SI.No.M21246 Course code: 32117204

VINAYAKA MISSION'S RESEARCH FOUNDATION, SALEM
(Deemed to be University)
B.Sc(PERFUSION TECHNOLOGY) DEGREE EXAMINATIONS - September 2021
Second Year
INTRODUCTION TO PERFUSION TECHNOLOGY

Three Hours Maximum: 75 marks

SECTION - A

I. Choose the Best Answer : (10 x 1 = 10)

1. ----------used the blood pump to operate the left heart in a patient with patient's own lung rather than using mechanical oxygenator.
   a)Dodrill b)Wesolowski c) C. Walton Lillehei d)cooley
2. John Gibbon completed medical in ---------- medical college
   a) Jefferson b) Massachusetts c) boston d) Minnesota
3. RBC normal value----------
   a) 4.5 to 5 million/cubic millimeter
   b) 5 to 5.5 million /cubic millimeter
   c) 4 to 4.5 million /cubic millimeter
   d) 5.5 to 6 million /cubic millimeter
4. heparin concentration is monitored by ----------
   a)pro thrombin time b)Thrombin time
   c)clotting time d) Activated Clotting Time
5. Connectors should be smooth enough to minimize ----------
   a) damage b)turbulence c) speed d)flow
6. The major disadvantage of the bubble oxygenator is ----------
   a)cost b)breakage c) massive air embolism d) water leak
7. The membrane oxygenator separates blood from the gas phase by ----------
   ---material
   a) semi permeable membrane b) true membrane
   c) silicon membrane d) spiral membrane
8. 1959 --------proposed a more advanced designs in which the roller pump
   a) Debakey b) john gibbon c) Melrose d)Clark and Gollan
9. Cooling rate should be ----------per minute.
   a) 2º Celsius b) 3º Celsius c) 1 degree Celsius d) 0.5º Celsius
10. The bubbles are flow through the ----------of the bubble trap
    a) silicon membrane
    b)microporous hydrophobic membrane
    c) microporous hydrophilic membrane
    d) true membrane

II. Write Short Answers on any FIVE of the following: **(5 x 5 = 25)**

11. Pre CPB surgery.
12. Non cardioplegic methods during cardiac surgery on CPB.
13. What are the different types of Hypothermia
14. Different drugs to be added in Circuit.
15. Platelet disorders.
16. What is pulse oximeters, what is its purpose of usage.
17. Gas transfer

III. Write Short Essays on any TWO of the following: **(2 x 10 = 20)**

18. Hemodynamic and Haematologic monitoring
19. What is filter? Where do you need to incorporate exactly in your bypass circuit?
20. What is ACT? Why it is essential to be monitored in CPB. Mention normal ACT values. And values to be maintained in CPB.
21. What is cannula? What are the types of cannula. Explain breiefly the usage of each cannula.

IV. Write Essays on any ONE of the following: **(1 x 20 = 20)**

22. Explain in detail the types of Oxygenator.
23. Write a note on blood disorders and its corrective measures in CPB.

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