Bio 182

# Exam One

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**

**a. 1 and 2 are correct**

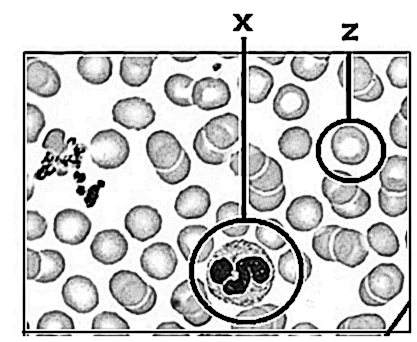
**b. 1, 3, and 5 are correct**

**c. 1, 2, and 4 are correct**

**d. 2, 4, and 5 are correct**

**e. 2 and 4 are correct**

**For this question, you would indicate (e) for a correct response.**

1. As a general rule, most hormone concentrations are controlled by
2. negative feedback mechanisms
3. the thyroid gland
4. cellular demands
5. cholesterol levels
6. positive feedback mechanisms
7. **Steroid** hormones
8. Are composed of glucose
9. Can diffuse through the plasma membrane
10. can be composed of amino acids
11. are soluble in water
12. All of the above
13. Which of the following hormones exerts its effect primarily upon the **reproductive organs**?
14. follicle stimulating hormone
15. adrenocorticotropic hormone
16. thyrotropin
17. thymosin
18. prolactin releasing factor
19. **Thyroid hormones** (T3 and T4) functions to
20. inhibit osteoclasts
21. enhance the hormone inhibin
22. regulate the rate at which carbohydrates are metabolized
23. inhibit activities within the nervous system
24. inhibit the rate at which proteins are denatured
25. **Nonsteroid** hormones act upon their target cells by causing
26. a generalized deamination
27. the activation of adenylate cyclase
28. cyclic AMP to become ATP
29. cyclic AMP to be decomposed
30. the inactivation of adenylate cyclase
31. Which of the following is secreted by nerve fibers in the posterior lobe of the pituitary gland
32. antidiureteic hormone
33. thyroid-stimulating hormone
34. adrenocorticotropic hormone
35. growth hormone
36. prolactin
37. The secretion of **parathyroid hormone** is controlled primarily by the
38. pituitary gland
39. hypothalamus
40. concentrations of the bone calcium
41. concentration of blood calcium
42. thyroid gland
43. Where are the hormones secreted by the posterior pituitary **made**
44. in the medulla oblongata
45. in the posterior pituitary
46. in the hypothalamus
47. in the thalamus
48. in the anterior pituitary
49. An example of a hormone secreted by the **adrenal medulla** is
50. renin
51. epinephrine
52. melatonin
53. aldosterone
54. antidiuretic hormone
55. **Target cells** for releasing hormones (CRH, GnRH, etc) are in the
56. anterior pituitary gland
57. hypothalamus
58. thymus
59. posterior pituitary gland
60. thyroid gland
61. **Oxytocin** is sometimes administered to women during childbirth to stimulate
62. Vaginal relaxation
63. milk development
64. uterine relaxation
65. the urge to cuddle
66. uterine contractions
67. **Goiter** is most likely to affect people who live in regions where the soil lacks
68. potassium
69. worms
70. vitamins
71. sodium
72. iodine
73. A **steroid hormone** acts on a target cell by
74. turning on/off genes
75. diminishing mitotic control
76. causing the cell to divide
77. promoting phagocytosis
78. causing a second messenger to be formed
79. How does the body **turn off** the second messenger cAMP?
    1. Removes phosphates from ATP
    2. Sends out steroid hormones
    3. The enzyme phosphodiesterase breaks it down
    4. Activates protein kinases
    5. Activates adenylate cyclase
80. The parafollicular (extrafollicular) cells of the thyroid gland secrete
81. thyroxine
82. follicle stimulating hormone
83. calcitonin
84. triiodothyronine
85. calmodulin
86. In males, **oxytocin**
87. contributes to male pattern baldness
88. stimulates the smooth muscles of the bladder
89. is the “cuddle hormone” in non-sexual relationships
90. causes impotence
91. causes contraction of the Dartos muscle in the scrotum
92. With **melatonin**,
93. light stimulates retinas, which stimulates pituitary gland, which decreases melatonin concentrations
94. light stimulates retinas, which stimulates pituitary gland, which increases melatonin concentrations
95. light stimulates retinas, which stimulates pineal gland, which increases melatonin concentrations
96. light stimulates retinas, which stimulates pineal gland, which decreases melatonin concentrations
97. Insulin
98. **causes a decrease in the concentration of blood glucose**
99. **causes a decrease in the permeability of cell membranes to glucose**
100. **an increase in the production of glucose from glycogen**
101. **is released by pancreatic alpha cells**
102. **is released by pancreatic beta cells**
103. 1 and 4 are correct
104. 3 and 5 are correct
105. 2, 4, and 5 are correct
106. 2, 3, and 4 are correct
107. 1 and 5 are correct
108. A **second messenger** is often
109. protein kinase
110. released with steroid hormones
111. cyclic AMP
112. prolactin
113. cholesterol
114. The movement of a white blood cell out of the circulatory system and into the tissues is called
115. Pseudopoeisis
116. Diapedesis
117. Cavitation
118. Capacitation
119. Diapodemia
120. Identify “X”
121. erythrocyte
122. monocyte
123. neutrophil
124. lymphocyte
125. basophile
126. Identify “z”
127. erythrocyte
128. monocyte
129. lymphocyte
130. basophile
131. neutrophil
132. Which white blood cell will be elevated with a parasitic worm infection?
133. Macrophages
134. Monocytes
135. Basophils
136. Lymphocytes
137. Eosinophils
138. Which white blood cell will leave the circulation to transform into a **macrophage**?
139. Basophils
140. Erythrocyte
141. Monocytes
142. Eosinophils
143. Neutrophils
144. Type **AB** blood will have which of the following
145. No antigens on the cell surface; no antibodies in the plasma
146. Type A and type B antigen on the cell surface; no antibodies in the plasma
147. Type A and type B antigen on the cell surface; type A and type B antibodies in the plasma
148. Type D antigen and Anti B in plasma
149. Type A antigen on the cell surface and Antibody B in plasma
150. Which Rh combination is **potentially** hazardous for a fetus?
151. Rh + mother and Rh + fetus
152. Rh- mother and Rh- fetus
153. Rh + mother and Rh– fetus
154. Rh – mother and Rh + fetus
155. Jane has **Type O** blood. If she is given an infusion of **Type A blood** **cells**, what will happen?
     1. Jane will be in jeopardy because Antibody B in her plasma will connect with antigen A from the donor blood.
     2. Jane will be in jeopardy because Antigen A in her plasma will connect with Antigen A from the donor blood
     3. Jane will be in jeopardy because Antibody A in her plasma will agglutinate with Antigen A from the donor blood
     4. Jane will be in jeopardy because her blood will have no antibodies to protect her from the foreign Type A blood.
     5. Jane will be perfectly safe if given Type A Blood.
156. Indicate the correct statement regarding hematapoeisis
     1. The hormone responsible for hematopoiesis is erythromycin
     2. The hormone is stimulated by oxygen levels in the atria (heart)
     3. The hormone responsible for hematapoiesis is erythropoietin
     4. The hormone responsible for hematopoiesis is leukopoietin
     5. The hormone is stimulated by calcium levels in the kidney
157. Indicate the correct pathway for the development of a **lymphocyte**
158. Hemacytoblast 🡪 myeloid stem cell 🡪 lymphoblast 🡪 prolymphocyte 🡪 Lymphocyte
159. Hemacytoblast 🡪 prolymphocyte 🡪 prolymphoblast 🡪 lymphocyte
160. Hemacytoblast 🡪 megakaryoblast 🡪 promegakaryocyte 🡪 lymphocyte
161. Hemacytoblast 🡪 lymphoid stem cell 🡪 prolymphocyte 🡪 lymphoblast 🡪 lymphocyte
162. Hemacytoblast 🡪 Lymphoid stem cell 🡪 lymphoblast 🡪 prolymphocyte 🡪 lymphocyte
163. Which White Blood Cells fall into the **granulocytic** category?
164. **Erythrocytes**
165. **Neutrophils**
166. **Monocytes**
167. **Lymphocytes**
168. **Basophils**
169. 1 and 4 are correct
170. 1 and 3 are correct
171. 1, 2, and 5 are correct
172. 2 and 5 are correct
173. 3 and 4 are correct
174. In both intrinsic and extrinsic pathways, \_\_\_\_\_\_\_ needs to be converted to \_\_\_\_\_ to create the mesh that prevents blood loss.
175. Profibrin; fibrin
176. Plasminogen; plasmin
177. Fibrin; metafibrin
178. Proplasmin; plasmin
179. Fibrinogen; fibrin
180. As an embryo, where are red blood cells formed?
181. Mother’s bone marrow
182. Bone marrow
183. Lymph tissue
184. Liver and spleen
185. Kidney and lymph nodes
186. A reticulocyte
187. Is a fully mature white blood cell
188. Is an immature platelet
189. Is an almost mature white blood cell
190. Is an almost mature red blood cell
191. Is a fully mature red blood cells
192. If a person were to suffer from **severe blood loss**, what type of anemia would they have?
193. Thalassemia
194. Malaria
195. Hemorrhagic anemia
196. Pernicious anemia
197. Hemolytic anemia
198. Consider the hypophyseal portal system. Identify the correct statement
199. The portal is a circulatory pathway between hypothalamus and thalamus
200. The portal is a circulatory pathway between the pineal gland and pituitary gland
201. The portal is a neural pathway between the thalamus and pineal gland
202. The portal is a neural tract between hypothalamus and posterior pituitary
203. The portal is a circulatory pathway between the hypothalamus and anterior pituitary
204. Under normal circumstances, which leukocyte do we expect to see the most of in the blood?
205. Lymphocyte
206. Basophil
207. Neutrophil
208. Eosinophil
209. Monocyte
210. ACTH is **released** from the
211. hypothalamus
212. posterior pituitary
213. adrenal cortex
214. Corticotropic cells of anterior pituitary
215. adrenal medulla
216. ACTH is **regulated** by which hormone
217. Corticotropin Releasing Hormone
218. Sodium
219. Oxytocin
220. Cortex Regulating Hormone
221. Growth Hormone Releasing Hormone
222. ACTH has **target cells** located in
223. Renal gland
224. Posterior Pituitary
225. hypothalamus
226. Coritcotropic cells of anterior pituitary
227. Adrenal Cortex
228. Indicate which **two** of the hormones are from the adrenal cortex
229. **aldosterone**
230. **follicle stimulating hormone**
231. **cortisol**
232. **interstitial cell stimulating hormone**
233. **oxytocin**
234. 1 and 2 are correct
235. 2 and 4 are correct
236. 1 and 3 are correct
237. 4 and 5 are correct
238. 3 and 5 are correct
239. LH is **released** from the
240. Ovarian Follicle
241. Corpus luteum
242. Leukotropic cells of anterior pituitary
243. Gonadatropic cells of anterior pituitary
244. Posterior Pituitary
245. LH is stimulated for release by which hormone
246. ACTH
247. melatonin
248. serotonin
249. Pineal Releasing Hormone
250. Gonadatropic releasing Hormone
251. In the development of erythrocytes, at which stage do they extrude (lose) their nuclei?
252. Hemocytoblast
253. Erythroblast
254. Proerythrocyte
255. Normoblast
256. Reticuloblast

1. A paracrine cell \_\_\_\_, while an autocrine cell\_\_\_\_.
2. releases pancreatic enzymes; releases autolytic enzymes
3. releases hormones that influence the releasing cell; releases hormones that influence the nearby cells.
4. Releases hormones that influence the nearby cells; releases hormones that influence the releasing cell
5. releases hormones that influence the releasing cell; releases hormones that influence the releasing cell
6. inhibit neurosecretory cells; excite neurosecretory cells

1. Blood glucose levels are going to trigger the release of glucagon. Which type of stimulation is being used?
2. neural
3. humoral
4. hormonal
5. ionic
6. sensory
7. Which disorder can be a complication of pregnancy and results in widespread clotting within the vessels?

a. Septicemia

b. Thalassemia

c. Disseminated intravascular coagulation

d. Sickle cell anemia

e. Hemophilia

1. Which secretory cell is paired **correctly** with the hormone it releases?
2. corticotropic cell, cortisol
3. somatotropic cell, growth hormone releasing hormone
4. lactotropic cell, leutinizing hormone
5. thyrotropic cell, thyroid releasing hormone
6. somatotropic cell, growth hormone
7. Which of the following are **true** statements?
8. Extrinsic clotting is stimulated by tissue damage
9. Intrinsic clotting is stimulated by tissue damage
10. Fibrinogen is insoluble in plasma and forms clots
11. Extrinsic clotting is stimulated by foreign particles
12. Intrinsic clotting is stimulated by foreign particles
13. 1 and 2 are correct
14. 1, 2, and 3 are correct
15. 4 and 5 are correct
16. 1 and 5 are correct
17. 2 and 4 are correct
18. In Chronic Lymphoid leukemia, which of the following would be true?
19. The predominant leukocyte could be a lymphocyte
20. The predominant leukocyte could be a monocyte
21. The progression is slowly advancing
22. The progression is quickly advancing
23. It is more likely to be found in the elderly rather than the young
24. 2 and 3 are correct
25. 3 and 5 are correct
26. 1 and 4 are correct
27. 1, 3, and 5 are correct
28. 2 and 4 are correct
29. In Polycythemia, which of the following is true?
    1. The platelets double in size
    2. The myeloid line reduces by half
    3. Oxygen carrying capacity is severely restricted
    4. The blood cells are misshapen, but protects against malaria
    5. The hematocrit (HCT) can almost double.

**Please turn in both your Op-Scan 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.**

**Your results will be posted on Blackboard in the next few days.**