BRAINWARE UNIVERSITY

Term End Examination 2024-2025
Programme – B.Sc.(Ag)-Hons-2022
Course Name – Geoinformatics and Nano-Technology and Precision Farming
Course Code - CC-BAG577(T)
(Semester V)

Full Marks : 50   **Time : 2:0 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A
(Multiple Choice Type Question)   1 x 20=20

1. *Choose the correct alternative from the following :*

(i) Select the navigation system based on a network of satellites that helps users to record positional information

a) GPS   b) GIS
c) Remote sensing   d) All of these

(ii) Choose the size range on a nanoscale

a) 1-10 nm   b) 1-100 nm
c) 100-200 nm   d) 0-1nm

(iii) Choose the correct number:The ratio between distance or area on a map and corresponding distance or area on ground

a) Model   b) Scale
c) Image   d) Chart

(iv) Write the word from which the word nano came

a) Greek word   b) Italian word
c) French word   d) Latin word

(v) What is the Fertilizer recovery efficiency of P in rice

a) 20-30 %   b) 30-40 %
c) 60-70 %   d) 10-20 %

(vi) Write the range of Scale used for mapping multispectral satellite data

a) 1:20000   b) 1:50000
c) 1:40000   d) 1:30000

(vii) What is the Fertilizer recovery efficiency of N in rice

a) 40-60%   b) 10-20%

c) 30-40%   d) 50-70%

(viii) Choose the correct answer:Aerial photography is also called as

    a) Airborne imagery   b) Airborne sheet
    c) Air imagery   d) All of these

(ix) What does the term "Geo" stands for in Geoinformatics

    a) Earth's surface or environment   b) Geography
    c) Geology   d) It doesn't have any meaning

(x) Pollen flight is not common in which type of crops

    a) Wind pollinated crops   b) Self-pollinated crops
    c) Cross-pollinated crops   d) None of these

(xi) Show the correct answer:Topographic map is also called

    a) Topographic sheet   b) Topographic module
    c) Topographic paper   d) None of these

(xii) In which year the GIS was first coined

    a) 1968   b) 1986
    c) 1992   d) 1990

(xiii) Show the correct answer:Geoinformatics is a new discipline concerned with the ____ of spatial data and the processing techniques in spatial information system

    a) GPS   b) GIS
    c) Remote sensing   d) Variable rate applicator

(xiv) What can be used as potential variables for crop type discrimination

    a) Narrow band vegetation indices   b) Physiological indices
    c) Stress indices   d) All of these

(xv) Identify the correct answer:GIS represents data of

    a) Trees   b) Water bodies
    c) Lands   d) All of these

(xvi) 3D coordinates defines object location in _____ space

    a) 3D   b) 2D
    c) 1D   d) Both a and b

(xvii) Photogrammetry methods include which of the following data

    a) Projective   b) Optics
    c) Geometry   d) All of these

(xviii) Which one of the following is an example of naturally occurring nanomaterials

    a) Cooking smoke   b) Quantum dots
    c) Forest fires   d) All of these

(xix) Show the correct answer: The concept of SSNM in rice was developed in cooperation with researchers across

    a) Africa   b) South America
    c) Asia   d) Europe

(xx) What is dimension of nano particle used in nanotechnology

    a) 1-10 nm   b) 1-100 nm
    c) 1-50 nm   d) 1-100 cm

Group-B

(Short Answer Type Questions)   2.5 x 10=25

2. Explain Precision Agriculture
3. Explain the need of precision farming   (2.5)
4. Explain Yield Monitoring   (2.5)
5. Explain Soil Mapping   (2.5)
6. Express your opinion about GIS   (2.5)
7. What are the importance of GIS   (2.5)
8. Express your opinion about Global Positioning System   (2.5)
9. Discuss about the different components of GPS   (2.5)
10. Describe about decision rules to estimate Site-Specific Nutrient management parameters   (2.5)
11. Discuss about importance of Hyperspectral Remote Sensing   (2.5)
                                                                                                                           (2.5)
                                                       OR
    Discuss about the different types of remote Sensing

                                                                                                                           (2.5)

Group-C
(Long Answer Type Questions)   5 x 1=5

12. Express your opinion about Soil Test Crop Response (STCR)
                                                                                                                            (5)
                                                       OR
    Explain about the use of nanotechnology in Fertilizers
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