



**PRESIDENCY UNIVERSITY
BENGALURU**

**SCHOOL OF ENGINEERING
END TERM EXAMINATION - JAN 2023**

Semester : Semester V - 2020

Course Code : CIV3024

Course Name : Sem V - CIV3024 - Remote Sensing and Geographical Information System

Program : B.Tech. Civil Engineering

Date : 16-JAN-2023

Time : 9.30AM - 12.30PM

Max Marks : 100

Weightage : 50%

Instructions:

- (i) Read all questions carefully and answer accordingly.
- (ii) Question paper consists of 3 parts.
- (iii) Scientific and non-programmable calculator are permitted.

PART A

ANSWER ALL THE FIFTEEN QUESTIONS

15 X 2 = 30M

1. Which of the following is called heat radiation?
a) X-rays (CO1) [Knowledge]
b) Gamma rays
c) Microwave
d) Infrared radiation
2. Which among the following waves is having less wavelength range?
a) 0.03m (CO1) [Knowledge]
b) 0.03nm
c) 0.03m option text
d) 0.03km
3. On satellite imagery, Railway line can be readily distinguished from a road bases on;
a) Shape (CO1) [Knowledge]
b) Colour
c) Texture
d) Size

4. RADARSAT-2 is an Earth-imaging radar satellite is lunched by
a) Government (CO1) [Knowledge]
b) Canadian Space Agency
c) MacDonald Dettwiler Associates
d) Both c & d
5. Supervised classifications mainly are used;
a) Mapping vetetation (CO2) [Knowledge]
b) Mapping forest
c) Mapping water body
d) Mapping plantations
6. Unsupervised image classification based on;
a) Training sites (CO2) [Knowledge]
b) Site visits
c) Clussters of pixel
d) None of the above
7. Satellite Image classification is used for;
a) Residential (CO2) [Knowledge]
b) Industrial
c) Crop land
d) All of the above
8. _____ are the drone components
a) Standard Propeller (CO3) [Knowledge]
b) Landing Gear
c) The receiver
d) All of the above
9. Drone is a _____ type of remote sensing
a) Low flying objects (CO3) [Knowledge]
b) Medium flying
c) Very high flying
d) All of the above
10. Which of the following acts as a key to GIS?
a) Topology (CO4) [Knowledge]
b) Platform
c) Software
d) Terrain
11. Mini-computer is a type of _____
a) Software (CO4) [Knowledge]
b) Hardware
c) Data
d) Map

12. Which of the following can be used for representing a real world feature on two dimensional surfaces?
a) Plan (CO4) [Knowledge]
b) Drawing
c) Scale
d) Map
13. Digital cartography is also known as;
a) Digital mapping (CO4) [Knowledge]
b) Wall maps
c) Street maps
d) Cartography
14. Which of the following is a GIS operation?
a) Geo-data (CO4) [Knowledge]
b) Geo-processing
c) Global processing
d) None of the above
15. _____ is a topology error where a part or whole part of a feature occupies the same position with another feature.
a) Overlap (CO4) [Knowledge]
b) Gap
c) Sliver polygon
d) All of the above

PART B

ANSWER ALL THE FIVE QUESTIONS

5 X 8 = 40M

16. The electromagnetic spectrum ranges from the shorter wavelengths (including gamma and x-rays) to the longer wavelengths (including microwaves and broadcast radio waves). Explain with a neat diagram the spatial, spectral, Radiometric and Temporal (CO1) [Comprehension]
17. Satellite image classification is the most significant technique used in remote sensing for the computerized study and pattern recognition of satellite information. Explain the supervised classification system used Digital image processing? (CO2) [Comprehension]
18. Write a short note on the Drone techniques? (CO3) [Comprehension]
19. There are fundamental differences between spatial and non-spatial data. Describe the difference between them? (CO4) [Comprehension]
20. Map projection is the process of representing ellipsoidal earth surface onto a flat surface. The primary purpose of map projection is to create an easier way to measure distances, calculate areas, determine azimuth, and find the shortest route. Explain the various types of map projections and their applications? (CO4) [Comprehension]

PART C

ANSWER ALL THE TWO QUESTIONS

2 X 15 = 30M

21. Explain the applications of drones in various sectors?

(CO3) [Application]

22. Digital Cartography involves the creation and analyses of maps through the use of computers. As such, Geographical Information Systems (GIS) are an integral tool for Cartography. Explain various types of digital maps produced based on the scale and purposes?

(CO4) [Application]
