SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)
MBBS Phase II Examination - January 2023

Time: 150 Minutes **Max Marks: 80 Marks**

Microbiology Paper I QP Code C2051

(Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary)

Long Essay 10 × 2 = 20 Marks

1. Draw a neat labelled diagram of bacterial cell. Describe the structure, types, functions and demonstration methods of flagella
(3+2+2+1+2)
2. A 40 year old male presented to casualty with history of several episodes of vomiting and diarrhoea. Stool examination showed darting motility. Describe the pathogenesis and laboratory diagnosis of the above condition.
(5+5)

Short Essay 5 × 12 = 60 Marks

3. Describe the working principle of Autoclave with a diagram. List the sterilization controls used. (2+2+1)
4. Describe the mechanisms of innate immunity. (5)
5. Describe Graft versus host reaction.
6. Describe the pathogenesis of Acute rheumatic fever
7. Describe the pathogenesis of infective endocarditis
8. Describe the morphology, modes of transmission of Human Immunodeficiency Virus (HIV). (2+3)
9. Enumerate the agents causing watery diarrhoea. Describe the pathogenesis and laboratory diagnosis of Enteric Fever (2+3)
10. Describe the pathogenesis of Entamoeba histolytica.
11. Discuss the pathogenesis and laboratory diagnosis of Botulism (3+2)
12. Describe the laboratory diagnosis of Dermatophytosis and name any two antifungal agents. (4+1)
13. Describe the pathogenesis and laboratory diagnosis of Malaria (2+3)
14. What are the implications of health care as a right?

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Microbiology Paper II QP Code C2052

(Your answer should be specific to the question asked
Draw neat labeled diagrams wherever necessary)

Long Essay 10 × 2 = 20 Marks

1. Enumerate viruses causing encephalitis. Discuss the pathogenesis, laboratory diagnosis and immunoprophylaxis of Rabies (2+3+3+2).
2. Describe the pathogenesis, laboratory diagnosis and preventive measures of SARS COV 2infection (4+3+3)

Short Essay 5 × 12 = 60 Marks

3. Describe laboratory diagnosis of meningococcal meningitis
4. Describe the pathogenesis and laboratory diagnosis of Infectious mononucleosis. (3+2)
5. A 4 year old child with high grade fever, toxic, pain in throat, inability to swallow attended the outpatient department. On examination of throat a white membrane was found in the fauces.

   a. Describe how will you proceed in the microbiology lab for establishing the etiological diagnosis,

   b. How will you manage this condition (3+2)
6. Describe the pathogenesis and laboratory diagnosis of Dengue fever. (3+2)
7. A 32 year old woman presented with cough, low grade fever, shortness of breath. Se was a known HIV positive. On examination febrile, increased respiratory rate was found. Chest X ray showed a bilateral interstitial infiltrate with ground glass appearance. Bronchoalveolar lavage stained by Gomori methamine silver stain showed a black coloured ping -pong ball.

   A . What isthe probable clinical diagnosis.

   B. What is the etiological agent. Describe the laboratory diagnosis. (1+1+3)
8. A 40 year old bus driver complains of low grade fever, loss of weight and cough with blood stained sputum. A clinical diagnosis of pulmonary tuberculosis was made. What are the tests done in the microbiology laboratory to confirm the diagnosis?
9. Mention causative agent, pathogenesis and laboratory diagnosis of Syphilis. (1+2+2)
10. Describe the clinical manifestations and laboratory diagnosis of Urinary Tract Infection. (3+2)
11. Describe the predisposing factors and laboratory diagnosis of Vulvovaginal candidiasis. (2+3)
12. Name the vector, hosts, clinical features and distribution of Kyasanur Forest Disease. (1+1+2+1)
13. Mention the Causative agent and describe the clinical features and laboratory diagnosis of Cryptococcal meningitis (1+2+2)
14. Define hospital acquired infection. Enumerate different types of hospital acquired infections and pathogens associated with it.
    (2+2+1)

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M.B.B.S Phase-II Degree examination January 2023

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

MICROBIOLOGY- PAPER 1

Your answer should be specific to the question asked

Draw neat and labeled diagrams wherever necessary

LONG ESSAY (Answer any 2) ***2 X 10 = 20 Marks***

1. Name the pyogenic cocci. Describe the clinical features and the laboratory diagnosis of Staphylococcus aureus infections. (2+4+4).
2. Classify Mycobacteria of medical importance. Describe the laboratory diagnosis of a suspected case of pulmonary tuberculosis. What is the role of RNTCP (3+5+2)
3. Define agglutination reaction. Enumerate different types of agglutination reactions and their diagnostic applications. (2+4+4)

SHORT ESSAY (Answer any 10) ***10 X 5 = 50 Marks***

4. List the important cytokines and their biological functions.
5. Describe the laboratory diagnosis of Diphtheria.
6. Describe Staphylococcal food poisoning with relation to food items involved, pathogenesis and clinical manifestations. (1+2+2)
7. Describe the laboratory diagnosis of Anthrax.
8. Describe the principle and applications of Hot air oven (3+2)
9. Describe the laboratory diagnosis of Syphilis.
10. Describe the pathogenesis and laboratory diagnosis of Acute Rheumatic Fever.
11. The CSF analysis of a patient with meningitis and skin rash. Gram stain showed pus cells with intracellular gram negative diplococci. Colonies grown on culture were oxidase positive.
    a) What is the most likely causative agent? b) describe the pathogenesis of the above condition. (1+4)
12. Describe conjugation.
13. Describe the mechanisms of innate immunity.
14. Describe the laboratory diagnosis of enteric fever.
15. Describe the mechanisms of autoimmunity

SHORT ANSWERS (No choices) ***10 X 3 = 30 Marks***

16. Mention three uses of autoclave.
17. Draw a neat labelled diagram of Albert stain of throat swab smear from diphtheria patient.
18. What is the procedure and interpretation of CAMP test?
19. Name three zoonotic infections.
20. Enumerate three agents causing meningitis.
21. Satellitism.
22. Enumerate 3 infections caused by Klebsiella pneumoniae.
23. What type of vaccine is BCG, name its content and route of administration.
24. Enumerate three bacterial vaccines.
25. Draw a labelled diagram of bacterial spore.

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MICROBIOLOGY- PAPER 2

Your answer should be specific to the question asked
Draw neat and labeled diagrams wherever necessary

LONG ESSAY (Answer any 2) ***2 X 10 = 20 Marks***

1. Describe the morphology, pathogenesis, laboratory diagnosis and immunoprophylaxis of Rabies.(2+2+3+3)
2. Describe the life cycle, pathogenesis and laboratory diagnosis of round worm. (3+4+3)
3. Enumerate the viruses causing Hepatitis. Name the markers of Hepatitis B virus infection and indicate their interpretation. How is Hepatitis B virus infection prevented? (2+2+3+3)

SHORT ESSAY (Answer any 10) ***10 X 5 = 50 Marks***

4. Describe antigenic variations in influenza virus.
5. Enlist any two causative agents of eumycotic mycetoma and describe its pathogenesis and laboratory diagnosis (1+2+2)
6. Describe the pathogenesis and complications of Falciparum malaria. (3+2)
7. Describe the sources, clinical lesions and laboratory diagnosis of Dermatophytes. (1+2+2)
8. Describe the laboratory diagnosis of HIV.
9. Describe the pathogenesis and laboratory diagnosis of leishmaniasis. (3+2)
10. Name the aetiological agent and describe the pathogenesis and laboratory diagnosis of Mucormycosis. (1+2+2)
11. Describe the laboratory diagnosis of candidiasis.
12. Describe the pathogenesis and laboratory diagnosis of Trichomonas vaginalis. (3+2)
13. Describe the life cycle of hook worm.
14. Describe the clinical manifestations and laboratory diagnosis of Cryptococcosis (2+3)
15. Enumerate the viruses causing diarrhea and their laboratory diagnosis.(2+3)

SHORT ANSWERS (No choices) ***10 X 3 = 30 Marks***

16. List three antifungal agents
17. Define hospital acquired infections? list 3 important pathogens associated with it.
18. Name three Arboviral infections.
19. Enumerate three mosquito borne diseases.
20. Enumerate vaccines used for COVID - 19.
21. Draw a neat labelled diagram of Giardia lamblia.
22. List 6 personal protective equipment.
23. Enumerate three opportunistic fungal infections in AIDS
24. Enumerate three extraintestinal sites of Entamoeba histolytica.
25. Define window period and its clinical significance.

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MICROBIOLOGY- PAPER 1

Your answer should be specific to the question asked

Draw neat and labeled diagrams wherever necessary

LONG ESSAY ***2 X 10 = 20 Marks***

1. Enumerate zoonotic diseases. Mention the source and mode of transmission of Anthrax. Describe the pathogenesis and laboratory diagnosis of Anthrax (2+1+1+3+3).
2. Enumerate the bacterial agents causing meningitis. Describe the pathogenesis and laboratory diagnosis of pneumococcal meningitis (2+4+4).

SHORT ESSAY ***10 X 5 = 50 Marks***

3. Describe the types of agglutination with examples. (3+2)
4. Typhoid carriers: Describe the types, methods of detection and treatment.(2+2+1)
5. Describe the Bacterial flagella with reference to structure, types and functions. (2+1+2)
6. A 4 year old child with high grade fever, toxic, pain in throat, inability to swallow attended the outpatient department. On examination of throat a white membrane was found in the fauces.
   a. Describe how will you proceed in the microbiology lab for establishing the etiological diagnosis
   b. How will you tackle the emergency? (3+2)
7. Describe the laboratory diagnosis of syphilis.
8. Describe the mechanism of resistance, detection methods and treatment options of Methicillin Resistant Staphylococcus aureus. (2+2+1)
9. Describe the laboratory diagnosis of cholera.
10. Describe the principle and applications of Autoclave (3+2)
11. Describe the laboratory diagnosis of enteric fever.
12. Describe the mechanism of auto immunity.

SHORT ANSWERS ***10 X 3 = 30 Marks***

13. Satellitism
14. Enumerate three killed bacterial vaccines.
15. Enumerate 3 bacteria causing endocarditis
16. Enumerate 3 bacterial agents used in bioterrorism
17. Enumerate 3 bacteria causing Urinary tract infection.
18. CAMP test.
19. What is the pathogenesis of Ghons focus
20. What are Adjuvants and Give two examples
21. Enumerate three complications of Cholera
22. Enumerate three microorganisms causing sexually transmitted infections.

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

MICROBIOLOGY- PAPER 2

Your answer should be specific to the question asked

Draw neat and labeled diagrams wherever necessary

LONG ESSAY ***2 X 10 = 20 Marks***

1. Enumerate the mosquito borne diseases. Describe the clinical features, complications and laboratory diagnosis of Plasmodium falciparum. (2+2+2+4)
2. Describe the morphology, pathogenesis, laboratory diagnosis and immuno-prophylaxis of Rabies. (2+2+3+3)

SHORT ESSAY ***10 X 5 = 50 Marks***

3. Name the aetiological agent and describe the pathogenesis and laboratory diagnosis of Mucormycosis. (1+2+2)
4. Describe the laboratory diagnosis of HIV
5. Describe the pathogenesis and laboratory diagnosis of Kala azar. (3+2)
6. Describe the pathogenesis and laboratory diagnosis of Trichomonas vaginalis. (3+2)
7. Describe the antigenic variation in influenza virus.
8. Describe the life cycle of Hookworm.
9. Describe the pathogenesis and laboratory diagnosis of cryptococcosis (2+3)
10. Describe the sources, clinical lesions and laboratory diagnosis of Dermatophytes. (1+2+2)
11. Describe the laboratory diagnosis of Hepatitis B virus.
12. Describe the morphology, pathogenesis and laboratory diagnosis of Giardia lamblia. (1+2+2)

SHORT ANSWERS ***10 X 3 = 30 Marks***

13. Enumerate three opportunistic fungal infections.
14. Define window period and its clinical significance.
15. Enumerate three organisms causing meningitis.
16. Enumerate six personal protective equipments.
17. What is Surgical site infection? Enumerate any two measures to prevent it.
18. Name the mode of transmission, clinical manifestations and laboratory diagnosis of Chikungunya.
19. List three antifungal agents
20. Define hospital acquired infections and list any three pathogens associated with it.
21. Enumerate three live viral vaccines.
22. Draw a neat labelled diagram of HIV virus.