

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FIFTH SEMESTER – NOVEMBER 2009

PB 5405 - MEDICAL MICROBIOLOGY

Date & Time: 12/11/2009 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

PART A

(20 marks)

Answer All questions

I Choose the Correct Answer

(5 x 1 = 5 marks)

01. Match A) Asbestos pad B) Steam Arnold C) Electron accelerator D) Spirit lamp
with i) radiation ii) filtration iii) incineration iv) tyndallization

- a. A-ii, B-iv, C-iii, D- i b. A-ii, B-i, C-iv, D- iii
c. A-ii, B-iii, C-i, D- iv d. A-ii, B-iv, C - i, D - iii

02. Statement A: Nystatin is an antibacterial antibiotic.

Statement B : It is obtained from a fungal source.

- a) Statement A is correct, but B is incorrect
b) Statement A is incorrect, but B is correct
c) Both A and B are correct
d) Both A and B are incorrect

03. In which of the following part, *Lactobacillus* plays an important role:

- a) intestine b) vagina c) skin d) urethra

04. The causal organism of Histoplasmosis is a:

- a) fungus b) protozoan c) bacterium d) virus

05. Pick the odd one out:

- a) *Epidermophyton* b) *Microsporium* c) *Entamoeba* d) *Trichophyton*

II State whether the following statements are True or False.

(5 x 1 = 5 marks)

06. Elie Metchnikoff is known as Father of Chemotherapy.

07. Griseofulvin is obtained from *Cephalosporium* species..

08. Precipitation is the most striking of all test-tube antigen-antibody reactions.

09. Hepatitis B virus is a non-enveloped RNA virus.

10. *Clostridium tetani* is a gram-positive, obligate anaerobic spore-forming bacterium.

III. Complete the following

(5 x 1 = 5 marks)

11. The ability of heavy metals to inhibit microbes even in minute quantities is known as _____.

12. The source of Streptomycin is _____.

13. Hyaluronidase is otherwise known as _____.

14. _____ medium is the medium used to grow tubercle bacilli.

15. The causal organism of Typhus fever is _____.

IV. Answer all, each in about 50 words

(5 x 1 = 5 marks)

16. Mention any two contributions of Pasteur to the field of medical microbiology.
17. Write down any two characteristics of chemotherapeutic agents.
18. Distinguish between transient and resident flora.
19. Enumerate the symptoms and treatment of amoebiasis.
20. Mention the four pathogenic species of *Plasmodium*. Which is more common?

PART B

(5 x 8 = 40 marks)

Answer any **five**, each within 350 words only. Draw diagrams and flowcharts wherever necessary.

21. Enumerate the characteristics of an ideal chemical agent used in the control of microbes.
Add a note on the importance of acids and alkalis.
22. Write about the antibiotic sensitivity tests.
23. Give an account of any two antigen-antibody reactions.
24. Discuss the causal organisms and symptoms of cholera.
25. Write about the four different forms of tetanus.
26. Expand the following, with a brief note about each:
a) HTST b) MIC c) NMF d) TCBS
27. Define the following:
a) chancre b) cold sterilization c) antibiotic d) phagocytosis
28. Distinguish between:
a) Causal organism of Histoplasmosis and Amoebiasis
b) Incubation period and treatment of syphilis and gonorrhoea
c) Sterilization and disinfection
d) Synthetic and semisynthetic drugs

PART C

(2 x 20 = 40 marks)

Answer the following, each within 1500 words only. Draw diagrams and flowcharts wherever necessary.

29. a) Give an account of virulence factors with suitable examples.
OR
b) Write notes on: i) Morphology, staining and cultural characteristics of *Mycobacterium tuberculosis*.
ii) life-cycle of malarial parasite.
30. a) Discuss the importance of control of microbes by physical agents.
OR
b) Explain the following:
i) Structure of HIV and symptoms of AIDS.
ii) Prophylaxis and treatment of chicken-pox.
