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MCP-003-001525

Seat No. _____

Third Year B. Sc. (Sem. V) (CBCS) Examination

May / June - 2018

Microbiology : Paper - 501

(Applied Microbiology) (New Course)

Faculty Code : 003

Subject Code : 001525

Time : $2\frac{1}{2}$ Hours] [Total Marks : **70**

Instructions : (1) All Questions are compulsory.

(2) Right side figures indicate mark of the question.

(3) Draw the figure wherever necessary.

(4) Write answers of all the questions in main answer sheet.

1 Answer briefly : **20**

(1) What is Rhizosphere ?

(2) What is antagonism ?

(3) Give two examples of symbiotic nitrogen fixing bacteria.

(4) Define Humus.

(5) What are perishable foods ?

(6) Enlist four fermented foods.

(7) What is botulism ?

(8) Define Putrefaction.

(9) Give composition of normal milk.

(10) What information does the Phosphatase test reveal about the milk ?

(11) What is MBRT ?

(12) Define Yoghurt.

(13) What is MPN ?

(14) What are benthos ?

(15) What is 'Sanitary Survey' ?

(16) What is Zoogleal Film ?

(17) Give two examples of air pollutants.

(18) What do you mean by Bioplastic ?

(19) What is MEOR ?

(20) What are Recalcitrant compounds ?

2 (a) Answer in short : (**3** out of 6) **6**

(1) Explain in brief physical properties of soil.

(2) Define Commensalism and give one of its example.

(3) What is the significance of Resazurin test in milk ?

(4) What is AGMARK ?

(5) Define BOD and COD.

(6) Give one example of Social and Legal Implications of Biotechnology.

(b) Answer specifically : (**3** out of 6) **9**

(1) Discuss in brief the process of nodule formation by *Rhizobium species* on legume plants.

(2) What is Trickling filter?

(3) Discuss in brief Grading of Milk

(4) Explain in brief Single Cell Protein.

(5) Give brief of Acidophilus milk.

(6) Discuss in brief Air sanitation.

(c) Write short notes on : (**2** out of 5) 10

(1) Nitrogen fixation.

(2) Preservation of Food.

(3) Types of Microorganisms in milk.

(4) Municipal waste water treatment.

(5) Role of Microorganisms in deterioration of Materials.

3 (a) Answer in short : (**3** out of 6) **6**

(1) Define Nitrification and Denitrification.

(2) Give idea about LTHT and HTST.

(3) Define functional foods and give two examples.

(4) What is composting?

(5) What is starter culture?

(6) Explain in brief Biotechnology as Interdisciplinary science.

(b) Answer specifically : (**3** out of 6) **9**

(1) Explain in brief Winogradsky's column.

(2) Discuss in brief the procedure of drinking water purification at municipal level.

(3) Explain in brief Food borne intoxication.

(4) Describe Cheese manufacturing in brief.

(5) Explain in brief bacteriological techniques used for the revealing evidence of water pollution.

(6) Explain in brief Biomagnification of Pesticides.

(c) Write short notes on : (**2** out of 5) **10**

(1) Positive Interactions among soil microorganisms.

(2) Role of microbes in spoilage of Fresh foods.

(3) Principle and Methods of Preservation of Milk.

(4) Solid waste processing

(5) Bioleaching.
