

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)

-----End-----

Question Paper

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



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT/BOT/BSc. (CVT / PHYSICIAN ASSISTANT / AOTT / RRT & DT / CND / RT / EMT / PFT) DEGREE

EXAMINATION - JUNE 2024

SUBJECT: MCB2103/MICR 201 - MICROBIOLOGY

(2022/2020/2019/2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Classify hypersensitivity. Explain the mechanism and mediators of type I hypersensitivity reactions. (10)
(2+5+3 = 10 marks)
- 2) Explain the prevention and investigations in healthcare associated infections. (10)
(5+5 = 10 marks)

3) Write short notes on:

- 3A) Bacterial growth curve (5)
- 3B) Mechanisms of autoimmunity (5)
- 3C) Explain the structure of gram negative cell wall (5)
- 3D) Laboratory diagnosis of fungal infections (5)

4) Answer the following:

- 4A) Classify protozoa with examples (2)
- 4B) Name TWO enriched media (2)
- 4C) Classify immunity (2)
- 4D) Write TWO contribution of Louis Pasteur (2)
- 4E) List any TWO live attenuated vaccines. (2)

-----End-----

Question Paper

Exam Date & Time: 19-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BACHELOR OF OCCUPATIONAL THERAPY DEGREE EXAMINATION-JUNE 2024
SUBJECT: OCT2101- BIOMECHANICS AND KINESIOLOGY
(SCHEME 2020)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Describe the structure of a typical vertebra with a diagram. Discuss any six contrasting features between cervical and thoracic vertebrae. (20)
(8+12 = 20 marks)
- 2) Explain the structure of tibiofemoral joint and mention five functions of meniscus. (20)
(15+5 = 20 marks)
- 3) List three differences between type I and type II levers. Explain the mechanical advantage of type I and type II lever with suitable example of each. (10)
(3+7 = 10 marks)
- 4) Describe the structure and functions of proximal and distal interphalangeal joints. (10)
- 5A) Describe 'translatory movement' with an example. (5)
- 5B) Describe subject factors that influence the joint range of motion (5)
- 5C) Differentiate between eccentric and isometric contraction of a muscle and mention an example for each (5)
- 5D) Describe the sequence of power grip with an example. (5)
(4+1 = 5 marks)
- 5E) Describe the Phase-II events of scapulohumeral rhythm. (5)
- 5F) Discuss the effect of using orthosis on gait. (5)
- 6A) Differentiate between 'kinesiology' and 'biomechanics'. (2)
- 6B) Describe zygapophyseal joint. (2)
- 6C) List the four characteristics of skeletal muscle. (2)
- 6D) List two features related to orthokinetics of humeroradial joint. (2)
- 6E) Describe the functional position of the hand. (2)

-----End-----

Question Paper

Exam Date & Time: 18-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BACHELOR OF OCCUPATIONAL THERAPY DEGREE EXAMINATION-JUNE 2024
SUBJECT: OCT2102- ASSESSMENTS IN OCCUPATIONAL THERAPY-II
(SCHEME 2020)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Explain the procedure of screening for motor and sensory components of the facial nerve. Identify the impact of facial nerve lesions on daily functions. (20)
(12+8 = 20 marks)
- 2) Explain the types of 'attention' and 'memory' with a suitable example. (20)
(10+10 = 20 marks)
- 3) Explain any five non-equilibrium coordination tests. (10)
- 4) Explain the influence of physical and social contexts in activities of daily living assessment. (10)
(5+5 = 10 marks)
- 5A) Identify the influence of gravity while performing manual muscle testing. (5)
- 5B) Explain the gross motor development of a typical child from 1 to 2 years of age. (5)
- 5C) Explain two risk factors involved in the assessment of work with a suitable example. (5)
(2½+2½ = 5 marks)
- 5D) Illustrate the elements of play and leisure with diagrams. (5)
(2½+2½ = 5 marks)
- 5E) Explain the preparations needed to assess work at the workplace. (5)
- 5F) Explain the following concepts related to assessments. (5)
i) face validity
ii) content validity.
(2½+2½ = 5 marks)
- 6A) Explain the Modified Brunnstrom's Motor Recovery 'stage 5 of arm and hand'. (2)
- 6B) Explain the term 'executive abilities'. (2)
- 6C) Explain 'mood' with an example. (2)
- 6D) List two self-report checklists to assess leisure. (2)
- 6E) Define the 'nominal scale' of measurement with an example. (2)

-----End-----

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.
(6+3 = 9 marks) | (9) |
| 2A) | Define anemia. Classify anemia based on morphology.
(1+2 = 3 marks) | (3) |
| 2B) | List the clinical features, mention the etiology and discuss the basic laboratory investigations for iron deficiency anemia.
(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) |

-----End-----

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)

-----End-----

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)

-----End-----