

**VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM
(Deemed to be University)**

**B.Sc. (Perfusion Technology) DEGREE EXAMINATION
September 2021
Third Year**

PERFUSION TECHNOLOGY - ADVANCED

Time: Three hours

Maximum: 75 marks

I. Write an essay on any ONE of the following: (1 x 20 = 20)

1. P_H-stat management, oxyhaemoglobin dissociation curve while cooling down deeply.
2. Possible accidents, mechanical and electrical failures and uses of safety devices.

II. Write short notes on any TWO of the following: (2 x 10 = 20)

3. Explain veno-venous ECMO.
4. Examples of experimental perfusion.
5. Modified Ultra Filtration (MUF) in paediatric cases.
6. Open-system and closed-system in membrane oxygenation.

III. Write short answers on any SEVEN of the following: (7 x 5 = 35)

7. CUF in kidney failure patients.
8. Mention some advances in perfusion techniques.
9. Patient selection for ECMO.
10. How is ECMO different from regular bypass?
11. Why are coated circuits used in ECMO?
12. Venous drainage management in minimal invasive surgery.
13. Write about arterial, venous cannulae – what are they made of?
14. Perfusion for invasive cardiology in cathlab.
15. What is total circulatory arrest?
16. Priming solutions in paediatric cases.