

--	--	--	--	--	--	--	--	--	--



GIET UNIVERSITY, GUNUPUR – 765022

B. Sc (AG) (Sixth Semester) Examinations, June – 2021

AT364 – PROTECTED CULTIVATION AND SECONDARY AGRICULTURE

Time: 2 hrs

Maximum : 50 Marks

The figures in the right hand margin indicate marks.

PART – A

Q.1. Fill in the blanks with suitable word / figure.

(0.5 x 10 = 5 Marks)

- Soilless culture is known as _____.
- _____ is a plant growth regulator.
- Shade net houses are suitable for _____.
- An instrument for measuring total hemispherical solar radiation on a horizontal surface is _____.
- The unit of light intensity inside a protected structure is _____.
- _____ frames are used for a quonset green house.
- Hammer mill works on the principle of _____.
- Fruits and vegetables are _____ foods.
- HDPE stands for _____.
- Thin layer drying is limited to _____ cm of grain depth.

Q. 2. Define (or) Explain the following in one or two sentences.

(1 x 5 = 5 Marks)

- Define a green house.
- List the main climatic factors required for a protected structure.
- What is fan pad cooling system?
- Which is the most widely used cladding material for a green house?
- What do you mean by hydro-dynamic properties of cereals?

Q3. Match the following

(0.5 x 10 = 5 Marks)

Column – A		Column – B	
(a)	Micro-irrigation	(i)	Row covers
(b)	Poly-grip assembly	(ii)	Mother plant
(c)	Hoop	(iii)	Glazing material
(d)	Venlo green house	(iv)	Drip system
(e)	NCPAH	(v)	Fixing green house
(f)	Cyclone separator	(vi)	Structural member
(g)	Psychrometric chart	(vii)	Netherlands
(h)	Tissue culture	(viii)	Plasticulture
(i)	Plastic low tunnels	(ix)	Drying analysis
(j)	Glass	(x)	Cleaning and grading

Q4. Write True or False against each statement

(0.5 x 10 = 5 Marks)

- a. Henderson's equation tells us about EMC of agricultural materials.
- b. LSU dryer is a batch type dryer.
- c. Drying increases the handling and transportation costs.
- d. The spiral separator separates the material on the basis of specific gravity.
- e. The weight of hull is 20% of the total weight of paddy grains.
- f. Coco-peat is a commonly used inorganic root media.
- g. NFT is a type of water culture.
- h. When solar rays fall on the earth, it emits short wave radiation.
- i. Bamboo and timber are used for low cost green house.
- j. FRP is more transparent than glass.

PART – B

Attempt ANY FIVE questions. All question carries equal marks

(6 x 5 = 30 Marks)

5. How does the micro-climate change inside a green house? Describe different cooling methods used in green house with suitable sketches.
6. Briefly describe about the types of green houses, generally constructed on the basis of structural components and location.
7. Write down step by step procedure for construction of a pipe framed structure by adopting traditional method.
8. What are the material handling equipments for agricultural processing? Mention about the working principle of a belt conveyor.
9. Distinguish between a deep bed dryer and a flat bed dryer.
10. What is meant by hydroponics? How it can be classified? Discuss about the merits and demerits.

--- End of Paper ---