

# **INTERNAL ASSIGNMENT QUESTIONS**

**Advanced Diploma in Data Science**

**SEMESTER II –2026**



**PROF. G. RAM REDDY CENTRE FOR DISTANCE EDUCATION**

(RECOGNISED BY THE DISTANCE EDUCATION BUREAU, UGC, NEW DELHI)

**OSMANIA UNIVERSITY**

(A University with Potential for Excellence and Re-Accredited by NAAC with "A" + Grade)

**DIRECTOR**

**Prof. N.Ch. Bhattacharyulu**  
**Hyderabad – 7 Telangana State**

**PROF.G.RAM REDDY CENTRE FOR DISTANCE EDUCATION  
OSMANIA UNIVERSITY, HYDERABAD – 500 007**

Dear Students,

Each student has to write the answers to the Assignment questions with neat own handwriting using Blue Pen (Black Ink not allowed) for each paper. Assignments have to submit after the payment of Rs.500/- by showing the receipt of the same. If the Assignment is not submitted within stipulated time i.e. before the theory exams / last date is treated as absent.

**Methodology for writing the Assignments (Instructions) :**

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 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**

1. NAME OF THE STUDENT :
  2. ENROLLMENT NUMBER :
  3. NAME OF THE COURSE :
  4. SEMESTER ( I, II, III & IV) :
  5. TITLE OF THE PAPER :
  6. DATE OF SUBMISSION :
6. Write the above said details clearly on every subject assignments paper, otherwise your paper will not be valued.
  7. Tag all the assignments paper wise and submit them in the concerned counter.
  8. Submit the assignments on or before **20-04-2026** at the concerned counter at PGRRCDE, OU on any working day and obtain receipt.

**DIRECTOR**

**P.G. Diploma in Data Science**  
**INTERNAL ASSESSMENT 2026**  
**PAPER – I : Machine Learning**

**SECTION - A**

**Answer the following short questions (each question carries three marks)**

**5 x 3 = 15**

1. Explain the types of machine learning.
2. Describe linear model specifications.
3. Introduce the logistic regression along with its types.
4. Describe the architecture of neural networks.
5. Give an overview of evaluation metrics of classification.

**SECTION – B**

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

**5 x 3 = 15**

1. Explain decision tree building process.
2. Explain about the K-means algorithm.
3. Analyze the idea of support vector machine.
4. Describe the steps to perform agglomerative clustering.
5. Introduce the concept of deep learning.

**P.G. Diploma in Data Science**  
**INTERNAL ASSESSMENT 2026**  
**PAPER – II : Big Data Analytics**

**SECTION - A**

**Answer the following short questions (each question carries three marks)**

**5 x 3 = 15**

1. Draw and explain Hadoop Architecture and HDFS Architecture.
2. Differentiate types of Machine Learning.
3. Write a short note on V C Dimension.
4. Explain Gradient Descent for Learning Parameters.
5. Describe job scheduling Algorithms of Hadoop.

**SECTION – B**

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

**5 x 3 = 15**

1. Explain efficiency optimization of Hadoop system.
2. Draw and explain Real-Time Analytics stack.
3. Draw and explain Big-Data system back-end and front-end architecture.
4. Discuss Navigational models and Relational Data Models.
5. Explain types of NOSQL Data Models.

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