

STUDENT'S ASSIGNMENTS
Post Graduate Diploma in Geoinformatics (PGDGI)
(DISTANCE MODE)
SESSION 2020-21



CENTRE FOR DISTANCE AND ONLINE EDUCATION
JAMIA MILLIA ISLAMIA, NEW DELHI – 110025

STUDENT ASSIGNMENTS

(SESSION 2020-21)

INSTRUCTIONS

The student is required to read carefully and follow the instructions given below:

- Submission of one complete Assignment in each course of the programme every year is compulsory. Completed Assignments on prescribed Assignment booklets are to be submitted by hand or through post to the Learner Support Centre/Programme Coordinator, CDOL as per dates mentioned in the Academic Calendar 2020- 21 (<http://jmi.ac.in/bulletinboard/academic-calendar/cdol>).
- For Assignments Submitted after dates mentioned in the Academic Calendar, a late fee of Rs. 100/- per Assignment will be payable to CDOL through Demand Draft in favor of Jamia Millia Islamia, Payable at New Delhi.
- For Ex-Students who failed to submit Assignments during the course of the programme are required to submit Rs. 200/- per Assignment to CDOL in the form of Demand Draft in favor of Jamia Millia Islamia, Payable at New Delhi.
- Write your name, roll number and other details as required on the cover page of Assignment Booklet.
- For your record you must keep a photocopy of your Assignment. In case your assignment is lost then your photocopy will take as a proof for evaluation.
- Please go through your Programme Guide carefully

FUNDAMENTALS OF REMOTE SENSING AND GPS: DGI-101

Session: 2020-21

M.Marks: 30

NOTE: Attempt any three questions. All questions carry equal marks.

1. What are the two major uses of an aerial photograph? Elaborate
2. State any three advantages that an aerial photograph offers over ground based observation
3. Explain GPS constellations and its arrangement.
4. What are the differences between Electromagnetic Radiation (EMR) and Electromagnetic Spectrum (EMS)
5. Explain the following
 - a. Aerial Camera
 - b. Aerial Mosaic
 - c. Radiation Law
 - d. GPS

IMAGE INTERPRETATIONS & PROCESSING: DGI-102

Session: 2020-21

M.Marks: 30

NOTE: Attempt any three questions. All questions carry equal marks.

1. What do you mean by Normal Distribution? Write down its properties.
2. What are the differences between Analog and Digital images? Explain procedure of converting an Analogue image into Digital Image
3. Explain Resampling and Interpolation with example.
4. What do we need of Filter in image processing? Explain different types of filters used in image processing
5. Explain the following
 - a. Producer's Accuracy and User Accuracy
 - b. K-Mean Clustering
 - c. PCA Transformation
 - d. Histogram Equalization

GEOGRAPHICAL INFORMATION SYSTEM: DGI-103

Session: 2020-21

M.Marks: 30

NOTE: Attempt any three questions. All questions carry equal marks.

1. Write down features of UNIX and DOS operating System.
2. What are the differences between?
 - a. Spatial and Non-spatial Data
 - b. Scanning and Digitization of maps
3. Explain different types of data model with diagrams.
4. What is the use and significance of Spatial Analysis?
5. Explain the following
 - a. DEM and DSM

- b. Fuzzy Spatial Analysis
- c. DBMS
- d. Data Registration

CARTOGRAPHY: DGI-104

Session: 2020-21

M.Marks: 30

NOTE: Attempt any three questions. All questions carry equal marks.

1. How does Digital Cartography different from Analytical Cartography?
2. Explain Indian Grid System and UTM Grid
3. What is Typography? Explain various elements of Typography.
4. What is the importance of Symbol System in Cartographic Generalization? Explain few methods of symbol creation.
5. Explain the following
 - a. Geoid and datum
 - b. Map Scale
 - c. Map Projection
 - d. Lamberts orthomorphic

THEMATIC APPLICATIONS IN GEOSCIENCES: DGI-105

Session: 2020-21

M.Marks: 30

NOTE: Attempt any three questions. All questions carry equal marks.

1. What are the principles of geomorphologic analysis? Explain.
2. Explain principles and approaches of crop inventory and crop production forecasting.
3. Explain the role of remote sensing and GIS in Watershed management in India.
4. How can Remote Sensing and GIS can help in Solid Waste Management?
5. Explain the following
 - a. UIS
 - b. Principle of evaluation
 - c. Geomorphology
 - d. Issues in land use Planning and policy in India