



**Haematology Part 1
MCQ/EMQ Sample Questions**

Question 1

Theme: acute leukaemia

Focus: investigations - special techniques for diagnosis

A bone marrow examination is performed on a 48 year old woman who presents with pancytopenia and has circulating blasts in her peripheral blood film. The following immunophenotypic results are obtained by flow cytometry of the bone marrow:

TDT +ve
HLA-DR +ve
CD10 +ve
CD19 +ve
Cyt Ig +ve
Smlg -ve
CD33 weak +ve
CD34 +

Which type of leukaemia does this represent?

- A. B ALL
- B. Common ALL
- C. Pre-pre-B ALL
- D. Pre-B ALL
- E. Pro-B ALL



Question 2

Theme: abnormalities of iron metabolism

Focus: clinical investigations

A 39 year old Caucasian man is referred with a serum ferritin of 1945 ng/ml and is found to be heterozygous for HFE C282Y and H63D. Liver function tests are normal. He is commenced on a venesection programme.

Optimal venesection is best assessed by which of the following?

- A. Normalisation of magnetic resonance of liver
- B. Normalisation of percentage transferrin saturation
- C. Normalisation of serum ferritin
- D. Normalisation of serum ferritin and percentage transferrin saturation
- E. Normalisation of serum ferritin and serum iron

Question 3

Theme: acquired haemorrhagic diseases

Focus: special techniques

A 24 year old woman has a 2 litre primary post partum haemorrhage. Coagulation studies show a normal platelet count, PT 13 secs (control 12 secs), APTT ratio 2.9 and fibrinogen 3.5 g/l.

Which test will distinguish between acquired haemophilia A and lupus anticoagulant (antiphospholipid antibody)?

- A. Bleeding time
- B. DRVVT with platelet neutralisation procedure
- C. Factor VIII assay
- D. Platelet function tests
- E. Von Willebrand factor activity

Extended Matching Questions

Theme: Transfusion Medicine

Focus: Blood product selection

Options

- A. Cryoprecipitate
- B. Fibrinogen concentrate
- C. Intermediate purity factor VIII concentrate (containing von Willebrand factor)
- D. Leucocyte depleted platelet concentrate
- E. Leucocyte depleted, irradiated platelet concentrate
- F. Leucocyte depleted, cytomegalovirus negative platelet concentrate
- G. Leucocyte depleted, irradiated, cytomegalovirus negative platelet concentrate
- H. Methylene blue treated virally-inactivated fresh frozen plasma
- I. Prothrombin complex concentrate (containing factors II, VII, IX & X)
- J. Solvent detergent virally-inactivated fresh frozen plasma

In each of the following situations, a patient requires blood component support. For each situation, select the most suitable product from the list of options. Each option may be used once, more than once, or not at all.

Question 4

A 77 year old man presents with an intracerebral haemorrhage. He has been on Warfarin since his aortic valve replacement three years earlier and his INR on admission is 3.5.

Question 5

A 76 year old woman with chronic lymphocytic leukaemia presents after chemotherapy with epistaxis and a platelet count of $5 \times 10^9/L$. The treatment regimen has recently been changed after an earlier course of Fludarabine.

Question 6

A 22 year old woman with type 3 von Willebrand disease presents in labour and requires emergency Caesarean section. Her Factor VIIIc, von Willebrand antigen and Ristocetin co-factor are all less than 10%.

Question 7

A 35 year old woman develops microangiopathic haemolytic anaemia at 40 weeks and the platelet count continues to fall 24 hours after delivery. Her coagulation screen is normal. Spherocytes and red cell fragments are present in the peripheral blood film.

Question 8

A 28 year old man with hypo/dysfibrinogenaemia requires an elective mastoidectomy.