

Question Paper

Exam Date & Time: 25-Nov-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Human Anatomy and Physiology-I [PHA-BP101T]

Marks: 75

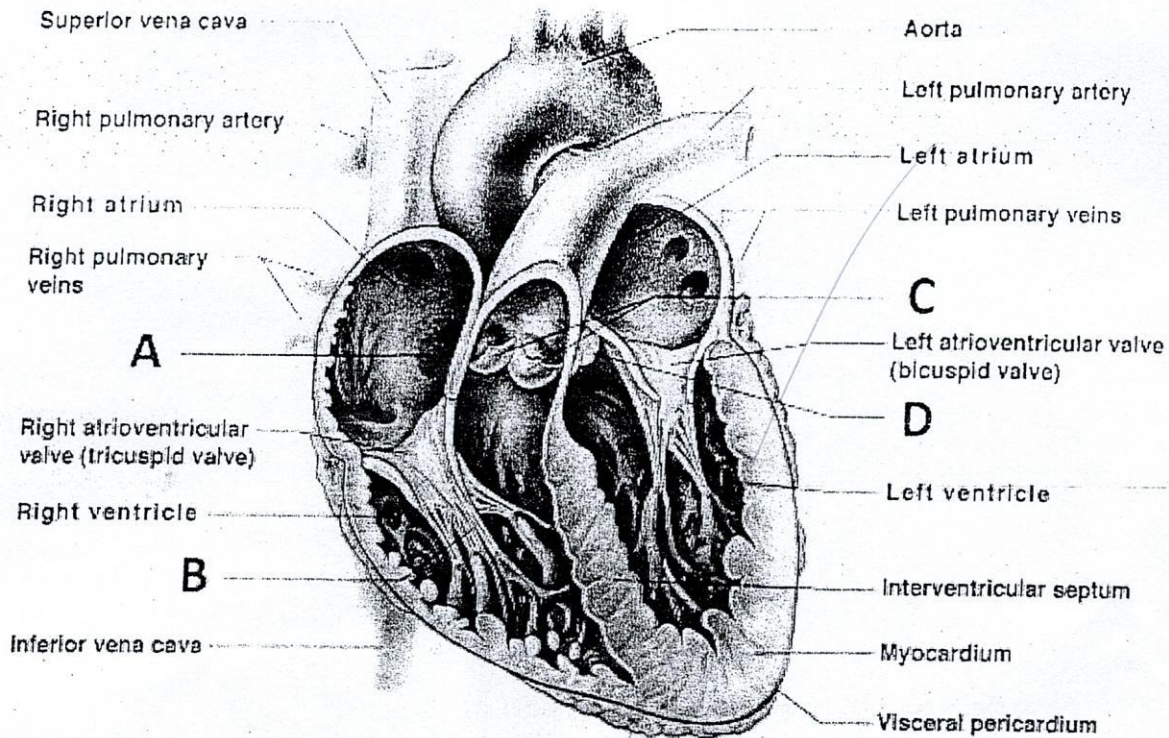
Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) Explain the various gastric glands and cell types present in the gastric mucosa with a neat, labelled diagram. (5)
- A)
- B) Describe the mechanical and chemical processes of digestion in the stomach. (5)
- 2) Case 1: 30 year old male has a Hemoglobin (Hb) level of 12g/dl (6)
Case 2: 25 year old female has a Hb level of 12 g/dl
Case 3: 12 year old boy has a Hb level of 12 g/dl
Case 4: Pregnant woman has a Hb level of 12 g/dl
A) Comment on each case and if any abnormality is observed how it can be rectified? Explain the recycling of haemoglobin components.
- B) The below figure depicts the internal anatomy of heart. Identify the parts marked A, B, C and D. Justify your answers for the identification (4)

(PTO)



III Short Answers

Answer all the questions.

- 1) Glucose movement into different cells varies. Explain with examples (5)
- 2) With the help of a diagram discuss the concept of fluid mosaic model of plasma membrane (5)
- 3) Explain receptor mediated endocytosis with example (5)
- 4) A 48 year old man comes to the emergency department complaining of disturbance in vision and has difficulty in swallowing. History revealed that patient ate fish that was canned. Symptoms began three hours ago. Construct the physical and laboratory examination to be conducted. Examine the physiology connected to key symptoms (5)
- 5) Describe the contraction cycle of skeletal muscle (5)
- 6) Mr. Balu, 45-year-old migrant labour reported to doctor with fever and chills for the past 3 days. He was complaining of headache and retro orbital pain. On examination he had rashes over the body and there was minor bleeding from gums and nose. He mentioned that there was lot of stagnant water in and around his house and mosquitoes were present. Doctor advised for Total WBC, DLC, and Platelet count for the patient. Explain the significance of these tests justifying the underlying condition. (5)
- 7) Mr. Ajay went to physician with a complaint of repeated headache, chest pain and fatigue. On physical examination the physician observed that Mr. Ajay's blood pressure was 190/100 mmHg. Immediately, he prescribed anti-hypertensive medications and recommended him to visit after a week. In the second visit the physician observed that Ajay's blood pressure has not reduced drastically and was persistently elevated. He recommended for abdominal scan and blood test. Mr. Ajay was diagnosed to have pheochromocytoma (tumor of adrenal gland). Identify the type of hypertension that has affected Ajay. Justify your identification with appropriate reason. (5)

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Question Paper

Exam Date & Time: 27-Nov-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmaceutical Analysis-I [PQA-BP102T - S2]

II Long Answers Answer all the questions

- 1) Explain the titration curve of 100ml 0.1M iron(II) with 0.1M cerium (IV) in the presence of dilute (10) sulphuric acid
- 2) Explain in detail about direct, replacement and back complexometric titrations with suitable examples. (10)

III Short Answers Answer all the questions.

- 1) a) Define the terms Molality and mole fraction
b) 15 ml of 0.1N hydrochloric acid was completely neutralized with 0.25N sodium hydroxide. Calculate Volume and weight per litre of sodium hydroxide (2+3 marks) (5)
- 2) a) Name volumetric methods of analysis
b) Why starch is used as indicator in Iodometry towards the end point? (3+2 marks) (5)
- 3) Discuss the role of precipitation in gravimetric analysis (5)
- 4) Explain Modified Mohr's method in detail (5)
- 5) a. Classify solvents in non-aqueous titration with examples. (2 M) (5)
b) Write the principle involved in titration of weak bases with perchloric acid. (3 M) (5)
- 6) Explain the estimation of ferrous by dichrometry using internal indicator method (5)
- 7) Calculate the initial pH and the pH at neutralization point for the titration of 0.1M acetic acid Vs 0.1M sodium hydroxide (5)

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Question Paper

Exam Date & Time: 29-Nov-2019 (09:30 AM - 12:30 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

Pharmaceutical Inorganic Chemistry [PCH-BP104T - S2]

Marks: 75

Duration: 180 mins.

II Long Answers

Answer all the questions.

- 1) a) What are the possible sources of impurities in pharmaceutical preparations? Classify elemental impurities. (10)
b) Give the principle involved in limit test for chlorides in the following compounds:
i) sodium bicarbonate ii) potassium permanganate
- 2) a) Give the normal levels in blood plasma and physiological roles of the following electrolytes: (10)
i) sodium ii) phosphate
b) Give the method of preparation, principle involved in the assay of calcium gluconate.

III Short Answers

Answer all the questions.

- 1) What are ideal properties of antacids? Why combination therapy is preferred for antacids? Name any three combination formulations of antacids. (5)
- 2) Define saline cathartics with examples. How do they act? Mention their uses. (5)
- 3) Classify anti-microbial agents with examples. Give the principle involved in the assay of hydrogen peroxide. (5)
- 4) Give the method of preparation, principle involved in the assay and medicinal uses of Ferrous Sulphate (5)
- 5) Write a note on the following: (5)
a) Activated Charcoal b) Potash alum
- 6) Explain the working principle of Geiger Muller counter. Name few units to measure the radioactivity. (5)
- 7) Comment in brief on the following (5)
a) diagnostic applications of radioisotopes 3 marks
b) advantages of betadine over iodine tincture 2 marks

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