



Date: 28-04-2018

Dept. No.

Max. : 100 Marks

Time: 09:00-12:00

PART – A (20 marks)

Answer ALL the Questions

I. Choose the correct answer

(5 x 1 = 5 Marks)

- Ribosomal RNA sequences in ribosome database project alignment are drawn from
a) Xenbase b) chEMBL c) IntAct d) GenBank
- Bacteria having single flagellum on each of two opposite ends
a) Amphibious b) Lophotrichous c) Amphitrichous d) Anamorphic
- Epidemic kerato conjunctivitis is also called
a) swimming pool conjunctivitis b) keratitis
c) Acute conjunctivitis d) ship yard eye
- Which of the following gram positive bacteria causes pharyngitis
a) *Neisseria* b) *Streptococcus* c) *Staphylococcus* d) *Mycobacterium*
- Viropexis is a process of
a) release of virus b) Budding of virus
c) engulfing of virus d) distriction of virus

II. State whether the following are true or false.

(5x1=5 Marks)

- Koch's postulate state cultured microbe causes disease when introduced into healthy organism
- Living unstained cells can be observed using a fluorescent microscope.
- Manganese is one of the major macronutrient required for bacterial growth.
- Rotavirus is associated with respiratory infection.
- Chitin is a major polysaccharide in fungal cell wall.

III. Complete the following

(5 x 1= 5 Marks)

- _____ acid is found in the cell wall of gram positive bacteria.
- _____ is an example of a extreme alkalophile.
- The TMV virus after its multiplication enters the neighboring cells through_____.
- Unicellular vegetative spores formed due to septation and fragmentation is called _____.
- Cauliflower Mosaic virus has _____ as genome.

IV. Answer the following within 50 words

(5 x 1 = 5 Marks)

- What are pili?
- Give a note on halophiles.
- Mention any two toxin-mediated staphylococcal diseases.
- What are Satellite RNAs?
- What are viroids?

PART B

Answer the following each within 500 words.

(5 x 8 = 40 marks)

Draw diagrams wherever necessary

21. (a) Write a note on Haeckel's three kingdom concept.

OR

(b) Give short notes on the germ theory of disease.

22. (a) Enumerate the applications of electron microscope and phase contrast microscope.

OR

(b) Explain briefly the structure of a bacterial cell wall with the help of a diagram.

23. (a) What is a bacteriophage? Explain its lytic cycle.

OR

(b) Write briefly on the virulence factors of *Staphylococcus aureus*

24. (a) Describe the pathogenesis, laboratory diagnosis, and prophylaxis of rabies.

OR

(b) Write a short note on the structure and pathogenesis of Pox virus.

25. (a) Name the different species of Plasmodium and differentiate their features.

OR

(b) Give a brief account of opportunistic mycosis

PART – C

Answer any TWO of the following, each within 1500 words.

(2 x 20 = 40 Marks)

Draw diagrams wherever necessary.

26. Write an essay on the methods of classification of microbes and their nomenclature. Add a note on criteria for classification.

27. Discuss the different factors which influence the growth of microorganisms.

28. Describe the pathogenesis, laboratory diagnosis, and treatment of syphilis.

29. Explain the life cycle of *Plasmodium falciparum* and its clinical presentation.
