

P.G. DIPLOMA IN DATA SCIENCE

POST GRADUATE DIPLOMA IN DATA SCIENCE I SEMESTER Internal Assignment Questions



PROF. G. RAM REDDY CENTRE FOR DISTANCE EDUCATION

(Recognised by the Distance Education Bureau, UGC, New Delhi.)

OSMANIA UNIVERSITY, HYDERABAD – 500 007 Telangana State INDIA

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Dear Students,

All the I semester students of PG Diploma in Data Science has to write **2 Assignments** for each paper and submit **Assignment** for each paper compulsorily. Each assignment carries **40 marks**. University Examinations will be held for **60 marks**. The concerned faculty evaluates these assignment scripts. The marks awarded to you will be forwarded to the Controller of Examination, OU for inclusion in the University Examination marks. If you fail to submit Internal Assignments before the stipulated date, the internal marks will not be added to University examination marks under any circumstances. **The assignment marks will not be accepted after the stipulated date.** You are required to **pay Rs.500/- fee** towards Internal Assignment marks through online <http://oucde.net> and submit the payment receipt along with assignment at the concerned counter **on or before Last Day of the Exam Fee Payment** and obtain proper submission receipt.

ASSIGNMENT WITHOUT THE PAID RECEIPT WILL NOT BE ACCEPTED

Assignments on Printed / Photocopy / Typed papers will not be accepted and will not be valued at any cost. Only hand written Assignments on A/4 size paper (one side only) will be accepted and valued.

Methodology for writing the Assignments:

1. First read the subject matter in the course material that is supplied to you.
2. If possible read the subject matter in the books suggested for further reading.
3. You are welcome to use the PGRRCDE Library on all working days including Sunday for collecting information on the topic of your assignments.
(10.30 am to 5.00 pm).
4. Give a final reading to the answer you have written and see whether you can delete unimportant or repetitive words.
5. The cover page of the each theory assignments must have information as given in FORMAT below.

FORMAT

a. NAME OF THE COURSE :

b. NAME OF THE STUDENT :

c. ENROLLMENT NUMBER :

d. NAME OF THE PAPER :

e. DATE OF SUBMISSION :

6. Write the above said details clearly on every assignment paper, otherwise your paper will not be valued.
7. Tag all the assignments paper-wise and submit.
8. Submit the assignments on or before **Last Day of the Exam Fee Payment** at the concerned counter at PGRRCDE, OU on any working day and obtain receipt.

Prof.G.B.Reddy
DIRECTOR



**PROF. G. RAM REDDY CENTRE FOR DISTANCE EDUCATION
OSMANIA UNIVERSITY
INTERNAL ASSIGNMENT QUESTION PAPER – 2023
PGD-DS – I SEMESTER**

ASSIGNMENT – I

Subject : DATA ANALYTICS & DATA MANAGEMENT

Paper : DDS101

Total Marks: **40**

ASSIGNMENT – I
SECTION – A

Unit-I and II:

*Answer the following short questions (each question carries **Four** marks) 5 x 4 = 20*

1. Compare Descriptive Statistics with Inferential statistics
2. Using R programming language write a program show the following data using various types of graphs.

Roll No	Marks
1601	25
1602	35
1603	45
1604	55
1605	44

3. Explain the role of central tendency in the statistics
4. What is pivoting. How do you prepare a pivot table using MS-Excel
5. What are the various statistical function in MS-Excel. Show the performance with suitable examples.

SECTION – B

Unit – III and IV

*Answer the following questions (each question carries **Ten** marks)*

2 x 10 = 20

6. Write SQL queries for the following.
 - a. Display employees along with their department details
 - b. Display all the information of the EMP table?
 - c. Display unique Jobs from EMP table



- d. List the emps in the asc order of their Salaries?
 - e. List the details of the emps in asc order of the Dptnos and desc of Jobs?
 - f. List the emps who joined before 2023
 - g. List the Empno, Ename, Sal, Daily sal of all emps in the asc order of Annsal
 - h. List the emps along with their Exp and Daily Sal is more than Rs.1000.
 - i. List all the emps except 'PRESIDENT' & 'MGR' in asc order of Salaries.
 - j. List the emps whose Empno not starting with digit 18.
7. What are the various clustering techniques? Explain these techniques in the prediction.

Name of the Faculty: **Dr. G.N.R. Prasad**
College/Dept: CBIT, Dept. of MCA



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PGD-DS – I SEMESTER**

ASSIGNMENT – I

Subject : DATA ANALYTICS & DATA MANAGEMENT

Paper : DDS101

Total Marks: **40**

ASSIGNMENT – II
SECTION – A

Unit-I and II:

*Answer the following short questions (each question carries **Four** marks)* **5 x 4 = 20**

1. What are the various data analytic techniques?
2. Show the various data frame operations in R
3. Differentiate between regression and classification
4. List the various data pruning operations in SQL
5. How do you load from MS-Access to MS-Excel. Write the procedure to download the data.

SECTION - B

Unit – III and IV

*Answer the following questions (each question carries **Ten** marks)* **2 x 10 = 20**

6. What is role of macro in ms-excel Write the procedure to merge two cell values
7. What is Chi-Square test. Explain with an example Compare regression with classification

Name of the Faculty: **Dr. G.N.R. Prasad**
College/Dept: CBIT, Dept. of MCA

MATHEMATICS FOR DATA SCIENCE

ASSIGNMENT – I

Paper :II

Total Marks: **40**

SECTION – A

Unit – I : Answer the following short questions (each question carries **Four**marks) $5 \times 4 = 20$

1. Explain the difference between linear and non-linear function
2. Find the area of the Parabola which is parallel to X-axis.
3. Define liner transformation give an examples linear and non-linear transformations.
4. When we use z-test and T-test and give their formulae.
5. Define connected, disconnected graph and regular graph give their examples..

SECTION – B

Unit – II : Answer the following questions (each question carries **Ten** marks) $2 \times 10 = 20$

1. Write a formal for least square regression line of best fit. Find equation of the best fit of the line using the least square regression for the following data

X hours sunshine	2	3	5	7	9
Y of ice creams sold	4	5	7	10	15

and also how many ice creams sold for 8 hours.
And also find error.

2. Define eigen values and eigen vectors for PXP matrix and find the eigen values and find corresponding eigen vectors for the matrix

$$\begin{bmatrix} 1 & 3 \\ 3 & 2 \end{bmatrix}$$

Name of the Faculty :Dr.B.Mallesh
College/Dept : University PG College O.U Secunderabad

MATHEMATICS FOR DATA SCIENCE

ASSIGNMENT – II

Paper :II

Total Marks: 40

SECTION – A

Unit – I : Answer the following short questions (each question carries **Four** marks) 5 x 4 =20

1. Write distance between two points and find the equation to line between the points (1,2) and (3, 5).
2. Find the area of the Hyperbola.
3. Define row, column and idempotent matrix give the examples.
4. Give the formula for binomial distribution and Bob makes 60% of his free-throw attempts. If he shoots 12 free throws then what is probability that he makes exactly 10?.
5. Define simple graph, bipartite graph and Euler graph and give their examples.

SECTION – B

Unit – II : Answer the following questions (each question carries **Ten**marks) 2 x 10 =20

1. Write a formal for least square regression line of best fit. Find equation of the best fit of the line using the least square regression for the following data

X hours sunshine	1	2	3	4	5	6	7
Y of ice creams sold	1.5	3.8	6.7	9	11.2	13.6	16

find for $x=8$. also find error and also draw a scatter diagram using table.

2. Define characteristic equation and characteristic vectors for M by M matrix and find the eigen values and find corresponding eigen vectors for the matrix

$$\begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$$

Name of the Faculty :Dr.B.Mallesh

College/Dept : University PG College O.U Secunderabad

PYTHON PROGRAMMING
ASSIGNMENT – I

Paper: III

Total Marks: **20**

SECTION – A

Unit-I and II: Answer the following short questions. Each question carries **Two**marks. **5 x 2 = 10**

1. Describe the variables in python
2. Differentiate between lists and tuples
3. Discuss the working of membership operators
4. Explain about if .. else statement
5. Explain the functionality of for loop with an example

SECTION – B

Unit-I and II: Answer the following questions. Each question carries **Five** marks. **2 x 5 = 10**

6. With an example program, explain arithmetic operators
7. Explain about the different ways of parameter passing

Name of the Faculty: Dr. Humera Shaziya
College/Dept: Nizam College

PYTHON PROGRAMMING
ASSIGNMENT – II

Paper: III

Subject Name: **PYTHON PROGRAMMING**

Total Marks: **20**

SECTION – A

Unit-III, IV and V:

Answer the following short questions. Each question carries **Two** marks

5 x 2 = 10

1. What are the steps to create a module
2. How to create python class
3. What is a file object
4. Write notes on standard files
5. Write a program to demonstrate Exception

SECTION – B

Unit-III, IV and V: Answer the following questions. Each question carries **Five**marks. **2 x 5 = 10**

6. Write a program to implement inheritance
7. Explain how to open, read and write to a file

Name of the Faculty: Dr. Humera Shaziya
College/Dept: Nizam College