**BSC 182 Wargo**

Please take your time and *read each question carefully*. I will **not** be able to answer questions during the exam period. If you have a conflict with a question, address it on the back of this exam packet. You will be finding the **one best** answer for each question.

Some of the questions appear in the following format:

**Example Only**

 **Ex: On which weekdays does BSC 182 meet for class? (Identify the correctly numbered responses and find them in the five lettered options below. You will indicate only ONE letter for a correct response.)**

1. **Monday**
2. **Tuesday**
3. **Wednesday**
4. **Thursday**
5. **Friday**
6. **1 and 2 are correct**
7. **2 and 4 are correct**
8. **1, 3, and 5 are correct**
9. **1, 2, and 4 are correct**
10. **2, 4, and 5 are correct**
11. As a general rule, most hormone concentrations are controlled by
12. cellular demands
13. cholesterol levels
14. positive feedback mechanisms
15. the thyroid gland
16. negative feedback mechanisms
17. **Steroid** hormones
18. Can diffuse through the plasma membrane
19. can be composed of amino acids
20. are soluble in water
21. Are composed of glucose
22. All of the above
23. Which of the following hormones exerts its effect primarily upon the **reproductive organs**?
24. thyrotropin
25. thymosin
26. calcitonin
27. follicle stimulating hormone
28. adrenocorticotropic hormone
29. Which of the following is secreted by nerve fibers in the posterior lobe of the pituitary gland
30. growth hormone
31. prolactin
32. antidiureteic hormone
33. thyroid-stimulating hormone
34. adrenocorticotropic hormone
35. The secretion of **parathyroid hormone** is controlled primarily by the
36. pituitary gland
37. concentration of blood calcium
38. thyroid gland
39. hypothalamus
40. concentrations of the bone calcium
41. Where are the hormones secreted by the posterior pituitary **made**
42. in the thalamus
43. in the anterior pituitary
44. in the medulla oblongata
45. in the posterior pituitary
46. in the hypothalamus
47. This hormone targets the kidneys and aids in regulating water balance and is called \_\_\_\_\_\_\_\_\_\_\_. However, when the **same hormone** targets the blood vessels, it causes vasoconstriction and helps to control blood pressure and is called \_\_\_\_\_\_\_.
	1. Leukopoietin; Erythropoietin
	2. Oxytocin; Antidiuretic Hormone
	3. Glucagon; Calcitonin
	4. Renin; Angiotensinogen
	5. Antidiuretic Hormone; vasopressin
48. An example of a hormone secreted by the **adrenal medulla** is
49. melatonin
50. aldosterone
51. renin
52. epinephrine
53. antidiuretic hormone
54. **Target cells** for releasing hormones (CRH, GnRH, etc) are in the
55. anterior pituitary gland
56. posterior pituitary gland
57. thyroid gland
58. hypothalamus
59. thymus
60. The hormone **ghrelin** stimulates the release of Growth Hormone. What else is Ghrelin associated with?
	1. Puberty
	2. Hunger
	3. Cognition
	4. Connective tissue degradation
	5. Urinary output
61. A **steroid hormone** acts on a target cell by
62. turning on/off genes
63. causing a second messenger to be formed
64. diminishing mitotic control
65. causing the cell to divide
66. promoting phagocytosis
67. The parafollicular (extrafollicular) cells of the thyroid gland secrete
68. triiodothyronine
69. calmodulin
70. thyroxine
71. follicle stimulating hormone
72. calcitonin
73. Insulin
74. **causes a decrease in the concentration of blood glucose**
75. **causes a decrease in the permeability of cell membranes to glucose**
76. **an increase in the production of glucose from glycogen**
77. **is released by pancreatic alpha cells**
78. **is released by pancreatic beta cells**
79. 2, 3, and 4 are correct
80. 1 and 5 are correct
81. 1 and 4 are correct
82. 3 and 5 are correct
83. 2, 4, and 5 are correct
84. Identify “X” This cell is the only cell leukocyte with a multi-lobed nucleus, very fine staining granules, and is typically the first to respond to infection.
85. lymphocyte
86. basophil
87. erythrocyte
88. monocyte
89. neutrophil
90. Identify “Z” This cell is the most numerous as well as being anucleate.
91. lymphocyte
92. basophile
93. neutrophil
94. erythrocyte
95. monocyte
96. Which white blood cell will be elevated with a parasitic worm infection?
97. Macrophages
98. Eosinophils
99. Monocytes
100. Basophils
101. Lymphocytes
102. Thalassemia is
103. A condition in which decreased platelet levels cause prolonged clotting times
104. A blood condition in which the numbers of erythrocytes are increased
105. A condition in which the erythrocytes circulate in with their nuclei
106. A condition in which the leukocytes are forced to carry hemoglobin
107. A condition that results from part of the hemoglobin being absent or incorrectly formed
108. Which Rh combination is **potentially** hazardous for a fetus?
109. Rh + mother and Rh + fetus
110. Rh – mother and Rh + fetus
111. Rh- mother and Rh- fetus
112. Rh + mother and Rh– fetus
113. Jane has **Type O** blood. If she is given an infusion of **Type A blood** **cells**, what will happen?
	1. Jane will be perfectly safe if given Type A Blood.
	2. Jane will be in jeopardy because Antibody B in her plasma will connect with antigen A from the donor blood.
	3. Jane will be in jeopardy because Antigen A in her plasma will connect with Antigen A from the donor blood
	4. Jane will be in jeopardy because Antibody A in her plasma will agglutinate with Antigen A from the donor blood
	5. Jane will be in jeopardy because her blood will have no antibodies to protect her from the foreign Type A blood.
114. Indicate the correct statement regarding hematopoiesis
	1. The hormone is stimulated by calcium levels in the kidney
	2. The hormone responsible for hematopoiesis is erythromycin
	3. The hormone is stimulated by oxygen levels in the atria (heart)
	4. The hormone responsible for hematopoiesis is erythropoietin
	5. The hormone responsible for hematopoiesis is hematopoietin
115. Which White Blood Cells fall into the **agranulocytic** category?
116. **Erythrocytes**
117. **Neutrophils**
118. **Monocytes**
119. **Lymphocytes**
120. **Basophils**
121. 1, 2, and 5 are correct
122. 2 and 5 are correct
123. 1 and 4 are correct
124. 1 and 3 are correct
125. 3 and 4 are correct
126. In both intrinsic and extrinsic pathways, \_\_\_\_\_\_\_ needs to be converted to \_\_\_\_\_ to create the mesh that prevents blood loss.
127. Proplasmin; plasmin
128. Fibrinogen; fibrin
129. Profibrin; fibrin
130. Plasminogen; plasmin
131. Fibrin; metafibrin
132. A reticulocyte
133. Is a fully mature white blood cell
134. Is a fully mature red blood cell
135. Is an immature platelet
136. Is an almost mature white blood cell
137. Is an almost mature red blood cell
138. If a person were to suffer from **severe blood loss**, what type of anemia would they have?
139. Hemolytic anemia
140. Thalassemia
141. Malaria
142. Hemorrhagic anemia
143. Pernicious anemia
144. Consider the hypophyseal portal system. Identify the correct statement
145. The portal is a neural tract between hypothalamus and posterior pituitary
146. The portal is a circulatory pathway between the hypothalamus and anterior pituitary
147. The portal is a circulatory pathway between hypothalamus and thalamus
148. The portal is a circulatory pathway between the pineal gland and pituitary gland
149. The portal is a neural pathway between the thalamus and pineal gland
150. Under normal circumstances, which leukocyte do we expect to see the most of in the blood?
151. Lymphocyte
152. Eosinophil
153. Monocyte
154. Basophil
155. Neutrophil
156. ACTH is **released** from the
157. hypothalamus
158. Corticotropic cells of anterior pituitary
159. adrenal medulla
160. posterior pituitary
161. adrenal cortex
162. ACTH is **regulated** by which hormone
163. Corticotropin Releasing Hormone
164. Sodium
165. Oxytocin
166. Cortex Regulating Hormone
167. Growth Hormone Releasing Hormone
168. ACTH has **target cells** located in
169. Renal gland
170. Posterior Pituitary
171. hypothalamus
172. Coritcotropic cells of anterior pituitary
173. Adrenal Cortex
174. LH is **released** from the
175. Gonadatropic cells of anterior pituitary
176. Leukotropic cells of anterior pituitary
177. Ovarian Follicle
178. Corpus luteum
179. Posterior Pituitary
180. Indicate which of the hormones are from the adrenal cortex
181. **aldosterone**
182. **follicle stimulating hormone**
183. **cortisol**
184. **interstitial cell stimulating hormone**
185. **oxytocin**
186. 1 and 2 are correct
187. 1 and 3 are correct
188. 4 and 5 are correct
189. 2 and 4 are correct
190. 3 and 5 are correct
191. LH is stimulated for release by which hormone
192. ACTH
193. melatonin
194. Gonadatropic releasing Hormone
195. serotonin
196. Pineal Releasing Hormone
197. **Blood glucose levels** are going to trigger the release of **glucagon**. Which type of stimulation is being used?
198. sensory
199. neural
200. humoral
201. hormonal
202. ionic
203. Which disorder can be a complication of pregnancy and results in widespread clotting within the vessels?
204. Acute lymphocytic leukemia
205. Thalassemia
206. Disseminated intravascular coagulation
207. Sickle cell anemia
208. Hemophilia
209. Which secretory cell is paired **correctly** with the hormone it releases?
210. somatotropic cell, growth hormone
211. corticotropic cell, cortisol
212. somatotropic cell, growth hormone releasing hormone
213. lactotropic cell, leutinizing hormone
214. thyrotropic cell, thyroid releasing hormone
215. If an Rh- person has been previously sensitized to Antigen D, what happens during the second exposure?
	1. IgM anti-D antibodies are formed slowly
	2. IgM anti-D antibodies are formed immediately
	3. IgG anti-D antibodies are formed slowly
	4. IgG anti-D antibodies are formed immediately
	5. The Rh- system learns to accept Antigen D as “self”
216. In Acute Myeloid leukemia, which of the following would be true?
217. The predominant leukocyte could be a lymphocyte
218. The predominant leukocyte could be a monocyte
219. The progression is slowly advancing, and targets more mature cell types
220. The progression is quickly advancing, and targets more immature cell types
221. It is more likely to be found in the elderly rather than the young
222. 1, 3, and 5 are correct
223. 2 and 4 are correct
224. 2 and 3 are correct
225. 3 and 5 are correct
226. 1 and 4 are correct
227. In Polycythemia, which of the following is true?
	1. The platelets double in size
	2. The hematocrit (HCT) can almost double.
	3. The myeloid line reduces by half
	4. Oxygen carrying capacity is severely restricted
	5. The blood cells are misshapen, but protects against malaria
228. **Growth Hormone** over-secretion in individuals with open growth plates (epiphyses) can cause gigantism. If the individual is exposed to large amounts of growth hormone after adulthood when the growth plates have fused, what is the condition called?
	1. Pituitary Gigantism
	2. Acromegaly
	3. Addison’s Disease
	4. Kwashiorkor
	5. Hypertrophy
229. The Adrenal Cortex is divided into three layers. The Zona Reticularis is responsible for the production of **gonadocorticoids**. Which of the hormones below would fall into that category?
	1. Testosterone
	2. Hydrocortisone
	3. Aldosterone
	4. Corticosterone
	5. Norepinephrine
230. Which of the following symptoms are signs associated with Diabetes Mellitus?
	1. Dysphagia
	2. Polyuria
	3. Polyphagia
	4. Dyspepsia
	5. Diaphoresis
	6. 1 and 3 are correct
	7. 2 and 4 are correct
	8. 4 and 5 are correct
	9. 2 and 3 are correct
	10. 1 and 5 are correct
231. Gordon has previously been diagnosed with a gastric ulcer which seems to be getting worse. Due to ease of access and his poor finances, his diet has mainly been carbohydrate (pasta and bread) based. When he presented to his doctor with fatigue and chills, his blood work came back with a report of hypochromic, microcytic erythrocytes. Which of the following statements are true relating to Gordon’s case?
	1. Gordon may be suffering from a lack of intrinsic factor
	2. Gordon may have a persistent internal blood loss
	3. His carbohydrate rich diet is causing low levels of vitamin B12 in his system
	4. Gordon has Pernicious Anemia
	5. Gordon has an Iron Deficiency Anemia
	6. 1, 3, 5 are correct
	7. 2, 3, and 4 are correct
	8. 2 and 3 are correct
	9. 1, 3, and 4 are correct
	10. 2 and 5 are correct
232. Which of the following cells types would be the earliest (least mature) type in a progression
	1. Erythrocyte
	2. Erythroblast
	3. Proerythrocyte
	4. Proerythroblast
	5. Posterythrocyte
233. In the bloodstream, this cell is called a monocyte. When it is out in the tissues acting as a phagocyte, what is it called?
	1. Lymphophage
	2. Macrophage
	3. Phagablast
	4. Basophil
	5. Mast Cell
234. The hemocytoblast cells is responsible for producing all of the cells/formed elements except
	1. Erythrocytes
	2. Eosinophils
	3. Platelets
	4. Monocytes
	5. All of the above are produced from the hemocytoblast
235. Louise has blood that is B+. If she is given red blood cells that are A-, which of the following statements is correct?
	1. This is a safe scenario. There will be no agglutination
	2. This would be a sensitizing exposure. Since it is the first exposure, there will be no negative effects.
	3. Antibody B in Louise’s plasma will agglutinate with antigen B in the donated cells
	4. The resulting agglutination response will break down RBCs, and Louise will need lots of fluids to remove exposed hemoglobin from her system to prevent damage to her kidneys
	5. The ABO groups are fine, and will not react, but the Rh factor cases an incompatibility
236. Which statements below are true?
	* + 1. B cells are lymphocytes that promote inflammation
			2. T cells are lymphocytes that can destroy infected cells
			3. B cells are monocytes that produce interleukins
			4. Antibodies are produced from activated B lymphocytes
			5. B cells and T cells come from the Myeloid line
	1. 1 and 2 are correct
	2. 2 and 3 and 5 are correct
	3. Only 2 is correct
	4. 2 and 4 are correct
	5. 1 and 2 and 5 are correct
237. What materials are responsible for clot retraction? They help to squeeze serum from the clot.
	1. Thrombocytes
	2. Plasminogen
	3. Plasmin and Fibrin
	4. Actin and Myosin
	5. Hemostasis
238. What is an embolus?
	1. A freely floating thrombus in the bloodstream
	2. A clot in a broken blood vessel
	3. A clot in an unbroken blood vessel
	4. A clot that forms an obstruction in a vein
	5. The exposed collagen fibers in a damaged blood vessel
239. Which condition is most likely to present with petechiae?
	1. Polycythemia vera
	2. Mononucleosis
	3. Thrombocytopenia
	4. Leukocytopenia
	5. Thalassemia

**Please turn in both your Opscan sheet as well as your exam form.**

**If you had a question or comment that you made on your exam form, be sure to place it in a separate pile on the front desk so I can look at it. Put your name and the question # on the front only if you have a comment/question**

**Your results will be posted through ReggieNet**