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

[MD 0524] **MAY 2024** **Sub. Code: 4011**

M.D. DEGREE EXAMINATION

BRANCH IV – MICROBIOLOGY

PAPER III – VIROLOGY, PARASITOLOGY AND MYCOLOGY

Q.P. Code: 204011

Time: Three Hours **Maximum: 100 Marks**

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

1. Enumerate the viruses infecting the central nervous system. Discuss about pathogenesis, laboratory diagnosis and post exposure prophylaxis of Rabies.

2. Enumerate the parasites causing diarrhea in HIV/AIDS patients. Discuss in detail the life cycle, pathogenesis and treatment of cryptosporidiosis.

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

1. Vaccine strategies against malaria.
2. Post exposure prophylaxis for HIV.
3. Methods of cultivation of parasites.
4. Darling's disease.
5. Immuno diagnosis in parasitic infection.
6. Epidemiology of poliomyelitis.
7. Dead end parasitic infection.
8. Mycetoma.
9. River blindness.
10. Immunoprophylaxis of influenza.

III. Reasoning Out: **(4 x 5 = 20)**

1. Tropical pulmonary Eosinophilia is seen in lymphatic filariasis.
2. Mutations in CARD9 gene predisposes to recurrent mucocutaneous Candidiasis.
3. Non lipid containing viruses are generally resistant to ether.
4. Leishmanin testing is negative in active cases of Kala-azar.

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

[MD 1224] **DECEMBER 2024** **Sub. Code: 4011**

(OCTOBER 2024 EXAM SESSION)

M.D. DEGREE EXAMINATION

MICROBIOLOGY

PAPER III – VIROLOGY, PARASITOLOGY AND MYCOLOGY

Q.P. Code: 204011

Time: Three Hours **Maximum: 100 Marks**

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

1. Explain in detail about the morphology, antigenic characteristics, clinical features, pathogenesis and lab diagnosis of HIV virus. Write in detail about the strategies for HIV testing. Add a note on HIV vaccines.

2. Classify Malarial parasites. Explain in detail about the morphology, life cycle, clinical features, pathogenesis, lab diagnosis of Plasmodium falciparum. Add a note on how it differs from Plasmodium vivax and ovale. Write in brief about Malarial vaccine.

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

1. Classify Herpes viruses. Explain in detail about Herpes simplex.
2. Parvovirus.
3. Antigenic variations of Orthomyxovirus.
4. Shell vial culture.
5. Serological markers of Hepatitis B virus and its interpretation.
6. Coccidian parasites.
7. Classify Trematodes and write life cycle of Fasciola hepatica.
8. Classify Dematiaceous fungi. Explain in detail about morphology and cultural characteristics of Dematiaceous fungi.
9. Cryptococcosis.
10. Oculomycoses.

III. Reasoning Out: **(4 x 5 = 20)**

1. Primary Varicella antibodies are not protective in Reactivation.
2. Mucormycosis is more common in diabetic patients.
3. Chlamydospore production in Candida species not demonstrable in Sabouraud's Dextrose agar.
4. Trophozoite detection is difficult in stored stool sample in diagnosis of Entamoeba histolytica.

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

[MD 0525] **MAY 2025** **Sub. Code: 4011**

M.D. DEGREE EXAMINATION

MICROBIOLOGY

PAPER III – VIROLOGY, PARASITOLOGY AND MYCOLOGY

Q.P. Code: 204011

Time: Three Hours **Maximum: 100 Marks**

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

1. Explain in detail about the morphology, antigenic characteristics, clinical features, pathogenesis and lab diagnosis of Picornavirus. Write in detail about the vaccination strategy of Polio. Add a note on Pulse Polio vaccination.

2. Explain in detail about the morphology, life cycle, clinical features, pathogenesis, lab diagnosis of Leishmaniasis. Add a note on epidemiology of Leishmaniasis.

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

1. Sporothrix schenckii.
2. Explain in brief about the morphology, antigenic features and lab diagnosis of Rota virus.
3. Write in brief about classification of Herpes virus and brief about Cytomegalo virus.
4. Oncogenic virus and vaccination against Oncogenic virus.
5. Antifungal susceptibility testing.
6. Zymodemes.
7. Echinococcosis granulosis.
8. Classify Filarial worms. Explain in detail about the life cycle, pathogenesis and lab diagnosis of Loa loa.
9. Explain in detail about the lab diagnosis of Entamoeba histolytica.
10. Mycotoxicosis and Mycetismus.

III. Reasoning Out: **(4 x 5 = 20)**

1. What are the difficulties encountered in the preparation of Influenza vaccine? Add a note on the newer approaches in the preparation of Influenza vaccine.
2. Mutation is less common among DNA viruses. Why?
3. Why are certain parasitic eggs bile stained?
4. Hydatid cysts have to be removed in toto during surgery.

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

[MD 1025] **OCTOBER 2025** **Sub. Code: 4011**

M.D. DEGREE EXAMINATION

MICROBIOLOGY

PAPER III – VIROLOGY, PARASITOLOGY AND MYCOLOGY

Q.P. Code: 204011

Time: Three Hours **Maximum: 100 Marks**

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

1. Classify Dermatophytosis. Explain in detail about the morphology, cultural characteristics, laboratory diagnosis of Dermatophytes. Add a note on Non dermatophytes causing Onychomycoses.

2. Classify Tumor viruses. Write in detail about DNA tumor viruses and add a note on its prevention and control.

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

1. Explain in detail about the viral culture methods and viral inclusion bodies.
2. Cytomegalovirus.
3. Pathogenesis and lab diagnosis of Human metapneumovirus.
4. Rodent borne Hemorrhagic fever.
5. Congenital Rubella syndrome.
6. Endemic hematuria.
7. Candidiasis.
8. Sporotrichosis.
9. Rapid diagnostic methods in parasitology.
10. Dirofilaria immitis.

III. Reasoning Out: **(4 x 5 = 20)**

1. Salicylates are contraindicated in children with Flu-like symptoms.
2. Gold standard diagnosis of Penicillium marneffei is a positive culture from appropriate clinical specimens.
3. Efficacy of Post Exposure Prophylaxis in HIV if administrated within two hours of exposure.
4. Microfilaria is not demonstrable in peripheral blood examination in case of occult filariasis.

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

[MD 0526] **MAY 2026** **Sub. Code: 4011**

M.D. DEGREE EXAMINATION

MICROBIOLOGY

PAPER III – VIROLOGY, PARASITOLOGY AND MYCOLOGY

Q.P. Code: 204011

Time: Three Hours **Maximum: 100 Marks**

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

1. List out the parasites affecting central nervous system. Discuss in detail about the life cycle, pathogenesis and laboratory diagnosis of falciparum malaria.

2. Enumerate the Arboviruses prevalent in India. Write in detail about Dengue Haemorrhagic fever.

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

1. Monkey pox.
2. Subacute sclerosing panencephalitis.
3. Nipah virus.
4. Anti retroviral drugs.
5. Human papilloma virus vaccine.
6. Antifungal drug resistance.
7. Candida auris.
8. Occult filariasis.
9. Filoviruses.
10. Snail as intermediate host.

III. Reasoning Out: **(4 x 5 = 20)**

1. HIV serology is not recommended in patients already on ART.
2. Dog bite in patient who received rabies vaccine in the last 3 months.
3. Galactomannan assay is not specific to Aspergillus.
4. Both sedimentation and floatation methods should be performed for the detection of parasite in stool.

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