*Total No. of Questions: 6* *Total No. of Printed Pages:2*

**Enrollment No.....**

# Faculty of Agriculture
## End Sem Examination Dec-2023
## AG3CO40 Geoinformatics & Nano-technology & Precision Farming

Programme: B.Sc. (Hons.) Branch/Specialisation: Agriculture

**Duration: 3 Hrs.** **Maximum Marks: 50**

Note: All questions are compulsory. Internal choices, if any, are indicated. Answers of Q.1 (MCQs) should be written in full instead of only a, b, c or d. Assume suitable data if necessary. Notations and symbols have their usual meaning.

Q.1 i. The navigation system based on a network of satellites that helps users to record positional information- **1**
(a) GPS (b) GIS (c) Remote sensing (d) All of these

ii. Precision agriculture is also known as- **1**
(a) Satellite farming (b) Specific farming
(c) Nano tech farming (d) None of these

iii. The required fertiliser N is distributed in several applications during the crop growing season using tool like the _____. **1**
(a) Specific leaf area (b) Leaf area index
(c) Leaf colour chart (d) None of these

iv. Who coined the term, 'Remote sensing? **1**
(a) Evelyn L. Pruitt (b) Gaspard Felix Tournachon
(c) Wilbur Wright (d) Albert Einstein

v. Scale used for mapping multispectral satellite data is_____. **1**
(a) 1:20000 (b) 1:500 (c) 1:50,000 (d) 1:5000

vi. The process of identifying a location by one or more attributes from a base layer is_____. **1**
(a) Geo-reference (b) Geoid
(c) GIS (d) Geocode

vii. The word Nano came from_____. **1**
(a) Greek word (b) Italian word
(c) Latin word (d) French word

viii. Nanotechnology term was coined by- **1**
(a) Sumio Tijima (b) Nori Taniguchi
(c) Eric Drexler (d) Richard Feymann

P.T.O.



ix. _____ is a Nano pesticide. **1**
(a) Elbasan (b) Hexosan (c) Medusan (d) Chitosan

x. Plant species like Medicago Sativa and Serbania are used to formulate _____ nanoparticles. **1**
(a) Zinc (b) Copper (c) Silver (d) Gold

Q.2 i. Define precision agriculture. **1**
ii. Write the need of precision farming **2**
iii. Write the use of Geo-informatics in precision agriculture. **5**
OR iv. Discuss the application of geo informatics in precision agriculture **5**

Q.3 i. Define soil mapping. **1**
ii. What is crop discrimination and yield monitoring? **3**
iii. Write the use of remote sensing in agriculture. **4**
OR iv. Write the importance of GIS. **4**
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Q.4 i. What is components of global positioning system? **2**
ii. Write crop simulation models and their uses for optimization of agricultural inputs. **6**
OR iii. Explain components and its functions of GPS. **6**

Q.5 i. Define Nano-technology. **2**
ii. What is soil test crop response? **2**
iii. Write the use of nanotechnology in agriculture. **4**
OR iv. Explain soil test crop response approach for precision agriculture. **4**

Q.6 Attempt any two:
i. Explain nano-fertilizers. **4**
ii. Write the use of nanotechnology in seed. **4**
iii. Write the use of nanotechnology in plant protection. **4**

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