

15. B). How can object recognition algorithms be optimized for real-time applications such as autonomous vehicles or security systems? 10M

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

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations November-2024

Course Name: Green Buildings

(Common for CSE, CSC, CSD, AID, CSM & AIM)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Define sustainable design.	2 M
2.	What is green design, and why is it important?	2 M
3.	Define sustainable architecture.	2 M
4.	What is LEED certification?	2 M
5.	Why is envelope material important for temperature control?	2 M
6.	Name two materials that help in humidity control.	2 M
7.	What is an eco-house?	2 M
8.	List two building concepts used in eco houses.	2 M
9.	What is the purpose of a green building design studio?	2 M
10.	Name key parameters in designing sustainable buildings.	2 M

PART-B

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

11.A).	Explain the historical perspective and strategies for sustainable design.	10M
	OR	
11. B).	Discuss the role of bio-mimicry as a design tool in sustainable architecture.	10M
12. A).	Describe LEED and Green Globe certifications and their significance in green building evaluation.	10M
	OR	
12. B).	Explain the environmental management practices for sustainable buildings.	10M
13. A).	Discuss the role of passive design in maintaining internal temperature in buildings.	10M
	OR	
13. B).	Explain the importance of material and humidity control in building design.	10M
14. A).	Discuss various concepts used in the design of an eco-house, focusing on energy and insulation.	10M
	OR	
14. B).	Explain the benefits of small-scale wind and hydro power systems in eco houses.	10M
15. A).	Describe the process of collaborative learning in a sustainable design studio and its advantages.	10M
	OR	
15. B).	Discuss the key design parameters for developing sustainable buildings in urban settings.	10M

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

CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Supplementary Examinations November-2024

Course Name: Environmental Protection and Management

(Electronics & Communication Engineering)

Date: 05.12.2024 AN **Time: 3 hours** **Max.Marks: 70**

(Note: Assume suitable data if necessary)

PART-A

Answer all TEN questions

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

1.	Explain systems approach to corporate environmental management.	2 M
2.	What is Environmental stewardship?	2 M
3.	Why are environmental quality standards important?	2 M
4.	Define zero discharge technology.	2 M
5.	What are the benefits of Environmental Management Systems?	2 M
6.	What is ISO 14001 ?	2 M
7.	List out the environmental performance indicators.	2 M
8.	Outline compliance audit.	2 M
9.	Illustrate the Hazardous waste.	2 M
10.	List out the characteristics of hazardous wastes.	2 M

PART-B

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

11.A).	Discuss in detail about abatement of pollution and conservation of resources.	10M
	OR	
11. B).	Explain charter on corporate responsibility for environmental protection.	10M
12. A).	Differentiate pollution prevention and pollution control and explain the opportunities and barriers of pollution control.	10M
	OR	
12. B).	State the objectives and benefits of an environmental performance evaluation program.	10M
13. A).	Discuss the objectives and targets of an environmental management program.	10M
	OR	
13. B).	Identify different environmental aspects and impact analysis methods for environmental management program.	10M
14. A).	Discuss the objectives and benefits of environmental audit.	10M
	OR	
14. B).	Explain process steps for waste audit and waste minimizing measures.	10M
15. A).	Discuss pollution prevention and control opportunities in textile and tannery industries.	10M
	OR	
15. B).	Discuss hazardous wastes treatment and disposal methods.	10M

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