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在你回答任何問題前，請務必先填寫你的系別、學號及姓名。共有二十五題。所有考試題目都是選擇題。每一題選擇題有五個可能的答案。在每一題中，或許不只一個答案是正確的，但都只有一個最好的答案。請選擇最好的一個答案來回答每一個問題。祝各位 期末 考試順利，春節快樂及有個快樂的寒假。

1. Which of the following is used to test for the products of the hydrolysis of sucrose? (A) Sudan stain (B) Iodine stain (C) Phenol red (D) NaOH and CuSO_4 (E) None of the above
2. Where are sperm stored after production? (A) prostate gland (B) epididymis (C) seminal vesicles (D) prostate gland (E) seminiferous tubules
3. Where is the final destination of blastocyst? (A) fallopian tube (B) ovary (C) uterus (D) vagina (E) none of the above
4. Which of the following statements is NOT correct?
(A) The reproductive process in both males and females is controlled by sex hormones.
(B) One of the functions of the cilia in the fallopian tube is to move the egg along the fallopian tube.
(C) A sperm swims in the female reproductive tract by using cilia.
(D) The prostate glands secrete sugar, which acts as an energy source for sperm.
(E) More than one of the above.
5. Which of the following conditions can be responsible for the production of defective sperm? (A) stress (B) smoking (C) masturbation (D) All of the above (E) More than one of the above.
6. According to the tape "Odyssey of life," which two species are closed related to human? (A) chimpanzee and monkey (B) gorilla and pig (C) chicken and pig (D) chimpanzee and gorilla (E) None of the above
7. In adulthood, the human brain is (A) 1 times the size (B) 2 times the size (C) 3 times the size (D) 4 times the size (E) 5 times the size of the chimpanzee's brain.
8. Which of the following is NOT one of the types of human fingerprints?
(A) dimples (B) loops (C) arches (D) whorls (E) None of the above

9. A reagent, or indicator, is a chemical used to
(A) make foods turn color. (B) catalyze a reaction. (C) stop a reaction.
(D) indicate when an experiment is complete.
(E) react with specific compounds in a solution.
10. What anesthetic do we use to anesthetize the rat in Lab 11-13?
(A) Urine (B) Pentobarbital (C) Urethane (D) Ether (E) Heparin
11. During the early development, what hormone do testes of baby boy secrete to stimulate the development of internal genitalia?
(A) MIH (B) Estrogen (C) Progesterone (D) Testosterone (E) None of the above
12. Which of the following hormones determines the development of male external genitalia?
(A) DHT (B) MIH (C) Estrogen (D) Progesterone (E) Testosterone
13. The Mullerian duct, if stimulated by the right hormone, will develop into
(A) oviduct (B) uterus (C) seminal vesicles (D) two of the above (E) testes
14. If an XY individual is affected with 5-alpha reductase deficiency, he is expected to have
(A) normal testes (B) normal ovaries (C) male external genitalia at birth
(D) Mullerian derivatives (E) More than one of the above
15. Which of the following brain regions is larger in men than women?
(A) SCN (B) INAH-3 (C) anterior commissure (D) two of the above
(E) none of the above
16. Which of the following enzymes converts testosterone into estrogen? (A) aromatase (B) 5-alpha reductase (C) invertase
(D) lactase (E) None of the above.
17. During the perfusion of the rat, we inserted the needle into (A) left atrium
(B) right atrium (C) left ventricle (D) right ventricle (E) None of the above
18. During the analysis of Chi-Square result, we have to decide the degree of freedom before we can find the right p value for each Chi-Square value. If the number of phenotypes is 9, the degree of freedom is (A) 9 (B) 6 (C) 3 (D) 8 (E) 1
19. Which of the following indicators is used to test for lipids?
(A) Benedict's solution (B) Iodine (C) Sodium hydroxide (D) Sudan stain
(E) Phenol red
20. Which of the following statements is correct? Please choose the BEST answer.
(A) Cell theory states that the majority of living organisms are composed of cells and cell products.
(B) Cell theory states that new cells derive from cell division of preexisting cells.
(C) A single cell is the structural and functional unit of life.
(D) More than one of the above is correct.
(E) All of the above statements are correct.

21. Enzymes are biological catalysts: the effect of enzymes on reaction is affected by
(A) pH of reaction solution (B) temperature of reaction.
(C) substrates (reacting compounds) of reaction.
(D) 1 and 2 only. (E) 1, 2, and 3.
22. Which of the following statements is NOT correct?
(A) Human has 23 pairs of chromosomes.
(B) Dog has 39 pairs of chromosomes.
(C) Rhesus monkey has 21 pairs of chromosomes.
(D) Cat has 18 pairs of chromosomes.
(E) None of the above.
23. The karyotype of one individual is XO. This individual has underdeveloped ovaries and is sterile. What is your diagnosis about this individual?
(A) Down syndrome
(B) Cri-du-chat syndrome
(C) Turner syndrome
(D) Klinefelter syndrome
(E) Edward syndrome
24. Which of the following carbohydrates is a disaccharide?
(A) Fructose (B) Lactose (C) Starch (D) Glycogen
(E) More than one of the above.
25. Which of the following statements is correct?
(A) Glycine is the simplest amino acid.
(B) All proteins are enzymes.
(C) Proteins are composed of C, H, O, Cl and P.
(D) Fatty acids are basic subunits of proteins.
(E) More than one of the above statements is correct.

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