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Honeathural

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

SELECTION EXAMINATION FOR ENROLMENT TO THE IN-SERVICE
TRAINING PROGRAMME IN POSTGRADUATE DIPLOMA IN
TRANSFUSION MEDICINE – OCTOBER 2022

Date :- 10th October 2022

Time:- 1.00 p.m. – 4.00 p.m.

Answer six (06) questions only.

Answer each question in a separate book.

1.

1.1. What are the essential elements in safe transfusion practice? (40 marks)

1.2. Write briefly on “positive patient identification” (10 marks)

1.3. List the important factors to be checked in a blood pack before starting the transfusion. (20 marks)

1.4. A patient is to be transfused in the ward. What vital parameters would you check in this patient and at what stages? (30 marks)

2. A 47-year-old female patient underwent a Total Abdominal Hysterectomy (TAH) for multiple uterine fibroids with severe menorrhagia. During surgery she was transfused with one unit of red cell concentrate as there was considerable bleeding to which she developed a febrile non haemolytic transfusion reaction. Post-operative period was uneventful, and she was discharged on post-operative day 4. She was readmitted with multiple ecchymotic patches with no other symptoms after 5 days of being discharged.

2.1. List three (03) likely differential diagnoses. (15 marks)

2.2. What additional information would you inquire in establishing the diagnosis. (35 marks)

2.3. Outline the management of the most probable diagnosis during her current admission. (50 marks)

Contd...../2-

3.
 - 3.1. What are the Hepatitis viruses reported to have transmitted by blood transfusion? (10 marks)
 - 3.2. Name the serological markers available to detect Hepatitis B infection? (15 marks)
 - 3.3. What are the differences of detection of different serological markers in acute Hepatitis B infection and chronic Hepatitis B career state? (20 marks)
 - 3.4. List the methods available to detect Hepatitis B infection in donated blood. (15 marks)
 - 3.5. List the strategies you can adopt to prevent post transfusion Hepatitis B infection. (40 marks)
4.
 - 4.1. What are the advantages of blood component preparation in a transfusion service? (30 marks)
 - 4.2. What are the types of primary and modified blood components available in a blood bank? (20 marks)
 - 4.3. What are the indications of primary blood components that you have mentioned in 4.2? (50 marks)
5.
 - 5.1. Briefly explain the pathophysiology of Haemolytic Disease of Fetus and Newborn (HDFN) due to anti D. (40 marks)
 - 5.2. List out the strategies to prevent Rh D HDFN. (40 marks)
 - 5.3. State three (03) blood group antibodies which can cause HDFN other than anti D. (10 marks)
 - 5.4. State three (03) blood group antibodies which does not cause HDFN. (10 marks)
6.
 - 6.1. Define the complement system. (20 marks)
 - 6.2. Briefly describe the pathways of activation of complement system. (30marks)
 - 6.3. What is the role of complements in acute hemolytic transfusion reaction? (50 marks)

Contd...../3-

7.
 - 7.1. State the indications for the following immunohaematological tests (30 marks)
 - 7.1.1. Direct antiglobulin test (DAT)
 - 7.1.2. Indirect antiglobulin test (IAT)
 - 7.2. How do you perform Indirect Antiglobulin Test (IAT)? (40 marks)
 - 7.3. How do you select compatible blood for the patients with following subgroups of ABO blood group system? (30 marks)
 - 7.3.1. A₂ Rh D Negative with anti A₁ not reactive at 37°C
 - 7.3.2. A₂ Rh D positive with anti A₁ reactive at 37°C
 - 7.3.3. A₂B Rh D positive with anti A₁ reactive at 37°C

8. Indicate giving reasons whether the following donors are deferred or accepted for blood donation. If deferred write the period of deferral (10 marks each)
 - 8.1. Donor had Dengue fever 4 months back.
 - 8.2. A donor with symptoms of COVID-19 three weeks back, not tested, now fully recovered.
 - 8.3. Donor had Chicken pox, 5 weeks after full recovery.
 - 8.4. Donor had returned from Maldives 15 months back.
 - 8.5. Donor has Hypercholesterolaemia on treatment but no symptomatic disease.
 - 8.6. Donor had Leptospirosis 10 months back. Has undergone two plasma exchanges.
 - 8.7. Donor (54-year-old) is on hormone replacement therapy after menopause.
 - 8.8. Donor has a household contact with a past history of Hepatitis B infection 3 years back.
 - 8.9. Donor underwent a splenectomy for trauma. Recovered but on prophylactic antibiotics.
 - 8.10. Donor was given radioactive iodine therapy 4 months back.