

**THE CHARUTAR VIDYA MANDAL UNIVERSITY**

M.Sc. Geoinformatics, SEM – II  
April 2023 Examination (Regular)  
Digital Image Processing (201400201)

Date: 17<sup>th</sup> April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

- Q.1 Choose the correct answer. [04]**
- (1) Piecewise Linear Transformation function involves which of the following?  
(A) Bit-plane slicing (C) Both (A) & (B)  
(B) Contrast stretching (D) None of above
- (2) Second derivatives are zero at points on  
(A) Ramp (C) Edge  
(B) Step (D) Constant intensity
- (3) How is negative of an image obtained with intensity levels  $[0, L-1]$  with "r" and "s" being pixel values?  
(A)  $s = L - 1 + r$  (C)  $s = L + 1 + r$   
(B)  $s = L - 1 - r$  (D)  $s = L + 1 - r$
- (4) Compression is done for saving  
(A) Storage (C) Both (A) & (B)  
(B) Bandwidth (D) Money
- Q.2 Answer the following. (any three, each two marks) [06]**
- (1) Explain Lossless and Lossy compression.  
(2) Define convolution and correlation  
(3) Define compression ratio, Histogram.  
(4) Define pictograph, Scatter diagram
- Q.3 (A) Explain video control and its operations to display raster graphics on monitor. [05]**  
**(B) Write a note on 2D composite transformation. [05]**  
**OR**  
**(B) What you mean by chart? Explain all types of charts with example. [05]**
- Q.4 (A) What is Analog and Digital Image? Explain all types of digital image in detail. [05]**  
**(B) What is Image Resolution? List out and explain types of resolutions. [05]**  
**OR**  
**(B) Write a note on 3 types of Sensors for image sensing and acquisition. [05]**
- Q.5 (A) Write a note on basic intensity Transformation Function. [05]**  
**(B) Write a note on Histogram Equalization. [05]**  
**OR**  
**(B) Write a note on various types of low pass filters in spatial domain. [05]**
- Q.6 (A) List out and define 3 types of data redundancy. Explain Coding redundancy in detail and also explain how to remove it from the image. [05]**  
**(B) Write a note on Huffman Coding with example. [05]**  
**OR**  
**(B) What is image classification? Explain ISODATA and K-Means classification algorithm in detail. [05]**

**THE CHARUTAR VIDYA MANDAL UNIVERSITY**

M.Sc. Geoinformatics, SEM – II,  
April 2023 Examination (Regular)

**Spatial Analysis and Modelling (201400202)**

Date: 19<sup>th</sup> April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

**Q.1 Choose the correct answer. [04]**

- (1) For Isochrone map \_\_\_\_\_ is appropriate variable.  
(A) Flood (C) Both (A) & (B)  
(B) Location (D) None of above
- (2) The value generated in the output raster is a function of cell values at the \_\_\_\_\_ on in the input layers.  
(A) same location (C) all location  
(B) different location (D) None of the location
- (3) According to Reilly's law, customers are willing to travel \_\_\_\_\_ distances to larger retail centers given the higher attraction they present to customers.  
(A) Shorter (C) longer  
(B) Equal (D) None of above
- (4) As ORPHEUS approach for conflict resolution of cartography modeling \_\_\_\_\_.  
(A) Competing portion of a problem (C) Both (A) & (B)  
(B) create two separate model (D) None of above

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

- (1) List the six lattices for sampling of statistical surface.  
(2) What is neighborhood (focal) analysis? draw any two shapes for analysis.  
(3) List any four applications for line overlay polygon.  
(4) Differentiate large scale map and small-scale map.

**Q.3 (A) Write a detail note on TIN model. [05]  
(B) Explain non liner interpolation. [05]****OR**

- (B) Elaborate the importance of viewshed analysis. [05]**

**Q.4 (A) Write a note on vectorization process. [05]  
(B) Write note on location – allocation for retail grocery store location selection parameters and impedance. [05]****OR**

- (B) Write a detailed note on route analysis. [05]**

**Q.5 (A) Explore the gravity model for Geoinformatics System. [05]  
(B) Write a note on Thiessen polygon. [05]****OR**

- (B) Explain Spatial data mining issues. [05]**

**Q.6 (A) What is cartography model implementation? explain in detail. [05]  
(B) Write a note on inductive and deductive models with appropriate applications. [05]****OR**

- (B) Explain fundamental problems of traditional cartography. [05]**

**THE CHARUTAR VIDYA MANDAL UNIVERSITY**

M.Sc. Geoinformatics, SEM – II

April 2023 Examination (Regular)

**Web Programming (201400203)**Date: 21<sup>th</sup> April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

**Q. 1 Choose the correct answer. [04]**

- (1) Determine the correct order of given steps  
1. Open a connection to MySQL Server  
2. Execute the SQL Query  
3. Fetch the data from query  
4. Select database  
Close Connection  
(A) 5, 2, 1, 3, 4 (C) 1, 4, 2, 3, 5  
(B) 1, 3, 2, 4, 5 (D) 1, 4, 5, 3, 2
- (2) PHP is an example of \_\_\_\_\_ scripting language.  
(A) Server-side (C) Both (A) & (B)  
(B) Client-side (D) Browser-side
- (3) +=, -=, \*=, /=, %= all are example of  
(A) Comparison operator (C) Both (A) & (B)  
(B) Assignment operator (D) None of above
- (4) In \_\_\_\_\_ type of cookies, files are erased when you close your browser.  
(A) Temporary (C) Cache  
(B) Persistent (D) Permanent

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

- (1) What is MySQL? List out features of MySQL.
- (2) What is Protocol? List out various types of protocols.
- (3) What do you mean by open source software? List out any two open source software names
- (4) Explain hub and switch.

**Q.3 (A) List out networking devices and explain any three in detail. [05]**

- (B) Write a note on CSS. Explain 3 ways of inserting a style. List and explain 2 attributes of CSS. [05]

**OR**

- (B) How to draw table in HTML? Explain with various table tags and with the help of example. [05]

**Q.4 (A) Define Event Handle. List out various types of event handles. Explain any one event handler with code. [05]**

- (B) What is array? List and explain various types of arrays supported by PHP. [05]

**OR**

- (B) Write a note on Server Side Scripting and Client Side Scripting. [05]

- Q.5 (A)** What is PHP? Write rules and scope of variables in PHP. **[05]**  
**(B)** List out and explain any four string functions with syntax and example. **[05]**

**OR**

- (B)** Write a note on conditional statements in php with suitable example. **[05]**

- Q.6 (A)** Explain the term MySql. Write a sample code to create a connection of PHP to MySQL database. **[05]**

- (B)** Write a note on Cookies. Explain cookie by explaining its major functions with example. **[05]**

**OR**

- (B)** Write a note on Session. Explain how to handle session variable with all of its function. **[05]**

**Best of Luck**

**THE CHARUTAR VIDYA MANDAL UNIVERSITY**

M.Sc. Geoinformatics, SEM – II,  
 April 2023 Examination (Regular)  
**Disaster Management (201400208)**

Date: 25<sup>th</sup> April 2023

TIME: 02:00 PM TO 4:00 PM

TOTAL MARKS: 50

**Q. 1 Choose the correct answer. [04]**

- (1) As per principle of disaster management, \_\_\_\_\_ are responsible for their own safety.
- (A) All government of earth (C) individual  
 (B) Respective government of country (D) NDRF
- (2) As per phase of disaster Vs time graph, disillusionment to reconstruction timing is \_\_\_\_\_.
- (A) 1 to 3 days (C) 1 to 3 months  
 (B) 1 to 3 weeks (D) 1 to 3 Years
- (3) For fire detection \_\_\_\_\_ satellite is used.
- (A) PALSAR (C) IKONOS  
 (B) SPOT (D) None of above
- (4) As per finance ministry guideline for disaster, flexi fund amount is \_\_\_\_\_
- (A) 70% (C) 10%  
 (B) 90% (D) None of above

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

- (1) How is earthquake epicenter located?  
 (2) List four different nodal ministries for different disaster management.  
 (3) Draw the cycle for flood management.  
 (4) Write full form of PROMISE (2005-2008) and AUDMP (1995-2004) project by UN.

- Q.3 (A) What is Tsunami? Explain mechanism for Tsunami early warning system. [05]**  
**(B) Write a note on man made disaster. [05]**

**OR**

- (B) Give Complete Classification of Natural Disaster, Explain Flood as Disaster. [05]**

- Q.4 (A) What is paradigm shift in Disaster Management? elaborate in detail. [05]**  
**(B) Enlist different areas of concern for disaster management. [05]**

**OR**

- (B) Explain pre disaster preparation. [05]**

- Q.5 (A) Draw and explain prevention and early warning earthquake system. [05]**  
**(B) Elaborate applications of science and technology for disaster mitigation. [05]**

**OR**

- (B) How does nonstructural part of household construction differ from structural part? List and explain nonstructural part. [05]**

- Q. 6 (A) Why secondary cities are priorities for Disaster Risk Reduction program? [05]**  
**(B) List all causes which make cities are prone to disaster risk. [05]**

**OR**

- (B) Explain financial mechanism as per NDM act. [05]**