

Question Paper

Exam Date & Time: 18-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT / BOT / B.Sc. RRT &DT / BAOTT / BSc. RT / BSc. PFT / BSc. MIT / BSc. CVT DEGREE
EXAMINATION - APRIL 2022
SUBJECT: MICR 201 - MICROBIOLOGY
(2016 / 2019 SCHEME)

Marks: 50

Duration: 120 mins.

- 1) Explain the pathogenesis and laboratory diagnosis of enteric fever. (10)
(4+6 = 10 marks)
- 2) Classify sterilization. Explain the working principle and articles sterilized using autoclave. (10)
(4+4+2 = 10 marks)

3. Write short notes on:

- 3A) Components of innate immunity. (5)
- 3B) Pathogenesis of influenza virus. (5)
- 3C) Bacterial cell wall. (5)
- 3D) Laboratory diagnosis of HIV infections. (5)

4. Answer the following:

- 4A) Name TWO parasites causing intestinal infections. (2)
- 4B) Mention TWO bacterial culture methods. (2)
- 4C) List Any TWO bacteria causing meningitis. (2)
- 4D) Name TWO functions of IgM antibody. (2)
- 4E) Classify bacteria based on morphology. (2)

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Question Paper

Exam Date & Time: 19-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - APRIL 2022
SUBJECT: BRES 201 - PULMONARY DIAGNOSTICS
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Which are the techniques to measure Functional Residual Capacity (FRC)? Briefly explain any two techniques. (10)
(3+7 = 10 marks)
- 2) Explain in detail about the stepwise interpretation of Chest X ray. Also, mention the chest X-ray features of cardiogenic pulmonary edema and tension pneumothorax. (10)
(5+5 = 10 marks)
- 3A) Explain in detail the different lung volumes and capacities with the help of a diagram. (5)
- 3B) Write a note on Diffusion capacity for carbon monoxide (DLCO). (5)
- 3C) Write a note on the indications and hemodynamic measurements obtained using a pulmonary artery catheter. (5)
- 3D) Write a note on variable intrathoracic and variable extrathoracic obstruction with the help of diagrams. (5)
- 4A) Define incremental test. Give examples for incremental tests. (2)
- 4B) Enlist the complications of arterial puncture for blood gas testing. (2)
- 4C) Define maximal inspiratory pressure (MIP) and maximal expiratory pressure (MEP). (2)
- 4D) Define anion gap and bicarbonate gap. (2)
- 4E) Draw labelled diagram of normal capnograph. (2)

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Question Paper

Exam Date & Time: 20-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BPT / BOT / BSc. MIT / BRTT / BSc. RRT & DT / BAOTT / BSc. RT / BSc. PFT / BSc. CVT DEGREE
EXAMINATION - APRIL 2022
SUBJECT: PATH 201 - PATHOLOGY
(2016 /2016 RV/ 2019 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1A) Define and classify hypertension. Describe the effects of hypertension on various organs. (5)
(2+3 = 5 marks)
- 1B) Describe the causes and clinical features of cardiac failure. (5)
- 2A) Define anaemia. Describe the aetiology and clinical features of megaloblastic anaemia. (5)
(1+4 = 5 marks)
- 2B) Describe the clinical features, blood picture and chromosomal abnormality of chronic myeloid leukaemia. (5)
(2+2+1 = 5 marks)

3. Write short notes on:

- 3A) Fracture healing. (5)
- 3B) Cerebrovascular disease. (5)
- 3C) Differences between benign and malignant tumours with examples. (5)
- 3D) Bronchial asthma. (5)

4. List the following:

- 4A) Cellular events of acute inflammation. (2)
- 4B) The fate of a thrombus. (2)
- 4C) The types of necrosis. (2)
- 4D) Any two types of jaundice with examples. (2)
- 4E) Two examples each of nephritic and nephrotic syndrome. (2)

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Question Paper

Exam Date & Time: 21-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - APRIL 2022
SUBJECT: BRES 203 - PEDIATRIC RESPIRATORY CARE
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

Draw neat labelled diagram wherever required.

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| 1) | Describe fetal circulation and fetal shunts.
(5+5 = 10 marks) | (10) |
| 2) | Write a note on diagnosis and management of cystic fibrosis.
(5+5 = 10 marks) | (10) |
| 3A) | Acapella | (5) |
| 3B) | Describe normal capnogram | (5) |
| 3C) | Indications and mechanism of action of caffeine
(2+3 = 5 marks) | (5) |
| 3D) | Spirometry findings in Asthma | (5) |
| 4A) | Name any 2 high-flow oxygen therapy devices used in paediatrics. | (2) |
| 4B) | Normal values for pulmonary capillary wedge pressure and mean pulmonary artery pressure. | (2) |
| 4C) | Principles of pulse oximetry. | (2) |
| 4D) | Indications of bronchoscopy. | (2) |
| 4E) | What is pectus excavatum? | (2) |

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Question Paper

Exam Date & Time: 22-Apr-2022 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER B.Sc. RESPIRATORY THERAPY DEGREE EXAMINATION - APRIL 2022
SUBJECT: BRES 205 - PULMONARY DISEASES
(2016 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define cardiogenic pulmonary edema. List the etiological factors. Describe the different diagnostic methods of cardiogenic pulmonary edema. (10)
(2+2+6 = 10 marks)
- 2) In detail explain the pathophysiology and management of Acute Respiratory Distress Syndrome (ARDS) (10)
(4+6 = 10 marks)
- 3A) Classify pulmonary hypertension with an example (5)
- 3B) In detail explain the management of myasthenia gravis (5)
- 3C) Write a short note on any two types of interstitial lung disease. (5)
- 3D) Describe the management strategies of drowning. (5)
- 4A) Define Guillain Barre Syndrome (2)
- 4B) Classify Cyanotic Heart Disease (2)
- 4C) Write the chest x-ray features of pneumothorax (2)
- 4D) Define Asthma (2)
- 4E) List the etiology of pneumonia (2)

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