CMR COLLEGE OF ENGINEERING & TECHNOLOGY
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Examination	: B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	: Business Economics and Financial Analysis
Course Code	: A400102
Branch	: CE/ EEE/ ECE/ CSC
Date & Session	: 24-11-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)

PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	List the non-conventional sources of finance for businesses.	1 M
2.	What do you mean by national income?	1 M
3.	What is elasticity of demand?	1 M
4.	Write the characteristics of good demand forecasting.	1 M
5.	What are the factors of production?	1 M
6.	Define Break Even Analysis.	1 M
7.	State the concept of accounting equation.	1 M
8.	What is the purpose of a Trial Balance?	1 M
9.	What is ratio analysis?	1 M
10.	Write the significance of solvency ratios.	1 M

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

11.A).	i) Explain various types of business entities with examples.	5M
	ii) Determine the theory of the firm. How does it relate to the decision-making process in businesses?	5M

OR

11. B).	i) Explain the features of business cycle and discuss the various phases of business cycle.	5M
	ii) State the role of Business Economist in modern organization.	5M

12. A).	i) What do you understand by Elasticity of demand? Mention its significance?	5M
	ii) Consider a local car dealership that gathers data on changes in demand and consumer income for its cars for a particular year. When the average real income of its customers falls from Rs.50,000 to Rs.40,000, the demand for its cars from 10,000 to 5,000 units sold, all other things unchanged. Calculate Income elasticity of demand?	5M

OR

12. B).	What is Demand Forecasting? Briefly explain the various methods of Demand Forecasting?	10M

13. A).	i) State and illustrate Cobb-Douglas production function. What are the properties of this function?	5M
	ii) Define Cost. Discuss various cost concepts used in the process of Cost Analysis.	5M

(P.T.O..)

<center>OR</center>

13. B).   What is meant by the term Market Structure? Discuss the various types of competition   10M
with suitable examples.

14. A).   i) Define accounting. Explain about accounting concepts and conventions.   5M
ii) Prepare a format for Trading account, Profit & Loss account and Balance sheet.   5M

<center>OR</center>

14. B).   From the following information prepare a Profit and Loss Account of a trader for the year   10M
ending on 31st March, 2024.

Particulars	Amount Rs.
Gross Profit	3,00,000
Salary & Wages	60,000
Wages & Salaries	600
Carriage Inwards	1,200
Carriage Outwards	3,000
Freight Inward	1,800
Freight outwards	3,000
Discount Allowed	600
Discount Received	1,200
Dividend Received	1,800
Commission allowed	1,200
Commission received	1,800
Interest allowed	1,800
Interest Received	2,400
Rent Paid	2,400
Rent Received	3,000
Premium Received	3,000
Premium paid	3,600
General expenses	600
Miscellaneous income	1,800
Brokerage Expenses	1,800

15. A).   State the concept of ratio analysis. Elaborate the different types of ratios.   10M

<center>OR</center>

15. B).   The following is the balance sheet of a company 31st March 2024:   10M

Liabilities	Rs	Assets	Rs
Share capital	2,00,000	Land and Buildings	1,40,000
P&L Account	30,000	Plant and machinery	3,50,000
General reserve	40,000	stock	2,00,000
12% debentures	4,20,000	Sundry Debtors	1,00,000
Sundry Creditors	1,00,000	Bills receivables	10,000
Bills payables	50,000	Cash at Bank	40,000

Calculate: i) Current ratio   ii) Quick ratio   iii) Debt to Equity ratio.

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Organizational Behavior
Course Code	:	A400103
Branch	:	CSE/ IT/ CSC/ CSD
Date & Session	:	26-11-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)
PART-A
Answer all TEN questions
Each question carries ONE mark. 10x1=10M

1. Define Organizational Behavior. 1 M
2. What is the autocratic model of OB? 1 M
3. Explain Emotional Intelligence. 1 M
4. State one factor influencing perception. 1 M
5. Define team building. 1 M
6. What is meant by group dynamics? 1 M
7. What is the difference between a leader and a manager? 1 M
8. List any two sources of power. 1 M
9. Define job satisfaction 1 M
10. What is work stress? 1 M

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

11.A). Explain the definition, need, and importance of Organizational Behavior in modern organizations. 10M

OR

11. B). Describe the framework of Organizational Behavior and explain how it helps in improving organizational performance. 10M

12. A). Evaluate the role of emotions, emotional labor, and emotional intelligence in managing workplace behavior. 10M

OR

12. B). Discuss the importance of perception and motivation in influencing employee performance. Explain their effects on work behavior. 10M

13. A). What is the process of group decision-making. Examine the techniques used for effective decision-making in teams. 10M

OR

13. B). Explain the types of communication networks and analyze their advantages and disadvantages in organizations. 10M

(P.T.O..)

14. A).   Analyze the different theories of leadership and their relevance in modern organizations.   10M

OR

14. B).   Discuss the relationship between leadership, power, and politics in influencing employee   10M
performance.

15. A).   Differentiate between stability and change and between proactive and reactive change.   10M

OR

15. B).   Examine the causes of work stress and describe the methods for preventing and managing   10M
stress to promote work-life balance.

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Disaster Preparedness & Planning Management
Course Code	:	A401601
Branch	:	EEE/ ME/ ECE/ CSE/ IT/ CSC/ CSD/ CSM
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)

PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	Define the term disaster.	1 M
2.	Outline hazard? Give one example.	1 M
3.	Write two major impacts of tsunami on coastal regions.	1 M
4.	What is a man-made disaster? Mention any two examples.	1 M
5.	Outline disaster impact.	1 M
6.	Define urban disasters illustrate.	1 M
7.	Define Disaster Risk Reduction (DRR)	1 M
8.	What is an early warning system and why is it important?	1 M
9.	Outline environmental vulnerability?	1 M
10.	What is sustainable development in the context of disaster management?	1 M

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

11.A).	Discuss about disaster, hazard, vulnerability, risk, and resilience and explain how they are interlinked in disaster management.	10M

OR

11. B).	Identify the impact of disasters on human life and infrastructure.	10M
12. A).	Classify disasters based on their origin. Differentiate between natural and man-made disasters with examples.	10M

OR

12. B).	Identify the causes, effects, and mitigation measures of floods and droughts.	10M
13. A).	Explain the environmental, physical, social and economic disaster impacts with suitable examples.	10M

OR

13. B).	How does climate change cause more urban disasters? Explain mitigation measures to control.	10M
14. A).	Explain the phases of the Disaster Management Cycle with suitable examples.	10M

OR

14. B).	Define risk analysis, vulnerability, and capacity assessment. Explain how these are used to plan effective DRR strategies.	10M
15. A).	Discuss the interrelationship between disasters, environment, and development. How can development increase or reduce disaster risks?	10M

OR

15. B).	Describe the importance of dam construction with any case study.	10M

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Environmental Impact Assessment
Course Code	:	A401602
Branch	:	EEE/ ME/ ECE/ CSE/ IT/ CSC/ CSD/ CSM
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)

PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	What is EIA?	1 M
2.	Define Environmental Inventory in the context of EIA.	1 M
3.	List the major methodologies for EIA?	1 M
4.	What is the purpose of a checklist in EIA?	1 M
5.	What is an Environmental Management Plan?	1 M
6.	List out the different types of monitoring activities?	1 M
7.	What is meant by biodiversity?	1 M
8.	State the limitations of the Wildlife Protection Act.	1 M
9.	List factors considered for assessment of impact significance in developmental projects.	1 M
10.	Suggest some factors important for siting an industry.	1 M

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

11.A).	Discuss the steps involved in the EIA process.	10M
	OR	
11. B).	Enumerate the limitations of environmental impact assessment.	10M
12. A).	Explain the systematic approach for using EIA as a planning tool for major project activities.	10M
	OR	
12. B).	Describe the matrix method in detail, with reference to the Leopold matrix.	10M
13. A).	Discuss the components of an Environmental Management Plan (EMP) and their significance.	10M
	OR	
13. B).	Explain the sequential steps involved in Environmental Impact Assessment (EIA) as an environmental management tool.	10M
14. A).	Explain the provisions of the Water Prevention and Control of Pollution Act, 1974.	10M
	OR	
14. B).	Discuss various methods to control noise pollution from industrial activities	10M
15. A).	Explain with a case study the environmental impact assessment for a water resources project.	10M
	OR	
15. B).	Describe the environmental impact assessment of a pharmaceutical industry.	10M

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Fundamentals of Engineering Materials
Course Code	:	A403601
Branch	:	CE/ EEE/ ECE/ CSE/ IT/ CSC/ CSM
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)
PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	What is meant by a unit cell?	1 M
2.	What is meant by atomic packing factor (APF)?	1 M
3.	State Gibbs phase rule.	1 M
4.	Give an example of binary phase diagram.	1 M
5.	Define hardenability.	1 M
6.	What is the carbon percentage in eutectoid steel?	1 M
7.	Define grey cast iron.	1 M
8.	What is Al–Cu phase diagram?	1 M
9.	What is a thermoplastic polymer?	1 M
10.	Give one example of fibre-reinforced composite.	1 M

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

11.A).	Explain crystallography and Miller indices with suitable diagrams.	10M
	OR	
11. B).	Analyze the effect of grain size and boundaries on metal properties.	10M
12. A).	Discuss in detail the construction of binary phase diagrams.	10M
	OR	
12. B).	Compare isomorphous, eutectic, and eutectoid systems.	10M
13. A).	Discuss the Fe–Fe3C equilibrium diagram in detail.	10M
	OR	
13. B).	Discuss hardenability and factors affecting it.	10M
14. A).	Discuss the structure and properties of various cast irons.	10M
	OR	
14. B).	Compare ferrous and non-ferrous metals in engineering.	10M
15. A).	Discuss the classification, properties, and uses of polymers.	10M
	OR	
15. B).	Analyze the role of ceramics and composites in high- temperature applications.	10M

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	**Java Programming**
Course Code	:	A405604
Branch	:	CE/ EEE/ ME/ ECE
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)

PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	List any two features of Java.	1 M
2.	What is the use of this keyword?	1 M
3.	What is array?	1 M
4.	What does the final keyword do?	1 M
5.	What is access protection in packages?	1 M
6.	Differentiate between String and String Buffer.	1 M
7.	Difference between a process and thread.	1 M
8.	What is Main Thread.	1 M
9.	How do you read data using Scanner class?	1 M
10.	How do you check if a file exists?	1 M

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

11.A).	i) Explain the steps involved in creating and executing a Java program.	5M
	ii) Write a Java program to check whether a number is prime or not.	5M

OR

11. B).	i) Write a Java program to create a class Employee with attributes id, name, and salary, and display the details using a constructor.	5M
	ii) Differentiate between method overloading and constructor overloading.	5M
12. A).	i) Describe the types of inheritance supported in Java.	7M
	ii) Write a Java program to find the sum of elements in a 2D array.	3M

OR

12. B).	i) Write a Java program to demonstrate multilevel inheritance.	5M
	ii) Differentiate between abstract class and interface.	5M
13. A).	i) What is the difference between checked and unchecked exceptions?	5M
	ii) Write a Java program to convert primitive types to wrapper objects and vice versa.	5M

OR

13. B).	i) What are wrapper classes? Explain with examples.	5M
	ii) Discuss the role of try, catch, and finally blocks.	5M

(P.T.O..)

14. A). i) Describe thread lifecycle with a diagram. 5M
     ii) Write a Java program to create two threads using Thread class. 5M

OR

14. B). i) Write a Java program to demonstrate the difference between start () and run (). 5M
     ii) Explain how can multiple threads be synchronized. 5M

15. A). i) What are the exceptions associated with file handling. 5M
     ii) How do you check file properties using File class? 5M

OR

15. B). i) What are the differences between byte streams and character streams? 5M
     ii) Write a Java program to read a text file line by line using Buffered Reader. 5M

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Basics of Logistics and Supply Chain Management
Course Code	:	A400601
Branch	:	CE/ ME/ ECE/ CSE/ IT/ CSC/ CSD/ CSM
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)
PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	List the key issues in SCM.	1 M
2.	List two best practices in SCM.	1 M
3.	Define distribution management.	1 M
4.	What is cross-docking?	1 M
5.	What is e-business?	1 M
6.	Define the term "network" in supply chain management.	1 M
7.	What is bullwhip effect?	1 M
8.	What is the abbreviation for SCOR in supply chain management?	1 M
9.	State one example of the bullwhip effect in real-world supply chains.	1 M
10.	Define incentive and misalignment.	1 M

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

11.A).	Develop a Green SCM model for a manufacturing firm.	10M
	OR	
11. B).	Compare traditional and modern supply chain objectives with examples.	10M
12. A).	Explain how containerization and cross-docking improve logistics efficiency.	10M
	OR	
12. B).	Analyze the key issues and challenges in modern distribution management.	10M
13. A).	Illustrate the role and factors influencing distribution network in detail.	10M
	OR	
13. B).	Explain the role of network design and its framework for network design decisions.	10M
14. A).	Explain how technology enables effective demand chain integration.	10M
	OR	
14. B).	Discuss how companies can mitigate risks in global logistics and sourcing.	10M
15. A).	i) Compare structural and relational barriers in supply chain coordination.	5M
	ii) Explain the role of information technology in supply chain management with suitable example.	5M
	OR	
15. B).	Evaluate the effectiveness of CPFR in detail.	10M

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Examination	:	B.Tech VII Semester Regular Examinations Nov/Dec-2025
Course Name	:	Fundamentals of Internet of Things
Course Code	:	A404601
Branch	:	CE/ EEE/ ME/ CSE/ CSC/ IT/ CSD/ CSM
Date & Session	:	05-12-2025 AN Duration: 3 hours Max. Marks: 60

(Note: Assume suitable data if necessary)

PART-A
Answer all TEN questions
Each question carries ONE mark.   10x1=10M

1.	Define Arduino Uno.	1 M
2.	What is the function of the RESET button?	1 M
3.	What is Raspberry Pi?	1 M
4.	Mention one feature of NodeMCU.	1 M
5.	Define the Internet of Things (IoT).	1 M
6.	What is the main advantage of using cloud storage in IoT?	1 M
7.	Identify the main advantage of CAN bus.	1 M
8.	What is the role of ZigBee in IoT?	1 M
9.	Give an example of IoT in industrial automation.	1 M
10.	State one application of IoT in energy management.	1 M

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

11.A).	Explain the architecture of Arduino Uno board, describing the key components and their functions.	10M

OR

11. B).	Describe the complete process of interfacing an LED with Arduino Uno. Include circuit diagram and programming steps.	10M

12. A).	i) Compare and contrast Raspberry Pi with Arduino Uno.	5M
	ii) Discuss the features and pin functions of Node MCU.	5M

OR

12. B).	Examine the commonly used Linux commands in Raspberry Pi terminal.	10M

13. A).	i) Define IoT and Write its advantages and disadvantages of IoT.	4M
	ii) Design and explain the logical design of IoT in detail.	6M

OR

13. B).	Determine the various IoT enabling technologies and explain their roles in the development of Internet of Things applications.	10M

14. A).	Analyze various wireless communication technologies used in IoT	10M

OR

14. B).	Illustrate the SPI bus configuration and data transfer process.	10M
15. A).	Discuss how IoT can improve urban living through smart cities and transport systems.	10M

OR

15. B).	i) Evaluate the effectiveness of IoT in traffic management and accident prevention.	5M
	ii) Explain case study for agriculture in IoT.	5M