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**M.Sc. – I (Semester – I) Examination, 2016  
GEOINFORMATICS (Paper – II) (CBCS)(New)  
Introduction to Geology**

Day and Date : Thursday, 31-3-2016  
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

- Instructions :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **one** is **compulsory**.  
4) Answer **any two** essay questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5,6,7**.  
6) Draw **neat** sketches **wherever** necessary.

1. Fill in the blanks with appropriate.

14

- 1) Diaphaneity is the property related to \_\_\_\_\_ of light.  
A) Transmission B) Reflection C) Dispersion D) Refraction
- 2) Find the odd one \_\_\_\_\_  
A) Granite B) Dolorite C) Dunite D) Conglomerate
- 3) Gold is a \_\_\_\_\_ kind of deposit.  
A) Volcanic B) Placer C) Both A and B D) None of these
- 4) \_\_\_\_\_ are the undulations in the rocks produced by the compression forces.  
A) Faults B) Unconformity C) Folds D) Joints
- 5) An igneous structure that cuts across the bedding plane is called as \_\_\_\_\_  
A) Laccolith B) Phacolith C) Dyke D) Sill
- 6) Ore mineral of iron is \_\_\_\_\_  
A) Siderite B) Limonite C) Magnetite D) All of the above
- 7) Which one of the following is a mono-mineralic rock ?  
A) Basalt B) Granite C) Dunite D) Dolerite



- 8) Sorting of sediments from coarse to fine grained sediments gives rise to \_\_\_\_\_  
 A) Laminations    B) Ripple marks    C) Current bedding    D) Graded bedding
- 9) \_\_\_\_\_ are the folds with a parallel arrangement of limbs ?  
 A) Isoclinal fold    B) Reclined fold    C) Inverted fold    D) Symmetrical fold
- 10) Load metamorphism on sandstone converts to \_\_\_\_\_  
 A) Marble    B) Quartzite    C) Schist    D) Slate
- 11) Higher contours are always surrounded by the lower once in the case of  
 A) Hill    B) Valley    C) Basin    D) Spur
- 12) Most favorable site for the construction of DAM is \_\_\_\_\_  
 A) Upstream dipping beds    B) Jointed beds  
 C) Downstream dipping beds    D) Faulted beds
- 13) Which of the following coal will give the high calorific value ?  
 A) Anthracite    B) Peat    C) Lignite    D) Bituminous
- 14) Permeability and porosity of the rock depends upon  
 A) Texture    B) Pore spaces    C) Both A and B    D) None of the above
2. Define igneous rocks with example. How they are formed and explain the Forms of igneous rocks. **14**
3. Write a detail note on geological considerations of dams. **14**
4. What is an Ore ? Explain the various process involved in the formation of ore. **14**
5. Explain the following. **14**  
 a) Luster and Forms  
 b) Cleavage, Color and Streak.
6. Write a brief note on : **14**  
 a) Kinds of metamorphism.  
 b) Coal and petroleum.
7. Write a short note on : **14**  
 a) Unconformity  
 b) Role of Geology in mining Industry.
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**M.Sc. – I (Semester – I) Examination, 2016  
GEOINFORMATICS (CBCS) (New) (Paper – IV)  
Computer Application in Earth Science**

Day and Date : Tuesday, 5-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

- Instructions :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **1** is **compulsory**.  
4) Answer **any two** essay questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5, 6, 7**.  
6) Draw neat and labelled diagrams **wherever** necessary.

1. Fill in the blanks :

14

- 1) \_\_\_\_\_ are used to store data and programs.
  - a) Folder
  - b) File
  - c) Recycle Bin
  - d) None of these
- 2) Which of these facilities is provided by an operating system ?
  - a) Use Interface
  - b) Surfing
  - c) Spelling Checker
  - d) Browsing
- 3) The system component that controls and manipulates data in order to produce information is called the \_\_\_\_\_.
  - a) Monitor
  - b) Keyboard
  - c) Mouse
  - d) Microprocessor
- 4) Which of the following service not offer through Online Service ?
  - a) Telemarketing
  - b) Home banking
  - c) Travel Reservations
  - d) Investing
- 5) Which of following is an input device ?
  - a) Monitor
  - b) Printers
  - c) Projector
  - d) Webcam



- 6) Gigabyte is equal to
- a)  $2^{20}$  Bytes
  - b)  $2^{30}$  Bytes
  - c)  $2^{40}$  Bytes
  - d) None of above
- 7) SQL stand for \_\_\_\_\_
- a) Sequential Query Language
  - b) Structured Query Language
  - c) Stratum Query Language
  - d) Standard Query Language
- 8) Data stored in a ROM cannot be changed by user of a computer
- a) True
  - b) False
  - c) Other
  - d) None of above
- 9) Which is the latest version of MS Windows ?
- a) Windows 10.1
  - b) Windows 8.1
  - c) Windows 2008
  - d) Windows 10
- 10) Which of following is an both input-output device ?
- a) Touch Screen
  - b) Microphone
  - c) Joystick
  - d) Computer Output Microfilm
- 11) The advantage of MS-Work
- a) Letter writing
  - b) Preparing lecture
  - c) Preparing question paper
  - d) All the above
- 12) CAD also known as \_\_\_\_\_
- a) Computer Aided Design
  - b) Computer Assist Design
  - c) Computer Aided Device
  - d) None of the above
- 13) Modulation is the process of \_\_\_\_\_
- a) Conversion of data
  - b) Communication
  - c) Converting from analog to digital
  - d) All of the above
- 14) \_\_\_\_\_ is a collection of several separate troubleshooting utilities.
- a) Backup
  - b) Uninstall
  - c) Norton Utilities
  - d) All of these



2. Define computer and explain its characters. **14**
  3. Describe RDMS in detail. **14**
  4. Explain in details various applications of computer in Environment. **14**
  5. Write a note on : **14**
    - i) Network
    - ii) SQL.
  6. Write discuss brief : **14**
    - i) MS Office
    - ii) Role of data base administrator.
  7. Write a short on : **14**
    - i) Operating System
    - ii) Internet.
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**M.Sc. – I (Semester – II) Examination, 2016  
GEOINFORMATICS (Paper – I) (New) (CBCS)  
Introduction to Remote Sensing**

Day and Date : Wednesday, 30-3-2016

Total Marks : 70

Time : 10.30 a.m. to 1.00 p.m.

- Instructions :** 1) Answer **all five** questions.  
2) **All** questions carry **equal** marks.  
3) Question I is **compulsory**.  
4) Answer **any two** questions from question numbers **II, III, and IV**.  
5) Answer **any two** questions from question numbers **V, VI and VII**.  
6) Draw **neat** and labeled diagrams **wherever** necessary.

I. Fill in the blanks :

14

- 1) The instrument which provides electromagnetic radiation of specified wavelength or a band of wavelength to illuminate the earth surface, are called \_\_\_\_\_
- a) Sensor  
b) Passive sensors  
c) Active sensor  
d) None of these
- 2) The refractive index of the ocean water
- a) Increases with salinity  
b) Increases with temperature  
c) Decreases with salinity  
d) Decreases with temperature
- 3) Electromagnetic radiation \_\_\_\_\_
- a) Produces a time varying magnetic field and vice versa  
b) Once generated, remains self-propagating  
c) Is capable to travel across space  
d) Consist of magnetic and electric fields  
e) All of these



- 4) The Indian started their remote sensing program in late seventies with the launch of Bhaskara I and \_\_\_\_\_
- a) Arybhata II    b) Bhaskara II    c) Arjuna II    d) Surya II
- 5) \_\_\_\_\_ is the height of each wave peak.
- a) Wavelength    b) Frequency    c) Amplitude    d) Spectrum
- 6) The ability of a portion of a developed film to pass light is called its \_\_\_\_\_
- a) Transmittance    b) Reflectance  
c) Radiance    d) None of the above
- 7) \_\_\_\_\_ reflection occurs when the surface is rough relative to wavelength.
- a) Diffuse    b) Specular    c) Selective    d) Platform
- 8) An Electromagnetic radiation of wavelength 0.56 micron falls under which portion of spectrum ?
- a) Infra Red    b) Visible    c) Microwave    d) Radio wave
- 9) Spectro-radiometer is a \_\_\_\_\_ instrument.
- a) Ground base    b) Space-born    c) Air-borne    d) None
- 10) A pictorial representation of an object or a scene is called as \_\_\_\_\_
- a) Image    b) Data    c) Information    d) None
- 11) Each pixel is associated with a number known as \_\_\_\_\_
- a) Digital number    b) Account number  
c) Band number    d) None of the above
- 12) These errors are caused by detector imbalance and atmospheric deficiencies \_\_\_\_\_
- a) Radiometric    b) Geometric    c) Pixel    d) Band
- 13) Bodies having high thermal inertia have \_\_\_\_\_ tendency to change their temperature easily.
- a) High    b) Less    c) No    d) None of the above
- 14) Wet soil generally appears \_\_\_\_\_ when viewed using visible and NIR bands.
- a) Dark    b) Light    c) Bright    d) None



- II. Explain the concept of Remote Sensing and add a note on its history. **14**
  - III. Explain Electromagnetic Energy and Electromagnetic Spectrum with reference to Remote Sensing. **14**
  - IV. What is aerial photography ? Describe various types of aerial photographs. **14**
  - V. Write a short note on : **14**
    - a) Atmospheric windows
    - b) Image Interpretation.
  - VI. Explain in short : **14**
    - a) Hardware component of GIS.
    - b) Type of platforms.
  - VII. Describe in brief : **14**
    - a) Active and Passive Remote Sensing with examples.
    - b) Energy interaction with earth surface.
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**SLR-MG – 454**

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**M.Sc. – I (Semester – II) (New CBCS) Examination, 2016  
GEOINFORMATICS (Paper – II)  
Cartography and Map Analysis**

Day and Date : Friday, 1-4-2016

Max. Marks : 70

Time : 10.30 a.m. to 1.00 p.m.

- Instructions :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **1** is **compulsory**.  
4) Answer **any two** essay questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5, 6, 7**.  
6) Draw **neat** and labelled diagrams **wherever** necessary.

1. Fill in the blanks with the correct answers :

**14**

- 1) Cartography is generally consider to be the \_\_\_\_\_ and \_\_\_\_\_ of designing, constructing and producing maps.  
a) Science, Art  
b) Science, Technology  
c) Art, Technology  
d) Innovation, Science
- 2) Map is \_\_\_\_\_ scale conventional representation earth of part there of as seen from the above.  
a) Macro  
b) Meso  
c) Large  
d) Small
- 3) District within a state would be represented in which type of spatial data ?  
a) Point  
b) Line  
c) Polygon  
d) None of these
- 4) Which of the following is small scale map ?  
a) Topographical map  
b) City map  
c) Atlas map  
d) Wall map

**P.T.O.**



- 5) Circle and sector diagram is also known as
- a) Pictorial diagram
  - b) Pie diagram
  - c) Ring diagram
  - d) Pile diagram
- 6) The amount of information to be represented on the map depends on
- a) Scale
  - b) Projection
  - c) Conventional sign
  - d) All the above
- 7) The following features are found on virtually all maps.
- a) Distance or scale
  - b) Directions
  - c) Legend
  - d) All the above
- 8) Cartographers may not used a number of visual resources such as
- a) Size and shape
  - b) Texture and pattern
  - c) Orientation
  - d) Distance
- 9) A map projection least suitable for the world map
- a) Mercator
  - b) Simple Cylindrical
  - c) Conical
  - d) All the above
- 10) For convenience of mapping cartographic representation of surface feature, minimum mappable standardized unit is
- a) 3 mm + 3 mm
  - b) 4 mm + 4 mm
  - c) 2 mm + 2 mm
  - d) None of these
- 11) Which symbol used for visual interpretation of Riverine Satellite data ?
- a) RF
  - b) SC
  - c) X
  - d) SOMENDRA
- 12) Which of the following color is applying to satellite image interpretation for water bodies ?
- a) Dark red
  - b) Light red
  - c) Black
  - d) White
- 13) A map of RF 1 : 20000 to be reduced to 1 : 80000 the ratio of reduction will be
- a) 4 : 1
  - b) 1 : 4
  - c) 2 : 3
  - d) 3 : 2
- 14) Which one of the following datum is the best representation of the shape of the entire Earth ?
- a) NAD 27
  - b) NAD 83
  - c) WGS 84
  - d) WGS 27



2. Discuss on 'History of Cartography'. **14**
  3. Describes the 'Geographic Coordinate system'. **14**
  4. What is Projection ? Explain Ellipsoid, Geoids and Datum. **14**
  5. Write short notes on : **14**
    - a) Color theory and models
    - b) Map referencing and indexing.
  6. Write small account on : **14**
    - a) Remote Sensing data collection
    - b) Reduction and enlargement of scale.
  7. Discuss in brief : **14**
    - a) Characteristics of raster data
    - b) Scope of cartography.
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**M.Sc. I (Semester – II) Examination, 2016  
GEOINFORMATICS (New) (CBCS)  
Introduction to GIS & GPS (Paper – III)**

Day and Date : Monday, 4-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Max. Marks : 70

- Instructions :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) **Question I** is **compulsory**.  
4) Draw **neat** and labeled diagram **wherever** necessary.  
5) Answer **any two** essay questions from **II, III, IV**.  
6) Answer **any two** short note questions from **V, VI, VII**.

I. Fill in the blanks.

14

- 1) Out of following which is not vector data \_\_\_\_\_  
A) Point                      B) Line                      C) Polygon                      D) Image
- 2) Conversion of vector data to raster data called as \_\_\_\_\_  
A) Rectorization                      B) Rasterization  
C) Vectorization                      D) All of the above
- 3) A raster data structure that uses square blocks to represent a region called as \_\_\_\_\_  
A) Block code                      B) Ran length code  
C) Chain code                      D) None of these
- 4) GLONASS stands for \_\_\_\_\_  
A) Global Navigation Satellite System  
B) Global Nevy Star System  
C) Global Navigation Sector System  
D) All of the above
- 5) \_\_\_\_\_ is not a open source GIS software.  
A) GRASS GIS      B) gvSIG                      C) ERDAS                      D) QGIS

P.T.O.



- 6) GIS can be used for \_\_\_\_\_
- A) Archeology    B) Logistics  
C) Protecting wetland                                      D) All of the above
- 7) GPS gives height from \_\_\_\_\_
- A) WGS 84              B) WGS 83              C) WGS 85              D) All of the above
- 8) Global Positioning Service (GPS) is based on a principle called \_\_\_\_\_
- A) Transmission    B) Globalization  
C) Orbiteration    D) Trilateration
- 9) 1 mm on a map drawn at a scale of 1 : 50,000 represent on the ground as \_\_\_\_\_
- A) 500 centimetres    B) 50 metres  
C) 50 centimetres    D) 5 metres
- 10) An endpoint that is not connected to another line is called \_\_\_\_\_
- A) A dangle              B) Iseudo              C) Overshoot              D) Undershoot
- 11) Orbital radius of GPS satellites is approximately \_\_\_\_\_
- A) 15,200 km              B) 18,400 km              C) 26,600 km              D) 36,000 km
- 12) GIS cannot be used to visualize \_\_\_\_\_
- A) Patterns              B) Tables              C) Trends              D) Relationships
- 13) GPS has been widely recognized as accurate, fast and cost-effective method for the following \_\_\_\_\_
- A) Collection of the geographic coordinate data used in GIS  
B) For movement of navigation  
C) For determination of precise orbit and altitude of low earth orbiting satellites  
D) All of these
- 14) Scanning resolution 508 dip is \_\_\_\_\_ inch.
- A) 0.5                      B) 1                      C) 1.5                      D) 2

II. Define GIS and concepts of space and time in spatial information system. **14**

III. Give the list of error in spatial data editing. **14**



- IV. Explain in detail the Hardware and Software in GIS. **14**
- V. Write a short note on : **14**
- A) Topology
  - B) Raster.
- VI. Write a brief on : **14**
- A) Projection and coordinate system.
  - B) Errors in GIS database.
- VII. Write a note on : **14**
- A) History of GIS.
  - B) GPS.
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**M.Sc. – I (Semester – II) Examination, 2016  
GEOINFORMATICS (New) (CBCS) (Paper – IV)  
Digital Image Processing**

Day and Date : Wednesday, 6-4-2016  
Time : 10.30 a.m. to 1.00 p.m.

Total Marks : 70

- N.B. :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **1** is **compulsory**.  
4) Answer **any two** questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5, 6, 7**.  
6) Draw neat and labeled diagrams **wherever** necessary.

1. Fill in the blanks :

**14**

- 1) \_\_\_\_\_ is displayed by placing the infrared, red, green in the red, green and blue frame buffer memory.  
a) FCC  
b) Standard FCC  
c) Colour Composition  
d) None of these
- 2) \_\_\_\_\_ is a pictorial representation of an object or a scene.  
a) Image  
b) Photo  
c) Data  
d) None of these
- 3) \_\_\_\_\_ method uses a linear expression to model the relationship between input and output values.  
a) Non-linear  
b) Rectification  
c) Linear  
d) Noise correction
- 4) \_\_\_\_\_ interpolation simply chooses the actual pixel that has its centre nearest the point located in the image.  
a) Nearest neighbour  
b) Bilinear  
c) Cubic convolution  
d) None of these
- 5) \_\_\_\_\_ operations aim to correct distorted or degraded image data to create a faithful representation of the original scene.  
a) Image Enhancement  
b) Image Rectification  
c) Image Classification  
d) None of these





- 6) \_\_\_\_\_ is a widely used decision rule based on simple Boolean “and/or” logic.
- a) Maximum likelihood classifier
  - b) Minimum Distance to Means Classifier
  - c) Parallelepiped classifier algorithm
  - d) None of these
- 7) \_\_\_\_\_ format maintains all data for a single band covering entire scene as one file.
- a) BIL
  - b) BSQ
  - c) BIP
  - d) Geo-TIFF
- 8) Associated with each pixels a number known as \_\_\_\_\_
- a) Digital number
  - b) Brightness value
  - c) a and b both
  - d) Only a is correct
- 9) Supervised classification is a type of \_\_\_\_\_
- a) Image rectification
  - b) Image classification
  - c) Image enhancement
  - d) Image processing
- 10) \_\_\_\_\_ classification can be defined as the process of sample of known identify to classify pixel of unknown identify.
- a) Unsupervised
  - b) Supervised
  - c) a and b both
  - d) All of the above
- 11) Image \_\_\_\_\_ operation aim to correct distorted image data to create a faithful representation of the original scene.
- a) Enhancement
  - b) Classification
  - c) Registration
  - d) Rectification
- 12) In 8 bit image 237 digital number represents \_\_\_\_\_ color.
- a) Black
  - b) Gray
  - c) White
  - d) All of the above
- 13) Launch of the first landsat earth observation satellite in \_\_\_\_\_ began an era of increasing interest in machine processing.
- a) 1972
  - b) 1974
  - c) 1977
  - d) 1982
- 14) In FCC image urban areas reflects equal portion of NIR, Red and Green and therefore they appear as steel \_\_\_\_\_
- a) Dark Blue
  - b) White
  - c) Black
  - d) Grey



2. Explain contrast manipulation image enhancement techniques. **14**
  3. What is classification ? Discuss unsupervised classification. **14**
  4. What is Geometric correction ? Explain the geometric errors and corrections. **14**
  5. Write a short note on : **14**
    - a) Radiometric correction
    - b) Accuracy Assessment.
  6. Write in brief on : **14**
    - a) Band rationing
    - b) Differences between digital image and photographs.
  7. Write small account on : **14**
    - a) Error matrix
    - b) Band Combination.
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**M.Sc. – II (Semester – IV) Examination, 2016**  
**Paper – I : GEOINFORMATICS (New CGPA)**  
**Information Technology and Management**

Day and Date : Wednesday, 30-3-2016

Total Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

- Instructions :** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **1** is **compulsory**.  
4) Answer **any two** essay questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5, 6, 7**.  
6) Draw **neat and labelled** diagrams **wherever** necessary.

1. Fill in the blanks :

**14**

- 1) Which of the following communication modes support two-way traffic but in only one direction at a time ?
- a) Simplex  
b) Half duplex  
c) Three-quarters duplex  
d) All of the above
- 2) Online income tax accounting for tax collection started from \_\_\_\_\_
- a) 1<sup>st</sup> March 2006  
b) 1<sup>st</sup> June 2004  
c) 1<sup>st</sup> March 2004  
d) 1<sup>st</sup> September 2006
- 3) The computer that process both analog and digital is called
- a) Analog computer  
b) Digital computer  
c) Hybrid computer  
d) Mainframe computer



- 4) The Prime Minister of India constituted a National Task Force on IT and Software Development in
- a) June 1998
  - b) May 1999
  - c) May 1998
  - d) June 1999
- 5) The first electronic computer in the world was
- a) UNIVAC
  - b) EDVAC
  - c) ENIAC
  - d) All of above
- 6) The World Wide Web (WWW) was introduced in 1992 in Switzerland by \_\_\_\_\_
- a) NIC
  - b) ARPANET
  - c) SASSCOM
  - d) CERN
- 7) Starting or restarting a computer is called \_\_\_\_\_ the system.
- a) Booting
  - b) Copying
  - c) Pasting
  - d) Multitasking
- 8) Modulation and demodulation are the processes of a \_\_\_\_\_
- a) Connection device
  - b) Modulator
  - c) Node
  - d) Modem
- 9) C programming language was developed by \_\_\_\_\_
- a) Dennis Ritchie
  - b) Ken Thompson
  - c) Bill Gates
  - d) Peter Norton
- 10) Information is \_\_\_\_\_
- a) Data
  - b) Processed data
  - c) Manipulated input
  - d) Computer output
- 11) The function of operating system includes \_\_\_\_\_
- a) Managing Resources
  - b) Providing User Interface
  - c) Running Applications
  - d) All of the above



- 12) \_\_\_\_\_ can be described as “end-user” software.
- a) DOS
  - b) System software
  - c) Application software
  - d) Operation software
- 13) HTML means \_\_\_\_\_
- a) Hyper Text Markup Language
  - b) Hyper Text Monitor Language
  - c) Hyper Text Messaging Language
  - d) Hyper Text Markup Label
- 14) NASSCOM conducted a survey of \_\_\_\_\_ leading states to point out that all these states have an IT policy, expert group, e-governance cell and some even have a separate IT department.
- a) Ten
  - b) Nine
  - c) Twenty
  - d) Sixteen

2. What are programming languages ? Write a note on history of programming languages. **14**
3. What is Information System ? Give detailed Classification of Information System. **14**
4. What is Information Technology ? Describe the impact of Information Technology on Educational Organizations in detail. **14**
5. Write brief account on : **14**
- a) Mission statement and vision statements of strategic planning.
  - b) TPS.
6. Write short note on : **14**
- a) Advantages of expert systems.
  - b) MIS.
7. Enumerate the following : **14**
- a) Types of networking.
  - b) Components of data communication system.
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M.Sc. – II (Semester – IV) Examination, 2016  
GEOINFORMATICS (New) (CGPA)

Paper – II : Geoinformatics Approach for Natural Resource Management

Day and Date : Friday, 1-4-2016  
Time : 2.30 p.m. to 5.00 p.m.

Total Marks : 70

- Instructions:** 1) Answer **any five** questions.  
2) **All** questions carry **equal** marks.  
3) Question **1** is **compulsory**.  
4) Answer **any two** essay questions from **2, 3, 4**.  
5) Answer **any two** short note questions from **5, 6, 7**.  
6) Draw **neat** and labeled diagrams **wherever** necessary.

1. Fill in the blanks with appropriate choice : 14
- 1) The forest cover of India was mapped for the first time by NRSA in \_\_\_\_\_  
a) 1975                      b) 1980                      c) 1983                      d) 1990
  - 2) Formula for NDVI is \_\_\_\_\_  
a)  $\frac{NIR-R}{NIR+R}$                       b)  $\frac{NIR+R}{NIR}$   
c)  $\frac{R}{NIR}$                       d) None of these
  - 3) \_\_\_\_\_ satellite sensor gives a tree height of upto  $\pm 15$  cm.  
a) LIDAR                      b) RADAR                      c) IRS PAN                      d) Quick bird
  - 4) The most important role of remote sensing in forest resource management is \_\_\_\_\_  
a) Mapping                      b) Monitoring                      c) Evaluation                      d) All of the above
  - 5) \_\_\_\_\_ was the percentage cultivated land in India in the year 2005.  
a) 70.77                      b) 59.51                      c) 51.63                      d) 30.67
  - 6) \_\_\_\_\_ of the following not visual images interpretation key.  
a) Color                      b) Pattern                      c) Tone                      d) Edge detection
  - 7) \_\_\_\_\_ sensor is used for potential fishing zone management.  
a) LISS                      b) ETM                      c) MSS                      d) OCM
  - 8) \_\_\_\_\_ geographical area of India is covered by forest.  
a) 33%                      b) 22%                      c) 20%                      d) None of these



- 9) \_\_\_\_\_ band is useful measurement of urban heat.  
a) Visible          b) Microwave    c) Thermal          d) Infrared
- 10) SST stand for \_\_\_\_\_  
a) Sea Surface Temperature          b) Sea Surface Television  
c) Shallow Surface Temperature    d) All of the above
- 11) Mention the satellite image available free of cost on internet.  
a) LISS IV                                  b) Landsat-8  
c) Quick bird                                d) All of the above
- 12) For landuse/land core mapping \_\_\_\_\_ spatial resolution is require.  
a) 20 to 25 m                                b) 70 to 80 m  
c) 90 to 120 m                                d) All of the above
- 13) INSAT data have been regularly utilized to monitor the track of \_\_\_\_\_  
a) Agriculture    b) Weather    c) Desert          d) Coastal
- 14) \_\_\_\_\_ beam SONAR provides two kind of data : Bathymetric and acoustic back scatter.  
a) Multiple          b) Single          c) Side              d) Middle
2. What is the role of geospatial technology in forest classification and mapping. **14**
3. What is watershed management ? Explain geoinformatic approach for watershed management. **14**
4. Explain the details application of R. S. and G. I. S. in soil moisture mapping. **14**
5. Write short notes on : **14**  
a) Potential fishing zone mapping  
b) Importance of forest cover.
6. Give a brief account on : **14**  
a) Soil types  
b) Water resources.
7. Explain briefly the following : **14**  
a) Advantage of GIS and R.S. in marine resources development  
b) Sea surface temperature.
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**M.Sc. – II (Semester – IV) Examination, 2016  
GEOINFORMATICS (New) (CGPA)  
Application of Remote Sensing and GIS (Paper – III)**

Day and Date : Monday, 4-4-2016

Max. Marks : 70

Time : 2.30 p.m. to 5.00 p.m.

- Instructions :** A) Answer **any five** questions.  
B) **All** questions carry **equal** marks.  
C) Question **1** is **compulsory**.  
D) Draw **neat** and labelled diagram **wherever** necessary.  
E) Answer **any two** essay questions from **2, 3, 4**.  
F) Answer **any two** essay questions from **5, 6, 7**.

1. Fill in the blanks with appropriate :

14

- 1) \_\_\_\_\_ satellite data is used to study the potential fishing zone.  
A) LISS 3                      B) SSM                      C) OCM                      D) OCR
- 2) Which ArcGIS Extension will help in the Basin analysis ?  
A) ArcHydro Tool                      B) SWAT  
C) ArcBasin                      D) Both (A) and (B)
- 3) “Kalpana” satellite data is used to regular monitoring of  
A) Temperature change                      B) Cyclones  
C) Both (A) and (B)                      D) Snowfall
- 4) \_\_\_\_\_ of the following types of remote sensing would be best suited for locating deforestation.  
A) Microwave                      B) Visible  
C) Colour infrared                      D) All of the above
- 5) \_\_\_\_\_ kind of resolution is very much important in study of change detection.  
A) Spectral                      B) Temporal                      C) Spatial                      D) Both (B) and (C)



- 6) \_\_\_\_\_ data is used for the road construction.  
 A) IKONOS  
 B) Quickbird  
 C) LISS 3  
 D) Both (A) and (B)
- 7) Applications of NDWI are in the field of  
 A) Coastal Management  
 B) Groundwater Management  
 C) Irrigation projects  
 D) All of the above
- 8) Coastal Morphological study will help in the understanding of  
 A) Sea Level Changes  
 B) CRZ Management  
 C) CRP Management  
 D) None of the above
- 9) \_\_\_\_\_ combination will help to get the false colour composite in case of ETM+ data.  
 A) 4, 3, 2  
 B) 2, 3, 1  
 C) 4, 3, 1  
 D) 1, 2, 3
- 10) \_\_\_\_\_ of the following is not an a coastal process.  
 A) Coral formation  
 B) Wave action  
 C) Erosion  
 D) Deposition
- 11) \_\_\_\_\_ dataset will be helpful in understanding the orographic history of the area.  
 A) DEM Datasets  
 B) Infrared datasets  
 C) DSM Datasets  
 D) None of the above
- 12) MANU project is the project launched by the ISRO-IIRS during the \_\_\_\_\_ disaster event.  
 A) Mumbai Bomb Blast  
 B) Bhopal Gas Blast  
 C) Nepal Earthquake  
 D) Kedarnath Flood Disaster
- 13) Remote Sensing do not have any applications in  
 A) Flood Events  
 B) Matrimony  
 C) Coastal processes  
 D) Disaster Events
- 14) In India satellite data can be obtained from \_\_\_\_\_ agency.  
 A) DOS  
 B) NRSC  
 C) IIRS  
 D) SAC

2. Write a note on mapping and analysis of natural and man-made disasters. **14**

3. Write a note on applications of RS and GIS in Geoscience. **14**



4. Note on integrated approach for landslide hazard zone mapping. **14**
  5. Explain the following : **14**
    - a) Agro Ecological Zoning
    - b) Morphometry and slope mapping.
  6. Write a brief note on : **14**
    - a) Case study related to urban mapping
    - b) Land use – Land cover mapping.
  7. Write a short note on : **14**
    - a) Urban Land Conservation
    - b) Drainage Basin Analysis.
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