17957

BRAINWARE UNIVERSITY

Term End Examination 2025-2026
Programme – B.Sc.(Ag)-Hons-2024
Course Name – Agri- Informatics
Course Code - CC-BAG374 (T)
(Semester III)

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) The FCFS algorithm is particularly troublesome for ____________.

a) operating systems
b) time sharing systems
c) multiprocessor system
d) multiprogramming systems

(ii) If K is the Mean of Poisson distribution, then the variance is given by:

a) K/2
b) K
c) K^2
d) K^(1/2)

(iii) Find the Variance of the constant 'K'.

a) 1
b) 0
c) K^2
d) K/2

(iv) Enumerate and explain various types of errors that can be managed by the operating system.

a) Extensible Markup Language
b) Extensive Markup Language
c) Exclusive Markup Language
d) None of these

(v) GIS captures and analyzes ______ data.

a) Spatial
b) Geographic
c) Both Spatial and Geographic
d) Neither Spatial or Geographic

(vi) GIS represents a location in ______ dimensional coordinates.

a) 2
b) 3
c) 4
d) 5

(vii) Calculate the geometric Mean of 1, 3, 9, 3.

a) 1
b) 2
c) 3
d) 4

(viii) Calculate the range of the given sets of data 7, 47, 8, 42, 47, 95, 42, 96, 2.

a) 6
b) 94

c) 71 d) 84

(ix) The Mean of a random variable K is given by equation.

a) E(K) b) E(K^2)
c) K d) 2K

(x) If K denotes the expectation, the variance of a random variable X is denoted as?

a) E(K) b) E(K(^2))
c) K(X^2) - (K(X))^2 d) E(2K)

(xi) What is the primary goal of agri-informatics?

a) Enhancing crop yields b) Developing new pesticides
c) Studying animal behavior d) Analyzing weather patterns

(xii) Which technology plays a crucial role in modern agri-informatics?

a) Artificial intelligence b) Biotechnology
c) Nuclear energy d) Geothermal power

(xiii) How can agri-informatics contribute to agriculture?

a) Simulating crop growth and yield b) Predicting crop diseases
c) Analyzing market prices d) Tracking agricultural subsidies

(xiv) What does VRT stand for in agri-informatics?

a) Variable Rate Technology (VRT) b) Virtual Reality Training
c) Vehicle Routing and Tracking d) Voltage Regulation Technology

(xv) What type of analytics focuses on recommending specific actions in agri-informatics?

a) Prescriptive analytics b) Descriptive analytics
c) Predictive analytics d) Diagnostic analytics

(xvi) What is the primary purpose of simulating crop growth and yield in agri-informatics?

a) Simulating crop growth and yield b) Studying animal behavior
c) Analyzing soil composition d) Monitoring deforestation

(xvii) What technology is used for geofencing in agri-informatics?

a) Geofencing b) Telekinesis
c) Biotechnology d) Solar energy

(xviii) What is a key advantage of wireless sensor networks in agri-informatics?

a) Scalability and remote access b) High initial setup costs
c) Limited data storage capacity d) Dependency on physical servers

(xix) What technology is associated with drones in agri-informatics?

a) Assisting farmers in decision-making b) Monitoring crop yields
c) Analyzing bird migration patterns d) Predicting earthquakes

(xx) What is the primary purpose of robotic milking machines in agri-informatics?

a) Enhancing animal health and productivity b) Identifying crop diseases
c) Increasing meat quality d) Tracking weather conditions

Group-B

(Short Answer Type Questions) 2.5 x 10=25

2. What is the primary goal of hyperspectral imaging? (2.5)
3. What benefits does big data analytics offer in agriculture? (2.5)
4. Write short note on statistical model. (2.5)
5. Explain the types of operating system. (2.5)
6. What is the utility of blockchain in agri-informatics? (2.5)
7. How does VRT save costs in farming? (2.5)
8. Explain the use of AI in crop disease detection. (2.5)
9. Differentiate between Information System and Decision Support System. (2.5)

10. How can robotics help in farming? (2.5)
11. How does AI help in optimizing crop production? (2.5)

OR

Why is data security crucial in agri-informatics? (2.5)

Group-C

(Long Answer Type Questions) 5 x 1=5

12. Analyze the significance of accurate weather forecasts in agriculture, focusing on their impact on crop planning and disaster preparedness. (5)

OR

Evaluate the role of blockchain technology in ensuring food safety and traceability in the agri-food supply chain, emphasizing its benefits. (5)

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