

Write the following information in the first page of Answer Script before starting answer

ODD SEMESTER EXAMINATION: 2020-21

Exam ID Number _____

Course _____ Semester _____

Paper Code _____ Paper Title _____

Type of Exam: _____ (Regular/Back/Improvement)

Important Instruction for students:

1. Student should write objective and descriptive answer on plain white paper.
2. Give page number in each page starting from 1st page.
3. After completion of examination, Scan all pages, convert into a single PDF, rename the file with Class Roll No. (2019MBA15) and upload to the Google classroom as attachment.
4. Exam timing from 10am – 1pm (for morning shift).
5. Question Paper will be uploaded before 10 mins from the schedule time.
6. Additional 20 mins time will be given for scanning and uploading the single PDF file.
7. Student will be marked as ABSENT if failed to upload the PDF answer script due to any reason.

**M.Sc. BOTANY
THIRD SEMESTER
BIOFERTILIZER & ORGANIC FARMING
MSB - 306A MDC**

Duration : 3 hrs.

Full Marks : 70

Time : 20 min.

(PART-A : Objective)

Marks : 20

Choose the correct answer from the following:

1×20=20

1. A free living nitrogen fixing bacterium is
a. *Clostridium*
c. *Rhizobium*
b. *Azotobacter*
d. Both A and B
2. A free living nitrogen fixing cyanobacterium which can also form symbiotic association with *Azolla* is
a. *Nostoc*
c. *Tolypothrix*
b. *Anabaena*
d. *Gleocapsa*
3. The most quickly available source of nitrogen to plants are
a. Amide fertilizers
c. Nitrate fertilisers
b. Ammonia fertilisers
d. Ammonia nitrate fertilisers
4. Organic farming is the technique of raising crops through uses of?
a. Manure
c. Resistant varieties
b. Biofertiliser
d. All of these
5. Green manuring increases the crop yield by
a. 5-10%
c. 30-50%
b. 15-25%
d. 80-90%
6. Aquatic fern which is an excellent biofertilizer
a. *Salvinia*
c. *Marsilea*
b. *Azolla*
d. *Pteridium*
7. Bacterial fertilizer is
a. *Nostoc*
c. *Rhizobium*
b. *Anabaena*
d. None of these
8. What should be added to increase efficiency of biofertilizer?
a. Calcium
c. Phosphorous
b. Potassium
d. Zinc
9. The proper method of application of biofertilizer in transplanted crops is
a. Seed treatment
c. Main field application
b. Seedling root Dip
d. None of these
10. Weed management is possible through the organic method
a. Leaf manure
c. Crop rotation
b. Biofertiliser
d. All of these

11. For composting good carbon/nitrogen ratio is important. Which of the following will supply nitrogen to the compost?
- a. Green leaves
 - b. Dried leaves
 - c. sawdust
 - d. Bit of woods
12. Which one is not a green manure crop
- a. Sorghum
 - b Sun hemp
 - c. Soybean
 - d Jute
13. Select the odd one
- a. Egg shell
 - b. Tea leaves
 - c. Cow dung
 - d. Milk water
14. In vermicompost making process the bedding materials should have C: N ratio
- a. High
 - b Medium
 - c. Low
 - d Very low
15. Select the Common Worm Feed in vermicompost
- a. Cattle manure
 - b Rabbit manure
 - c. Poultry manure
 - d All of these
16. Crop rotation _____ the soil organic carbon.
- a. Decreases
 - b Increases
 - c. Does not effect
 - d Lower
17. Typically, they are ploughed under and incorporated into the soil while green or shortly after flowering, called as
- a. Leaf manure
 - b Inter crops
 - c. Green manure
 - d Compost
18. GMO means
- a Generally modified organism
 - b Genetically modified organism
 - c Genetically modified organ
 - d Generally modified organ
19. Organically grown plants are more drought
- a. Tolerant
 - b Resistant
 - c. Susceptible
 - d Does not effect
20. Green manure acts mainly as soil-acidifying matter to decrease the alkalinity/pH of alkali soils by generating
- a. humic acid and
 - b Salicylic acid
 - c. acetic acid
 - d Both a and c

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(PART-B : Descriptive)

Time : 2 hrs. 40 min.

Marks : 50

[Answer question no.1 & any four (4) from the rest]

1. Describe the procedure of vermicomposting. What is bedding materials in vermicomposting, give two example? 7+3=10
2. What is crop rotation? Describe the benefit of Crop rotation 2+8=10
3. Define biofertilizer. Write about the types of biofertiliser and its advantages. 2+5+3
=10
4. Describe biological control of pest and its advantages and disadvantages. 6+4 =10
5. What is compost? What are the benefit of composting? Describe the method of preparation. 1+4+5
=10
6. What are the different method of biofertilizer application? Describe the rhizobium and PGPR as a biofertilizer. 2+4+4
=10
7. Briefly discussed 5+5=10
 - a. Environmental benefit for organic agriculture
 - b. Homemade fertilizer
8. What are the properties of good carrier material of biofertilizer? Describe the advantages of liquid biofertilizer . 5+5=10

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