B.Sc. (Ag.) Honours Semester-VI Examination, 2018

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

Signature of Centre Superintendent

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

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

Time : 2 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) for the following statements:** 0.5×7=3.5

   (a) The goal of sustainable agriculture is to feed expanding population while farming in an ecologically sound regenerative way. ☐

   (b) Organic farming is an example of high external input agriculture. ☐

   (c) In Indo-gangetic plains intensive crop husbandry is practised with the livestock, dairy, cattle and buffaloes. ☐

   (d) 'Agroforestry' is also called as "multiple land use system". ☐

   (e) Scientific name of 'Oyster' mushroom is *Volvariella volvacea*. ☐

   (f) Sustainable agriculture possesses stable ecology. ☐

   (g) 'Permaculture' is not a sustainable agricultural system. ☐

2. **Tick the right answer (√):** 0.5×5=2.5

   (a) Animal enterprise is a sub-system of

   (i) cropping system (ii) crop system (iii) farming system (iv) none of these

   (b) In ..... system agricultural crops are intercropped with tree crops in the interspaces between the trees.

   (i) silvipasture (ii) agri-silviculture (iii) silvi-horti-pastoral (iv) horti-pastoral

   (c) Scientific name of tasar silk worm is

   (i) *Philosamia ricini* (ii) *Antheraea mylitta* (iii) *Antheraea assami* (iv) *Bombyx mori*

   (d) Indigenous carp ..... is bottom feeder in feeding habit

   (i) 'catla' (ii) 'rohu' (iii) 'mrigale' (iv) silver carp

   (e) ..... are popularly known as 'angels of agriculture'

   (i) Honeybees (b) Silkworms (c) Mushrooms (d) none of these

P.T.O.

3. **Fill in the blanks** 0.5×8=4

(a) .....is the fungal fruiting body technically known as 'sporophore'.

(b) .....is an arrangement of components which process inputs into outputs.

(c) .....is a process of harnessing solar energy in the form of economic plant and animal products.

(d) Scientific name of button mushroom is.....

(e) .....is a winter growing annual leguminous fodder.

(f) .....is defined as a process of combining mulberry cultivation, silk worm rearing and silk reeling.

(g) The husbandry of plant and animal organism that live in water is known as.....

(h) National Wasteland Development Board has been created in the year.....

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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. Discuss about farming system concept. What are the scopes of farming system? Write about a model of integrated farming system for irrigated areas. Enlist the importance of paddy cum fish culture. 2+2+4+2=10

5. Write about concept and meaning of sustainable agriculture. What are the major attributes of sustainable system? Write in brief about reasons attributed to ecological imbalance. How could nutrient loses in soil be minimized? 3+3+2+2=10

6. What do you mean by 'wasteland'? Write about classification of wastelands. Discuss about causes and management strategies of wasteland. 2+2+(3+3)=10

7. Explain briefly ***any five*** of the following: 5×2=10
   (a) Irrigation with high sodium containing water
   (b) Natural farming
   (c) Improved fallow in shifting agriculture
   (d) Bio-gas
   (e) High External Input Agriculture (HEIA)
   (f) Conservation of natural resources
   (g) Multi-storey cropping
   (h) Alley cropping

8. Write short notes on ***any four*** of the following: 2.5×4=10
   (a) Shelterbelt
   (b) Homegarden
   (c) Apiculture
   (d) Shifting cultivation
   (e) Aquaculture
   (f) Water erosion
