B.Sc. 4th Semester (Honours) Examination, 2019 (CBCS)

Subject : Botany

Paper : SEC-II

Time : 2 Hours　　　　　　　　　　　　　　　　　　　**Full Marks : 40**

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words
as far as practicable.

Biofertilizers

1. Answer *any five* of the following questions:　　　　　　　　　2×5=10

   (a) What is biofertilizers?

   (b) Name two root-nodule organisms.

   (c) What is the main cause of using biofertilizer?

   (d) Do you think organic farming would be useful for society at large?

   (e) What is vermicompost?

   (f) Name two widely used organisms which are generally exploited as biofertilizers.

   (g) Do you think green revolution was harmful to human being?

   (h) "Application of biofertilizer is a costly affair"— Do you agree?

2. Answer *any two* of the following questions:　　　　　　　　　5×2=10

   (a) What is mycorhizal association? Describe briefly its types.　　1+4=5

   (b) What are the utilities of BGA in increasing crop yield?

   (c) How *Azospirullum* and *Azotobacter* help as biofertilizer?　　2½+2½=5

   (d) What is mass multiplication? Enumerate it briefly.　　　　　1+4=5

3. Answer *any two* of the following questions:　　　　　　　　　10×2=20

   (a) What is organic farming? Discuss it briefly.　　　　　　　　2+8=10

   (b) What is VAM? Describe its importance on growth and yield of plants.　　2+8=10

   (c) What is biocompost? Describe briefly the process of biocompost production.　　2+8=10

   (d) What is *Azolla*? Describe the role of *Azolla* in increasing crop yield.　　2+8=10

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Herbal Technology

1. Answer *any five* of the following questions:　　　2×5=10

   (a) What is Pharmacognosy?

   (b) What is micropropagation?

   (c) Define medicinal plant bank.

   (d) Define Pharmacology.

   (e) What is indigenous drug?

   (f) What do you mean by secondary metabolites?

   (g) What is drug adulteration?

   (h) Name two plants that activate nervous system.

2. Answer *any two* of the following questions:　　　5×2=10

   (a) Describe the role of *Ocimum* as phytomedicine.

   (b) Write the scientific names of live ayurvedic drugs you studied.　　　1×5=5

   (c) What is AYUSH? Describe its function.　　　2+3=5

   (d) What is aromatherapy? Briefly describe its role in herbal technology.　　　1+4=5

3. Answer *any two* of the following questions:　　　10×2=20

   (a) What is the active principle of *Withania sominifera*? Describe briefly.　　　2+8=10

   (b) Briefly describe the role of secondary metabolites in plants with example.

   (c) What is herbal food? Define its scope in future of pharmacognosy.　　　2+8=10

   (d) Describe briefly the processing of any two herbal plants you have studied.　　　5+5=10

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Nursery and Gardening

1. Answer *any five* of the following questions: 2×5=10

    (a) What is nursery?

    (b) Define seed bank.

    (c) What is plant propagation?

    (d) Define gardening.

    (e) What is seed dormancy?

    (f) Name two famous botanical gardens of India.   1+1=2

    (g) What is cutting?

    (h) Define direct seedling and transplants.

2. Answer *any two* of the following questions: 5×2=10

    (a) What is the difference between landscape and home gardening?   2½×2=5

    (b) What is seed testing and seed certification?   2½×2=5

    (c) How the viability of seeds affected in storage?

    (d) Why planning and seasonal activities are necessary for gardening?

3. Answer *any two* of the following questions: 10×2=20

    (a) Describe briefly the role of greenhouse, moist chamber, shady root, shade house and glass house.   2×5=10

    (b) What is seed dormancy? How the seed dormancy is breaked?   2+8=10

    (c) Describe briefly the process of gardening operations.

    (d) What are the objectives and scope of gardening in India?   5+5=10

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Floriculture

1. Answer *any five* of the following questions: 2×5=10

    (a) What is pricking?

    (b) What is mulching?

    (c) Define defoliation.

    (d) What is divine vine?

    (e) Define lawn.

    (f) What is ornamental plant?

    (g) What is shrubbery?

2. Answer *any two* of the following questions: 5×2=10

    (a) Distinguish between sexual and vegetative method of propagation. 2½×2=5

    (b) How indoor plants are cultivated?

    (c) What are the methods of prolonged vase life?

    (d) How soil is being sterilised for floriculture?

3. Answer *any two* of the following questions: 10×2=20

    (a) Describe the role of plant growth regulators on flowering.

    (b) How pests and diseases of ornamental plants are controlled?

    (c) What are the principles of garden designing?

    (d) Describe briefly the role of garden for the development of society.

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Plant Diversity and Human Welfare

1. Answer *any five* of the following questions: 2×5=10

   (a) What is wild taxa?

   (b) What is cultivated plant taxa?

   (c) What is biodiversity loss?

   (d) What is genetic diversity?

   (e) What is the role of quadrate study?

   (f) Define agrodiversity.

   (g) What are the components of biodiversity?

   (h) What is the full form of UNEP?

2. Answer *any two* of the following questions: 5×2=10

   (a) Define wood and describe its uses. 2+3=5

   (b) Distinguish between *in-situ* and *ex-situ* conservation. 2½+2½=5

   (c) Describe the social approaches of conservation.

   (d) What are the ethical and aesthetic values of biodiversity? 2½+2½=5

3. Answer *any two* of the following questions: 10×2=20

   (a) Describe the role of plants in relation to human welfare.

   (b) Describe the role played by various organisms for sustainable development of agriculture system.

   (c) How the loss of biodiversity is projected?

   (d) "Global warming is destroying the biodiversity"– clarify the comment with your idea.

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