GANDHI INSTITUTE OF ENGINEERING AND TECHNOLOGY UNIVERSITY, ODISHA, GUNUPUR

(GIET UNIVERSITY)

B. Sc. (Ag.) (Fourth Semester Regular) Examinations, April – 2025

AG-226- Farming Systems and Sustainable 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)

a. Farm in which no enterprise is contributing to 50% or more income is called as …… farming
b. Expand MCI.....
c. Raising a crop with regrowth coming out of the roots or stalks after harvest of the crop is called……..
d. …… is a system where agriculture and forestry are practiced either simultaneously or separately on the same unit of land.
e. Cultivation of two or more than two crops of different heights simultaneously on a certain piece of land in a certain period is called as ……..
f. Form of agriculture aimed at meeting the needs of the present generation withoutendangering the resource base of the future generations is termed as.....
g. Agricultural crops + forest crops management comes under **……**
h. HEIA stands for …….
i. Diversification will lead to …… Income.
j. Main objective of mixed cropping is ……..

Q. 2. Define (or) Explain the following in one or two sentences. (1 x 5 = 5 Marks)

a. MCI
b. Quadruple cropping
c. LER
d. Conservation agriculture
e. LEISA

Q3. Match the following (0.5 x 10 = 5 Marks)

Column – A		Column – B	
(a)	MCI	(i)	Annual rainfall of > 1150 mm.
(b)	HI	(ii)	Dalrymple
(c)	Dry land Farming	(iii)	*Dactylopus tomantosus*
(d)	LER	(iv)	Donald
(e)	Prickly pear	(v)	*Neochetina* sp.
(f)	Water hyacinth	(vi)	Willey
(g)	Rainfed Farming	(vii)	Repetitive growing of the same sole crop in the same land
(h)	*Parthenium* sp.	(viii)	Annual rain falls of > 750 mm.
(i)	Monocropping	(ix)	One crop variety grown alone in pure stand at normal density
(j)	Sole Cropping	(x)	*Zygograma bicolorata*

Q4. Write True or False against each statement **(0.5 x 10 = 5 Marks)**

a. IFS leads to low benefit-cost ratio.
b. Rotational intensity of 'Rice- wheat+ sugarcane- mung' is 133%.
c. In Diversified Farming, No source of income equal as much 75% in total income
d. Growing of a crop after the failure of main crop is called catch crop
e. Harmful effect caused by one plant species through releasing chemical substances into theenvironment is known as annidation
f. The value of Sustainability yield index ranges from 0 to 1.
g. The percentage of no. of crops grown in a rotation to the duration of the rotation is called as cropping intensity
h. The quantity of physical output obtained per every unit of input is called energy efficiency.
i. LER stands for Land Efficient Ratio.
j. Capacity of the system for production in relation to existing system is called as Relative production efficiency.

PART – B

Attempt *ANY FIVE* questions. All question carries equal marks **(6 x 5 = 30 Marks)**

5. What are the major components of farming system? Discuss the factors affecting type of farming system employed by framers in a given region.
6. Differentiate the followings.
   i) Organic farming Vs Modern farming
   ii) State farming Vs Collective farming
7. Explain about the Integrated Farming systems for different Agro-climatic zones (India).
8. What is conservation agriculture? What are the three pillars and problems in conservation agriculture?
9. Define sustainable agriculture. What are the basic concept, goal and challenge of sustainable agriculture?
10. Differentiate between farming system and cropping system. Write down different types of cropping system.

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