

THE CHARUTAR VIDYA MANDAL UNIVERSITY

PG Diploma in Geoinformatics, SEM – II,

April 2023 Examination (Regular)

Digital Image Processing (201780201)Date: 17th April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

Q. 1 Choose the correct answer. [04]

- (1) What is the process of moving a filter mask over the image and computing the sum of products at each location called as?
- (A) Correlation (C) Linear spatial filtering
(B) Convolution (D) Nonlinear spatial filtering
- (2) In ____ level of DIP process Input is image and output is attributes.
- (A) Low (C) High
(B) Medium (D) Last
- (3) What is Histogram Matching also called as?
- (A) Histogram Equalization (C) Both (A) & (B)
(B) Histogram linearization (D) None of above
- (4) ____ Element of Image Interpretation depends on the object outline.
- (A) Texture (C) Shape
(B) Size (D) Site

Q.2 Answer the following. (any three, each two marks) [06]

- (1) Define True Color Composite and False Color Composite images.
- (2) Define Correlation, Convolution
- (3) Define Frame Buffer, Digital Image
- (4) List out and define Spatial Filters.

Q.3 (A) What is Image Quality? Write a note on two types of errors in digital image. [05]**(B) What is image interpretation? Write a note on elements of image interpretation. [05]****OR****(B) What are Radiometric errors? List out sources of errors. List out and explain causes of radiometric errors in detail. [05]****Q.4 (A) What is Analog and Digital Image? Explain all types of digital image in detail. [05]****(B) Write a note on 3 digital formats to store a digital image in computer with example. [05]****OR****(B) What is Image Resolution? List out and explain types of resolutions. [05]****Q.5 (A) Write a note on steps in digital image processing. [05]****(B) Write a note on basic intensity Transformation Function. [05]****OR****(B) Write a note on Histogram Equalization. [05]****Q. 6 (A) What is classification? Explain ISODATA and K-means classification algorithm in detail. [05]****(B) Write a note to check classification accuracy. Also explain types of errors in classified image. [05]****OR****(B) Write a note on spatial filtering. Explain all types of filters in detail. [05]**

THE CHARUTAR VIDYAMANDAL UNIVERSITY

PGD in Geoinformatics, Sem-II

Examination: April 2023 (Regular)

Python Programming (201780202)

Date: 19th April 2023

Time: 02:00 PM to 04:00 PM

TOTAL MARKS: 50

- Q. 1 Choose the most correct answer. [04]**
- (1) != is used for _____ operation.
(A) NOR (C) XOR
(B) OR (D) None of above
- (2) Extension of python file is _____.
(A) .pi (C) .pp
(B) .py (D) All of above
- (2) Python IDE means: Integrated _____ environment.
(A) Development (C) Debugging
(B) Deriving (D) Designing
- (4) Get the value of the 'a' from {'10','21','33','a','x','r'}, indexing ____ is used.
(A) [0] (C) [2]
(B) [3] (D) [4]
- Q.2 Answer the following in short. (Attempt any three, each two marks) [05]**
- (1) List any 10-python reserved key list.
(2) Why Python programming language is important?
(3) Write an importance of variable in Python.
(4) Write a program to find tick in your computing system.
- Q.3 (A) Elaborate different data types in Python. [05]**
(B) What is interactive mode and script mode in Python? [05]
- OR**
- (B) Write a program to find the largest number from given any three numbers. [05]**
- Q.4 (A) Explain logical operators in python programming language with necessary example. [05]**
(B) Explain arithmetic operators in python programming language with necessary example. [05]
- OR**
- (B) Introduce IF.... Else with suitable program in python. [05]**
- Q.5 (A) Write notes on list and how to update list in python. [05]**
(B) How tuple distinguish from list in python? Show its importance in programming. [05]
- OR**
- (B) Illustrate for loop and while loop in python. [05]**
- Q. 6 (A) Illustrate python date and time module with necessary examples. [05]**
(B) Discuss array in python. [05]
- OR**
- (B) Write a program to print April 2023, 2024, and 2025 calendar. [05]**

THE CHARUTAR VIDYA MANDAL UNIVERSITY

PG Diploma in Geoinformatics , SEM – II

April 2023 Examination (Regular)

Introduction to Database Management System (201780203)Date: 21th April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

- Q. 1 Choose the correct answer. [04]**
- (1) What is DBMS?
(A) DBMS is a collection of queries (C) DBMS is a programming language
(B) DBMS is a high-level language (D) DBMS stores, modifies and retrieves data
- (2) In which of the following formats data is stored in the database management system?
(A) Image (C) Graph
(B) Table (D) None of above
- (3) Which of the following is not a type of database?
(A) Hierarchical (C) Distributed
(B) Network (D) Decentralized
- (4) _ Operations do not preserve non-matched tuples:
(A) Left outer join (C) Right outer join
(B) Inner join (D) None of above
- Q.2 Answer the following. (any three, each two marks) [06]**
- (1) What is Join? List out types of joins
(2) What is the full form of DDL and DML.
(3) Enlist types of relationship between tables.
(4) Define primary key, Not null.
- Q.3 (A) Write a note on Data Model. [05]**
(B) Write a note on Database design. [05]
OR
(B) Write a note on Database Normalization. [05]
- Q.4 (A) What is Database? How data can be stored in database? Explain this by taking suitable examples. [05]**
(B) Explain E-R Diagram in detail with example. [05]
OR
(B) Explain Basic operations on RDBMS in detail. [05]
- Q.5 (A) Write a note on transactions. [05]**
(B) Define transactions. Explain transactions states with the help of diagram. [05]
OR
(B) Write a note on concurrency control. [05]
- Q. 6 (A) Write a note on ERD. [05]**
(B) Write a note on Locking. [05]
OR
(B) Write a note on Reverse Engineering. [05]