

VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. (PART TIME) DEGREE EXAMINATIONS - NOV / DEC - 2021
COMPUTER SCIENCE AND ENGINEERING
Seventh Semester
ELECTIVE - DATA WAREHOUSING AND DATA MINING
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

- 1 Write the definition of Data warehouse.
- 2 Differentiate descriptive and predictive in data mining.
- 3 Write down the functionalities of data mining.
- 4 List out the two approaches of concept characterization.
- 5 Define association rule.
- 6 List out the classification of association rules based on level of abstractions.
- 7 What is a partitioning method?
- 8 Define data classification.
- 9 Define Spatial Database.
- 10 What are the contributions of data mining to DNA analysis?

PART-B (5 x 16 = 80)

- 11 a. What is multidimensional data model? Describe.

OR

b. What is the major task of on-line operational database systems? Distinguish the major features between OLTP and OLAP.
- 12 a. Describe the data transformation in preprocessing with suitable example.

OR

b. Explain Data Discretization and Concept Hierarchy Generation for numerical data.
- 13 a. Explain the FP-growth algorithm for discovering frequent item sets without candidate generation.

OR

b. Describe in detail about mining multidimensional association rules from relational databases and data Warehouses.
- 14 a. Write down the categorization of major clustering methods in detail.

OR

b. Write notes on (a) tree pruning (b) Bayes' theorem.
- 15 a. Explain in detail about construction of spatial data cube and spatial OLAP in spatial database.

OR

b. Explain the application of data mining in DNA analysis and financial data analysis.

Sl.No. 4080

Sub.Code: 335017702

**VINAYAKA MISSIONS RESEARCH FOUNDATION
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B.E- (Part Time) DEGREE EXAMINATIONS – FEB-2022

**COMPUTER SCIENCE AND ENGINEERING
Seventh Semester**

SCIENTIFIC COMPUTING TECHNIQUES

(Candidates admitted under 2017 Regulations-CBCS)

Time: Three hours

Maximum:100Marks

Answer **ALL** questions

PART – A (10 x 2 = 20 marks)

1. When Newton's backward interpolation formula is used.
2. State Newton's backward difference Interpolation formula.

3. State the trapezoidal rule to evaluate $\int_a^b f(x)dx$

4. Write the formula for $\frac{dy}{dx}$ at $x = x_0$ using forward difference operator.

5. Write Milne's predictor corrector formula.
6. State Taylor series algorithm for the first order differential equation.
7. Write the various types of models with examples.
8. Write the Types of Simulation.
9. What is an Action time?
10. Draw three Block Diagram symbols in GPSS.

PART – B (5 x 16 = 80 marks)

11.a) Using Lagrange's interpolation formula, find the value corresponding to $x=10$

from the following table:

x:	5	6	92	11
f(x):	12	13	14	16

(p.t.o)

OR

- b) Using Newton's backward interpolation formula find y when $x = 27$, from the following data.

x	10	15	20	25	30
f(x)	35.4	32.2	29.1	26.0	23.1

12. a) The following data gives the velocity of a particle for 20 seconds at an interval of 5 seconds. Find the initial acceleration using the entire data

Time(sec):	0	5	10	15	20
Velocity(m/sec):	0	3	14	69	228

OR

- b) Evaluate $\int_{-1}^1 (1 + x + x^2) dx$ by Gaussian three point formula.

13. a) Solve $y' = 1 - y, y(0) = 0$ by modified Euler's method

OR

- b) Using Milne's method, find $y(4.4)$ given

$$5xy' + y^2 - 2 = 0 \text{ given } y(4) = 1,$$

$$y(4.1) = 1.0049, y(4.2) = 1.0097 \text{ and } y(4.3) = 1.0143$$

(p.t.o)

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14. a) List the various steps in simulation study with flowchart.

OR

b) Discuss the two types of Systems with examples.

15. a) Develop a GPSS model of a manufacturing shop in detail.

OR

b) State the uses of FORTRAN in detail.

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VINAYAKA MISSIONS RESEARCH FOUNDATION
(Deemed to be University)
B.E. (PART TIME) DEGREE EXAMINATIONS - FEB - 2022
COMPUTER SCIENCE AND ENGINEERING
SEVENTH SEMESTER
PRINCIPLES OF PROGRAMMING LANGUAGES
(Candidates admitted under 2017 Regulations-CBCS)

Time : Three Hours

Maximum Marks:100 Marks

Answer **ALL** questions
Part-A (10 x 2 =20 Marks)

- 1 Define language and package.
- 2 Write about evaluation of programming languages.
- 3 What are the needs of data types?
- 4 Describe tree.
- 5 What is meant by assignment statement?
- 6 Write the conditional operator with example.
- 7 Define procedure.
- 8 Differentiate exception and error
- 9 State non-concurrent programming?
- 10 What are the advantages of logic programming?

PART-B (5 x 16 = 80)

- 11 a. Elucidate the implementation methods are available and explain.
OR
b. Explain structure & object oriented programming.
- 12 a. Discuss about binding and give advantages & disadvantages.
OR
b. Explain stack operations with example.
- 13 a. Discuss about assignment operators.
OR
b. Explain about iterative statement with example.
- 14 a. Describe in detail about function call.
OR
b. Elucidate arguments and parameters
- 15 a. Explain in detail about functional programming.
OR
b. Explain briefly about pointers with neat example.
