



BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – B.Sc.(PA)-2020

Course Name – Perfusion Technology

Course Code - BPA601

(Semester VI)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Choose from the given option ,ECMO for the first time was done by:-
- | | |
|---------------------|----------------------|
| a) Dr.Gibbons. | b) Dr.J.Donald Hill. |
| c) Dr.Bramson Jones | d) Dr.Stanley Hill. |
- (ii) Select the correct option about role of heparin in extracorporeal circuits.
- | | |
|--------------------------|-------------------------|
| a) Antiplatelet effect | b) Anticoagulant effect |
| c) Antithrombotic effect | d) Coagulant effect |
- (iii) Define Ejection fraction in ECHO :-
- | | |
|---------------------------------------|-----------------------|
| a) Capability of heart to pump blood. | b) Preload on heart. |
| c) Afterload on heart. | d) None of the above. |
- (iv) Identify the false statement about CPB circuit.
- | | |
|---|--|
| a) Membrane oxygenator is better than bubble oxygenator for prolonged cardiac surgeries | b) Filter prevents debris from the operating site to reach the oxygenator. |
| c) Bubble oxygenator is better than membrane oxygenator. | d) Centrifugal pump is used in an extracorporeal circuit. |
- (v) Identify the one which is not a mode of mechanical ventilation.
- | | |
|-------------------|---------------------|
| a) Volume control | b) Pressure control |
| c) SIMV | d) Volume load |
- (vi) Which of the following represent a contraindication of NAVA?
- | | |
|-----------------------------------|----------------------------------|
| a) Low respiratory drive | b) Erratic respiratory drive |
| c) Anatomical defect in diaphragm | d) Synchronus respiratory drive. |
- (vii) Recognize the full form of SLED :
- | | |
|-----------------------------------|-----------------------------------|
| a) Slow Low Efficiency Dialysis | b) Super Light Efficient Dialysis |
| c) Slow Light Efficiency Dialysis | d) Slim Light Efficiency Dialysis |
- (viii) Tell what ECMO stands for:-
- | | |
|---------------------------------------|---|
| a) Extracardiac membrane oxygenation. | b) Extracorporeal membrane oxygenation. |
|---------------------------------------|---|

- c) Extracavernous membrane oxygenation. d) Extrachitinous membrane oxygenation.
- (ix) Select which is not a mode of mechanical ventilation
- a) Volume Control. b) Pressure Control
c) SIMV d) Volume Load.
- (x) Choose from the option what SIMV stands for:-
- a) Synchronised Intermittent Mandatory Ventilation. b) Synchronsed Initial Mandatory Ventilation.
c) Synchronic Mandatory Ventilation. d) Synchronic Intermittent Mechanical Ventilation.
- (xi) Determine what NAVA stands for:-
- a) Neurally Adjusted Ventilatory Assist. b) Assisted neurological ventilation.
c) Neurally automated Ventilatory assist. d) Neural auxiliary ventilation assist.
- (xii) Determine what X-ray cannot diagnose :-
- a) Pancreatitis. b) Intestinal Obstruction.
c) Pneumonitis. d) Tuberculosis.
- (xiii) Choose from the option ,“Asystole” in ecg is seen in case of:-
- a) Death. b) Strenous Exercise.
c) Sleep d) Sedentary work.
- (xiv) Identify Which is not a complication of plasmapheresis
- a) Haematoma. b) Retroperitoneal bleed.
c) Hypotension. d) Atrial fibrillation.
- (xv) Choose the statement true about Veno-Venous ECMO:-
- a) Useful for patients with severe respiratory failure refractory to other therapies. b) Low flow ECMO is a sub configuration.
c) Not the therapy of choice in cardiogenic shock. d) Not useful in myocarditis.

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Complete the following statement by filling up the blank."Dissociative Anaesthesia is caused by _____." (3)
3. Give examples of Two therapeutic methods that are extracorporeal circulations (3)
4. Explain why "ECMO is a better tool than mechanical ventilation". (3)
5. Explain why "WBC count is increased in infections." (3)
6. "Depleted ferritin levels are suggestive of microcytic hypochromic anaemia." .Justify the statement. (3)

OR

- "High PCV in complete blood count report of a dengue patient is alarming."Justify the statement. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Discuss the process of inducing hypothermia & its importance in cardiothoracic surgery. (5)
8. Construct an essay on thrombocytopenia while classifying various types of thrombocytopenias in detail. (5)
9. Discuss & support the statement" CBC is a useful tool to diagnose a variety of infections". (5)
10. Construct an essay on"Heart Lung Machine". (5)
11. Discuss the management of "Disseminated Intravascular Coagulation while enlightening benefits of platlet transfusion. (5)
12. Write a short essay on "Evolutionary history of cardiothoracic surgery & cardiopulmonary bypass technique" & enumerate the contributions of few leading surgeons in this field. (5)

OR

Write a short essay on "Evolutionary history of cardiothoracic surgery & cardiopulmonary bypass technique" & enumerate the contributions of few leading surgeons in this field. (5)
