

B.Sc. (Ag.) Honours Semester-VI Examination, 2017

Course No: AGR-321 (Farming Systems & Sustainable Agriculture)

Signature of Centre Superintendent

Roll No. : (in figure) _____ (in words) _____

Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 40

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 20 minutes

Full marks : 10

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. State True (T) or False (F) in respect of the following statements:

6×0.5=3

- a) Yearly sequence and spatial arrangement of crops or crops and fallow is called cropping system. ☐
- b) Subsistence is one of the principles of farming system. ☐
- c) Sustainable agriculture possesses diversified ecology. ☐
- d) Environmental sustainability is not an important characteristic of farming system. ☐
- e) Animal enterprise is a sub-system of cropping system. ☐
- f) Organic farming is an example of low external input sustainable agriculture. ☐

2. Fill in the blanks:

8×0.5=4

- a) ICAR-Institute of Integrated Farming System Research is located at _____.
- b) A sheep requires about _____ Kg of leguminous hay per day.
- c) Large White Yorkshire is one of the most important breeds of _____.
- d) One cubic meter capacity biogas plant will need on an average _____ Kg of dung each day.
- e) Home garden is an example of _____ type of agroforestry.
- f) The author of the book "Plowman's Folly" is _____.
- g) _____ is an ideal multipurpose tree species for alley cropping.
- h) Annual average loss of soil due to erosion in India is _____ tonnes/ha/year.

3. Tick (✓) the correct answer from the alternatives provided:

6×0.5=3

- a) *Antheraea assami* is the scientific name of
 - i) Tasar silk worm
 - ii) Eri silk worm
 - iii) Muga silk worm
 - iv) Mulberry silk worm

P.T.O.

- b) Moriculture refers to
 - i) practice of mulberry cultivation
 - ii) silkworm rearing
 - iii) silk reeling
 - iv) combining of above three
- c) Mushroom is a good source of
 - i) Vitamin C
 - ii) Vitamin B
 - iii) Vitamin A and C
 - iv) Vitamin B and C
- d) In wetland farming there are greater revenues for
 - i) fishery, duck rearing and buffalo rearing
 - ii) agroforestry, sericulture and duck rearing
 - iii) poultry, piggery and sericulture
 - iv) sheep and goat rearing and sericulture
- e) Scientific name of paddy straw mushroom is
 - i) *Pleurotus spp.*
 - ii) *Agaricus bisporus*
 - iii) *Volvariella volvacea*
 - iv) *Agaricus bispillosa*
- f) Plant suitable for plantation in coastal belt is
 - i) *Syzigium cumini*
 - ii) *Casuarina equisetifolia*
 - iii) *Dalbergia sisso*
 - iv) *Gmelina arborea*

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Part - II
(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any three* questions.

4. Define farming system, cropping pattern and cropping system. Write the principles of farming system. Briefly discuss about any three components of farming system. 3+2+5=10
5. Write the definition of 'sustainable agriculture'. Explain different approaches to sustainable agriculture. What are different attributes of the concept of sustainability? 2+5+3=10
6. What do you understand by multiple cropping and sequential cropping? Briefly discuss various interaction among crops in intercropping and sequential cropping. Describe crop production and land management practices oriented toward agricultural sustainability. 2+3+5=10
7. Explain briefly ***any five*** of the following: 5×2=10
- a) Relay cropping
 - b) Sustainable yield index
 - c) Concept of food and nutritional security
 - d) Crop rotation
 - e) Efficient use of irrigation water
 - f) Soil conservation measures for wind erosion
 - g) In-situ rain water harvesting
8. Write short notes on ***any four*** of the following: 4×2.5=10
- a) Bio-diversity conservation
 - b) Duck rearing
 - c) Objectives of agroforestry
 - d) Management of wasteland
 - e) LEISA
 - f) Intercropping
 - g) Interaction among different components of farming system
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