SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR (AUTONOMOUS)

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QUESTION BANK (DESCRIPTIVE)

Subject with Code: GREEN HOUSE TECHNOLOGY (20AG0702) **Course & Branch**: B.Tech (AGE)

Year & Sem: II-B.Tech & I-Sem **Regulation:** R20

UNIT-1
INTRODUCTION TO GREENHOUSE

1		Define greenhouse and list the classification of greenhouse?	**[L1][CO1]**	**12M**
2	**a**	Explain briefly history of greenhouse?	**[L2][CO1]**	**6M**
	b	Write advantages of greenhouse?	**[L2][CO1]**	**6M**
3	**a**	Explain about greenhouse effect?	**[L2][CO1]**	**6M**
	b	Explain greenhouse based on shape?	**[L2][CO1]**	**6M**
4	**a**	Write about Shade nets?	**[L2][CO1]**	**6M**
	b	Explain greenhouse based on covering materials?	**[L2][CO1]**	**6M**
5		Explain types of greenhouses based on utility and construction?	**[L2][CO1]**	**12M**
6		Explain about polyethylene film greenhouses?	**[L2][CO1]**	**12M**
7	**a**	Briefly explain about polyvinyl chloride film (PVC films), Tefzel t2 film and polyvinyl chloride rigid-panel?	**[L2][CO1]**	**6M**
	b	Explain about acrylic and polycarbonate rigid-panel?	**[L2][CO1]**	**6M**
8		Write about Plant response to greenhouse environments lite and temperature?	**[L2][CO1]**	**12M**
9		Explain about Relative humidity, ventilation and carbon dioxide?	**[L2][CO1]**	**12M**
10	**a**	Write the brief history of greenhouse and Uses?	**[L1][CO1]**	**8M**
	b	Write short note on how it works inside of the greenhouse?	**[L2][CO1]**	**4M**

UNIT-II

ENVIRONMENTAL REQUIREMENT FOR CROPS AND CONTROL INSIDE GREENHOUSE

1		Write about the greenhouse supplemental lighting systems and its uses.	**[L1][CO2]**	**[12M]**
2	**a**	Write about the light requirement of horticulture crops in greenhouse?	**[L1][CO2]**	**[6M]**
	b	Write about the shading methods of horticulture crops.	**[L1][CO2]**	**[6M]**
3		Explain types of active summer cooling systems with neat diagram	**[L2][CO2]**	**[12M]**
4		Explain the types of active winter cooling systems with neat diagram.	**[L2][CO2]**	**[12M]**
5		What is carbon dioxide enrichment? Write the methods used for enrichment of carbon dioxide?	**[L1][CO2]**	**[12M]**
6	**a**	Write about light requirements of crops and lighting control methods.	**[L1][CO2]**	**[6M]**
	b	What is DIF and write the role of DIF in plant growth?	**[L1][CO2]**	**[6M]**
7		Briefly explain about Forced Ventilation with neat sketch?	**[L2][CO2]**	**[12M]**
8	**a**	Write about the role of computers in greenhouse environment with neat sketch.	**[L1][CO2]**	**[7M]**
	b	Write the advantages and disadvantages of computers.	**[L1][CO2]**	**[5M]**
9	**a**	Write in detail about microprocessor with neat diagram?	**[L1][CO2]**	**[6M]**
	b	Briefly explain about roll up side passive ventilation in poly houses.	**[L2][CO2]**	**[6M]**
10		What is greenhouse ventilation and explain natural ventilation with neat sketch?	**[L1][CO2]**	**[12M]**

UNIT-III
PLANNING OF GREENHOUSE FACILITY AND GREENHOUSE COVERING MATERIAL

1	**a**	Write about site selection and orientation of greenhouse.	**[L1][CO3]**	**[4M]**
	b	Explain about structural design of greenhouse with suitable diagram.	**[L2][CO3]**	**[8M]**
2	**a**	Explain the factors and types of covering materials for greenhouse.	**[L2][CO3]**	**[8M]**
	b	Write the properties for selecting covering for an ideal greenhouse?	**[L1][CO3]**	**[4M]**
3	**a**	Briefly explain about Tefzal T^2 film.	**[L2][CO3]**	**[6M]**
	b	Explain about acrylic and polycarbonate rigid panel.	**[L2][CO3]**	**[6M]**
4	**a**	Explain briefly about the glass constructional material used for greenhouse?	**[L2][CO3]**	**[6M]**
	b	Write about the polyvinyl chloride film	**[L1][CO3]**	**[6M]**
5		Explain about the fiberglass reinforced plastic rigid-panel covering material.	**[L2][CO3]**	**[12M]**
6		Explain about the polyethylene covering material.	**[L2][CO3]**	**[12M]**
7	**a**	Write difference between hammered and tempered glass?	**[L1][CO3]**	**[4M]**
	b	Write about polyvinyl chloride rigid film.	**[L1][CO3]**	**[6M]**
8		Explain briefly about galvanized iron, aluminum steel and RCC of constructional material	**[L2][CO3]**	**[6M]**
9		Explain about selective covering material properties and write planning steps of greenhouse facility?	**[L2][CO3]**	**[12M]**
10	**a**	Briefly explain about wood and bamboo construction of polyhouses.	**[L2][CO3]**	**[6M]**
	b	What are the Basic characteristics of thermoplastics?	**[L1][CO3]**	**[6M]**

UNIT-IV

GREENHOUSE HEATING AND ENERGY STORAGE AND IRRIGATION SYSTEMS

1	**a**	Explain the design criteria of construction of greenhouse.	**[L2][CO4]**	**[4M]**
	b	Write about the construction details of glass greenhouse.	**[L1][CO4]**	**[8M]**
2		Discuss in detail the procedure of construction of pipe framed	**[L2][CO4]**	**[12M]**
3	**a**	Explain the need of heating in greenhouse	**[L2][CO4]**	**[6M]**
	b	Explain about the modes of heat loss?	**[L2][CO4]**	**[6M]**
4		Explain in detail about heating systems	**[L2][CO4]**	**[12M]**
	a	Discuss about different heat distribution systems commonly used.	**[L2][CO4]**	**[6M]**
	b	Explain about the modes of heat loss?	**[L2][CO4]**	**[6M]**
6	**a**	Explain solar heating system with neat diagram.	**[L2][CO4]**	**[6M]**
	b	Explain about the hand watering and boom watering.	**[L2][CO4]**	**[6M]**
7		Write about water and rock storage with neat diagram?	**[L1][CO4]**	**[12M]**
8	**a**	Write the rules of application of greenhouse?	**[L1][CO4]**	**[6M]**
	b	Explain about overhead sprinklers with neat diagram?	**[L2][CO4]**	**[6M]**
9	**a**	Explain about drip irrigation with neat diagram?	**[L2][CO4]**	**[6M]**
	b	Explain about perimeter watering.	**[L2][CO4]**	**[6M]**
10	**a**	Explain about hand watering?	**[L2][CO4]**	**[6M]**
	b	Define irrigation in greenhouse?	**[L1][CO4]**	**[6M]**

UNIT-V

GREENHOUSE UTILIZATION IN OFF SEASON AND ECONOMICS OF GREENHOUSE PRODUCTION

1	**a**	Enlist the types of row covers.	**[L1][CO5]**	**[3M]**
	b	Explain about perforated plastic tunnels with neat sketch.	**[L2][CO5]**	**[9M]**
2		Write about the air supported row crops with neat sketch.	**[L1][CO5]**	**[12M]**
3	**a**	Write about slitted row crops with neat sketch.	**[L1][CO5]**	**[8M]**
	b	Explain about economics of production.	**[L2][CO6]**	**[4M]**
4		Explain about the floating row covers with neat sketch	**[L2][CO5]**	**[12M]**
5		Explain the capital requirements with flowchart for protected agriculture.	**[L2][CO5]**	**[12M]**
6		Write in detail about curing of tobacco and grains in greenhouse during off- season.	**[L1][CO5]**	**[12M]**
7	**a**	Explain briefly the economic analysis of greenhouse production	**[L2][CO6]**	**[6M]**
	b	Explain the capital requirements of production agriculture.	**[L2][CO5]**	**[6M]**
8	**a**	Explain about condition influencing returns.	**[L2][CO5]**	**[6M]**
	b	Write in detail about drying of agriculture produce.	**[L1][CO5]**	**[6M]**
9		Briefly explain about the hydroponic system.	**[L2][CO5]**	**[12M]**
10		Write about the nutrient film technique.	**[L1][CO5]**	**[12M]**