

# Question Paper

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



## MANIPAL ACADEMY OF HIGHER EDUCATION

SECOND SEMESTER M.Sc. PERFUSION TECHNOLOGY DEGREE EXAMINATION - JUNE 2024

SUBJECT: PFT5202 - EQUIPMENTS IN PERFUSION TECHNOLOGY AND PHYSIOLOGY & PATHOLOGY OF PERFUSION  
(2021 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

Draw Diagrams wherever Appropriate.

- 1) What is hemodilution and explain its principles? What are the different types of priming fluids used in CPB and discuss its importance. (20)  
(10+10 = 20 marks)
- 2) Discuss myocardial protection for on pump and off pump cardiac surgery in detail. (20)  
(10+10 = 20 marks)
- 3A) Explain the blood conservation techniques used during cardiac surgery in detail. (10)
- 3B) Explain working principle of bubble oxygenator in detail with its merits and demerits. (10)
- 3C) Discuss the SIRS effect after bypass on neurologic and renal system. (10)
- 3D) Compare and discuss roller and centrifugal pumps. (10)
- 4A) Discuss prebypass ultrafiltration in detail. (5)
- 4B) Explain the working principle of heat exchanger in detail. (5)
- 4C) Explain the criteria to choose double stage and single stage venous cannula. (5)
- 4D) Discuss the cannulation sites for venous cannulation with its advantages. (5)

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# Question Paper

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



## MANIPAL ACADEMY OF HIGHER EDUCATION

**SECOND SEMESTER M.Sc. PERFUSION TECHNOLOGY DEGREE EXAMINATION - JUNE 2024**  
**SUBJECT: PFT5203 - PHARMACOLOGY OF CARDIOVASCULAR DRUGS**  
**(2021 SCHEME)**

**Marks: 50**

**Duration: 120 mins.**

**Answer all the questions.**

**Draw Diagrams wherever Appropriate.**

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| 1)  | List and explain in detail about calcium channel blockers. | (20) |
| 2A) | Discuss in detail about antithrombotic agents.             | (10) |
| 2B) | List and explain drugs under antifibrinolytics.            | (10) |
| 3A) | Discuss the mechanism of action of nitrates.               | (5)  |
| 3B) | Discuss about lipid-lowering drugs.                        | (5)  |

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