

# Question Paper

Exam Date & Time: 19-Jun-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BSc. MEDICAL IMAGING TECHNOLOGY / BACHELOR OF OPTOMETRY DEGREE EXAMINATION -  
JUNE 2024  
SUBJECT: MCB2101/MICR 203 - MICROBIOLOGY  
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

**Answer all the questions.**

**Draw diagrams wherever necessary.**

- 1) Explain the various sources and routes of spread in healthcare associated infection. (10)  
(5+5= 10 marks)
- 2) Classify sterilization and explain the working principle of autoclave. Mention TWO articles sterilized by this method. (10)  
(3+5+2 = 10 marks)

**3) Write short notes on:**

- 3A) Innate Immunity (5)
- 3B) Bacterial flagella (5)
- 3C) Contributions of Robert Koch (5)
- 3D) Type I hypersensitivity (5)

**4) Answer the following:**

- 4A) Write any TWO differences between Bacteria and Viruses (2)
- 4B) Name any TWO enriched media (2)
- 4C) List TWO examples for Live Vaccines (2)
- 4D) Name the phases of bacterial growth curve (2)
- 4E) Write TWO examples for autoimmune disorders (2)

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# Question Paper

Exam Date & Time: 20-Jun-2024 (10:00 AM - 01:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc. MEDICAL IMAGING TECHNOLOGY DEGREE EXAMINATION-JUNE 2024  
SUBJECT: MIT2102- RADIOGRAPHIC SPECIAL PROCEDURES  
(SCHEME 2020)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- |     |  |      |
|-----|--|------|
| 1)  | Explain contrast media toxicity. Classify the severity of reactions and a note on its management.  | (20) |
| 2)  | Illustrate in detail the anatomy of the urinary system. Describe the preparation, procedure and filming techniques done to evaluate the lower urinary tract. | (20) |
| 3)  | Explain in detail the technique and complications for direct needle puncture.  | (10) |
| 4)  | Explain the indications, contraindication, procedure and filming done to visualize nasolacrimal duct.  | (10) |
| 5A) | Outline patient preparation for barium meal follow through   | (5)  |
| 5B) | Explain the procedure and filming techniques for hysterosalpingography using foley's catheter.   | (5)  |
| 5C) | Outline procedure and filming techniques for sialography   | (5)  |
| 5D) | Explain in detail tubeless hypotonic duodenography   | (5)  |
| 5E) | Illustrate barium swallow for gastroesophageal reflux disease  | (5)  |
| 5F) | Compare anatomical features of jejunum and ileum   | (5)  |
| 6A) | Outline the adverse effects of barium  | (2)  |
| 6B) | Summarize features of omnipaque contrast media   | (2)  |
| 6C) | Compare MCU and ASU  | (2)  |
| 6D) | Illustrate catheters used in visceral angiography  | (2)  |
| 6E) | List out cathartics used in Barium enema   | (2)  |

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# Question Paper

Exam Date & Time: 18-Jun-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BSc. (BPT / RT / EMT / MIT / PHYSICIAN ASSISTANT / RRT & DT / PFT / BAOTT / CVT / BOT)  
DEGREE EXAMINATION - JUNE 2024  
SUBJECT: PAT2103 - PATHOLOGY  
(2020/2022 SCHEME)

Answer ALL questions.

Draw diagrams wherever necessary.

Marks: 50

Duration: 120 mins.

Answer all the questions.

- |     |   |     |
|-----|---|-----|
| 1A) | Define necrosis.  | (1) |
| 1B) | Describe the various types of necrosis and give clinical examples of each.<br>(6+3 = 9 marks)   | (9) |
| 2A) | Define anemia. Classify anemia based on morphology.<br>(1+2 = 3 marks)  | (3) |
| 2B) | List the clinical features, mention the etiology and discuss the basic laboratory investigations for iron deficiency anemia.<br>(2+2+3 = 7 marks) | (7) |
| 3A) | List the clinical features of rheumatoid arthritis and osteoarthritis.  | (5) |
| 3B) | Describe the events in wound healing by primary intention with diagrams.  | (5) |
| 3C) | Describe the morphology of tuberculoid and lepromatous leprosy.   | (5) |
| 3D) | List the clinical features and discuss the basic laboratory investigations of hemophilia.   | (5) |
| 4A) | Name two main types of carcinogens with one example each.   | (2) |
| 4B) | Mention the causes of cardiac failure.  | (2) |
| 4C) | List the etiological factors for gastric ulcer.   | (2) |
| 4D) | Define liver failure. List any two causes.  | (2) |
| 4E) | Define embolism. List any two types of embolism.  | (2) |

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# Question Paper

Exam Date & Time: 18-Jun-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

**THIRD SEMESTER BSc. (BOATT / RT / MIT / RRT & DT / BOT / BPT / PFT) DEGREE EXAMINATION - JUNE 2024**  
**SUBJECT: PATH 201/PATH-201 - PATHOLOGY**  
**(2016/2019 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

- 1) Define anaemia. Describe the aetiology, clinical features and laboratory investigations of Sickle cell anaemia. (10)  
(2+2+3+3 = 10 marks)
- 2) Define & list the types of chronic obstructive airway disease. Describe the aetiology, clinical features and types of emphysema. (10)  
(1+2+2+3+2 = 10 marks)
- 3A) Cellular changes in acute inflammation (5)
- 3B) Aetiology & clinical features of rheumatic heart disease. (5)
- 3C) Types and aetiology of Renal failure. (5)  
(1+4 = 5 marks)
- 3D) Tumour metastasis. (5)
- 4A) Define jaundice & list ANY TWO causes for Post hepatic jaundice. (2)
- 4B) Describe the peripheral blood findings in acute myeloid leukaemia (2)
- 4C) Define karyotyping & give TWO examples for autosomal dominant disorders (2)
- 4D) Describe the gross pathology of gastric ulcer (2)
- 4E) Describe the morphology of tuberculoid leprosy (2)

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# Question Paper

Exam Date & Time: 18-Jun-2024 (10:00 AM - 12:00 PM)



## MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc. HEALTH INFORMATION MANAGEMENT DEGREE EXAMINATION-JUNE 2024  
SUBJECT: PATH-203- PATHOLOGY  
(SCHEME 2016)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define acute leukaemia. Classify acute myeloid leukaemia according to French-American-British system (FAB). Describe the clinical feature of acute myeloid leukaemia. (10)  
(2+4+4 = 10 marks)
- 2A) Explain the cardinal signs of acute inflammation (5)
- 2B) Describe the sequelae of acute inflammation (5)
- 3A) Describe the aetiology and predisposing factors of a tumor. List 2 examples each of an epithelial and mesenchymal tumor (5)  
(3+2 = 5 marks)
- 3B) Describe the pathogenesis of septic shock (5)

4) Write a short note on:

- 4A) Thrombocytopenia (5)
- 4B) Sickle cell anemia (5)

5) In a tabular format differentiate the following terms with suitable examples

- 5A) Hyperplasia and hypertrophy (2)
- 5B) Metaplasia and dysplasia (2)
- 5C) Granuloma and granulation tissue (2)
- 5D) Thrombosis and embolism (2)
- 5E) Coagulative and liquefactive necrosis (2)

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