

44 THINGS YOU SHOULD KNOW FOR THE LIVING ENVIRONMENT MID TERM EXAM

1. Amino acids are the individual units that bond together to form a polypeptide (protein).
2. Monosaccharides are the individual units that bond to together to form a polysaccharide (starch).
3. Enzymes are protein molecules that catalyze (speed up) chemical reactions.
4. The shape of a molecule is important to its proper functioning.
5. Electrophoresis is a technique used to separate fragments of cut DNA according to size.
6. Organisms have different structural, behavioral or procedural adaptations to carry out life functions.
7. Natural selection is the process that may lead to the evolution of new species.
8. The fossil record provides evidence that evolution has occurred.
9. The first living organisms were single celled prokaryotic organisms.
10. The rate at which evolution occurs varies from species to species.
11. When a small group of individuals is separated from the main population, they may evolve into a new species that is specialized for a different environment or become extinct.
12. Changes in genes result in variations that may lead to the formation of new species.
13. Changes in genes make evolution possible.
14. If a population has a wide range of variation due to genetic diversity, it gives the population an increased ability to adapt if the environment ever changes drastically.
15. Organs and systems in the human body help maintain homeostasis.
16. Enzymes in the digestive system are responsible for the hydrolysis (breaking down) of carbohydrates, proteins, and lipids.
17. The problem is what is being investigated and is written in question form.
18. The hypothesis is a testable possible solution about the answer to the problem and is a statement written in a sentence. **IT IS NEVER WRITTEN AS A QUESTION**
19. A conclusion is determined from data in an experiment and is stated as a complete sentence.
20. An experiment must be completed several times before results are considered valid.

21. The dependent variable is the numerical data obtained during the experiment; the measured variable.
22. The independent variable is the factor being tested that will influence the dependent variable.
23. Every experiment must have a control.
24. Conditions in an experiment must be exactly the same for all test tubes or test subjects. Only the single variable condition being investigated should differ.
25. Always use multiple set-ups at each condition and average the results to obtain valid data. Each setup must contain an organism of the same species and exactly the same conditions.
26. Open the diaphragm of the microscope to adjust the brightness and only use the fine adjusting knob when focusing using high power magnification.
27. Wet mount slides must be prepared to view live specimens under a microscope.
28. Bromothymol Blue is an indicator for carbon dioxide.
29. Iodine (Lugol's solution) is an indicator for starch (polysaccharide).
30. Wide range pH paper can be used to determine the acidity or basicity of a solution.
31. Benedict's solution is an indicator for glucose and must be heated.
32. An inference is an idea based on observations.
33. Data tables are used for organizing scientific data.
34. The independent variable is placed on the X-axis
35. The dependent variable is placed on the Y-axis.
36. Be sure the axes are labeled and start at zero and are divided into evenly spaced intervals.
37. Use most of the graph when making a graph (at least 75% of the space available).
38. Gradualism: evolution occurs at a slow and steady pace (Darwin)
39. Punctuated Equilibrium: Evolution occurs rapidly with interspersed periods of stability (Gould).
40. A stimulus is a change in the environment.
41. Negative feedback opposes original stimulus.
42. Positive feedback reinforces original stimulus.
43. Organisms do NOT change because they need to (Lamarck).
44. Organisms with favorable characteristics are able to survive if they environment changes.