M.D. DEGREE EXAMINATION

BRANCH XXI – IMMUNOHAEMATOLOGY AND BLOOD TRANSFUSION

PAPER III – BLOOD DONOR ORGANISATION AND MANAGEMENT, TECHNOLOGY OF COMPONENTS AND CLINICAL HAEMOTHERAPY

Q.P. Code: 202098

Time: Three Hours   **Maximum: 100 Marks**

I. Essay Questions: **(2 x 15 = 30)**

1. Why is blood safety dependent on repeat voluntary blood donors? Describe the various strategies to improve motivation and retention of voluntary blood donors.

2. Discuss the various manifestation and lab profile of a patient with haemotoxic snakebite and how the blood bank can support such patients?

II. Short notes: **(10 x 5 = 50)**

1. National Haemovigilance program of India.

2. Shortage of blood – a public health problem?

3. Assessment of platelet function for patients.

4. Use of APCC for patients with acquired bleeding disorder.

5. Transfusion associated cardiac overload.

6. Steps to set up a blood storage unit in a hospital without a Blood bank.

7. Methods to study clinical demand for blood/components and MSBOS.

8. Investigation of a suspected major haemolytic transfusion reaction.

9. Use of technology to ensure bedside transfusion safety.

10. Members of an role of a hospital transfusion committee.

III. Reasoning Out: (4 x 5 = 20)

1. A 60 bedded Taluk hospital that is 20 km away from your Blood bank requests blood from your Blood Bank at least thrice every week. Currently, they send patient's relatives with samples along with a request.

   a) What would your strategy be to address the problem?

   b) How would you monitor the facility?

2. A lady 27 years second child in Nursery with platelet count 48,000/cumm. Maternal Anti HPA-la >1:32

   a) What would be your diagnosis?

   b) What are the testing platform available?

   c) How would you support the child?

3. A sample of blood is received in a blood bank in a lavender cap tube with a request for 2 units of packed red cells for transfusion to a patient in labour room for anaemia due to acute blood loss. The identity on the tube matches the request form. The sample was accepted. Upon forward typing, the group in the count sample does not match the historical group of the patient as recorded during ANC visit.

   a) What is the most likely type of error?

   b) What are next steps to ensure safe blood?

4. An 18 year old male patient who has been repeatedly transfused plasma for his severe haemophilia A is admitted for tonsillectomy in your hospital. His lab results are as follows: Haemoglobin 8 g/dL; APTT 102 sec (ref interval 38 – 44 secs). 1:1 Patient : Control Mix APTT: 92 secs.

   a) What is your diagnosis?

   b) What test will you do to confirm your suspicion?

   c) What will you recommend for this patient for surgery?

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