

Question Paper

Exam Date & Time: 20-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. (RT/ MIT/EMT/BPT/CVT/RRT & DT/BOT/AOTT/ PHYSICIAN ASSISTANT/BPO) DEGREE

EXAMINATION - MAY/JUNE 2024

SUBJECT: ANA1201/ ANA1205 - ANATOMY - II
(2020/2022 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Describe the arches of foot and mention their applied anatomy
(8+2 = 10 marks) | (10) |
| 2) | Describe the median nerve under following headings
A) Origin
B) Root value
C) Course
D) Distribution
E) Applied anatomy
(1+1+2+5+1 = 10 marks) | (10) |
| 3A) | Popliteal fossa | (5) |
| 3B) | Deltoid muscle | (5) |
| 3C) | Sciatic nerve | (5) |
| 3D) | Elbow joint | (5) |
| 4A) | Brachial artery | (2) |
| 4B) | Femur | (2) |
| 4C) | Buccinator muscle | (2) |
| 4D) | Median cubital vein | (2) |
| 4E) | Femoral sheath | (2) |

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Question Paper

Exam Date & Time: 24-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. (NMT/RT/ MIT/EMT/BPT/BOPT/CVT/CND/RRT & DT/BOT/AOTT/ PHYSICIAN
ASSISTANT/PFT/MLT) DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: BIC1201 - BIOCHEMISTRY
(2020/2022 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

- 1) Define gluconeogenesis and write the reactions of gluconeogenesis from pyruvate (10)
- 2) Explain with illustrations the biosynthesis of mature collagen, emphasizing the reactions catalyzed by prolyl hydroxylase, lysyl hydroxylase, and lysyl oxidase. (10)
- 3A) Illustrate the classification of lipoproteins based on their ultracentrifugation properties. Mention the site of synthesis and function for any THREE lipoproteins. (5)
- 3B) Describe in detail the activation of fatty acid and the steps of beta oxidation in mitochondria. (5)
- 3C) Mention the RDA for dietary fibres. Explain FOUR benefits of consuming dietary fibres (5)
- 3D) Mention the RDA, sources and chemical forms of vitamin A. List FOUR features of vitamin A deficiency (5)
- 4A) Mention the normal blood levels of fasting glucose, urea, cholesterol and total bilirubin. (2)
- 4B) Write the normal level of albumin in serum and mention any TWO conditions in which its levels are altered. (2)
- 4C) List FOUR differences between DNA and RNA (2)
- 4D) Write the reaction catalysed by pyruvate dehydrogenase complex indicating the coenzymes required. (2)
- 4E) Define metabolic alkalosis. Mention TWO causes for it. (2)

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Question Paper

Exam Date & Time: 22-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

**SECOND SEMESTER B.Sc. (NMT/RTT MIT/EMT/BPT/BOPT/CVT/RRT & DT/BOT/AOTT/ PHYSICIAN
ASSISTANT/BPO/PFT/MLT/RESPIRATORY THERAPY) DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: PHY1201 - PHYSIOLOGY - II
(2020/2022 SCHEME)**

Marks: 50

Duration: 120 mins.

Answer all the questions.

Write brief, clear and legible answers.

Illustrate your answers with diagrams and flow charts wherever appropriate.

- 1) Name the functional divisions of cerebellum. Enumerate the functions of each lobe of cerebellum. (10)
Add a note on clinical features of cerebellar lesion.
(2+5+3 = 10 marks)
- 2) Describe the actions of growth hormone. Explain the regulation of secretion of growth hormone. Add (10)
a note on the cause and clinical features of gigantism
(4+3+3 = 10 marks)
- 3A) Enumerate any FOUR functions of saliva. Add a note on Xerostomia (5)
(4+1 = 5 marks)
- 3B) Describe the renal tubular reabsorption of glucose. (5)
- 3C) Draw a labeled diagram of the lateral spinothalamic pathway and mention any two sensations (5)
carried by the same.
- 3D) Describe the uterine endometrial changes during menstrual cycle (5)
- 4A) List any TWO clinical features of Parkinson's disease (2)
- 4B) List any TWO properties of receptors (2)
- 4C) Enumerate any TWO functions of gall bladder (2)
- 4D) Define Renal clearance. Mention the substance used for the estimation of GFR (2)
- 4E) List the indicators of ovulation (2)

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Question Paper

Exam Date & Time: 27-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. EMT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: EMT1221 - ECG AND HEMODYNAMIC MONITORING
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|---|------|
| 1) | Explain the risk factors, pathophysiology, clinical features of Myocardial Infraction. | (10) |
| 2) | Describe the basic principles, indication and special considerations
a) Pacemakers
b) Capnography | (10) |
| 3A) | Classify Atrioventricular Blocks.
Write the AHA algorithm for Brady Arrhythmias. | (5) |
| 3B) | Explain the ECG changes and pathophysiology for Pulmonary Embolism. | (5) |
| 3C) | Write a short note on Sick Sinus syndrome. | (5) |
| 3D) | Briefly explain the Conduction system of Heart. | (5) |
| 4A) | What are the branches of Left coronary Artery? | (2) |
| 4B) | What are the types of Cardiomyopathies? | (2) |
| 4C) | List some Tachy-arrhythmias. | (2) |
| 4D) | Expand "HASIA". | (2) |
| 4E) | What are the ECG features of Premature Atrial Beats. | (2) |

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Question Paper

Exam Date & Time: 29-May-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER B.Sc. EMT DEGREE EXAMINATION - MAY/JUNE 2024
SUBJECT: EMT1222 - EMERGENCY EQUIPMENT - II
(2020 SCHEME)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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|-----|---|------|
| 1) | Explain the principles of various oxygen delivery equipment's used in clinics. | (10) |
| 2) | Explain in detail about the procedure of defibrillation, indications, types of defibrillator and what are the equipment's need for the procedure. | (10) |
| 3A) | Illustrate the steps of inserting a Nasogastric tube. | (5) |
| 3B) | Explain the indications and the equipment used in urinary catheterization. | (5) |
| 3C) | Explain the indications, principle, and the measures in maintaining a mechanical ventilator. | (5) |
| 3D) | Write a short note on AED and mention its special circumstances. | (5) |
| 4A) | Explain the indications of using a syringe pump in ED. | (2) |
| 4B) | Name any four complications of NG tube insertion. | (2) |
| 4C) | Definition of ETCO ₂ monitoring. | (2) |
| 4D) | Mention the indications for using Nasopharyngeal airway device. | (2) |
| 4E) | List out the parts of oropharyngeal airway device. | (2) |

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