

**TECHNICAL UNIVERSITY OF MOMBASA**

***Faculty of Applied & Health Sciences***

DEPARTMENT OF MEDICAL SCIENCES

DIPLOMA IN MEDICAL LABORATORY SCIENCES

(DMLS 13J & 14J (MID)

**AML 2303: HAEMATOLOGY III**

SPECIAL/SUPPLEMENTARY EXAMINATIONS

**SERIES:** JUNE/JULY 2016

**TIME:** 2 HOURS

**INSTRUCTIONS:**

* Answer All questions.

***This paper consists of Eight printed pages.***

**SECTION A**

1. Vasoconstriction mechanism plays the following roles in haemostasis, except
2. Narrow the vessel
3. Reducing blood flow through the vessel
4. Prevent excessive blood loss
5. Repair the injured vessel
6. Arrest bleeding in small vessels
7. The following substances are produced through stimulation of cutonomic nervous system to bring about vabonstriction. Which of the following substances does not aid vasoconstriction?
8. Epinephrine
9. Norepinephrine
10. Adenosine diphosphate
11. Barotonin
12. Thromboxanes
13. Platelets are activated by?
14. Vasocontriction
15. Damaged blood vessels
16. Coagulation factors
17. Savotonis
18. Fib-inolysis mechanism
19. What is platelet adhesion?
20. Is the attachment of platelets to the subentothial of damaged blood vessels
21. Is the clumping of platelets to one another at the site of injury
22. Is the activation of platelets to produce procoagulants substances
23. Is activation of platelets cause vasoconstriction
24. Is the activation of platelets to activate coagulation factors
25. Von willebrand factor (VWF) is produced by the platelets, it carries the following coagulation factor
26. Factor VII
27. Factor VIII
28. Factor IX
29. Factor XII
30. Factor X
31. The role of von willebrand factor in haestosis is?
32. To enhance platelets secretion activity
33. To enhance activation of coagulation factors
34. To pontentiate platelets adhesion and platelets aggregation at the damaged site
35. To hasten vasoconstriction
36. To pontentiate injury repair
37. Tissue plasminogen activator (t-PA) converts proenzyme plasminogen into plasmin is produced by?
38. Endothelial cells
39. Platelets
40. Liver
41. Kidney
42. Red blood cells
43. The end-product of fibrinolytic mechanisms includes
44. Plasminogen
45. Plasmin
46. Fibrin
47. Degradation products
48. Fibrinogen
49. Proten C pathway
50. Activate coagulation factors
51. Activate cofactors
52. Inhibits Heparin
53. Activate Fibrinolysis
54. Activate vasoconstriction
55. What are the characteristics of vascular disorders
56. Blood vessels fails to form clot
57. Blood vessels takes long to heal
58. Spontanous bleeding from the small vessels
59. The underlying collagen fibre is not adequately formed
60. Blood vessels are prone to infection
61. The following are acquired vascular disorders, which one is not?
62. Senile purpura
63. Vasculitis
64. Simple easy bruising
65. Myeloma
66. Scurvy
67. Thrombocytopenia is a caused of acquired quantitative platelets disorders is caused by the following condition except?
68. Von willebrand factor (VWF)
69. Severe trauma
70. Megablastic anaemia
71. Infection
72. Excessive destruction of platelets
73. The effect of non steroidal Anti-Inflammatory Drugs (HUSAIDs) includes
74. Inhibits platelets includes
75. Inhibits platelets adhesion
76. Inhibits platelets secrection
77. Inhibits collagen synthesis
78. Inhibits vitamin K synthesis
79. The effects of shake venom and bee sting on platelets includes
80. Destroy platelets
81. Inhibits platelets aggregation
82. Inhibits platelets adhesion
83. Inhibits platelets secretion
84. Inhibits platelets activation
85. The symptoms of haemophilia includes the following except
86. Soft tissue bleeding
87. Develop join bleeding
88. Infant may suffer from phrofuse post ci-cumcission hemorrhage
89. Nose and gum bleeding
90. Women have long menstrual periods
91. The importance of Vitamin C is haemostasis is
92. Activation of platelets
93. Activation of clotting factors
94. Formation of collagen tissue of blood vessels
95. Inhibition of haemostasis
96. Activation of fibrinolysis
97. In activated partial thromboplastin time test (ADPTT) which one of the following is not a reagent.
98. Kaolin reagent
99. Phospholipid
100. Calcium chloride
101. Tissue extract
102. Plasma
103. What is the test for investigation of extrinsic pathway
104. Prothrombin time
105. Whole blood clotting time
106. Bleeding time
107. Activated partial thromboplastin time
108. Thrombin time
109. In prothrombin time result is expressed in prothrombin ratio (PR), what is prothrombin ratio
110. Ratio of thromboplastin to sample
111. Ratio of abnormal prothrombin time to manufacture prthrombin time
112. Ratio of prothrombin time of a patient to prothrombin time of the control
113. Ratio of thromboplasin to that of the samle
114. Ratio of thromboplastin to that of control used.
115. In the prothombin time test using Russels method, the thromboplastin used is?
116. Human brain
117. Rabbit brain
118. Bovine brain
119. Venom
120. Rat brain
121. Causes of prolonged prothombin time includes the following, excepts?
122. Patient on oral anticoagulant
123. Vitimin K deficiency
124. Liver diseases
125. Disseminated intravascular disorder (DIC)
126. Patient on heparin
127. The bleeding time is a test done for investigation of which condition
128. Extrinsic pathway deficiency
129. Intrinsic pathway deficiency
130. Platelets function
131. Integrity of the entire haemostasis mechanism
132. Fibrinolytic deficiency
133. Whole clotting time is investigated by the following method
134. Dukes method
135. Lee and white method
136. Ivys method
137. Template method
138. Standard sterile method
139. A prolonged thrombin time and a normal reptilase time is a diagnostic of the presence of which product?
140. Fibrinogen
141. Fibrinogen/fibrin degradation products (FDP)
142. Heparin
143. Prothrombin
144. Plasminogen
145. Full blood count report is needed before investigation or any Haemostasis disorder, what is the important of full blood count report haemostasis disorder screening?
146. To check the quality of plasma
147. For investigation of thrombocytopenia
148. To check for anaemia
149. For differential count
150. To investigate deficiency of clotting factors
151. The normal range for thrombin time is
152. Not more than 20 seconds
153. 2 – 7 minutes
154. 10 – 30 seconds
155. 2 – 10 seconds
156. 1 – 2 minutes
157. The predisposing factors to leukaemia includes the following except
158. Previous chemotherapy
159. Down’s syndrome
160. Occupational chemical exposure
161. Viral infection
162. Hypertension
163. Clinical onset, defines leukemia into which category?
164. Myeloid and lymphoid
165. Chronic and acute
166. Malignancy and benign
167. Progressive and regressive
168. Lethal and non-lethal
169. Philadelphia (ph) chromosome is present in which type of leukemia?
170. Chronic myeloid leukaemia
171. Chronic lymphcytic leukaemia
172. Acute myeloid leukaemia
173. Acute lymphocytic leukaemia
174. Prolymphocytic leukaemia
175. Disadvantage of “particle smears” for making bone marrow film includes
176. Smears are thick
177. Smears are difficult to stain
178. Squashing cause disruption of the cells
179. Films have head, body and ridged tail
180. Smears cannot be preserved for long
181. Differential cell count on aspirated bone marrow film is reported on the following form
182. Histogram
183. Myelogram
184. Haemogram
185. Leucogram
186. Laukaemiagram
187. The following are characterics of leukaemia cells which one is not
188. Macrocytes
189. Nucldear-cytoplasmic ratio
190. Degree of cytoplasmic basophilia
191. Size of nucleoli
192. Microcytes
193. Chronic myeloid leukaemia is characterized by gross production of which cells?
194. Eosipnophil
195. Lymphcystes
196. Monocytes
197. Neutrophils
198. Basophils
199. In acute lymphocytic leukemia 80% of the malignant cells are primitive precursor of which cell?
200. T-Lymphocyte
201. B-Lymphocytes
202. Monocytes
203. Neutrophils
204. Red blood cells
205. Symptoms of the acute monocytic leukaemia includes the following except
206. Gum infiltration
207. Lymphadenopathy
208. Hepatosplenopathy
209. Hepatosplenomaly
210. Central nervous system
211. Splenomegaly
212. Leukemia predominantly affects?
213. Children
214. Male and female
215. Female
216. Male
217. Elder woman
218. Platelets pooled plasma (PPP) is made from
219. 10 normal people
220. 40 normal people
221. 30 normal people
222. 15 normal people
223. 3 normal people
224. Active form of coagulation factors are denoted by subscript of letter
225. c
226. a
227. b
228. d
229. e
230. Sources of Vitamin C include the following
231. Citrus fruits
232. Avocado
233. Mangoes
234. Vegetable
235. Pawpaw fruit
236. Coagulation screening is first line of investigation in the following patients
237. Diabetic patient
238. Actively bleeding patients
239. Anaemia patients
240. Patients with fever
241. Hypertension patients

**SECTION B**

1. a) Discuss the intrinsic pathway of coagulation system. **(12 marks)**

b) Describe the following haemostasis disorders

1. Non willbrand disease. **(4 marks)**
2. Disorder of fibrinolytic system. **(4 marks)**

2. a) Describe how a good quality plasma is obtained for screening of coagulation disorders.

**(12 marks)**

b) Describe how Thrombin time test is done, and the causes of prolonged thrombin time.

**(8 marks)**

3. a) How is acute myeloid leukaemia diagnosed. **(10 marks)**

b) Describe **THREE** ways of obtaining bone marrow. **(10 marks)**