April-2001

[KD 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

(Revised Regulation)

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Discuss the opportunistic fungal infections and their diagnosis. (25)

2. Discuss the lab steps in establishing the aetiology of Diarrhoeal diseases. (25)

3. Write short notes on : (5 × 10 = 50)

   (a) Mycotic mycetoma.

   (b) Radio immuno assay.

   (c) AIDS sampling in Hospital wards.

   (d) Chlamydospores.

   (e) Mycotoxins.

November-2001

[KE 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL the questions.

1. Define the term "PANDEMIC". List out the diseases that caused pandemics and discuss the etiology, pathogenesis, laboratory diagnosis and preventive measures for any one of them. (25)

2. Discuss the etiology, pathogenesis and laboratory diagnosis of fungal infections of hair in man. (25)

3. Write briefly on : (5 × 10 = 50)

   (a) Nucleic acid amplification technology.

   (b) Mucormycosis.

   (c) Fungal toxins.

   (d) Pathogenic yeasts.

   (e) Blood culture.

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March-2002

[KG 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL the questions.

1. Discuss the etiology, pathogenesis and prevention of NOSOCOMIAL DIARRHOEA. Write notes on hospital antibiotic policy and its importance. (25)

2. Enumerate the dimorphic fungi you know. Describe the morphology, cultivation, pathogenesis and laboratory diagnosis of sporotrichosis in man. (25)

3. Write briefly on : (5 × 10 = 50)

(a) Milk borne diseases and their prevention.

(b) Antifungal drug susceptibility testing methods.

(c) Lipophilic fungi.

(d) Genetic engineering.

(e) Scope and limitations of immunological studies on TWINS.

September-2002

[KH 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch IV — MICROBIOLOGY

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Answer ALL questions.

1. Give an account of medically important candida with special reference to recent developments. (25)

2. Discuss the rapid diagnostic methods in bacterial diseases. (25)

3. Write short notes on : (5 × 10 = 50)

   (a) Chromoblastomycosis

   (b) Arthropodes of medical importance

   (c) Universal precautions

   (d) Sterilisation of operation theatre

   (e) Uses of guinea pig in laboratory medicine.

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[KJ 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes — Theory : 80 marks

M.C.Q. : Twenty minutes — M.C.Q. : 20 marks

M.C.Q. must be answered **SEPARATELY** on the answer sheet provided as per the instructions on the first page of M.C.Q. Booklet.

Answer ALL questions.

Draw suitable diagrams wherever necessary.

1. Discuss the methods for infectious waste management in hospitals and laboratories. (15)

2. Discuss the etiology, pathogenesis and laboratory diagnosis of mycotic mycetoma. (15)

3. Write short notes on : (10 × 5 = 50)

(a) DNA vaccines.

(b) Probiotics.

(c) Typing methods for epidemiological investigation.

(d) Antibiotics for multi resistant gram positive infections.

(e) SARS.

(f) Mycotic keratitis.

(g) Zygomycosis.

(h) Pseudallescheria boydii.

(i) Perinatal transmission, diagnosis and prevention of HIV infection.

(j) Antifungal agents and susceptibility testing.

[KK 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

A. Essay : (2 × 15 = 30)

(1) Discuss the laboratory diagnosis of infections caused by dermatophytes.

(2) Describe the laboratory diagnosis of urinary tract infection.

B. Write short notes on : (10 × 5 = 50)

(1) Laboratory diagnosis of pneumococcal pneumonia

(2) Food–borne botulism

(3) Viral diarrhoeas

(4) Candida albicans

(5) Keratomycosis

(6) Prevention of hospital acquired infection

(7) Disc diffusion methods

(8) Segregation of waste

(9) Aspergillosis

(10) Infection control policy.

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[KL 121] Sub. Code : 2019

M.D. DEGREE EXAMINATION,

(Revised Regulations)

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 15 = 30)

(1) List all the fungal agents causing infection of Keratinised tissue in Man. Discuss the clinical manifestations and laboratory diagnosis of such infections.

(2) Discuss the establishment of quality control in microbiology.

II. Write short notes on : (10 × 5 = 50)

(a) Dimorphic fungi.

(b) Probiotics.

(c) Perinatal transmission diagnosis and prevention of HIV.

(d) Antifungal agents and susceptability testing.

(e) Interferons.

(f) R plasmids.

(g) Beta lactamases.

(h) Madura mycosis.

(i) SARS.

(j) Immunochromatographic tests.

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[KM 121] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

(Revised Regulations)

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours **Maximum : 100 marks**

Theory : Two hours and forty minutes **Theory : 80 marks**

M.C.Q. : Twenty minutes **M.C.Q. : 20 marks**

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : **(2 × 15 = 30)**

(1) Describe the aetiological agents and laboratory diagnosis of a case of Urinary tract infection.

(2) Discuss in detail the molecular diagnostic methods used in clinical Microbiology.

II. Write short notes on : **(10 × 5 = 50)**

(a) Laboratory diagnosis of Dermatophytosis.

(b) Bacteriological examination of water.

(c) Milk borne diseases.

(d) Mycotic poisoning.

(e) Cryptococcosis.

(f) Sporotrichosis.

(g) Universal precautions.

(h) Immunisation schedule for children.

(i) Bioterrorism.

(j) Extended spectrum beta lactamases (ESBLs).

[KO 121] **Sub. Code : 2018**

M.D. DEGREE EXAMINATION.

Branch IV – Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay : (2 × 15 = 30)

(1) Enumerate Dimorphic fungi. Discuss Histoplasmosis with special emphasis on epidemiology and work done in India.

(2) Discuss the principles and applications of polymerase chain reaction and its modification in the clinical laboratory.

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

(a) Rhinosporidiasis

(b) Phage typing

(c) Maintenance of Stock cultures

(d) Standard Precautions

(e) Mycotic keratitis

(f) Prophylaxis of Hepatitis B infection

(g) Cryptococcosis

(h) Gene therapy

(i) Madura foot

(j) Significant Bacteruria.

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[KP 121] **Sub. Code : 2018**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

1. Describe the morphology, cultivation, pathogenecity and laboratory diagnosis of Candidal infections in immunocompromised patients. (20)

2. Describe the procedure to carry out the minimum inhibitory concentration and minimum bactericidal concentration. (15)

3. Discuss the duties and functions of infection control team. (15)

II. Short notes : (6 × 5 = 30)

(a) Food poisoning

(b) Trichosporon beigelii

(c) Sporotrichosis

(d) Mycotoxins

(e) Immunoblotting techniques in diagnostic microbiology.

(f) Continuous quality assessment in the laboratory.

[KQ 118] **Sub. Code : 2019**

M.D. DEGREE EXAMINATION.

Branch IV — Mircobiology

Paper IV — (Old/New/Revised Regulations)

MYCOLOGY AND APPLIED MICROBIOLOGY

(Candidates admitted from 1988-89 onwards)

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

1. Describe the aetiological agents and laboratory diagnosis of a case of urinary tract infection. (20)

2. Discuss the duties and functions of infection control team. (15)

3. Discuss about "BIO SAFETY" in microbiology laboratory. (15)

II. Short notes : (6 × 5 = 30)

(a) Mycotic keratitis.

(b) Mycetoma.

(c) Quality control in microbiology laboratory.

(d) Uses of mice in microbiology.

(e) Discuss the bacteriological examination of water.

(f) Bactec system.

[KQ 119] **Sub. Code : 2018**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

(For candidates admitted from 2004–2005 onwards)

Time : Three hours Maximum : 100 marks

Theory : Two hours and forty minutes Theory : 80 marks

M.C.Q. : Twenty minutes M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

1. Describe the epidemiology, pathogenesis and laboratory diagnosis of penicilliosis marneffei. (20)

2. Describe the steps involved in the management of biomedical waste in a hospital. (15)

3. Discuss the application of nucleic acid based techniques in diagnostic microbiology. (15)

II. Short notes : (6 × 5 = 30)

(a) Biofilms.

(b) ESBL screening.

(c) Rota virus vaccines.

(d) Otomycosis.

(e) Fungal spores.

(f) Candida dubliniensis.

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[KR 121] **Sub. Code : 2018**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

Paper IV — (Old/New/Revised Regulations)

MYCOLOGY, APPLIED MICROBIOLOGY AND RECENT ADVANCES

(Candidates admitted from 2004–05 onwards)

Time : Three hours — Maximum : 100 marks

Theory : Two hours and forty minutes — Theory : 80 marks

M.C.Q. : Twenty minutes — M.C.Q. : 20 marks

Answer ALL questions.

Draw suitable diagrams wherever necessary.

I. Essay :

1. Describe the morphology, pathogenesis and lab diagnosis of systemic dimorphic fungi. (20)

2. Describe the steps in investigation of an outbreak of infectious disease in a hospital. (15)

3. Describe the principle of different types of Polymerase Chain Reaction (PCR) and their use in Clinical Microbiology. (15)

II. Short notes : (6 × 5 = 30)

(a) Pathogenicity islands.

(b) Modern vaccines.

(c) Gnotobiotic animals.

(d) Candida albicans.

(e) Rapid diagnostic tests in Microbiology.

(f) Role of bacteriophages in Microbiology.

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MARCH 2008

[KS 120] **Sub. Code : 2017**

M.D. DEGREE EXAMINATION.

Branch IV — Microbiology

Paper IV — MYCOLOGY AND APPLIED MICROBIOLOGY

(Common to all candidates)

Q.P. Code : 202017

Time : Three hours Maximum : 100 marks

Answer ALL questions.

Draw diagrams wherever necessary.

I. Long Essay : $(2 \times 20 = 40)$

1. Discuss Nucleic acid based analytic methods for Microbial identification and characterization.
2. Discuss in detail the opportunistic fungal infections in AIDS with Laboratory diagnosis and Treatment.

II. Write Short note on: $(10 \times 6 = 60)$

1. Endemic Mycoses.
2. Demateaceous Fungal Infections.
3. Antifungal Susceptibility Testing.
4. Lysis Centrifugation Technique.
5. IV Catheter associated bacteremia and Techniques for Laboratory Diagnosis.
6. DNA Chips (Micro Arrays).
7. Hospital Infection Control programmes.
8. Agents of Bioterrorism
9. Susceptibility Profiles requiring further scrutiny and evaluation in clinical Laboratories.
10. Vaccines for Adults.

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March 2009

[KU 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

Branch IV – MICROBIOLOGY

(Common to all candidates)

Paper IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

Q.P. Code : 202017

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : **(2 x 20 = 40)**

1. Define quality assurance. Discuss in detail quality control programmes for clinical microbiology laboratory.

2. Discuss antifungal susceptibility testing methods for candida species with their merits and demerits.

II. Write short notes on : **(10 x 6 = 60)**

1. Mycetoma.
2. DNA microarrays and its application.
3. Disc approximation 'D' test for staphylococci.
4. Histoplasmosis.
5. Fungal stains.
6. Surface mycoses.
7. Flow cytometry.
8. Immuno chromatography.
9. Amp 'C' – β lactamases in GNB.
10. Penicillium marneffi infection.

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September 2009

[KV 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

Branch IV – MICROBIOLOGY

(Common to all candidates)

Paper IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

Q.P. Code : 202017

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : **(2 x 20 = 40)**

1. Discuss the recombinant genetic engineering techniques and its applications.

2. National Aids control organization policy of diagnosis of HIV infection. Add a note on HIV vaccines.

II. Write short notes on : **(10 x 6 = 60)**

1. Gene cloning
2. Biological weapons
3. Typing methods in bacteria
4. Non gonococcal urethritis
5. Salmonella food poisoning
6. ESBL detection in the laboratory
7. Newer fluroquinolones
8. Revised national tuberculosis control programme
9. Bacteriology of milk
10. Cytokines

*****

March 2010

[KW 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

Branch IV – MICROBIOLOGY

(Common to all candidates)

Paper IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

Q.P. Code : 202017

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.

Answer ALL questions.

I. Essay questions : **(2 x 20 = 40)**

1. Discuss important cytokines and their selected biologic effects.

2. Laboratory aids in the selection of antimicrobial therapy.

II. Write short notes on : **(10 x 6 = 60)**

1. Prions.
2. B.O.D. incubator.
3. Superficial mycoses.
4. Exospore.
5. Fc Farland tubes.
6. Jumping genes.
7. Opportunistic parasitic infections in AIDS.
8. Antiviral vaccines for HIV/AIDS.
9. Bioterrorism.
10. Biomedical waste disposal

*****

September 2010

[KX 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

Branch IV – MICROBIOLOGY

Paper IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

(Common to all candidates)

Q.P. Code : 202017

Time : Three hours **Maximum : 100 marks**

Draw suitable diagram wherever necessary.
Answer ALL questions.

I. Essay questions : **(2 X 20 = 40)**

1. Discuss in detail about Antibiotic sensitivity testing.

2. Describe the Antigenic variations in orthomyxoviruses and their epidemiological importance.

II. Write short notes on : **(10 X 6 = 60)**

1. Morphological classification of fungi.
2. Mycotoxins.
3. Automation in Microbiology.
4. Opportunistic fungi.
5. Blood culture.
6. Specimen collection in mycetoma.
7. Bird Flu.
8. Pigment producing fungi.
9. Biomedical waste disposal.
10. Superficial mycosis.

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MAY 2011

[KY 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION
BRANCH IV – MICROBIOLOGY
MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES
Q.P. Code : 202017

Time : 3 hours **Maximum : 100 marks**
(180 Min)

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Define Dimorphic fungi. Enumerate them. Describe the morphology, pathogenesis and lab diagnosis of Histoplasmosis causative organism.	6	15	10
2. List the Zoonotic diseases. Name the prevalent bacterial zoonotic diseases in India. Describe the morphology, cultural characteristics antigenic structure and lab diagnosis of Brucellosis.	6	15	10
II. Short Questions:			
1. Dermatophytes.	3	8	5
2. Madura mycosis.	3	8	5
3. Mycetism and Mycotoxicosis.	3	8	5
4. Universal immunization programme.	3	8	5
5. Prevention of hospital acquired infection.	3	8	5
6. Microbial pathogenicity.	3	8	5
7. Recent advances in detection of M.tuberculosis.	3	8	5
8. Recent immunological methods available for detection of antigen.	3	8	5
III. Reasoning Out:			
1. Biomedical waste management is mandatory in all hospitals, labs and healthcare delivery places.	4	10	5
2. Phage typing is used in epidemiological typing.	4	10	5
3 Though one or two doses of OPV has produced 90-100% seroconversion in advanced countries but not so in developing countries in the tropics.	4	10	5
4. Flow cytometry is technologically sophisticated approach than immuno fluorescence.	4	10	5
IV. Very Short Answers :			
1. Types of fungal spores.	1	4	2
2. Post exposure prophylaxis of HIV.	1	4	2
3. Types of PCR.	1	4	2
4. Standards to be maintained in the levels of airborne bacteria level in hospital air.	1	4	2
5. Latent infection.	1	4	2
6. HIV protein types blotted on Nitrocellulose paper.	1	4	2
7. Cold agglutination test.	1	4	2
8. Biological false positive reactions.	1	4	2
9. Weakly acid fast onganisms.	1	4	2
10. Thioglycollate medium.	1	4	2

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APRIL 2012

[LA 120] **Sub. Code: 2017**

M.D. DEGREE EXAMINATION
BRANCH IV – MICROBIOLOGY
MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES
Q.P. Code : 202017

Time : 3 hours **Maximum : 100 marks**
(180 Min)

Answer ALL questions in the same order.

	Pages (Max.)	Time (Max.)	Marks (Max.)
I. Essay:			
1. Enumerate the causative agents of mycetoma foot. Describe the pathogenesis and laboratory diagnosis of Eumycotic mycetoma.	9	15	10
2. What are Hospital acquired Infections? Write in detail about laboratory diagnosis and control of hospital acquired infections.	9	15	10
II. Short Questions:			
1. List Mycotoxins and discuss the pathogenesis of any one mycotoxin.	3	8	5
2. Discuss the causative agent and pathogenic lesion due to Lobomycoses.	3	8	5
3. Describe the causative agent and laboratory diagnosis of Piedra.	3	8	5
4. Discuss the composition and uses of Sabourauds Dextrose Agar.	3	8	5
5. Enumerate the Normal flora of skin and its benefits.	3	8	5
6. Describe the principle and procedure of Disk Diffusion method to study antibiotic sensitivity pattern.	3	8	5
7. List Recombinant vaccines, describe the production of recombinant Hepatitis B Vaccine.	3	8	5
8. What is Bio-film? What are the methods to detect it in vitro?	3	8	5
III. Reasoning Out:			
1. Demonstration of Fungus in nails is difficult and is possible only after using 10% Potassium hydroxide. Explain.	5	10	5
2. In Mycetoma foot why the sinuses discharge granules.	5	10	5
3. Explain why Dihptheria and tetanus toxoids are given with Bordetella pertusis vaccine.	5	10	5
4. More than 10^5 CFU/ml denotes significant bacteriuria. Explain.	5	10	5
IV. Very Short Answers :			
1. Give two examples for anthropophilic fungus.	1	4	2
2. Name the causative agent of white piedra.	1	4	2
3. List four fungus causing Systemic mycoses.	1	4	2
4. Draw the macroconidia of Histoplasma capsulatum.	1	4	2
5. Name four pathogenic species of Candida.	1	4	2
6. Give the CFU/ml corresponding to 0.5 Mc Farland standard.	1	4	2
7. List two examples for passive immunization.	1	4	2
8. Enumerate two characters of endotoxins.	1	4	2
9. Name two methods used for Air sampling.	1	4	2
10. Name the gene responsible for methicillin resistance in MRSA.	1	4	2

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(LC 120) **APRIL 2013** **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

BRANCH IV – MICROBIOLOGY

PAPER – IV – MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

Q.P. Code : 202017

Time: Three Hours **Maximum: 100 marks**

I. Essay: **(2X10=20)**

1. Discuss in detail the principle, steps, types, merits and demerits of polymerse chain reactions.
2. Classify superficial mycoses. Discuss in detail on Dermatophytosis.

II. Short Questions: **(8X5=40)**

1. Pneumocystis jirovecii
2. Aflatoxins
3. Bebesiosis
4. Human cysticercosis
5. H1N1 Influenza
6. Helicobacter pylori
7. Super antigens
8. Bacteriocins

III. Reasoning Out: **(4X5=20)**

1. Negative Weil Felix test never rules out Rickettsial diseases completely.
2. Infectivity is maximum during the initial stages of Chickenpox.
3. Brucellosis exhibits chronicity and there is a tendency for relapse even after adequate antimicrobial therapy.
4. Amoxycillin should be avoided in the treatment of Infectious Mononucleosis.

IV. Very Short Answers: **(10X2=20)**

1. Chick Martin test
2. Exaltation
3. Agar agar
4. Alastrim
5. Amboceptor
6. Job syndrome
7. Cold enrichment
8. Nude mice
9. Ascolis thermoprecipitin test
10. Torres bodies

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[LD 120] **OCTOBER 2013** **Sub. Code: 2017**

M.D. DEGREE EXAMINATION

BRANCH IV – MICROBIOLOGY

MYCOLOGY AND APPLIED MICROBIOLOGY AND RECENT ADVANCES

Q.P. Code : 202017

Time: Three Hours **Maximum: 100 marks**

I. Essay: **(2 x 10 = 20)**

1. Discuss automated methods employed in diagnosis of tuberculosis.

2. Define opportunistic fungal infections. Enumerate common predisposing factors. Outline laboratory diagnosis of these agents.

II. Short Questions: **(8 x 5 = 40)**

1. What is microarray? Describe its principle and applications in microbiology.
2. What are mycotoxins? Discuss mycotoxicosis.
3. Classify antifungal agents. Discuss the methods of anti-fungal susceptibility testing.
4. Role of microbiologist in Hospital Infection Control Committee.
5. Dermatophytes.
6. What are edible vaccines? Discuss the current status and future of edible vaccines.
7. Epidemiology and lab diagnosis of Pencillium marneffei.
8. Nosocomial infections.

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

1. Cryptococcus neoformans forms brown colonies on bird seed agar.
2. Uni-directional workflow is must in molecular laboratories.
3. Pertussis causes are increasing in adolescents and young adults.
4. Biomedical waste management is mandatory in all hospitals.

IV. Very Short Answers: **(10 x 2 = 20)**

1. Post exposure prophylaxis after needle stick injury.
2. Real time PCR.
3. Madura foot.
4. Microscopy in fungal infections.
5. Virus like particles.
6. Immunomodulators.
7. Blotting techniques.
8. Biofilms.
9. Competitive ELISA.
10. Dimorphic fungi.

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(LE 120) **APRIL 2014** **Sub. Code:2017**

M.D. DEGREE EXAMINATION

BRANCH IV - MICROBIOLOGY

PAPER – IV - MYCOLOGY AND APPLIED MICROBIOLOGYAND RECENT ADVANCES

Q.P.Code: 202017

Time: Three Hours **Maximum: 100 marks**

I. Essay Questions: **(2X10=20)**

1. Discuss the causative agents, pathogenesis and laboratory diagnosis of Rhino cerebral mucormycosis.

2. Discuss the mechanism of action of Antibiotics acting on bacterial cell wall and development of drug resistance.

II. Short Questions: **(8X5=40)**

1. Chromoblastomycosis.
2. Rhinosporidiosis
3. Oral thrush.
4. Sabourauds dextrose agar.
5. Mycotoxicosis.
6. Kirby Bauer disk diffusion method.
7. Differential coliform test.
8. Milk borne diseases.

III. Reasoning Out: **(4X5=20)**

1. Histoplasma capsulatum appears as rounded form in host tissues and filamentous form in culture.
2. Pneumocystis jirovecii is a fungus and not a protozoon.
3. Mid stream urine sample is appropriate for bacterial culture.
4. Skin scrapings are examined after treatment with 10% Potassium hydroxide.

IV. Very Short Answers: **(10X2=20)**

1. Penicillium marneffei.
2. Aspergilloma.
3. Black piedra.
4. Mycetism.
5. Lobomycosis.
6. Echinocandins.
7. Adjuvant.
8. Injectable vaccine for Typhoid.
9. Ribotyping.
10. Transposons.

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(LF 120) **OCTOBER 2014** **Sub. Code:2017**

M.D. DEGREE EXAMINATION

BRANCH IV - MICROBIOLOGY

PAPER IV - MYCOLOGY AND APPLIED MICROBIOLOGYAND RECENT ADVANCES

Q.P.Code: 202017

Time: Three Hours **Maximum: 100 marks**

I. Essay Questions: **(2 x 10 = 20)**

1. Define the term pandemic. List out the diseases that caused pandemic and discuss in detail morphology, etiology, pathogenesis, lab diagnosis and preventive measures of severe acute respiratory syndrome.
2. Describe the morphology, cultivation, pathogenesis and lab diagnosis of Candidal infection. Add a note on recent trends in the lab diagnosis of fungal infection.

II. Short Questions: **(8 x 5 = 40)**

1. Spores in fungi.
2. Mycotoxicosis.
3. Pseudallescheria boydii.
4. Etiological agents and lab diagnosis of keratomycosis.
5. Phaeoid fungi.
6. Sterilisation of operation theatres.
7. Beta – lactamases.
8. Tests in the examination of milk.

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

1. Another important emerging bacterial infection is Clostridium difficile.
2. Diagnosis of Penicillium marneffei infection is easy when typical skin lesions appear.
3. Normal microbial flora play an important role in the body.
4. Standard suspension of insoluble barium sulphate precipitates have been described by Mc Farland.

IV. Very Short Answers: **(10 x 2 = 20)**

1. Fungal wet mount.
2. Name the various skin tests and fungal antigens used.
3. Ectothrix infection.
4. Hair perforation test.
5. Common causative agents of Eumycetoma with characters of grains.
6. Bio typing.
7. Define density gradient centrifugation and mention the methods.
8. Good buffers.
9. Redox indicators.
10. Radio allergosorbent test.

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