

Enrolment No.....



Faculty of Agriculture
End Sem (Even) Examination May-2022
AG3EL09 Hi- tech Horticulture
 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.

- Q. i. Which among the following protected structures are commonly used for hardening of plants? **1**
 1 (a) Walk in tunnel (b) Shadenet house
 (c) Green house (d) Low tunnel
- ii. Which among the following protected structures are commonly used for early rooting of cuttings? **1**
 (a) Walk in tunnel (b) Shadenet house
 (c) Green house (d) Mist chamber
- iii. Which is the ideal thickness of black polythene mulch for fruit plants? **1**
 (a) 100 microns (b) 200 microns
 (c) 250 microns (d) 300 microns
- iv. Which among the following is not a type of dripper? **1**
 (a) Non-Pressure Compensating
 (b) Pressure Compensating
 (c) Pressure Compensating with Anti leak
 (d) Anti-leak
- v. Avoid clogging of drippers _____ pH is helpful. **1**
 (a) Higher (b) Very high (c) Medium (d) Lower
- vi. Which variety of mango is suitable for high density orcharding? **1**
 (a) Mallika (b) Chausa (c) Amrapalli (d) Dasher
- vii. Remote sensing techniques make use of the properties of _____ emitted, reflected or diffracted by the sensed objects. **1**
 (a) Electric waves (b) Sound waves
 (c) Electromagnetic waves (d) Wind waves
- viii. To know the change in cropping pattern of a particular area, which one is the best measure to consider- **1**
 (a) Satellite navigation (b) GPS
 (c) Satellite imagery (d) All of these

[2]

- ix. A precision instrument used to measure chlorophyll content is- **1**
 (a) SPAD meter (b) LCC
 (c) Green Seeker (d) Quantum sensor
- x. Which equipment is used for fertilizer application under drip irrigation? **1**
 (a) Disk filter (b) Venturi (c) Solenoid valve (d) Flush valve
- Q. i. Enlist the commonly used protected cultivation structures. **1**
 2 ii. Write the importance of media on plant growth. **2**
 iii. Write short note on low tunnel, shadenet house and green house. **5**
- OR iv. What are the advantages and disadvantages of soilless culture? **5**
- Q. i. Enlist the advantages of protected cultivation. **1**
 3 ii. What is drip irrigation system? Write some of its benefits. **3**
 iii. What are important climate parameters? Name climate parameter measuring instruments used in green houses? **4**
- OR iv. List out the equipments used for environmental parameters monitoring in green houses. **4**
- Q. i. Explain any three forms of Nitrogen fertilizers that are used in green house cultivation. **2**
 4 ii. What is fertigation? List out the equipment used in fertigation. **6**
- OR iii. Describe the components of precision farming. **6**
- Q. i. What are the different applications of remote sensing technology in agriculture? **2**
 5 ii. Explain Differential Geo-Positioning System (DGPS). **2**
 iii. What is variable rate application? How it is helpful in horticultural crop production? **4**
- OR iv. How GIS is useful in soil classification land use planning? **4**
- Q. Attempt any two: **6**
 6 i. Define precision farming and its significance in horticultural crops. **4**
 ii. Write down the application and advantages of plastic mulching in **4**

vegetable crops.

- iii. What types of sensors are used for mechanization vegetable farming? **4**

Marking Scheme

AG3EL09 Hi- tech Horticulture

Q. 1	i.	Which among the following protected structures are commonly used for hardening of plants? (b) Shadenet house	1
	ii.	Which among the following protected structures are commonly used for early rooting of cuttings? (d) Mist chamber	1
	iii.	Which is the ideal thickness of black polythene mulch for fruit plants? (a) 100 microns	1
	iv.	Which among the following is not a type of dripper? (d) Anti-leak	1
	v.	Avoid clogging of drippers _____ pH is helpful. (d) Lower	1
	vi.	Which variety of mango is suitable for high density orcharding? (c) Amrapalli	1
	vii.	Remote sensing techniques make use of the properties of _____ emitted, reflected or diffracted by the sensed objects. (c) Electromagnetic waves	1
	viii.	To know the change in cropping pattern of a particular area, which one is the best measure to consider- (c) Satellite imagery	1
	ix.	A precision instrument used to measure chlorophyll content is- (a) SPAD meter	1
	x.	Which equipment is used for fertilizer application under drip irrigation? (b) Venturi	1

Q. 2	i.	Protected cultivation structures.	(As per explanation) 1
	ii.	Importance of media on plant growth.	(As per explanation) 2
	iii.	Low tunnel	1.5 Marks 5
		Shadenet house	1.5 Marks
		Green house.	2 Marks
OR	iv.	Advantages	2.5 Marks 5
		Disadvantages	2.5 Marks

Q. 3	i.	Advantages of protected cultivation.	(As per explanation) 1
------	----	--------------------------------------	------------------------

	ii.	Drip irrigation system	2 Marks 3
		Some of its benefits.	1 Mark
	iii.	Climate parameters and Name climate	(As per explanation) 4
OR	iv.	List out the equipments used for environmental parameters monitoring in green houses.	(As per explanation) 4

Q. 4	i.	Three forms of Nitrogen fertilizers	(As per explanation) 2
	ii.	What is fertigation	2 Marks 6
		List out the equipment used in fertigation.	4 Marks
OR	iii.	Components of precision farming.	(As per explanation) 6

Q. 5	i.	Different applications of remote .	(As per explanation) 2
	ii.	Differential Geo-Positioning System (DGPS). .	(As per explanation) 2
	iii.	Variable rate application and How it is helpful in horticultural crop production	(As per explanation) 4
OR	iv.	GIS is useful in soil classification land use planning	(As per explanation) 4

Q. 6		Attempt any two:	
	i.	Define precision farming	2 Marks 4
		its significance in horticultural crops.	2 Marks
	ii.	application	2 Marks 4
		Advantages.	2 Marks
	iii.	Types of sensors are used	(As per explanation) 4
