This question paper contains 3 printed pages]

Roll No. | | | | | | | | | | | |

S. No. of Question Paper : 981

Unique Paper Code : 253101 G

Name of the Paper : Introduction to Microbial World (MIHT-101)

Name of the Course : B.Sc. (Honours) Microbiology

Semester : I

Duration : 3 Hours Maximum Marks : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt any *five* questions.

All questions carry equal marks.

Attempt *all* parts of a question together.

1. (*a*) Name the scientist associated with the following (any 8) : 1×8=8

   (*i*) *Azotobacter*

   (*ii*) Penicillin

   (*iii*) First Vaccine

   (*iv*) Lysozyme

   (*v*) Lactic acid bacteria as probiotics

   (*vi*) Side Chain Theory

   (*vii*) Stereochemistry

   (*viii*) Chemicals as Magic Bullets

   (*ix*) Chemolithotrophs.

   (*b*) Describe locomotion in protozoa. 5

   (*c*) What is floridian starch ? What color does it give on reacting with iodine ? 2

P.T.O.

2. Draw well labeled diagrams of the following (any *three*) : 3×5=15

(*i*) T4 Phage

(*ii*) *Chlamydomonas*

(*iii*) *Giardia*

(*iv*) *Rhizopus*.

3. Give one example each of suitable microorganisms for the following (any **15**) : 1×15=15

(*i*) Amylase producing fungi

(*ii*) Prion disease

(*iii*) Agar producing alga

(*iv*) Unicellular alga

(*v*) Fruiting body of club fungus

(*vi*) Fungal SCP

(*vii*) Osmophilic fungus

(*viii*) Naked icosahedral virus

(*ix*) Causative agent of anthrax

(*x*) Ciliated protozoan

(*xi*) ds DNA virus

(*xii*) Causative agent of Kala Azar

(*xiii*) Gram positive endospore former

(*xiv*) Heterocystous alga

(*xv*) Lysogenic phage

(*xvi*) Cyst forming protozoan.

4. (*a*) Discuss the contributions made by the following scientists (any *three*) : 3×3=9

(*i*) Anand Mohan Chakraborty

(*ii*) Elie Metchnikoff

(*iii*) Norman Pace

(*iv*) Anton von Leeuwenhoek.

(*b*) Define the following citing suitable examples (any *three*) : 2×3=6

(*i*) Kelp

(*ii*) Prophage

(*iii*) Biotroph

(*iv*) Zoospore

(*v*) Cystostome.

5. Differentiate between the following pairs (any *five*) : 3×5=15

(*i*) Haplontic and Diplontic Life History

(*ii*) Cleistothecium and Perithecium

(*iii*) Isogamy and Oogamy

(*iv*) Holozoic and Saprozoic Nutrition

(*v*) Prokaryotic and Eukaryotic cell

(*vi*) Arthrospore and Blastospore.

6. (*a*) Draw a well labeled diagram of one step growth cycle of a bacteriophage and explaining the steps involved. 5

(*b*) How did Robert Koch contribute to the development of Microbiology ? 5

(*c*) Discuss the economic importance of fungi. 5