

**BPT DEGREE EXAMINATION**  
**(Regulations for the candidates admitted from 2017-2018 onwards)**  
**SECOND YEAR**  
**PAPER V – MICROBIOLOGY AND PATHOLOGY**

*Q.P. Code : 746280*

**Time: Three hours**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A**  
**(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Write about the morphology, Pathogenesis and lab diagnosis of *Corynebacterium diphtheria*.

**II. Write notes on:** (5 x 5 = 25)

1. Write about Gram staining.
2. Write a note on Nosocomial Infections.
3. Describe Urinary tract infection and causative organisms involved.
4. Pathogenesis of Pulmonary Tuberculosis.
5. Lab diagnosis of *Vibrio cholera*.

**III. Short answers on:** (5 x 2 = 10)

1. What is a cold sterilization? Give example.
2. Mention two autoimmune diseases.
3. Name two transport media for *Vibrio cholera*.
4. What is window period in HIV infection?
5. Name the various disinfectants used in asepsis.

**SECTION – B**  
**(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Thrombosis – causes, pathophysiology and fate of the thrombus.

**II. Write notes on:** (5 x 5 = 25)

1. Complications of wound healing.
2. Bronchiectasis.
3. Differences between benign and malignant tumours.
4. Muscular dystrophies.
5. Necrosis – mechanisms and types.

**III. Short answers on:** (5 x 2 = 10)

1. Osteoarthritis.
2. Embolism.
3. Chemical mediators of inflammation.
4. Abscess.
5. Clinical features of Parkinsonism.

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**BPT DEGREE EXAMINATION**  
**(Regulations for the candidates admitted from 2017-2018 onwards)**  
**SECOND YEAR**

**PAPER V – MICROBIOLOGY AND PATHOLOGY**

*Q.P. Code : 746280*

**Time: Three hours**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A**  
**(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Write about the Ultrastructure of bacteria in detail with a neat labelled sketch.

**II. Write notes on:** (5 x 5 = 25)

1. Write a note on Dry heat sterilization.
2. Explain Acid fast staining technique.
3. Describe the structure of bacterial endospore.
4. Pathogenesis of Enteric fever.
5. Write a note on Herpes virus infection.

**III. Short answers on:** (5 x 2 = 10)

1. List four bacteria causing Diarrhoea.
2. WIDAL Test.
3. Write the Koch's postulates.
4. Define Iatrogenic infection with examples.
5. Give examples for the reaction of Type III hypersensitivity.

**SECTION – B**  
**(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. a) Wound healing by primary and secondary intention.  
b) Factors influencing repair.  
c) Complications of wound healing.

**II. Write notes on:** (5 x 5 = 25)

1. Rheumatoid arthritis.
2. Bronchial asthma.
3. Features of malignant tumours.
4. Atrophy.
5. Cerebrovascular accidents.

**III. Short answers on:** (5 x 2 = 10)

1. Osteomalacia.
2. Virchow's triad.
3. Deep vein thrombosis.
4. Complications of Rheumatic heart fever.
5. Differences between necrosis and apoptosis.

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

**[LR 1220]**

**DECEMBER 2020  
(AUGUST 2020 EXAM SESSION)**

**Sub. Code: 6280**

**BPT DEGREE EXAMINATION  
SECOND YEAR  
(New regulations for the candidates admitted from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY  
Q.P. Code : 746280**

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** **(1 x 15 = 15)**

1. Define Immunity, classify the various types and write in detail about natural Immunity.

**II. Write notes on:** **(5 x 5 = 25)**

1. Dry Heat Sterilization.
2. Tetanus.
3. Flagella.
4. Urinary tract infection.
5. Anaphylaxis.

**III. Short answers on:** **(5 x 2 = 10)**

1. Write the Koch's postulates.
2. Mantoux test.
3. Name two organisms causing meningitis.
4. Polio vaccine.
5. Disinfectant.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** **(1 x 15 = 15)**

1. Pneumonia - types, pathogenesis, stages and complications.

**II. Write notes on:** **(5 x 5 = 25)**

1. Myocardial Infarction – pathogenesis, features and complications.
2. Calcification.
3. Embolism.
4. Chronic inflammation – causes and types.
5. Necrosis – mechanisms and types.

**III. Short answers on:** **(5 x 2 = 10)**

1. Ankylosing spondylitis.
2. Septic shock.
3. Metastasis.
4. Two examples of autoimmune diseases with pathogenesis.
5. Atelactasis.

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

[BPT 0921]

SEPTEMBER 2021  
(FEBRUARY 2021 EXAM SESSION)

Sub. Code: 6280

BPT DEGREE EXAMINATION  
SECOND YEAR – (Regulations for the candidates admitted from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY  
*Q.P. Code : 746280*

Time: Three hours

Answer ALL Questions

Maximum: 100 Marks

Section A and B must be answered in SEPARATE Answer Book

SECTION – A  
(MICROBIOLOGY)

I. Elaborate on: (1 x 15 = 15)

1. Enumerate the etiology, pathogenesis and Lab diagnosis of anaerobic wound infection.

II. Write notes on: (5 x 5 = 25)

1. Meningitis.
2. Nagler reaction.
3. Herpes simplex virus.
4. ASO test.
5. Normal flora.

III. Short answers on: (5 x 2 = 10)

1. Enterotoxin.
2. Difference between plasma and serum.
3. Adjuvant.
4. Anaerobic medium.
5. Name two infections transmitted by blood and body fluid.

SECTION – B  
(PATHOLOGY)

I. Elaborate on: (1 x 15 = 15)

1. Define Inflammation. Discuss the cellular events of inflammation.

II. Write notes on: (5 x 5 = 25)

1. Pagets disease of bone.
2. Gangrene.
3. Rheumatic Heart Disease.
4. Emphysema.
5. Chemical carcinogenesis.

III. Short answers on: (5 x 2 = 10)

1. Granulation tissue.
2. Complications of fracture healing.
3. Infarct.
4. Hypertrophy.
5. Osteogenic sarcoma.

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

**[BPT 0122]**

**JANUARY 2022  
(AUGUST 2021 EXAM SESSION)**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR- (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY  
Q.P. Code : 746280**

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define pneumonia, write in detail about its etiology, pathogenesis and Lab diagnosis.

**II. Write notes on:** (5 x 5 = 25)

1. Structure of antibody.
2. Types of leprosy.
3. Measels.
4. Auto immunity.
5. Difference between Active immunity and passive immunity.

**III. Short answers on:** (5 x 2 = 10)

1. Cholera red reaction.
2. Hepatitis B Vaccination.
3. Autoclave holding time and temperature.
4. Application of Grams stain.
5. Herd immunity.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Describe the stages of wound healing by primary intention. Enumerate the factors that influence wound healing. Write a note on fracture healing.

**II. Write notes on:** (5 x 5 = 25)

1. Types of embolism.
2. Myasthenia gravis.
3. Differences between benign and malignant tumours.
4. Osteomyelitis.
5. Cerebrovascular accidents.

**III. Short answers on:** (5 x 2 = 10)

1. Types of pathological calcification with mechanism.
2. Complications of myocardial infarction.
3. Rickets.
4. Parkinsonism.
5. Tuberculosis of spine.

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

**[BPT 0622]**

**JUNE 2022  
(FEBRUARY 2022 EXAM SESSION)**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR- (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY  
Q.P. Code : 746280**

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define Typhoid, write in detail about its etiology, pathogenesis and Lab diagnosis.

**II. Write notes on:** (5 x 5 = 25)

1. ELISA.
2. Autoclave.
3. Fever.
4. Acid fast staining.
5. Klebsiella.

**III. Short answers on:** (5 x 2 = 10)

1. Middle brooks medium.
2. Name two bacteria showing oxidase positive.
3. Interferon.
4. Pseudomembranous colitis.
5. Hapten.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define Neoplasia. Discuss the differences between benign and malignant Tumours. Add a note on different routes of metastasis.

**II. Write notes on:** (5 x 5 = 25)

1. Osteoporosis.
2. Myasthenia Gravis.
3. Stages of Lobar Pneumonia.
4. Rheumatic Heart Disease.
5. Discuss wound healing by primary intention.

**III. Short answers on:** (5 x 2 = 10)

1. Types of Embolism.
2. Name 4 muscular dystrophies.
3. Fate of thrombus.
4. Cardinal signs of inflammation.
5. Name 4 risk factors for atherosclerosis.

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

**[BPT 1022]**

**OCTOBER 2022  
(AUGUST 2022 EXAM SESSION)**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR- (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY (Sec A & Sec B)  
Q.P. Code : 746280**

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Explain the etiology, pathogenesis and lab diagnosis of Tetanus.

**II. Write notes on:** (5 x 5 = 25)

1. Disinfection.
2. Types of infections.
3. Hypersensitivity.
4. Radiation sterilization.
5. Lab diagnosis of viral infections.

**III. Short answers on:** (5 x 2 = 10)

1. Contact dermatitis.
2. Hepatitis.
3. Differential medium.
4. Antiviral drugs.
5. Treatment of wound infections.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define inflammation. Discuss the vascular events of acute inflammation. Write the sequelae of acute inflammation.

**II. Write notes on:** (5 x 5 = 25)

1. Shock.
2. Atherosclerotic plaque.
3. Lobar pneumonia.
4. Chemical mediators of inflammation.
5. Asthma.

**III. Short answers on:** (5 x 2 = 10)

1. Osteomalacia.
2. Fate of thrombus.
3. Classification of leprosy.
4. Define neoplasm.
5. Types of calcification.

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

**[BPT 0423]**

**APRIL 2023  
(FEBRUARY 2023 EXAM SESSION)**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR - (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY (Sec A & Sec B)**

***Q.P. Code: 746280***

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** **(1 x 15 = 15)**

1. Define Immunity. Write about pathogenesis and methods of transmission of diseases.

**II. Write notes on:** **(5 x 5 = 25)**

1. Types of Immunoglobulins.
2. Radiation sterilization.
3. Diphtheria.
4. Shape and arrangement of bacterial cells.
5. Hypersensitivity reactions.

**III. Short answers on:** **(5 x 2 = 10)**

1. Mantoux test.
2. Inspissation.
3. Gram staining.
4. Widal test.
5. Cultivation of viruses.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** **(1 x 15 = 15)**

1. What are the types of necrosis? Elaborate on the types of necrosis.

**II. Write notes on:** **(5 x 5 = 25)**

1. Rheumatoid arthritis.
2. Factors affecting wound healing.
3. Vitamin A deficiency.
4. Air embolism.
5. Bronchial Asthma.

**III. Short answers on:** **(5 x 2 = 10)**

1. Complications of Myocardial infarction.
2. Causes for edema.
3. Differences between benign and malignant tumors.
4. Types of calcification.
5. Types of renal stones.

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

**[BPT 1123]**

**NOVEMBER 2023  
(AUGUST 2023 EXAM SESSION)**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR - (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY (Sec A & Sec B)**

*Q.P. Code: 746280*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Explain the types of antigen and antibody reactions.

**II. Write notes on:** (5 x 5 = 25)

1. Morphology of bacteria.
2. Epidemiology and virulence of infections.
3. Pathogenicity and Diagnosis of Syphilis.
4. Classify viruses.
5. Pathogenicity and Diagnosis of Rubella.

**III. Short answers on:** (5 x 2 = 10)

1. Decontamination.
2. Complement fixation test.
3. PCR.
4. List out any three Gram positive bacteria.
5. Write any three RTI causing Pathogens.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define emphysema. Write in detail on the types and pathogenesis of emphysema.

**II. Write notes on:** (5 x 5 = 25)

1. Gout.
2. Note on phagocytosis.
3. Rheumatic heart disease.
4. Wound healing by primary intention.
5. Myasthenia gravis.

**III. Short answers on:** (5 x 2 = 10)

1. Angina pectoris.
2. Primary complex in TB.
3. Air embolism.
4. Define Parkinsonism.
5. Types of gangrene and note on it.

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

**[BPT 0824]**

**AUGUST 2024**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR - (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY**

*Q.P. Code: 746280*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Explain the different methods of Sterilization with examples.

**II. Write notes on:** (5 x 5 = 25)

1. Bacterial Flagella and its types.
2. Type I Hypersensitivity Reaction.
3. Diagnosis of Bacterial infection.
4. Laboratory diagnosis of HIV Infection.
5. Pathogenicity and Diagnosis of Tuberculosis.

**III. Short answers on:** (5 x 2 = 10)

1. Bacterial Motility.
2. UTI pathogens.
3. Opportunistic infections.
4. Contact Dermatitis.
5. Fogging methods in Laboratory.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Define atrophy. Write cellular basis of atrophy. Describe about physiological and pathological atrophy with examples.

**II. Write notes on:** (5 x 5 = 25)

1. Edema.
2. Apoptosis.
3. Osteomyelitis.
4. Difference between benign and malignant tumor.
5. Secondary tuberculosis.

**III. Short answers on:** (5 x 2 = 10)

1. Corpulmonale.
2. Osteoporosis.
3. Define dysplasia.
4. Ankylosing spondylitis.
5. Causes of asthma.

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

**[BPT 0225]**

**FEBRUARY 2025**

**Sub. Code: 6280**

**BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR - (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY**

*Q.P. Code: 746280*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Explain the Morphology, Pathogenicity and Diagnosis of Hepatitis viruses.

**II. Write notes on:** (5 x 5 = 25)

1. Pathogenicity and Diagnosis of Salmonella.
2. Mechanisms of Auto Immunity.
3. Morphology and Diagnosis of Pseudomonas Infections.
4. Classify the types, sources and Reservoirs of infections.
5. Wound Infections.

**III. Short answers on:** (5 x 2 = 10)

1. Disinfectants.
2. Gram positive Bacteria.
3. Anaerobic bacteria.
4. Meningitis causing pathogens.
5. Gas sterilization methods.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:** (1 x 15 = 15)

1. Explain in detail vascular and cellular events in acute inflammation. What is the fate and complication of acute inflammation?

**II. Write notes on:** (5 x 5 = 25)

1. Edema.
2. Difference between benign and malignant tumors.
3. Pneumonia.
4. Osteomalacia and osteoarthritis.
5. Types of necrosis.

**III. Short answers on:** (5 x 2 = 10)

1. Hypertrophy with examples.
2. Gout.
3. Infarction.
4. Phagocytosis.
5. Morphology of Chronic venous congestion.

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

[BPT 0825]

AUGUST 2025

Sub. Code: 6280

BACHELOR OF PHYSIOTHERAPY DEGREE COURSE  
SECOND YEAR - (Regulation from 2017-2018 onwards)  
PAPER V – MICROBIOLOGY AND PATHOLOGY

*Q.P. Code: 746280*

**Time: Three hours**

**Answer ALL Questions**

**Maximum: 100 Marks**

**Section A and B must be answered in SEPARATE Answer Book**

**SECTION – A  
(MICROBIOLOGY)**

**I. Elaborate on:**

**(1 x 15 = 15)**

1. Describe the morphological features, clinical manifestation and diagnostic methods for Mycobacterium tuberculosis.

**II. Write notes on:**

**(5 x 5 = 25)**

1. Robert Koch and his postulates.
2. Acid fast staining.
3. Difference between Gram positive and Gram negative bacteria.
4. Aspergillosis.
5. Define infection. Source and mode of transmission of infection.

**III. Short answers on:**

**(5 x 2 = 10)**

1. Tyndallisation.
2. Toxic Shock Syndrome.
3. Types of Antigens.
4. MMR.
5. Name any two toxins produced by Staphylococcus.

**SECTION – B  
(PATHOLOGY)**

**I. Elaborate on:**

**(1 x 15 = 15)**

1. Explain cell injury. Types, causes and morphological changes.

**II. Write notes on:**

**(5 x 5 = 25)**

1. Factors affecting wound healing.
2. Gangrene.
3. Autoimmune disorders.
4. Metastasis.
5. Fate of thrombus.

**III. Short answers on:**

**(5 x 2 = 10)**

1. Significance of apoptosis.
2. Signs of inflammation.
3. Parkinsonism.
4. Characteristics of tumor.
5. Atrophy.

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