Bio 101 review questions

Review Questions 1. The organic molecule produced directly by photosynthesis is b) sugar 2. The photosynthetic process removes E) carbon dioxide from theenvironment. 3. The process of splitting water to release hydrogen and electrons occurs during the _____ process. a) light dependent 4. The process of fixing carbon dioxide into carbohydrates occurs in the ____ process. b) light independent. 5. Carbon dioxide enters the leaf through b) stomata. 6. The cellular transport process by which carbon dioxide enters a leaf (and by which water vapor and oxygen exit) is ___.) Diffusion 7. Which of the following creatures would not be an autotroph? c) fish 8. The process by which most of the world's autotrophs make theirfoodis known as ____. b) Photosynthesis 9. The process of ___ is how ADP + P are converted into ATP during the Light dependent process. c) chemiosmosis 10. Once ATP is converted into ADP + P, it must be ____. b) recharged by chemiosmosis 11. Generally speaking, the longer the wave lenght of light, the ___ available energy of that light. a) smaller 12.

The section of the electromagnetic spectrum used for photosynthesis is ___. d) visible light 13. The colors of light in the visible range (from longest wavelength to shortest) is ___. a) ROYGBIV 14. The photosynthetic pigment that is essential for the process to occur is ___. a) chlorophyll 15. When a pigment reflects red light, _____. d) red light is reflected, all others are absorbed 16. Chlorophyll a absorbs light energy in the ____color range. e) b and c 17. A photosystem is ___. b) a collection of photosynthetic pigments arranged in a thylakjoid membrane. 8. The individual flattened stacks of membrane material inside the chloroplast are known as ___. c) thylakoids. 19. The fluid-filled area of the chloroplast is the ___. b) stroma 20. The

chloroplast contains all of these except ___. e) endoplasmic reticulum 21. The chloroplasts of plants are most close in size to __. d) bacteria in the human mouth 22. Which of these photosynthetic organisms does not have a chloroplast? c) cyanobacteria 23. The photoelectric effect refers to ____. c) emission of electrons from a metal when struck by any wavelength of light. 24.

Light of the green wavelengths is commonly absorbed by which accessory pigment? b) chlorophyll b 25. The function of the electron transport proteins in the thyakoid membranes is ___. c) Pumping of hydrogen into the thylakoid space for later generation of ATP by chemiosmosis. 26. ATP is known as the energy currency of the cell because ____. a) ATP is the most readily usable form of energy for cells. 27. Both cyclic and noncyclic photophosphorylation produce ATP. We can infer that the purpose of ATP in photosynthesis is to c) supply energy that can be used to form a carbohydrate. 8. The role of NADPH in oxygen-producing photosynthesis is to ____. b) supply carbon to the carbohydrate 29. The dark reactions require all of these chemicals to proceed except ___. e) oxygen 30. The first stable chemical formed by the Calvin Cycle is _____. c) PGA 31. The hydrogen in the carbohydrate produced by the Calvin Cycle comes from ___ b) NADPH 32. The carbon incorporated into the carbohydrate comes from ___. c) carbon dioxide 33. C-4 photosynthesis is so named because _____. b) it produces a four carbon compound as the first stable products of photosynthesis.