CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular/Supplementary Examinations May-2023
Course Name: BUSINESS MANAGEMENT & FINANCIAL ANALYSIS
(Common for EEE, ME & ECE)

Date: 08.05.2023 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 the Management.	2 M
2.	Explain the Delegation of authority.	2 M
3.	Describe the Promotion of the product.	2 M
4.	Explain the Performance appraisal.	2 M
5.	Write about Social environment of business.	2 M
6.	What is the importance of managerial economics?	2 M
7.	Define the price.	2 M
8.	Write about Monopoly market.	2 M
9.	Explain the Venture capital.	2 M
10.	Write the purpose of balance sheet.	2 M

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

11.A).	Explain the principles of modern management proposed by Henry Fayol, in detail.	10M
	OR	
11. B).	Describe Maslow's need hierarchy theory of motivation with a suitable diagram.	10M
12. A).	Enumerate the objectives and functions of Human Resource management.	10M
	OR	
12. B).	Define plant layout and explain the main types of plant layout.	10M
13. A).	What is National Income? Describe the significance of National Income.	10M
	OR	
13. B).	How do you define Demand? Discuss the demand forecasting methods in detail.	10M
14. A).	i) What is Break- even analysis? What are the applications of BEA?	5M
	ii) Star Industries manufactures electrical goods for which the fixed costs stand at Rs 50,000 and the variable cost to produce a good is Rs 30. The firm sold these goods to produce with a sale price of Rs 50 per unit, find out the Break- even point?	5M
	OR	
14. B).	Explain the concept of Production function with suitable examples, in detail.	10M
15. A).	Define Liquidity. Describe the types and importance of liquidity ratios.	10M
	OR	
15. B).	Define the business and explain the types of business enterprises.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular/Supplementary Examinations May-2023
Course Name: MICROPROCESSORS & MICROCONTROLLERS
(Common for EEE & ECE)

Date: 10.05.2023 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 are the different types of registers in 8086 microprocessor architecture?	2 M
2.	List the hardware interrupts in 8086 Microprocessor with pin numbers.	2 M
3.	Illustrate register indirect addressing mode with an example.	2 M
4.	Interpret any four data transfer instructions with the help of examples.	2 M
5.	Show the control register structure for I/O mode in 8255 PPI.	2 M
6.	Draw the pin diagram of 8255 PPI.	2 M
7.	List out the features of 8051 microcontroller.	2 M
8.	Differentiate between MOV, MOVC and MOVX instructions in 8051 microcontroller.	2 M
9.	What is the use of timers in 8051?	2 M
10.	How do microcontrollers handle interrupts?	2 M

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

11.A).	Explain the internal architecture of 8086 microprocessor with a neat sketch.	10M
	OR	
11. B).	Illustrate the physical memory organization of 8086 microprocessor.	10M
12. A).	Discuss about the branching instructions of 8086 microprocessor with examples.	10M
	OR	
12. B).	List different assembler directives with suitable examples.	10M
13. A).	Illustrate with an example, to interface an A/D converter with 8086 microprocessor.	10M
	OR	
13. B).	Draw the block diagram of 8255 and explain each block.	10M
14. A).	Illustrate the following registers of 8051 microcontroller: (i) TCON, (ii) SCON, (iii) SBUF and (iv) DPTR.	10M
	OR	
14. B).	Explain different types of instructions in 8051 microcontroller with suitable examples.	10M
15. A).	Interpret the serial communication in 8051 microcontroller.	10M
	OR	
15. B).	Explain the programming of external hardware interrupts.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular/Supplementary Examinations May-2023
Course Name: MICROWAVE ENGINEERING
(Electronics & Communication Engineering)

Date: 12.05.2023 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 Q factor of Microstrip line.	2 M
2.	What is dominant mode of wave guide?	2 M
3.	Sketch the E plane Tee.	2 M
4.	What is Faraday rotation?	2 M
5.	Explain the bunching process.	2 M
6.	Draw the applegate diagram of Reflex Klystron.	2 M
7.	Write any two applications of TWT.	2 M
8.	Define Hall cut off voltage.	2 M
9.	Mention different modes of Gunn oscillator.	2 M
10.	What is the role of bolometer in microwave test setup?	2 M

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

11.A). A TE10 wave at 10 GHZ propagates in a rectangular wave guide of 1.5 cm × 0.6 cm dimensions filled with medium air. Determine guided wave length and wave impedance. 　 10M

OR

11. B). A rectangular waveguide with a width of 4 cm and a height of 2 cm is used to propagate an electromagnetic wave in the TE_{10} mode. Determine the wave impedance, phase velocity, and group velocity of the waveguide for the wave length of 6cm. 　 10M

12. A). What is a magic Tee junction. Derive the S matrix of a magic Tee? 　 10M

OR

12. B). Draw the junction diagram of H-plane Tee and explain its characteristics. 　 10M

13. A). Draw the structure and explain the velocity modulation process in two cavity klystron amplifier. 　 10M

OR

13. B). Explain the operation of reflex klystron with applegate diagram and derive it's efficiency. 　 10M

(P.T.O..)

14. A). Briefly explain the amplification process of Travelling wave tube.   10M

                                OR

14. B). Explain the construction and operation of Magnetron and mention it's applications.   10M

15. A). Explain the operation of Gunn diode using RWH theory.   10M

                                OR

15. B). Using slotted line, draw a typical microwave bench setup for measurement of unknown   10M
        load and explain.

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

Course Name: VLSI DESIGN

(Electronics & Communication Engineering)

Date: 15.05.2023 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.	Explain a pull down device.	2 M
2.	Define Threshold voltage.	2 M
3.	List the types of design rules.	2 M
4.	Demonstrate the transfer characteristics of CMOS.	2 M
5.	What is sheet resistance?	2 M
6.	What is meant by wiring capacitance?	2 M
7.	Write categories of memory arrays.	2 M
8.	What are the different types of ROMs?	2 M
9.	Explain about FPGA.	2 M
10.	Explain about CPLD.	2 M

PART-B

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

11.A). Determine the relationship between Ids and Vds.   10M

OR

11. B). Draw and explain fan in and fan out characteristics of different CMOS design technologies.   10M

12. A). Draw and give the importance of VLSI design flow.   10M

OR

12. B). Draw the lay out diagram for two input AND gate.   10M

13. A). Design using Complex logic gates Y=AB+CD.   10M

OR

13. B). Describe about the methods for driving large capacitance loads.   10M

14. A). Name the types of memories and explain principal of SRAM.   10M

OR

14. B). Design a four bit parity generator using only XOR gates and draw the schematic of it.   10M

15. A). Explain the detailed logic configurable Block Architecture of FPGA.   10M

OR

15. B). What are the drawbacks of PLAs? How PLAs are used to implement combinational and sequential logic circuits?   10M

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

Course Name: OPERATING SYSTEM

(Electronics & Communication Engineering)

Date: 17.05.2023 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 operating system and list the objectives of operating system.	2 M
2.	Interpret the multiprogramming environment in an Operating System.	2 M
3.	What is PCB? List the contents of process control block (PCB).	2 M
4.	What are the various states of a process and draw the diagram?	2 M
5.	Outline the requirements that a critical section solution should satisfy.	2 M
6.	What is the motive of Inter process communication (IPC)?	2 M
7.	What is demand paging?	2 M
8.	What are logical and physical addresses?	2 M
9.	List the various file attributes in file system interface.	2 M
10.	What is the role of file organization module in file system structure?	2 M

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

11.A).   i) Demonstrate any five functions or services of Operating system.   5M
     ii) Explain about the time shared, multiprogramming and multitasking operating systems.   5M

OR

11. B).   i) Differentiate simple structure and layered structure of Operating system.   5M
     ii) Describe the features of a distributed operating system.   5M

12. A).   Consider the following table of arrival time and burst time for four processes P0, P1, P2, P3 :   10M

Process	Arrival time	Burst Time
P0	2	5
P1	2	4
P2	3	2
P3	4	1

Scheduling is carried out only at arrival of processes. Calculate the average waiting time and turnaround time for these processes using Round Robin scheduling algorithm.

OR

12. B).   i) What is multithreading? Explain the thread libraries in detail.   5M
     ii) Explain in detail about the various system call interfaces for process management.   5M

(P.T.O..)

13. A).   i) Explain mutual exclusion using semaphores.   5M

        ii) Interpret Dining Philosophers problem with an example.   5M

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

13. B).   i) Explain the Resource Allocation Graph algorithm for deadlock avoidance.   5M

        ii) What is synchronization? What are the different synchronization mechanisms? Explain in detail.   5M

14. A).   i) Explain the concept of Contiguous memory allocation.   5M

        ii) Consider the reference string: 5M

           7, 0, 1, 2, 0, 3, 0, 4, 2, 3, 0, 3, 2, 1, 2, 0, 1, 7, 0, 1

        for a memory with three frames. Trace FIFO, and LRU page replacement algorithms.

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

14. B).   i) Consider a computer system with a 32-bit logical address and 4-KB page size. The system supports up to 512MB of physical memory. How many entries are there in each of the following?   5M
        (a) A single-level page table
        (b) An inverted page table

        ii) Give the detailed description of hardware implementation of a page table with translation Look-Aside Buffer.   5M

15. A).   Explain the following with relevant diagrams: 10M
        i) Single level directory structure
        ii) Tree-structured directory structure

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

15. B).   i) Explain about the free space management.   5M

        ii) Explain in detail about the file allocation methods in operating system.   5M

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

CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular/Supplementary Examinations May-2023
Course Name: CELLULAR & MOBILE COMMUNICATIONS
(Electronics & Communication Engineering)

Date: 17.05.2023 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.	Differentiate the generations in the cordless phones & cellular phones.	2 M
2.	Define Doppler Spread.	2 M
3.	Define Fading.	2 M
4.	What is meant by space diversity?	2 M
5.	What is meant by frequency management?	2 M
6.	Define cross talk.	2 M
7.	What is meant by foliage?	2 M
8.	Write short notes on sectorization.	2 M
9.	Explain the need for handoff.	2 M
10.	Define spectrum utilization factor.	2 M

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

11.A).	Explain briefly different ways of improving coverage and capacity in cellular system.	10M
	OR	
11. B).	Explain the steps involved in planning a cellular system Illustrate how the performance criteria is evaluated.	10M
12. A).	Explain about the co channel interference reduction factor and derive the general formula for C/I.	10M
	OR	
12. B).	i) Write short notes on adjacent channel interference.	5M
	ii) Discuss how antenna height effects the coverage and interference of cellular system.	5M
13. A).	Explain signal reflections in flat and hilly terrain?	10M
	OR	
13. B).	Explain sum and difference patterns.	10M
14. A).	i) Explain about grouping channels into subsets.	5M
	ii) Describe various non fixed channel assignment algorithms.	5M
	OR	
14. B).	Explain channel sharing and borrowing in frequency management.	10M
15. A).	i) Explain two types of handoffs.	5M
	ii) What is an advantage of delayed handoff?	5M
	OR	
15. B).	Define drop call rate how it is evaluated.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular Examinations May-2023
Course Name: WASTE TO ENERGY
(Common for ECE, CSE & CSM)

Date: 19.05.2023 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 agro based waste?	2 M
2.	Classification of waste as fuel.	2 M
3.	What is meant by pyrolysis?	2 M
4.	List any 4 applications of charcoal.	2 M
5.	Classify gasifiers used for biomass gasification.	2 M
6.	Define thermal heating.	2 M
7.	List different types of biomass stoves.	2 M
8.	Define biomass combustors.	2 M
9.	List type of biogas plants	2 M
10.	List any 4 applications of biogas plant.	2 M

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

11.A). Write short notes on the following conversion devices with respect to waste management.   **10M**
i) Incinerator,   ii) digestors

OR

11. B). Explain classification of waste in detail.   **10M**

12. A). Distinguish between slow and fast biomass pyrolysis.   **10M**

OR

12. B). Discuss various applications and yields of pyrolytic oils – in detail   **10M**

13. A). Draw Gasifier engine arrangement for production of Electric power and explain the methodology.   **10M**

OR

13. B). How gasifier output is utilized in Electrical Power Plants – Justify?   **10M**

14. A). Explain Design, Construction and Operation of Fixed bed combustor.   **10M**

OR

14. B). Explain the operation of Inclined Grate Combustors.   **10M**

(P.T.O..)

15. A). Explain the following in detail. 10M
   i) Biomass gasification, ii) Pyrolysis & Liquefaction.

OR

15. B). Explain the following in detail with respect to biomass plants. 10M
   i) Bio-Chemical Conversion, ii) Anaerobic digestion

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

Date: 19.05.2023 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 Pollution.   2 M
2. What do you mean by sustainability?   2 M
3. What is clean technology?   2 M
4. Define zero discharge technology.   2 M
5. Give the full form of EMAS and EMS.   2 M
6. Define hazardous waste.   2 M
7. Give any two roles of an environmental auditor.   2 M
8. What is compliance audit?   2 M
9. What do you mean by transboundary?   2 M
10. Name some metals present in tanning industry effluent.   2 M

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

11.A). i) Discuss on the various national policy for environmental protection and Management.   5M
        ii) Enumerate the barriers for sustainable development.   5M

OR

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

12. A). Discuss cleaner production and cleaner technologies.   10M

OR

12. B). i) Distinguish between pollution control and pollution prevention.   5M
         ii) concentration and mass standards.   5M

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   10M
         ISO-19011.

OR

14. B). Write a note on Waste Minimisation Planning in an Industry.   10M

15. A). Write in brief about air and water pollution prevention opportunities in textile industries.   10M

OR

15. B). Write in brief about disposal of hazardous wastes in a landfill.   10M

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

Date: 19.05.2023 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 important of ethics?	2 M
2.	What is morality?	2 M
3.	Who is unethical manager?	2 M
4.	What is whistle blowing?	2 M
5.	What is hacking?	2 M
6.	What is psychological egoism?	2 M
7.	What is the purpose of a corporation?	2 M
8.	What are responsibilities of a corporation as a moral person?	2 M
9.	What is the role of executive and non-executive directors?	2 M
10.	Define Corporate Governance.	2 M

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

11.A).	Explain the five myths about business ethics.	10M
	OR	
11. B).	Explain Kohlberg Model of Moral Development.	10M
12. A).	Explain ethics in Human Resource Management.	10M
	OR	
12. B).	"Finance would be impossible without ethics" comment.	10M
13. A).	Explain about the impact of Cybercrimes in Social Engineering?	10M
	OR	
13. B).	What are IPR issues? Explain? and What is cost of Cybercrimes?	10M
14. A).	Discuss the future of Corporate Governance in India.	10M
	OR	
14. B).	Describe the role and responsibilities of a good Board.	10M
15. A).	Discuss the recommendations of Irani Committee Report on Corporate Governance.	10M
	OR	
15. B).	What is special about the OECD Principles and Methodology? Discuss.	10M

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Regular/Supplementary Examinations May-2023
Course Name: INTRODUCTION TO DATA SCIENCE
(Common for ECE, CSE & CSC)

Date: 19.05.2023 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.	Summarize the current traits of Big Data.	2 M
2.	Explain the concept of Web Scripting.	2 M
3.	Define the term Rescaling.	2 M
4.	Distinguish between Cleaning and Munging.	2 M
5.	Explain the importance of Support Vector Machine.	2 M
6.	Illustrate the concept of Bayes Theorem.	2 M
7.	Briefly elaborate the importance of Neural Networks.	2 M
8.	Examine the Induction rule in brief.	2 M
9.	Demonstrate the application of Data Science in Weather Forecasting.	2 M
10.	Analyze implementation of Data Science in the Stock Market.	2 M

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

11.A). Compare and contrast the differences between Analysis and reporting with a suitable example?   10M

OR

11. B). Classify the important concepts of Matplotlib and NumPy in Python.   10M

12. A). Evaluate the importance of Dimensionality Reduction in Data Science.   10M

OR

12. B). Analyze the concept of Visualization of data? Also demonstrate the implications of Bar Charts, Line Charts and Scatterplots.   10M

13. A). Compare and contrast the differences between Supervised and Unsupervised Learning.   10M

OR

13. B). Distinguish between Naïve Bayes and K- nearest Neighbors Classifications with suitable example.   10M

14. A). Outline the concept of Decision trees and random forest.   10M

OR

14. B). Interpret the concept of Deep Learning for problem solving.   10M

15. A). Illustrate the applicability of Object Recognition in Data Science with suitable example.   10M

OR

15. B). Classify the importance of Real Time Sentiment Analysis.   10M

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

Date: 19.05.2023 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. Evaluate the following arithmetic expressions using the rules of Operator Precedence in python   2 M
   a)   5 * 6 ** 3
   b)   24 // 6 // 3

2. Which of the following results is True?   2 M
   a)   >>>9==9 and 1==1
   b)   >>>3==5 or 7==3
   c)   >>>9==9 or 1==1
   d)   >>>4<1 and 1>6

3. How many numbers will be printed?   2 M
```
i=5
while  i>=0:
    print(i)
    i=i-1
```

4. Find the output of the following code.   2 M
```
def  f():
    s="Hello World!"
    print(s)


s="welcome to the python programming"
f()
```

5. Identify the output in the following statements   2 M
```
S= "Welcome"
print(S[1:3])
print(S[ :6])
```

6. Differentiate between Tuple and List give an example.   2 M
7. With the help of an example explain the significance of the __init__ () method.   2 M
8. Identify the role of **self** argument in the class methods.   2 M
9. The ----------- module has a variety of commonly used GUI elements.   2 M
10. Give examples of commonly used widgets.   2 M

(P.T.O..)

PART-B

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

11.A). Write a program to prepare grocery bill. For that enter the name of the items purchased,   10M
quantity in which it is purchased, and its price per unit. Then display the bill in the
following format.

****************BILL*****************************

Item Name   Item Quantity   Item Price

****

Total Amount to be paid

OR

11. B). Write a program to calculate salary of an employee given his basic pay (to be entered by   10M
the user), HRA=10 percent of basic pay, TA= 5 percent of basic pay. Define HRA and TA
as constants and use them to calculate the salary of the employee.

12. A). i) Draw a comparison between recursive and iterative technique for problem solving.   5M
ii) Write a program to print the Fibonacci series without using recursion.   5M

OR

12. B). Write a short notes on the following with an example: 10M
  i)   Keyword arguments
  ii)   Default arguments
  iii)   Lambda functions

13. A). Write a program to get a string made of the first two and last two characters from a given   10M
a string. If the string length is less than two return instead the empty string.

OR

13. B). Write a program to print index at which a particular value exists. If the value exists at   10M
multiple locations in the list, then print all the indices. Also count the number of times
that value is repeated in the list.

14. A). Write a program with class Employee that keeps a track of the number of employees in an   10M
organization and also stores their name, designation and salary details.

OR

14. B). What will happen when a class inherits from another class with the same attributes or   10M
methods? Will it override them?

15. A). i) Write a program to print the screen size using tkinter.   5M
ii) Write a program to make the window fullscreen.   5M

OR

15. B). Explain the following widgets and their functions: 10M
  i)   Frame
  ii)   Button
  iii)   Text
  iv)   Canvas
  v)   Listbox

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CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)
B.Tech VI Semester Supplementary Examinations May-2023
Course Name: JAVA PROGRAMMING
(Common for EEE & ECE)

Date: 19.05.2023 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 do you mean by byte code in Java programing?	2 M
2.	Differentiate type conversion and type casting.	2 M
3.	What are the various types of inheritance supported by Java?	2 M
4.	What are the uses of super keyword?	2 M
5.	Define a package.	2 M
6.	Differentiate checked exceptions and unchecked exceptions.	2 M
7.	What are the different states in the life cycle of a thread?	2 M
8.	Define thread synchronization.	2 M
9.	What are the three standard streams of Java?	2 M
10.	What is the purpose of Scanner class?	2 M

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

11.A).	Explain the Features of Java.	10M

OR

11. B).	i) Explain the concept of method overloading with the help of a program.	6M
	ii) Write a short note on static keyword.	4M

12. A).	Explain the properties of an inner class in Java. Demonstrate with the help of a program.	10M

OR

12. B).	Explain the concept of multi level inheritance with an example program.	10M

13. A).	Explain the concept of access protection with the help of packages in Java.	10M

OR

13. B).	What are the exception handling keywords in Java? Explain exception handling with an example program.	10M

14. A).	What are the different ways of creating threads in Java? Explain the process of thread creation using Runnable interface with a program.	10M

OR

14. B).	i) Discuss thread priorities.	3M
	ii) Explain the process of synchronization with a program.	7M

15. A).	Write a Java program to copy the content of one file to another using File Class.	10M

OR

15. B).	Discuss the BufferedInputStream class with an example program.	10M

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