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:

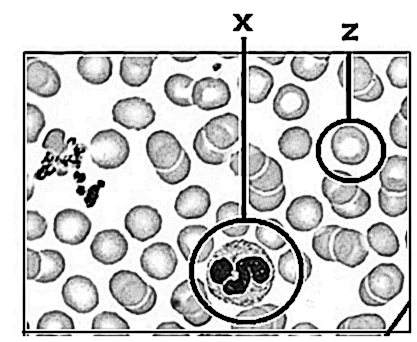
**Example Only**

**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**
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**

**For this question, you would have indicated (b) for a correct response.**

1. As a general rule, most hormone concentrations are controlled by
2. cellular demands
3. cholesterol levels
4. positive feedback mechanisms
5. the thyroid gland
6. negative feedback mechanisms
7. **Steroid** hormones
8. Can diffuse through the plasma membrane
9. can be composed of amino acids
10. are soluble in water
11. Are composed of glucose
12. All of the above
13. Which of the following hormones exerts its effect primarily upon the **reproductive organs**?
14. thyrotropin
15. thymosin
16. calcitonin
17. follicle stimulating hormone
18. adrenocorticotropic hormone
19. **Thyroid hormones** (T3 and T4) functions to
20. inhibit osteoclasts
21. enhance the hormone inhibin
22. inhibit activities within the digestive system
23. inhibit the rate at which proteins are denatured
24. regulate the rate at which carbohydrates are metabolized
25. **Nonsteroid** hormones act upon their target cells by causing
26. cyclic AMP to be decomposed
27. the inactivation of adenylate cyclase
28. a generalized deamination
29. the activation of adenylate cyclase
30. cyclic AMP to become ATP
31. Which of the following is secreted by nerve fibers in the posterior lobe of the pituitary gland
32. growth hormone
33. prolactin
34. antidiureteic hormone
35. thyroid-stimulating hormone
36. adrenocorticotropic hormone
37. The secretion of **parathyroid hormone** is controlled primarily by the
38. pituitary gland
39. concentration of blood calcium
40. thyroid gland
41. hypothalamus
42. concentrations of the bone calcium
43. Where are the hormones secreted by the posterior pituitary **made**
44. in the thalamus
45. in the anterior pituitary
46. in the medulla oblongata
47. in the posterior pituitary
48. in the hypothalamus
49. An example of a hormone secreted by the **adrenal medulla** is
50. melatonin
51. aldosterone
52. renin
53. epinephrine
54. antidiuretic hormone
55. **Target cells** for releasing hormones (CRH, GnRH, etc) are in the
56. anterior pituitary gland
57. posterior pituitary gland
58. thyroid gland
59. hypothalamus
60. thymus
61. **Oxytocin** is sometimes administered to women during childbirth to stimulate
62. vaginal relaxation
63. the urge to cuddle
64. uterine contractions
65. milk development
66. uterine relaxation
67. **Goiter** is most likely to affect people who live in regions where the food and soil lacks
68. potassium
69. sodium
70. iodine
71. worms
72. vitamins
73. A **steroid hormone** acts on a target cell by
74. turning on/off genes
75. causing a second messenger to be formed
76. diminishing mitotic control
77. causing the cell to divide
78. promoting phagocytosis
79. How does the body **turn off** the second messenger cAMP?
    1. Activates protein kinases
    2. Activates adenylate cyclase
    3. Removes phosphates from ATP
    4. Sends out steroid hormones
    5. The enzyme phosphodiesterase breaks it down
80. The parafollicular (extrafollicular) cells of the thyroid gland secrete
81. triiodothyronine
82. calmodulin
83. thyroxine
84. follicle stimulating hormone
85. calcitonin
86. In males, **oxytocin**
87. causes contraction of the Dartos muscle in the scrotum
88. contributes to male pattern baldness
89. stimulates the smooth muscles of the bladder
90. is the “cuddle hormone” in non-sexual relationships
91. causes impotence
92. With **melatonin**,
93. light stimulates retinas, which inhibits 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 inhibits 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. 2, 3, and 4 are correct
104. 1 and 5 are correct
105. 1 and 4 are correct
106. 3 and 5 are correct
107. 2, 4, and 5 are correct
108. A **second messenger** is often
109. cyclic AMP
110. protein kinase
111. prolactin
112. cholesterol
113. released with steroid hormones



1. Identify “X” This cell has a multi-lobed nucleus, very fine staining granules, and is typically the first to respond to infection.
2. lymphocyte
3. basophil
4. erythrocyte
5. monocyte
6. neutrophil
7. Identify “z” This cell is the most numerous as well as being anucleate.
8. lymphocyte
9. basophile
10. neutrophil
11. erythrocyte
12. monocyte
13. Which white blood cell will be elevated with a parasitic worm infection?
14. Macrophages
15. Eosinophils
16. Monocytes
17. Basophils
18. Lymphocytes
19. The movement of a white blood cell out of the circulatory system and into the tissues is called
20. Pseudopoeisis
21. Capacitation
22. Diapedesis
23. Cavitation
24. Diapodemia
25. Thalassemia is
26. A condition in which decreased platelet levels cause prolonged clotting times
27. A blood condition in which the numbers of erythrocytes are increased
28. A condition in which the erythrocytes circulate in with their nuclei
29. A condition in which the leukocytes are forced to carry hemoglobin
30. A condition that results from part of the hemoglobin being absent or incorrectly formed
31. Type **AB** blood will have which of the following
32. Type D antigen and Anti B in plasma
33. No antigens on the cell surface; no antibodies in the plasma
34. Type A and type B antigen on the cell surface; no antibodies in the plasma
35. Type A and type B antigen on the cell surface; type A and type B antibodies in the plasma
36. Type A antigen on the cell surface and Antibody B in plasma
37. Which Rh combination is **potentially** hazardous for a fetus?
38. Rh + mother and Rh + fetus
39. Rh – mother and Rh + fetus
40. Rh- mother and Rh- fetus
41. Rh + mother and Rh– fetus
42. 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.
43. Indicate the correct statement regarding hematapoeisis
    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 hematapoiesis is erythropoietin
    5. The hormone responsible for hematopoiesis is leukopoietin
44. Indicate the correct pathway for the development of a **lymphocyte**
45. Hemacytoblast 🡪 prolymphocyte 🡪 prolymphoblast 🡪 lymphocyte
46. Hemacytoblast 🡪 megakaryoblast 🡪 promegakaryocyte 🡪 lymphocyte
47. Hemacytoblast 🡪 myeloid stem cell 🡪 lymphoblast 🡪 prolymphocyte 🡪 Lymphocyte
48. Hemacytoblast 🡪 lymphoid stem cell 🡪 prolymphocyte 🡪 lymphoblast 🡪 lymphocyte
49. Hemacytoblast 🡪 Lymphoid stem cell 🡪 lymphoblast 🡪 prolymphocyte 🡪 lymphocyte
50. Which White Blood Cells fall into the **granulocytic** category?
51. **Erythrocytes**
52. **Neutrophils**
53. **Monocytes**
54. **Lymphocytes**
55. **Basophils**
56. 1, 2, and 5 are correct
57. 2 and 5 are correct
58. 1 and 4 are correct
59. 1 and 3 are correct
60. 3 and 4 are correct
61. In both intrinsic and extrinsic pathways, \_\_\_\_\_\_\_ needs to be converted to \_\_\_\_\_ to create the mesh that prevents blood loss.
62. Proplasmin; plasmin
63. Fibrinogen; fibrin
64. Profibrin; fibrin
65. Plasminogen; plasmin
66. Fibrin; metafibrin
67. As an embryo, where are red blood cells formed?
68. Liver and spleen
69. Mother’s bone marrow
70. Kidney and lymph nodes
71. Bone marrow
72. Lymph tissue
73. A reticulocyte
74. Is a fully mature white blood cell
75. Is a fully mature red blood cell
76. Is an immature platelet
77. Is an almost mature white blood cell
78. Is an almost mature red blood cell
79. If a person were to suffer from **severe blood loss**, what type of anemia would they have?
80. Hemolytic anemia
81. Thalassemia
82. Malaria
83. Hemorrhagic anemia
84. Pernicious anemia
85. Consider the hypophyseal portal system. Identify the correct statement
86. The portal is a neural tract between hypothalamus and posterior pituitary
87. The portal is a circulatory pathway between the hypothalamus and anterior pituitary
88. The portal is a circulatory pathway between hypothalamus and thalamus
89. The portal is a circulatory pathway between the pineal gland and pituitary gland
90. The portal is a neural pathway between the thalamus and pineal gland
91. Under normal circumstances, which leukocyte do we expect to see the most of in the blood?
92. Lymphocyte
93. Eosinophil
94. Monocyte
95. Basophil
96. Neutrophil
97. ACTH is **released** from the
98. hypothalamus
99. Corticotropic cells of anterior pituitary
100. adrenal medulla
101. posterior pituitary
102. adrenal cortex
103. ACTH is **regulated** by which hormone
104. Corticotropin Releasing Hormone
105. Sodium
106. Oxytocin
107. Cortex Regulating Hormone
108. Growth Hormone Releasing Hormone
109. ACTH has **target cells** located in
110. Renal gland
111. Posterior Pituitary
112. hypothalamus
113. Coritcotropic cells of anterior pituitary
114. Adrenal Cortex
115. Indicate which **two** of the hormones are from the adrenal cortex
116. **aldosterone**
117. **follicle stimulating hormone**
118. **cortisol**
119. **interstitial cell stimulating hormone**
120. **oxytocin**
121. 1 and 2 are correct
122. 1 and 3 are correct
123. 4 and 5 are correct
124. 2 and 4 are correct
125. 3 and 5 are correct
126. LH is **released** from the
127. Gonadatropic cells of anterior pituitary
128. Leukotropic cells of anterior pituitary
129. Ovarian Follicle
130. Corpus luteum
131. Posterior Pituitary
132. LH is stimulated for release by which hormone
133. ACTH
134. melatonin
135. Gonadatropic releasing Hormone
136. serotonin
137. Pineal Releasing Hormone
138. In the development of erythrocytes, at which stage do they extrude (lose) their nuclei?
139. Hemocytoblast
140. Erythroblast
141. Proerythrocyte
142. Normoblast
143. Reticuloblast

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

1. Blood glucose levels are going to trigger the release of glucagon. Which type of stimulation is being used?
2. sensory
3. neural
4. humoral
5. hormonal
6. ionic
7. Which disorder can be a complication of pregnancy and results in widespread clotting within the vessels?
8. Acute lymphocytic leukemia
9. Thalassemia
10. Disseminated intravascular coagulation
11. Sickle cell anemia
12. Hemophilia
13. Which secretory cell is paired **correctly** with the hormone it releases?
14. somatotropic cell, growth hormone
15. corticotropic cell, cortisol
16. somatotropic cell, growth hormone releasing hormone
17. lactotropic cell, leutinizing hormone
18. thyrotropic cell, thyroid releasing hormone
19. Which of the following are **true** statements?
20. Extrinsic clotting is stimulated by tissue damage
21. Intrinsic clotting is stimulated by tissue damage
22. Fibrinogen is insoluble in plasma and forms clots
23. Extrinsic clotting is stimulated by foreign particles
24. Intrinsic clotting is stimulated by foreign particles
25. 1 and 2 are correct
26. 1 and 5 are correct
27. 2 and 4 are correct
28. 1, 2, and 3 are correct
29. 4 and 5 are correct
30. In Chronic Lymphoid leukemia, which of the following would be true?
31. The predominant leukocyte could be a lymphocyte
32. The predominant leukocyte could be a monocyte
33. The progression is slowly advancing
34. The progression is quickly advancing
35. It is more likely to be found in the elderly rather than the young
36. 1, 3, and 5 are correct
37. 2 and 4 are correct
38. 2 and 3 are correct
39. 3 and 5 are correct
40. 1 and 4 are correct
41. 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

**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 in the next few days.**