



# Avinashilingam Institute for Home Science and Higher Education for Women

(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)

Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B

Coimbatore - 641 043, Tamil Nadu, India

## Bachelor's Degree Examination –November 2019

### III Semester

**Class : II UG**  
**Major : Physician Assistant**

**Time :3 hours**  
**Max. Marks: 100**

### 18BPA103- Microbiology

#### Part-A

**10 x 1=10**

**Circle the correct answer**

- The microbial cells begin to divide and enter a period of growth during \_\_\_\_\_.  
a) Lag phase      b) Stationary phase      c) Log phase      d) Death phase
- Which of the following is not a physical method for selection of pure culture?  
a) Heat treatment      b) pH of the media  
c) Cell size and motility      d) Use of dilute media
- The bacteria which synthesize all the organic compounds are called \_\_\_\_\_.  
a) Autotrophs      b) Chemotrophs      c) Phototrophs      d) Heterotrophs
- Selective medium for *Staphylococci* is \_\_\_\_\_.  
a) Nutrient agar      b) Mannitol salt agar      c) Serum agar      d) Blood agar
- Aspergillus* is recognized in tissue by the presence of \_\_\_\_\_.  
a) metachromatic granules      b) Pseudohyphae      c) Septate hyphae      d) budding cells
- The superficial fungal infection of outer layers of skin, nails and hair are \_\_\_\_\_.  
a) Piedras      b) Tinea      c) Maduromycosis      d) Cryptococcosis
- HIV infection may lead to \_\_\_\_\_.  
a) Dementia      b) chronic diarrhoea      c) CMV retinitis      d) all of these
- Hepatitis B virus is an \_\_\_\_\_.  
a) Influenza virus      b) Retro virus      c) Enterovirus      d) Rota virus
- The immunity produced by the sensitised lymphocytes is called \_\_\_\_\_.  
a) Humoral immunity      b) Cell mediated immunity      c) Active immunity      d) Passive immunity
- The most abundant immunoglobulin in plasma is \_\_\_\_\_.  
a) IgA      b) IgG      c) IgM      d) IgD

**Part B**

**5 X 6=30**

**Answer the following**

**Answer should not exceed 400 words or two pages**

11 a. Discuss the nutritional types of microorganisms

(OR)

11 b. Write a brief note on Koch's postulates.

12 a. Explain the morphology and cultural characteristics of Clostridia.

(OR)

12 b. Infer the characteristics and treatment of Salmonella.

13 a. Classify fungi and give its morphology.

(OR)

13 b. Describe the nutrition and cultivation of fungus.

14 a. Explain the biology of Helminths.

(OR)

14 b. Write a short note on bacteriophages.

15 a. Give a brief note on innate immunity.

(OR)

15 b. Give an account on types of immunoglobulin.

**Part C**

**5 x 12=60**

**Answer the following**

**Answer should not exceed 800 words or four pages**

16.a. Discuss the methods pure culture of microorganisms.

(or)

16.b. What are the principles and methods involved in the microbial control?

17.a. Write a short note on the bacterial infection caused by Staphylococcus.

(or)

17. b. Discuss the morphology, diseases, diagnosis and treatment of E.coli.

18.a. Elaborate the Systemic fungal infections with opportunistic mycosis.

(or)

18.b. Describe the common laboratory methods used for diagnosis of fungal diseases.

19.a. Explain in detail about serological test used in diagnosis of viruses.

(or)

19.b. Explain the diagnosis and treatment of diseases caused by Arbo virus.

20.a. Elaborate on the cell mediated immune response.

(or)

20.b. Explain the Auto immune disorders.

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**18BPA103- Microbiology**  
**Part-A**  
**Choose the correct answer**

**10 x 1=10**

- In microbial growth curve, the cells fails to reproduce during \_\_\_\_\_  
a) Lag phase      b) Log phase      c) Stationary phase      d) Death phase      CO1 K1
- In pour plate, the medium should be maintained at temperature \_\_\_\_\_.  
a) 37<sup>0</sup> C      b) 67<sup>0</sup> C      c) 45<sup>0</sup> C      d) 0<sup>0</sup> C      CO1 K1
- The bacterium staphylococcus aureus is \_\_\_\_\_ type of bacteria.      CO2 K1  
a)psychrophile      b) mesophile      c)thermophile      d) mesophile and psychrophile
- The optimum pH for growth of most bacteria lies between \_\_\_\_\_      CO2 K2  
a)5-9      b)6.5-7.5      c)2-3.5      d)9-9.5
- Diseases caused by fungi are called \_\_\_\_\_  
a)proteases      b) cycoses      c)mycoses      d)dermatoses      CO3 K2
- Which of the following is the opportunistic mycosis of fungi infection?      CO4 K2  
a)Cryptococcosis      b)Aspergillus      c)Maduromycosis      d)Histoplasmosis
- \_\_\_\_\_ is known as break bone fever.      CO4 K1  
a)Chikungunya      b)malaria      c)Dengue      d)Filaria
- The causative organisms of measles is \_\_\_\_\_.      CO4 K1  
a)Rubeola virus      b)myxovirus      c)Rhino virus      d)Varicella Zoster virus
- B cells are activated by -----      CO5 K1  
a)complement      b)antibody      c) interferon      d)antigen
- Rheumatoid factor is an -----      CO5 K2  
a) Antinuclear antibody      b) Antibody to complement  
c) Antibody to immunoglobulin      d) Antibody to synovial membranes

**Part B**

**5 X 6=30**

**Answer the following**

**Answer should not exceed 400 words or two pages**

- a. Explain in detail the culture media.      CO1 K2  
(OR)
- b. Discuss the nutritional types of microorganisms.      CO1 K2
- a. Give a brief note on Pneumococcus.      CO2 K2

- (OR)
- 12 b. Describe the diagnosis and treatment of Klebsiella. CO2 K2
- 13 a. Explain in detail the systemic fungal infections. CO3 K2
- (OR)
- 13 b. Give a brief note on candida and cryptococcus. CO3 K2
- 14 a. Classify viruses and give its properties. CO4 K1
- (OR)
- 14 b. Explain the structure and significance of bacteriophage. CO4 K1
- 15 a. Discuss the principles of acquired immunity. CO5 K2
- (OR)
- 15 b. Explain the properties of immunoglobulin. CO5 K2

**Part C**

**5 x 12=60**

**Answer the following**

**Answer should not exceed 800 words or four pages**

- 16 a. Describe the methods of pure culture of microorganisms. CO1 K1
- (OR)
- 16 b. Give an account on the identification of microorganisms by biochemical tests. CO1 K3
- 17 a. Explain the different methods of sterilization. CO2 K2
- (OR)
- 17 b. Explain the diseases caused by Salmonella and their diagnosis and treatment. CO2 K2
- 18 a. Discuss the morphology and structure of fungi. CO3 K2
- (OR)
- 18 b. Write a detailed note on opportunistic fungi. CO3 K2
- 19 a. Give an account on parasites. CO4 K2
- (OR)
- 19 b. Describe the following: i) Hepatitis virus and ii) Orthomyxo virus CO4 K2
- 20 a. Elaborate in detail the humoral immunity. CO5 K2
- (OR)
- 20 b. Describe the antigen – antibody reactions. CO5 K2

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