

## **Information about Paper 1- "extended answer" paper**

3 hours are allotted for the extended answer paper. Candidates are expected to answer 2 compulsory questions and then 2 further questions from a choice of 3.

Questions may cover several areas of the syllabus and may cover basic scientific principles, laboratory practice or clinical scenarios. Questions will not necessarily be "essays". Candidates may be asked to perform "real world" tasks such as writing a report or designing an implementation plan.

Take care to answer the exact question asked- credit will be deducted if irrelevant information is given in the answer.

### **Example "extended answer" questions**

#### **Example question 1**

- a) Describe the principles of techniques which could be used for quantification of fetomaternal haemorrhage by flow cytometry.
- b) Compare and contrast the advantages and disadvantages of flow cytometry with the Kleihauer test for quantification of flow cytometry. You may give your answer in the form of a table.
- c) An RhD negative mother gives birth to a healthy RhD positive baby. 500u anti D are administered post partum. Kleihauer test is positive estimating a bleed of 30ml, confirmatory flow cytometry for RhD quantifies a fetomaternal haemorrhage of 6ml. Write a report to the clinicians recommending further treatment and investigation of this case.

#### **Example question 2**

- a) Explain the nature and purpose of the regulations governing the traceability of blood components.
- b) Describe how IT systems have been used by hospitals and blood services to better meet the regulations.

## **Information on Paper 2- short answer questions**

Paper 2 consists of 20 compulsory Short Answer Questions (SAQs), to be answered in three hours. SAQs are designed to test factual knowledge and understanding across the range of the Curriculum.

Each question will usually cover a specific area of the curriculum and will have several sub-questions, requesting a brief answer (list or 1-2 sentences of text). Extended matching questions, "fill in the blanks" questions and tasks such as completing a table or drawing a diagram may also be asked.

Points to note:

- SAQs are criterion-marked against an explicit model answer
- Marks are only awarded for information required by the question – no marks are available for additional material
- If a defined number of facts are requested (e.g. State two causes of.....), only that number of responses will be marked (e.g. Answer – correct cause, incorrect cause, correct cause, will only receive one out of two marks).
- Answers requiring more than single word or phrase responses will be answerable in 1-2 sentences.
- Examiners will be looking for key concepts in these answers and no marks will awarded for extra information. Candidates who write unnecessarily long answers are likely to penalise themselves because these answers waste time.
- The mark allocation for each sub-question will be stated in brackets in each instance, but does not necessarily indicate the number of responses required.

## Example "short answer" questions

### Example question 1

- a) Complete the table below with the JPAC recommended specifications for red cells

| <b>Clinical situation</b>                            | <b>Range of Haematocrit</b> | <b>Age of red donation</b> | <b>Irradiated Y/N and if yes, shelf life post irradiation</b> | <b>CMV negative Y/N</b> |
|--|-----------------------------|----------------------------|---|-------------------------|
| <b>IUT</b>   |                             |                            |   |                         |
| <b>Neonatal exchange</b>                             |                             |                            |   |                         |
| <b>Neonatal small volume transfusion (pedipacks)</b> |                             |                            |   |                         |

- b) State the phenotype and compatibility testing requirements for red cells for transfusion to neonates <4 months old

## Example question 2

In the following clinical situations a) to e) , select from options A to M the most appropriate treatment for a patient with a platelet count of  $10 \times 10^9/L$  with no significant mucosal bleeding. You may use each option once, more than once or not at all.

- A. 4 Factor Prothrombin Complex Concentrate (e.g. Beriplex or Octaplex)
  - B. Cryoprecipitate
  - C. High Dose Intravenous Immunoglobulin
  - D. HPA Compatible Platelets
  - E. No blood product treatment
  - F. Octaplas (Fresh Frozen Plasma)
  - G. Paediatric Pack Red Cells
  - H. Platelets
  - I. Prednisolone
  - J. Recombinant Factor VIIa
  - K. Rituximab
  - L. Tranexamic acid & DDAVP
  - M. Vincristine
- 
- a) A 23-year-old woman presents to A&E with a first fit following a weeks' history of general ill health. The coagulation screen is normal; the serum LDH is 900 iu/l (normal range <250). The blood film shows red cell fragmentation and confirms severe thrombocytopenia.
  - b) A 56-year-old woman readmitted 2 weeks post hysterectomy with widespread bruising and a platelet count of  $3 \times 10^9/L$ . She had lost blood during surgery and was transfused 2 units of blood peri-operatively. She had made an uneventful recovery.
  - c) A 27-year-old whose blood films confirm ? severe thrombocytopenia with normal red and white cell morphology and who now has a severe headache and a Glasgow Coma Scale score of 7. Her history reveals that she has been thrombocytopenic in the past and failed to respond to treatment with steroids and iv IgG.
  - d) A 23-year-old woman in labour whose blood film confirms severe thrombocytopenia with normal red cell morphology and white cells and who has a family history of von Willebrand's disease. Her liver function tests are normal and she has not been pre-eclamptic.
  - e) A 73-year-old man on intravenous heparin seven days post cardiopulmonary bypass develops a small ecchymosis on his thigh.