

PGCGI

Assignment Booklet

**POST GRADUATE CERTIFICATE IN GEOINFORMATICS
(PGCGI)**

**ASSIGNMENTS
JANUARY & JULY 2021 CYCLES**

Valid from 1st January 2021 to 31st December 2021

Tutor Marked Assignments (TMA) for
**MGY-001
MGY-002, &
MGY-003**

**It is compulsory to submit the Assignments before filling in the
Term-End Examination (TEE) Form**



**School of Sciences
Indira Gandhi National Open University
Maidan Garhi, New Delhi-110 068 (INDIA)**

(2021)

Dear Learner,

Welcome to the Post Graduate Certificate Programme in Geoinformatics (PGCGI).

As per the laid down guidelines of the University, you need to complete the assignment for each course. Each assignment has 5 questions. All the questions are compulsory. It is important that you should write the answers to all the questions in your own words. You should remember that writing answers to assignment questions will improve your writing skills and prepare you for the term-end examination.

This booklet includes assignments for the following three courses:

MGY-001: Introduction to Geoinformatics

MGY-002: Remote Sensing and Image Interpretation

MGY-003: Global Navigation Satellite System and Geographic Information System

It is compulsory to submit the assignments within the stipulated time to be eligible for appearing in the term-end examination. You will not be allowed to appear for the term-end examination for a course if you do not submit the assignment for that course within the due date as set by the University. If you appear in the term-end examination of a course without submitting its assignment, the result of the term-end examination is liable to be cancelled/ withheld.

The assignments constitute the continuous component of the evaluation process and have 30% weightage in the final grading.

Before you write the assignments, first go through the course material and then prepare the assignments carefully by following the instructions pertaining to assignments. Your responses should not be a verbatim reproduction of the textual materials provided for self-learning purposes but it should be in your own words.

If you have any doubt or problem pertaining to the course material and assignments, contact the concerned Programme in-charge or Academic Counsellor at your Study Centre. If you still have problems, do feel free to contact us at the School of Sciences, IGNOU Headquarters.

Wishing you all the best to complete the programme successfully.

Programme Coordinator
PGCGI
School of Sciences
e-mail: pgcgi@ignou.ac.in

INSTRUCTIONS

1. On the first page of the assignment response sheet, write the course code, course title, assignment code, name of your study centre (SC) and date of submission along with your enrollment number, name and contact details.
2. The first page of your response sheet should be like the following:

ENROLLMENT NO.:

NAME:

ADDRESS:

.....

.....

CONTACT NUMBER:

CYCLE OF ADMISSION:

PROGRAMME CODE:

COURSE CODE:

COURSE TITLE:

ASSIGNMENT CODE:

REGIONAL CENTRE CODE:

STUDY CENTRE:

DATE OF SUBMISSION:

PLEASE FOLLOW THE ABOVE FORMAT STRICTLY TO FACILITATE EVALUATION AND TO AVOID DELAY.

If you do not follow this format, your script will be returned to you and you will be asked for re-submission.

3. Read the instructions related to assignments given in this booklet and the Programme Guide.
4. **Please note that unless you submit the assignments contained in this booklet within the stipulated time, you would not be permitted to appear in the term-end examination.**

Note the following points before you start writing the assignments:

- Use only A-4 size paper (but not of very thin variety) for writing your responses.
- Tie the pages after numbering them carefully.
- Write the question number for each answer.
- All the questions are compulsory.
- Your answers should be precise.
- **We strongly suggest that you keep a copy of your assignment answer sheets with you before submission for future reference.**
- Answer each assignment on separate sheet.
- It is mandatory to write all assignments neatly in **your own handwriting. Write Your Name, Course Code, Enrollment No. and Cycle of admission** on all the assignments in bold letters.
- Only hand written assignments will be accepted. **Typed or printed copies of assignments will not be accepted.**
- **Express your response in your own words. You are advised to restrict your response based on the marks assigned to it. This will also help you to distribute your time in writing or completing your assignments on time.**
- **The assignment has to be submitted at your Study Centre or as specified by the University.**

You have to submit the completed assignments at the **Study Centre** allotted to you before the due date as set by the University.

It is desirable to keep with you a photocopy of the assignment(s) submitted by you.

*You have to submit the assignments to the Study Centre by **31st March, 2021** (for January 2021 Cycle) if you wish to appear in the June 2021 TEE and by **30th September, 2021** (for July 2020 Cycle) if you wish to appear in the December 2021 TEE.

**Due Date of Submission[#]: For January 2021 Cycle: March 31, 2021
For July 2021 Cycle: September 30, 2021**

^{**} Please note that last date of submission may be changed by the University. Please check IGNOU website for the due date of assignment submission.

Wish you good luck.

Tutor Marked Assignment

MGY-001: Introduction to Geoinformatics

Course Code: MGY-001
Assignment Code: MGY-001/TMA/2021
Max. Marks: 100

Note: * This assignment is based on the entire course.
* It is compulsory to answer all the questions.
* The marks for each question are indicated against it within brackets on the right hand side.
* Write all answers in your own words; do not copy from the course material.

1. Describe the components of geoinformatics in about 450 words. (15)
2. Discuss various sources of geospatial data. (15)
3. Explain various schemes of classification of map projections with the help of neat well labelled diagrams. (15)
4. Describe the role of geoinformatics in natural resources management. (15)
5. Write short notes on the following:
 - a) BIL data format (5)
 - b) Map elements (5)
 - c) Free and Open Source Software (FOSS) (5)
 - d) Applications of geoinformatics in landuse planning (5)
 - e) Steps for interpretation of topographical maps (5)
 - f) Location Based Services (LBS) (5)
 - g) Rajiv Gandhi National Drinking Water Mission (5)
 - h) Challenges to geoinformatics industry (5)

Tutor Marked Assignment

MGY-002: Remote Sensing and Image Interpretation

Course Code: MGY-002
Assignment Code: MGY-002/TMA/2021
Max. Marks: 100

Note: * This assignment is based on the entire course.
* It is compulsory to answer all the questions.
* The marks for each question are indicated against it within brackets on the right hand side.
* Write all answers in your own words; do not copy from the course material.

1. Discuss electromagnetic radiation and its properties in about 450 words. (15)
2. Describe remote sensing platforms and sensor systems. (15)
3. Give an account of ground truth data collection. (15)
4. Explain supervised and unsupervised image classification techniques with the help of neat well labelled diagrams. (15)
5. Write short notes on the following:
 - a) Atmospheric windows (5)
 - b) Spectral signature of water (5)
 - c) Spatial resolution and temporal resolution (5)
 - d) QuickBird and IKONOS (5)
 - e) Image interpretation keys (5)
 - f) Anderson's scheme of landuse/landcover classification (5)
 - g) Image enhancement (5)
 - h) Error matrix (5)

Tutor Marked Assignment

MGY-003: Global Navigation Satellite System and Geographic Information System

Course Code: MGY-003
Assignment Code: MGY-003/TMA/2021
Max. Marks: 100

Note: * This assignment is based on the entire course.
* It is compulsory to answer all the questions.
* The marks for each question are indicated against it within brackets on the right hand side.
* Write all answers in your own words; do not copy from the course material.

1. Elaborately discuss the three segments of GPS. Give diagrams wherever required. (15)
2. Discuss in detail the organisational aspects of GIS. (15)
3. What do you understand by raster analysis? Explain basic operations in raster analysis with the help of neat well labelled diagrams. (15)
4. Describe the methods of GIS data inputs giving suitable examples. (15)
5. Write short notes on the following:
 - a) GPS signal structure (5)
 - b) GALILEO (5)
 - c) GIS as a science and technology (5)
 - d) Georeferencing (5)
 - e) Geovisualisation (5)
 - f) Waterfall model of System Life Cycle (5)
 - g) Types of GIS outputs (5)
 - h) Spatial data infrastructure (5)
