

H.T No:

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R18

Course Code: A30013



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **BUSINESS MANAGEMENT & FINANCIAL ANALYSIS**

(Common for CSE & IT)

Date: 06.12.2022 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 Management. 2 M
2. Explain any two functions Management. 2 M
3. Explain the concept of plant layout. 2 M
4. Write any two objectives of financial management. 2 M
5. Briefly discuss about microeconomics. 2 M
6. Write different stages in product life cycle. 2 M
7. Define production function. 2 M
8. Explain any two objectives of Pricing. 2 M
9. Explain the objectives of business enterprise. 2 M
10. Explain any two Turnover ratios. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Mention the principles of scientific management and also discuss why these principles of management are still practical in organization context. 10M
- OR**
11. B). Explain the different theories of motivation. 10M
12. A). Examine the recent trends in marketing & marketing mix. 10M
- OR**
12. B). Analyze the objectives and functions of Human Resource management. 10M
13. A). What do you mean by elasticity of demand? Analyze the different measures and types of elasticity of demand. 10M
- OR**
13. B). What do you understand by demand forecasting? Examine different methods of demand forecasting of existing products. 10M

(P.T.O.)

14. A). What do you understand by market? Examine different types of markets. 10M

OR

14. B). A company reported the following results. 10M

Sales Rs.15,00,000

Variable cost Rs.9,00,000

Fixed cost Rs.2,00,000

Ascertain the following:

- i. P/V Ratio
- ii. B.E.P sales
- iii. Margin of safety.
- iv. Sales required to earn a profit of Rs.5,00,000.

15. A). What do you understand by trading account? Prepare the format for trading account and profit & loss account. 10M

OR

15. B). What is meant by ratio analysis? Examine the liquidity, activity and profitability ratios. 10M

H.T No:

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R18

Course Code: A30163



CMR COLLEGE OF ENGINEERING & TECHNOLOGY

(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: AIR POLLUTION & CONTROL

(Common for EEE, MECH, ECE, CSE & IT)

Date: 08.12.2022 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 Inversion. 2 M
2. Give any four examples for aerosols. 2 M
3. Write a note on Mixing height. 2 M
4. Discuss the terms wind direction & speed. 2 M
5. List out the difficulties encountered in sampling. 2 M
6. What is called mass spectrometric analysis? 2 M
7. Define efficiency of separating devices. 2 M
8. Write a note on dust trap. 2 M
9. Discuss exhaust emission. 2 M
10. List any four functions of state pollution control board. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Explain about Primary and Secondary air pollutants. 10M
- OR**
11. B). Summarize the influences of hydrogen fluoride & hydrogen chloride as air pollutants. 10M
12. A). Briefly explain about estimation of plume rise. 10M
- OR**
12. B). Elaborate secondary meteorological parameters that influence air pollution. 10M
13. A). Write a detailed note on Gaussian dispersion Models. 10M
- OR**
13. B). Explain about Adsorbers & Condensers– the sampling devices. 10M
14. A). Elaborate about mechanical scrubbers. 10M
- OR**
14. B). Summarize about Electrostatic Precipitator. 10M
15. A). Explain the significance of air pollution control area. 10M
- OR**
15. B). Brief about Environmental (Protection) Act 1986. 10M

H.T No:

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R18

Course Code: A30534



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **DESIGN PATTERNS**

(Common for CSE & IT)

Date: 10.12.2022 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 Builder Design pattern? 2 M
2. How to select design pattern? 2 M
3. What is meant by recursive composition? 2 M
4. Explain the Glyph Abstract class hierarchies. 2 M
5. What is the difference between creational patterns and structural patterns? 2 M
6. Explain the intent of proto type design Pattern. 2 M
7. What are the applications of Composite design Pattern? 2 M
8. Explain the structure of the Decorator design Pattern. 2 M
9. Discuss the Applicability of Mediator design Pattern. 2 M
10. Draw the structure of Interpreter design Pattern. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). What is design pattern and list the Catalog of Design Patterns. 10M
- OR**
11. B). Discuss about design pattern in Smalltalk MVC. 10M
12. A). What is meant by recursive composition and explain the Glyph Abstract class hierarchies? 10M
- OR**
12. B). Explain Supporting Multiple Look-and-Feel Standards. 10M
13. A). Explain with an example how adapter patterns can be implemented. 10M
- OR**
13. B). Discuss the consequences and applications of Prototype. 10M
14. A). Draw the structure of the proxy pattern and write the applications. 10M
- OR**
14. B). Draw the structure of the Facade pattern and write the applications. 10M
15. A). Write the consequences and issues when using the visitor pattern. 10M
- OR**
15. B). Explain with an example how Chain of responsibility patterns can be implemented? 10M

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R18

Course Code: A30538



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: DEEP LEARNING

(Computer Science & Engineering)

Date: 13.12.2022 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. Illustrate Logistic Sigmoid and Hyperbolic Tangent Activation Functions. 2 M
2. Explain briefly about Higher-Order Derivatives. 2 M
3. Explain about Semi-Supervised Learning. 2 M
4. Outline Bagging Technique. 2 M
5. What is data augmentation? 2 M
6. What is noise robustness? 2 M
7. Explain about Parameter sharing. 2 M
8. Explain about Pooling Convolution. 2 M
9. What is Neural Network Models. 2 M
10. Compare exploration with exploitation in recommender systems. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Make use of Maximum Likelihood to Learn Conditional Distributions. 10M

OR
11. B). Explain about Natural languages processing. 10M
12. A). Apply the early stopping meta-algorithm for determining the best amount of time to train. 10M

OR
12. B). Explain about Dropout Method. 10M
13. A). Explain about Stochastic Gradient Descent. 10M

OR
13. B). Choose Conjugate Gradients Method for optimization of deep models. 10M
14. A). Explain the variants of the Basic Convolution Function operation. 10M

OR
14. B). Explain about the Neuroscientific Basis for Convolutional Networks. 10M
15. A). Explain about Speech Recognition in Deep Learning. 10M

OR
15. B). Explain about the application of Deep Learning in Recommender Systems. 10M

H.T No:

R18

Course Code: A30539



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **ETHICAL HACKING**

(Computer Science & Engineering)

Date: 13.12.2022 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. Why ethical hacking is important? 2 M
2. Define Firewall. 2 M
3. Define Windows Hacking. 2 M
4. List most common types of malware attacks. 2 M
5. Define cryptosystem. 2 M
6. List any two affects of insider attack. 2 M
7. What are the two types of biometric authentication? 2 M
8. List different functions of Intrusion Detection Systems. 2 M
9. List different features of hardware security module. 2 M
10. List steps to conducting a proper vulnerability assessment. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Explain about IPv6? Compare IPv4 and IPv6. 10M
- OR**
11. B). Explain the TCP/IP model. 10M
12. A). Illustrate internal and external penetration testing. 10M
- OR**
12. B). Explain the procedure for Malware analysis. 10M
13. A). Discuss about the methodology for the optimization of resources in the detection of computer fraud. 10M
- OR**
13. B). Discuss about the Insider Threat Strategic Planning Process. 10M
14. A). Explain strengths and weaknesses of Network Intrusion Detection Systems. 10M
- OR**
14. B). Illustrate penetration testing process in detail. 10M
15. A). Explain different aspects of side channel attacks and hardware trojans. 10M
- OR**
15. B). Illustrate the different types of SQL injections. 10M

H.T No:

R18

Course Code: A30540



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **BIG DATA ANALYTICS**

(Common for CSE & IT)

Date: 15.12.2022 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. Write the characteristics of Big Data. 2 M
2. Define NoSQL database? List few NoSQL database systems. 2 M
3. What is replication factor and what is the default replication factor of Hadoop? 2 M
4. What is HDFS? 2 M
5. What is Mapper Phase? 2 M
6. What is Sorting and shuffling phase? 2 M
7. What is Apache PIG? 2 M
8. Write the procedure for executing pig program. 2 M
9. List the advantages of HIVE. 2 M
10. What is managed table? 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Explain the differences between RDBMS and Big Data? Give suitable applications of each with an example. 10M
- OR**
- 11.B). Discuss the real time applications of Big Data and Big Data Analytics with suitable examples. 10M
- 12.A). Discuss block size concept of HDFS with a neat diagram. 10M
- OR**
- 12.B). How the communication takes place between name node and data node? Also explain fault-tolerance of HDFS. 10M
- 13.A). Implement Map Reduce Program for Word Count Problem. 10M
- OR**
- 13.B). Explain Hadoop's ecosystem and write a Hadoop command to copy data from local file system to HDFS and HDFS to local file system. 10M

(P.T.O.)

14. A). i) Explain architecture of PIG and its advantages. 5M
ii) Explain about PIG Relational Operators. 5M

OR

14. B). i) Discuss PIG components. 5M
ii) Explain about pig Load, Store and Relational Operators. 5M

15. A). Explain about HIVE characteristics, architecture and components in detail. 10M

OR

15. B). Explain HIVE data types and demonstrate in creating Table with suitable example. 10M

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R18

Course Code: A30160



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **DISASTER MANAGEMENT & MITIGATION**

(Common for EEE, MECH, ECE, CSE & IT)

Date: 17.12.2022 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 environmental hazard. | 2 M |
| 2. Mention about the approaches related to human ecology. | 2 M |
| 3. Give examples of Man induced hazards. | 2 M |
| 4. Differentiate Endogenous and Exogenous hazards. | 2 M |
| 5. State the hazardous effects of volcanoes. | 2 M |
| 6. Draw different forms of lightning. | 2 M |
| 7. List out the monitoring systems used for tracing the path of cyclones | 2 M |
| 8. Identify the Flood hazard status in India | 2 M |
| 9. Define the term Rehabilitation. | 2 M |
| 10. Write a short note on an emergency stage in disaster management. | 2 M |

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- | | |
|---|----|
| 11.A). i) Distinguish between Environmental stress, hazard and disaster. | 5M |
| ii) Describe Ecosystem approach to mitigate environmental stress. In what way it is different from the perception approach? | 5M |

OR

- | | |
|---|-----|
| 11. B). Human perception changes with environmental degradation. Justify the statement. | 10M |
|---|-----|

- | | |
|--|-----|
| 12. A). Explain how man-made hazards trigger the natural hazards | 10M |
|--|-----|

OR

- | | |
|--|-----|
| 12. B). Explain different types of Endogenous hazards. | 10M |
|--|-----|

- | | |
|---|-----|
| 13. A). Summarize about volcanic eruptions impacts on environment | 10M |
|---|-----|

OR

- | | |
|---|-----|
| 13. B). Explain the reason behind Zones of earthquake occurrence in India. List out various hazardous effects of earthquakes. | 10M |
|---|-----|

- | | |
|--|----|
| 14. A). i) Mention the causes of drought and the mitigation measures. | 5M |
| ii) Explain the relation between environmental hazard and ecology with respect to drought. | 5M |

OR

- | | |
|---|-----|
| 14. B). State the factors influencing the soil erosion along with different methods of conservation measures. | 10M |
|---|-----|

(P.T.O..)

15. A). i) Illustrate the considerations related to the disaster management of human resources during the COVID-19 pandemic. 5M
ii) Write few implementations required in such emergency situations with disaster response team 5M

OR

15. B). Differentiate rescue and preparedness. Explain pre disaster measures that would have reduced the impact of land slide disaster. 10M



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **KNOWLEDGE MANAGEMENT**

(Common for CSE & IT)

Date: 17.12.2022 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 challenges in implementing Knowledge management programmes? | 2 M |
| 2. | What is leveraging knowledge? | 2 M |
| 3. | Outline the barriers to BPR success. | 2 M |
| 4. | Summarize the importance of ERP. | 2 M |
| 5. | How does knowledge management improve the service industry? | 2 M |
| 6. | What are the Different Challenges of Knowledge Management? | 2 M |
| 7. | Distinguish knowledge capital and physical capital. | 2 M |
| 8. | What is the most important aspect in customer relationship management? | 2 M |
| 9. | Define the features and components of learning organization. | 2 M |
| 10. | What is the role of web portal in knowledge management? | 2 M |

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- | | | |
|-----------|--|-----|
| 11.A). | Define Knowledge Management and Explain the Scope and features of Knowledge Management. | 10M |
| OR | | |
| 11. B). | Explain the Classification of Organizational knowledge. | 10M |
| 12. A). | What are the tools you can apply for Knowledge Management? Explain them with Instances. | 10M |
| OR | | |
| 12. B). | How do you Create effective KM systems through IT? Explain. | 10M |
| 13. A). | How knowledge management systems are turning manufacturing into a competitive weapon? Explain. | 10M |
| OR | | |
| 13. B). | Explain the future trends of knowledge management. | 10M |
| 14. A). | Discuss the role and relevance of internet search Engines and Knowledge Management practices. | 10M |
| OR | | |
| 14. B). | Discuss on "Business Ethics and Knowledge Management". | 10M |
| 15. A). | Explain the ten steps of knowledge management road map implementation of Amrit Tiwana. | 10M |
| OR | | |
| 15. B). | Explain the role of Knowledge management in Organizational restructuring. | 10M |

H.T No:

R18

Course Code: A30531



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: PYTHON PROGRAMMING

(Common for CIVIL, EEE, MECH, ECE & CSE)

Date: 17.12.2022 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 indentation? 2 M
2. What operators does python support? 2 M
3. What is Chained Conditional statement? Give Example. 2 M
4. Point out the difference between recursive and iterative technique. 2 M
5. Describe List Slicing with example. 2 M
6. How a tuple is iterated? Explain with an example? 2 M
7. How can you copy an object in Python? Illustrate with an example? 2 M
8. How will you check if a class is a child of another class? 2 M
9. Compare Terminal-based user interfaces and GUIs. 2 M
10. How to create Label Widget in Python? 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Summarize various operators, built-in functions and standard library modules that deals with Python's numeric type. 10M

OR

11. B). What is the purpose of else clause for a loop? Explain how else works with while and for loops, with examples. 10M

12. A). Explain about different types of arguments in Python. Write a function to generate cubes of numbers over time. 10M

OR

12. B). Explain the file built-in functions and methods with clear syntax, description and illustration. 10M

13. A). i) Demonstrate how to create and print a 3-dimensional matrix with lists. 5M
ii) Write a Python program that counts the number of occurrences of a letter in a string, using dictionaries. 5M

OR

13. B). Give a comparison between lists, tuples, dictionaries and sets. 10M

(P.T.O..)

14. A). Explain how to implement different types of inheritance in Python with example. 10M

OR

14. B). Describe how the arithmetic operators can be overloaded to work with a new class of numbers. 10M

15. A). Develop a Python program that creates a GUI with a textbox, Ok button and Quit button. On clicking Ok, the text entered in textbox is to be printed in Python shell; on clicking Quit, the program should terminate. 10M

OR

15. B). Explain the Turtle Graphics Basic commands and drawing different shapes on screen with example. 10M

H.T No:

R18

Course Code: A30542



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: **CLOUD COMPUTING**

(Common for EEE & CSE)

Date: 20.12.2022 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 Quantum Computing. 2 M
2. Compare Distributed Computing with Parallel Computing. 2 M
3. Interpret the vision introduced by cloud computing? 2 M
4. Outline the four cloud deployment models. 2 M
5. What is meant by Elasticity and Multitenancy? 2 M
6. Explain different approaches for cloud Migration. 2 M
7. What are the challenges of SaaS Paradigm? 2 M
8. Discuss in brief about various types of cloud service models. 2 M
9. List out the advantages of Amazon Elastic compute cloud (EC2). 2 M
10. Name the basic modules of EMC's Captiva Cloud Toolkit? 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Why do you think users are shifting from traditional On-premises Computing to Cloud computing? Justify your answer. 10M
- OR**
11. B). Summarize the benefits and applications of nano computing. 10M
12. A). Discuss the cloud computing reference model with a neat diagram. 10M
- OR**
12. B). What is the need of cloud computing? Explain its essential characteristics. 10M
13. A). Explain various approaches used for cloud Migration. 10M
- OR**
13. B). Outline the importance of Quality and Security in Cloud. 10M
14. A). Explain in detail about Para virtualization. 10M
- OR**
14. B). With a neat diagram, explain Infrastructure-as-a-Service reference model and its functionalities. 10M
15. A). Discuss in detail about Amazon elastic Compute Cloud (EC2). 10M
- OR**
15. B). Elaborate on Google's Cloud storage. 10M

H.T No:

R18

Course Code: A30537



CMR COLLEGE OF ENGINEERING & TECHNOLOGY
(UGC AUTONOMOUS)

B.Tech VII Semester Regular/Supplementary Examinations December-2022

Course Name: DATA ANALYTICS WITH R

(Computer Science & Engineering)

Date: 22.12.2022 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 importance of data frame? 2 M
2. Write about nested functions in R. 2 M
3. What is data science? 2 M
4. Define Descriptive statistics. 2 M
5. Write any 3 math functions in R. 2 M
6. What is Vector cross product? 2 M
7. Define normal distribution. 2 M
8. Write a short note on Random forests. 2 M
9. What is clustering? 2 M
10. Define smoothing. 2 M

PART-B

Answer the following. Each question carries TEN Marks.

5x10=50M

- 11.A). Explain different data structures in R. 10M
- OR**
11. B). Write about control statements in R. 10M
12. A). Illustrate Visualizing a single variable. 10M
- OR**
12. B). Discuss Data exploration versus presentation. 10M
13. A). Demonstrate Calculus functions for statistical distributions. 10M
- OR**
13. B). Illustrate Linear algebra operations on matrices. 10M
14. A). Explain Anova test with example. 10M
- OR**
14. B). Explain about R graphics devices. 10M
15. A). Perform K-Means analysis using R. 10M
- OR**
15. B). Explain Decision tree algorithms. 10M
