THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0322] **MARCH 2022** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020 Batch onwards)

SECOND YEAR

PAPER III – MICROBIOLOGY – II

Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQS)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 45 years old female has attended the Gynac op with c/o Mucopurulent vaginal discharge for the past one week. In gram's staining of cervical swab, kidney shaped Gram negative cocci are seen. Answer the following questions

   a) Which organism causes this symptoms and list out the other possible organism that cause Sexually Transmitted Infection.
   b) Explain the pathogenesis and clinical feature of the organism
   c) What are the diagnostic methods and management

2. A 55 years old male patient was admitted in ICU were with fever, cough with expectoration, fatigue and sore throat. There is H/O loss of smell and taste. The contact history with fever patient before 5 days is also elucidated

   a) What is the cause of the above condition and list out other organism that causes interstitial pneumonia?
   b) Explain the structure of the organism
   c) How will you diagnose this condition .Add a note on its vaccine

II. Write Short notes on: **(10 x 5 = 50)**

1. Write about the lab diagnosis of Hepatitis B virus.
2. Explain various properties of enterotoxin produced by Escherichia coli.
3. Write the lab diagnosis of systemic mycosis.
4. Write short notes on carriers in typhoid infections.
5. Explain Weil-Felix Test and its application.
6. Write short notes on Brugian Filariasis.
7. Short notes on Granulomatous Amoebic Encephalitis.
8. Discuss the vaccine against Poliomyelits.
9. Write the clinical feature and lab diagnosis of Melioidosis.
10. Write the clinical feature and lab diagnosis of Plague.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0822] **AUGUST 2022** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

SECOND YEAR (SUPPLEMENTARY (CBME)
PAPER III – MICROBIOLOGY – II
Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 65 year old male patient admitted in the hospital with history of fever, sore throat, head ache, body pain and loss of taste and smell. Symptomatic treatment was given. After 2 days, he developed difficulty in breathing, his oxygen saturation was <90 %. Blood investigations like CRP, D-dimer and IL-6 were elevated. CT Chest shows ground glass opacities. Patient was treated with high flow oxygen, steroid, antibiotics and antiviral agents.

   a) What is the clinical condition?
   b) Describe in detail about transmission, pathogenesis and clinical manifestations of this condition?
   c) Write in detail about microbiological and non-microbiological investigations of this conditions?
   d) Add note on prevention and control of this clinical condition?

2. A 17-year-old boy presented with bloody diarrhea with mucus and pus cells, colicky abdominal pain, fever, and prostration. The wet mount examination of the stool sample was performed which showed trophozoites of 5–20 μm, actively motile, with fingerlike pseudopodia. Inside the trophozoites, the ingested RBCs present?

   a. What is the etiological diagnosis?
   b. Describe the pathogenesis and clinical manifestations produced?
   c. What are the various diagnostic modalities?
   d. How will you treat this condition?

II. Write Short notes on: **(10 x 5 = 50)**

1. An 18-year old female presented with high-grade fever which rises every third day with chills and rigor. Her blood sample was subjected to a rapid diagnostic test which revealed positive for Plasmodium vivax. Discuss the laboratory diagnosis and treatment for the same?

2. A 40-year-old male presented with history of loss of appetite, malaise and jaundice of 2 months duration. On examination, there was icterus, hepatomegaly and tenderness in the right hypochondriac region. He gave a history of blood transfusion in the past. On laboratory examination, he was found to be positive for HBsAg.

a. What is the most probable etiological diagnosis?
b. Discuss in detail about the various viral markers, their laboratory diagnosis and prophylaxis of this condition.

3. A 25-year-old male with history of multiple sex partners is admitted with complaints of unexplained fever, progressive loss of weight, persistent diarrhea and generalized lymphadenopathy for the past 6 months.
   a. What is the most probable diagnosis?
   b. Discuss the pathogenesis and laboratory diagnosis of the above condition.

4. Rajesh, a 28-year-old male, was admitted to the hospital with complaints of evening rise of temperature, night sweat, loss of weight, loss of appetite and chronic cough with expectoration for the past 6 months. Sputum examination revealed long, slender and beaded acid-fast bacilli.
   a. What is your provisional diagnosis?
   b. Describe the laboratory diagnosis and drug resistance that occur in the etiological agent.

5. A 35 year old male with c/o hard painless penile ulcer attends STD OP. Blood sample drawn and sent for VDRL test. The laboratory reports VDRL test as Reactive. How will you counsel & what advice you will give to the patient.

6. Enlist the opportunistic fungal infection. Write in detail about the pathogenesis, clinical features and laboratory diagnosis of aspergillosis?

7. A 28-year-old female was admitted with high grade fever, vomiting, flank pain with increased frequency of micturition for the past 3 days. What is your clinical diagnosis, etiological agents and laboratory diagnosis?

8. A 25-year-old Australian visited his local doctor complaining of difficulty in swallowing liquids, loss of appetite and restlessness. He had a travel history to India one month back and did mention being bitten by a street dog.
   a. What is the most probable etiological diagnosis?
   b. Discuss the laboratory diagnosis and the vaccines available for human use.

9. List the bacterial organism causing pyogenic meningitis. Write in detail about clinical manifestations. laboratory diagnosis and treatment of pyogenic meningitis?

10. A 29-year-old female came to casualty with complaints of high-grade fever, severe joint pain, back pain and myalgia. Gradually, she developed petechial rashes over the body. On examination, she was found to have jaundice, hepatomegaly and a low platelet count (30,000/cm), Raised hematocrit (packed cell volume) by 20%. A tourniquet test done over the cubital fossa demonstrated 25 petechial spots/square inch area. On inquiry, she told that she has been bitten by the mosquitoes.
    a. What is the clinical diagnosis and how is this disease transmitted?
    b. How will you confirm the diagnosis in the laboratory?

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0223] **FEBRUARY 2023** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND YEAR – (CBME)

PAPER III – MICROBIOLOGY – II

Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 5 year old male child admitted in ICU with c/o fever, headache and chills. His mother complained that child is not able to stand 5 days after the onset of fever. O/E there is flaccid paralysis of lower limbs and tripod sign is elucidated. On CSF analysis glucose level and protein level is normal. Microscopic examination of CSF show 25-40 lymphocytes per microlitre and no bacteria seen. Ziehl – Neelsen staining of CSF is negative for Acid Fast bacilli.
   a) Mention the organism causing the disease. Enumerate the other organisms causes myelitis.
   b) Write in detail about the clinical manifestation, Lab diagnosis of disease.
   c) Describe prophylaxis of the causative organism.

2. A 45 year old male patient attend O.P. with H/O fever with chills, headache abdominal pain with vomiting. History was elicited, that he went to Andaman and has taken drinking water from a lake. On examination there is jaundice with Hepato splenomegaly. On dark ground microscopic examination of blood shows spirally coiled bacilli.
   a) What is the causative bacteria and write its pathogenesis.
   b) Describe the lab diagnosis and management of the disease.
   c) Write the preventive measures of it.

II. Write Short notes on: **(10 x 5 = 50)**

1. Explain blood culture method for detection of Infective Endocarditis.
2. Write the current definition and etiology of fever of unknown origin.
3. Write short notes on drug resistance in Typhoidal Salmonella.
4. Short note on Scrub typhus.
5. Explain the pathogenesis and the diagnosis of dengue fever.
6. Write the lab diagnosis of diarrhoea caused by coccidian parasite.
7. How will you diagnose Respiratory tract Infection caused by Aspergillus.
8. Describe the structure of SARS CoV -2.
9. Describe the life cycle of Echinococcus granulosus.
10. Write the prophylaxis of whooping cough.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0723] **JULY 2023** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND YEAR – (CBME)

PAPER VI – MICROBIOLOGY – II

Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 70 year old man was hospitalized with fever, weakness in lower limbs. Echocardiogram showed vascular vegetations on the mitral value. He also had elevated CRP and ESR.
   a) What is the most probable diagnosis?
   b) Write about the etiological agents.
   c) Describe the diagnostic criteria used for this condition.
   d) How will you collect specimen for this clinical condition and enumerate the other laboratory investigation needed?
2. A 40 year old woman working in a paddy field developed fever, headache with conjunctival suffusion. Examination revealed hepato splenomegaly, elevated liver functions, Oliguria and Uremia.
   a) What is the etiological agent and how is this disease transmitted?
   b) What is the typical clinical presentation and pathogenesis of this condition?
   c) Write briefly about lab diagnosis.
   d) How will you manage this clinical condition?

II. Write Short notes on: **(10 x 5 = 50)**

1. Discuss briefly about Viral Gastroenteritis?
2. Write short notes on Mycotoxicoses?
3. A 5 year old child had high grade fever, pain in the throat with difficulty in swallowing. On examination the child was toxic, white patch was found on the fauces which bleeds on touch. Immunization status not known.
   a) What is your probable diagnosis and the etiological agent?
   b) Write briefly about the pathogenesis and lab diagnosis of this condition.
4. Write short notes on pulmonary anthrax.
5. Enumerate the causes of Vulvovaginitis. Write short notes on Trichomoniasis.
6. Explain shortly about the clinical manifestations and lab diagnosis of Toxoplamosis.
7. A 7 year old girl admitted with fever, headache, vomiting and neck rigidity. CSF showed elevated CSF pressure, Leukocytes predominantly neutrophils. Glucose < 40 mg/dl and protein > 45 mg/dl.
   a) What is your clinical interpretation?
   b) Enumerate the probable causative agents.
   c) Add a note on pneumococcal vaccine.

8. A 25 year old male visited the clinic of a local doctor with a history of dog bite. Write about the prophylactic measures used against dog bite?

9. An 18 year old female presented to the casualty with complaints of high grade fever, headache, joint pain, petechiae and low platelet count? What is your clinical diagnosis and write briefly about the pathogenesis and lab diagnosis of this condition?

10. What is Neurocysticercosis? Write briefly about the clinical manifestation and lab diagnosis of Neurocysticercosis.

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[MBBS 0723]

THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0224] **FEBRUARY 2024** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL YEAR – (CBME)

PAPER II – MICROBIOLOGY

Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 30 year old man presented with complaints of pain right side of abdomen. He gave a history of having a pet dog. Ultrasonogram revealed a single space occupying cystic lesion in the right lobe of liver.
    a) Identify the disease and the causative agent?
    b) Write briefly about the life cycle of the above clinical condition.
    c) Write shortly on the lab diagnosis and management.

2. A middle aged man presented with fever for more than 3 weeks. He was hospitalized for more than 5 days without identifying the definitive cause.
    a) What is your probable diagnosis?
    b) Classify the clinical condition and list the ethological agents involved.
    c) What are the laboratory investigations required in this case?

II. Write Short notes on: **(10 x 5 = 50)**

1. Write about the pathogenesis and lab diagnosis of Shigellosis.
2. Describe the mechanism of action of tetanus toxin and the role of tetanus toxoid vaccine.
3. Enumerate the causes of meningitis. Explain briefly about clinical features and lab diagnosis of viral meningitis.
4. Write short note on Fasciolopsiasis.
5. Enumerate the common causes of urinary tract infection. Write briefly about the lab diagnosis of urinary tract infection.
6. A 50 year old diabetic male developed blackish discoloration around the eye with head ache and one sided facial swelling. He had recovered from Covid-19 two weeks back. What is your probable diagnosis and Explain briefly about the clinical manifestation of this condition?
7. Write the clinical feature and lab diagnosis of Lyme disease.
8. Enumerate Halophilic Vibrios. Write briefly about the clinical manifestation and lab diagnosis.
9. Write about the lab diagnosis of Brucellosis.
10. Write short note on lab diagnosis and prophylactic measures against Pertussis.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0524] **MAY 2024** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – SUPPLEMENTARY (CBME)
PAPER II – MICROBIOLOGY
Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

1. A 3 year old boy was admitted to the hospital with complaints of high-grade fever, headache, vomiting, altered mental status, seizure and neck rigidity. CSF sample was collected by lumbar puncture in a sterile container and sent to the laboratory for biochemical analysis, direct microscopic test, culture and sensitivity testing
   a) What is the probable clinical diagnosis?
   b) What are the etiological agents, pathogenesis and clinical manifestations of this disease?
   c) Describe the laboratory diagnosis in detail.
   d) What are the treatment modalities according to the etiological agents?

2. A 32-year-old male with history of multiple sex partners is admitted with complaints of unexplained fever, progressive loss of weight, persistent diarrhoea and generalized lymphadenopathy for the past 6 months.
   a) What is the most probable diagnosis?
   b) Discuss the pathogenesis, clinical manifestation and laboratory diagnosis of the above condition.

II. Write Short notes on: **(10 x 5 = 50)**

1. Bioterrorism.
2. Opportunistic mycosis.
3. African sleeping sickness.
4. Typhoid Carriers.
5. Chancroid.
6. Campylobacter Jejuni.
7. Prions disease.
8. Diarrheagenic E.Coli.
9. Halophilic Vibrios
10. Laboratory diagnosis of Scrub typhus.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 1224] **DECEMBER 2024** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – MBBS (CBME)
PAPER II – MICROBIOLOGY
Q.P. Code: 526066

Time: Three hours **Maximum: 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(2+4+6+3)

1. A 32-year-old male patient has been referred from a local hospital with a history of intermittent high-grade fever, head ache, anorexia, myalgia for the past 25 days for which he has been evaluated since. The patient is an immunocompetent individual with no obvious septic foci.
   a) Define FUO or PUO.
   b) Enumerate the causes of FUO.
   c) Laboratory diagnosis of FUO.
   d) Write a note on recent Advanced and automated microbial identification system which will help in early identification of aetiology of FUO.

(2+9+4)

2. A 26-year-old male patient presented to the emergency department with severe dehydration following sudden onset of painless watery diarrhoea resembling rice water since yesterday. Microscopic examination of the stool sample showed actively motile organism with darting motility.
   a) Identify the disease and its causative pathogen.
   b) Describe briefly the pathogenesis of this disease and its laboratory diagnosis.
   c) Write a note on prophylaxis of this disease.

II. Write Short notes on: **(10 x 5 = 50)**

1. Laboratory diagnosis of viral haemorrhagic fevers.
2. What are the responsibilities of patient and doctors in shared decision making?
3. Laboratory diagnosis of Helicobacter pylori.
4. Amoebic liver abscess.
5. Neurocysticercosis.
6. Describe the implication of airborne and contact precautions in specific clinical situation.
7. Give a brief note on Pneumococcal vaccines.
8. Non gonococcal urethritis.
9. Discuss the laboratory methods used for diagnosing Cryptococcus infections.
10. Laboratory diagnosis of Leptospirosis.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[MBBS 0325] **MARCH 2025** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATIONS
(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – SUPPLEMENTARY - (CBME)
PAPER II – MICROBIOLOGY
Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(2+10+3)

1. A 9-year-old girl brought to paediatric OPD with complaints of intermittent fever with chills, rigor, anorexia and tiredness for the past 10 days. On examination the patient had anaemia and hepatosplenomegaly. Her peripheral blood smear study showed accole forms and double dot forms inside the RBC.
   a) What is your probable diagnosis and the probable causative pathogenic species.
   b) Describe the life cycle of this parasite and laboratory diagnosis of this disease.
   c) Write a brief note on its prevention strategies.

(2+2+8+3)

2. A 27-year-old man was brought to OPD with complaints of high-grade fever, vomiting, severe head ache and altered consciousness. Physical examination of this patient revealed neck rigidity and other signs of meningeal irritation. Physician ordered CSF cytology and CSF sample sent to microbiology laboratory for Gram stain and Culture and sensitivity.
   a) What is the probable clinical condition?
   b) Enumerate the causative pathogens of this condition.
   c) Brief about the predisposing factors and laboratory diagnosis of this condition.
   d) Write a note on its prophylaxis.

II. Write Short notes on: **(10 x 5 = 50)**

1. Laboratory diagnosis of Candida infections.
2. Write about Viral markers of Hepatitis B virus.
3. What is full and reasonable disclosure? Explain about contrast autonomy and Paternalism.
4. Describe briefly about Diarrheagenic E. coli.
5. Write a note on Opportunistic Coccidian parasites.
6. Write in detail about pathogenesis and prophylaxis of rabies virus.
7. Primary amoebic meningo encephalitis.
8. Define Mycotoxins and their effects on humans.
9. Dermatophytes.
10. Explain Preventive Strategies of Tuberculosis. Add a note on National Tuberculosis Elimination Program.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 0725] **JULY 2025** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – (CBME)
PAPER II – MICROBIOLOGY
Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20 MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(2+8+5)

1. A 22 year old college student presented to the OPD with a history of step ladder pattern of fever for the past 7 days, abdominal pain, malaise, and constipation. On examination, there was coated tongue, mild hepatosplenomegaly, and relative bradycardia. Blood was collected for culture and serological testing.
   a) What is the probable clinical condition?
   b) Briefly describe the mode of transmission and laboratory diagnosis.
   c) Write a note on prophylaxis and control measures.

(2+5+5+3)

2. A 28 year old pregnant woman in her second trimester visited the antenatal clinic with complaints of mild fever and fatigue for the past few days. On examination, she had cervical lymphadenopathy. She mentioned cleaning her pet cat's litter box regularly. Anomaly scan of the fetus showed signs of hydrocephalus. Blood was sent for serological testing.
   a) What is the probable clinical condition?
   b) Name the causative organism, its usual mode of transmission and life cycle of the organism.
   c) Briefly describe the risk factors and diagnostic methods.
   d) Write a note on preventive measures, especially in pregnancy.

II. Write Short notes on: **(10 x 5 = 50)**

1. Cryptococcosis.
2. Helicobacter pylori.
3. Pseudomembranous colitis.
4. Nongonococcal urethritis.
5. Antigenic drift and Antigenic shift.
6. A young woman comes to the clinic with mild back pain. The doctor advises an MRI scan immediately, even though clinical examination suggests no serious cause and simple rest and painkillers would suffice. The scan is expensive and exposes the patient to unnecessary procedures. Expalin in detail about ethical principle is being overlooked, and how could this decision be improved?
7. Ebola virus.
8. Strongyloides stercoralis.
9. Melioidosis.
10. Respiratory Syncytial Virus.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 1025] **OCTOBER 2025** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION
(For the candidates admitted from the Academic Year 2019-2020)

SECOND PROFESSIONAL – SUPPLEMENTARY - (CBME)
PAPER II – MICROBIOLOGY
Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20 MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(2+1+3+7+2)

1. A 26 year old man presented to the STD clinic with a solitary painless ulcer over the genital area that developed 10 days after unprotected sexual contact. On examination, he had non-tender, firm inguinal lymphadenopathy.
   a) What is the probable clinical condition?
   b) Name the causative organism.
   c) Briefly describe the stages.
   d) Explain in detail on laboratory diagnosis.
   e) Write a note on prevention and control of this condition.

(2+2+6+5)

2. A 34 year old man developed sudden onset fever, dry cough, and loss of smell. A few days later, he experienced shortness of breath with oxygen saturation dropping below 90%. He works in a crowded indoor office space. Chest CT showed bilateral ground-glass opacities. A respiratory swab was collected for molecular testing.
   a) What is the probable clinical condition?
   b) Mention the causative organism and its family.
   c) Briefly describe the diagnostic tests used and complications of the disease.
   d) Write a note on prophylaxis, vaccination, and containment strategies.

II. Write Short notes on: **(10 x 5 = 50)**

1. A lab personnel posts a photo of an unusual test result on social media for academic interest. Although the name is blurred, the hospital number and date of birth are visible. The post goes viral among medical students. Explain in detail about the ethical principle is being compromised in this situation?
2. Allergic Broncho Pulmonary Aspergillosis.
3. Botulism.
4. Epidemic typhus.
5. Zika Virus.
6. Lymphatic filariasis.
7. Viral gastroenteritis.
8. Trachoma.
9. Coxsackie Virus.
10. Laboratory acquired infections.

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THE TAMIL NADU Dr. M.G.R. MEDICAL UNIVERSITY

[MBBS 0826] **AUGUST 2026** **Sub. Code :6066**

M.B.B.S. DEGREE EXAMINATION

(For the candidates admitted from the Academic Year 2019-2020 to 2023-2024)

SECOND PROFESSIONAL – CBME

PAPER II – MICROBIOLOGY

Q.P. Code: 526066

Time: Three hours **Maximum : 100 Marks (80 Theory + 20 MCQs)**

Answer all the Questions

I. Essay: **(2 x 15 = 30)**

(2+2+8+3)

1. A 45 year old man presented with a chronic cough lasting more than 3 weeks, low grade evening fever, weight loss, and night sweats. He is a smoker and Sputum samples were collected for smear microscopy and molecular testing.
   a) What is the probable clinical condition?
   b) Describe about the causative organism.
   c) Describe the methods for laboratory diagnosis.
   d) Write a note on prophylaxis and public health measures.

(2+5+6+2)

2. A 38 year old man presented with high grade fever and dull pain in the right upper abdomen for 6 days. On examination, mild hepatomegaly and no jaundice were elicited. He had loose stools 2 weeks ago. He often eats outside. Ultrasound revealed a solitary lesion in the right lobe of the liver. On aspiration, the lesion yielded thick, reddish-brown pus. No organisms were seen on Gram stain or culture.
   a) What is your probable diagnosis?
   b) Explain about the causative organism and its route of transmission.
   c) Briefly describe the laboratory diagnosis.
   d) Write a note on preventive strategies.

II. Write Short notes on: **(10 x 5 = 50)**

1. Bacterial vaginosis
2. A technician in the clinical microbiology lab receives multiple patient samples late in the evening. Due to fatigue and work pressure, he sets aside a few unlabeled blood and urine samples without informing the duty microbiologist. The next day, the source and patient details for some of the samples are missing. Explain in details about the ethical principle is being violated in this situation?
3. Otomycosis.
4. Pathogenesis and Prophylaxis of diphtheria.
5. Endemic typhus.
6. Nipah Virus.
7. Laboratory diagnosis of Kala azar.
8. Bilharziasis
9. Adenovirus
10. National Viral Hepatitis Control Programme.

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