LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**B.Sc.** DEGREE EXAMINATION – **PLANT BIOLOGY & PLANT BIO-TECH.**

FIFTH SEMESTER – NOVEMBER 2010

**PB 5405 - MEDICAL MICROBIOLOGY**

Date : 11-11-10 Dept. No. Max. : 100 Marks

Time : 9:00 - 12:00

# Part A (20 marks)

**Answer all the questions**

*I. Choose the correct answer: (5 x 1 = 5)*

1. Match A) Bordet B) Von Behring C) Ronald Ross D) Widal

with i) Malaria ii) Typhoid iii) Whooping cough iv) Diphtheria

a) A-iii, B-i, C-iv, D) ii b) A-iii, B-ii, C-i, D) iv

c) A-iii, B-iv, C-ii, D) i d) A-iii, B-iv, C-i, D) ii

1. TMP refers to \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. Trimetaprim b. Tetramethoprim c. Trimethoprim d. Trimesoprim

1. Common pathogenic microbe present in Vagina

a. *Bacillus* sp. b. *Candida* sp. c. *Clostridium* sp. d. *Pseudomonas* sp.

1. Typhus fever caused by bacterium called *\_\_\_\_\_\_\_\_\_*

a. *E. coli* b. *Rickettsia typhi* c. *Samonella paratyphi* a d. *Samonella paratyphi* b

1. HIV virus affect by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. Redblood cells b. Whiteblood cells c. Platelet cells d. Liver cells

*II. State whether the following statements are True or False: (5 x 1 = 5 )*

1. Autoclave is an instrument used in moist heat sterilization.
2. Narrow spectrum means antibiotics kill only limited range of pathogens.
3. The quantitative measure of pathogenicity as known as virulence.
4. *Mycobacterium tuberculosis* was first discovered by Robert Koch.
5. Tetanus is caused by the bacterium *Treponema.*

*III. Complete the following: (5 x 1 = 5 )*

1. Phenol is otherwise called as \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_.
2. Penicillin obtained from \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_.
3. Inhibition of the growth of bacterial pathogens is called as \_\_\_\_\_\_\_\_\_\_\_.
4. VZV refer to\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Causal organism of Malaria is \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_.

*IV. Answer the following in about 50 words: (5 x 1 = 5)*

1. Mention the names of any two filters used in filtration.
2. Define Antibiotics.
3. What is microbiota?
4. What do you mean by Opportunistic pathogen?
5. mention any two dermatophytic fungi.

**Part B**

*Answer the following each in about 350 words. Draw necessary diagrams:*

*(5 x 7= 35)*

1. a. Discuss the importance of radiation as physical method of microbial control.

or

b. Write about the importance of halogens and heavy metals in the control of microbes.

1. a. Write about the source, mode of action and application of streptomycin.

or

b. Explain about mode of action of cephalosporins.

1. a. Describe the general features of normal microbial flora of human body.

or

b. Discuss about the factors which influence infection.

1. a. Write about the habit, structure and multiplication of *Entamoeba histolytica.*

or

b. Write about the causative agent, treatment and vaccines of cholera.

1. a. Write about the causal organism, symptoms and prevention of syphilis.

or

b. Describe the symptoms and treatment of Tetanus.

# Part C

*Answer* ***any three*** *of the following questions each in about 1200 words. Draw necessary diagrams:*

*(3 x 15 = 45)*

1. Write about the usefulness of high and low temperature in controlling microbes.
2. Write about the mode of action and application of sulfonamides.
3. Describe about any two antigen and antibody reactions.
4. Discuss the morphology of the causal organism of tuberculosis. Write about its symptoms and treatment.
5. Write about the mode of transmission, pathogenesis and prevention of AIDS.

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