

1. List **THREE** coagulation-related components present in cryoprecipitate.

Marks

3

Model Answer

(3 marks)

- Factor VIII
- Fibrinogen
- von Willebrand factor
- Factor XIII

2. A family physician asks you for advice on interpreting the following hepatitis blood test result in a patient:

HBsAg: Positive
anti-HBc: Positive
IgM anti-HBc: Positive
anti-HBs: Negative

How should this result be interpreted?

Marks

1

Model Answer

(1 mark)

Actively, acutely infected

3. a) Name **THREE** markers that are indicative of a systemic inflammatory response.

- b) What biochemical marker is useful in differentiating sepsis from a generalized systemic inflammatory response?

Marks

3

1

Model Answer

a) (3 marks)

C-reactive protein (CRP), erythrocyte sedimentation rate (ESR), ferritin, alpha-1 antitrypsin (AAT), Ig levels, ceruloplasmin, interleukins, tumour necrosis factor, alpha (TNF-alpha)

b) (1 mark)

Procalcitonin

C-reactive protein (CRP)

4.

a) What test is MOST commonly used for the diagnosis of *Clostridium difficile*-associated diarrhea? What is the preferred specimen?

b) Give **TWO** examples of specimens that are NOT appropriate for *C. difficile* testing and would be rejected by the laboratory.

c) Why is a stool culture of *C. difficile* NOT routinely performed?

Marks

2

1

1

Model Answer

a) 2 marks

Enzyme immunoassay for toxins A and B; watery stool

b) 1 marks

Formed stool, rectal swab

c) 1 mark

Lacks specificity for infection

5.

a) Describe the basic principles behind the determination of the activated partial thromboplastin time aPTT or the prothrombin time international normalized ratio PT-INR using a modern automated coagulation instrument.

b) List **THREE** causes of a prolonged aPTT.

Marks

4

3

Model Answer

- a)
- Ca^{2+} is added to overcome the citrate anticoagulant in the tube.
 - The clotting process is initiated by an external stimulus.
 - The time for the formation of the clot is recorded.
 - The clot is generally detected by the ceasing of movement of some entity in the specimen chamber.

b) heparin contamination, factor deficiency, factor inhibitor (antibody to one or more coagulation factors)

End

Before you leave the room, please return your examination booklet(s) to the invigilator.