

AHMES SECONDARY SCHOOL

FORM THREE HOLIDAY BIOLOGY HOLIDAY PACKAGE

1. What is the meaning of evolution?
2. State the theories of the origin of life.
3. a) State Lamarck's theory of evolution
b) Explain Lamarck's observations and deductions
c) Outline the merits and demerits of Lamarck's theory
4. a) State Darwin's theory of evolution
b) Outline Darwin's observations and deductions
c) Explain the merits and demerits of Darwin's theory
5. Explain the evidence of organic evolution.
6. Describe one way in which new species are formed.
7. Give the applications of organic evolution in real life situation.
8. a) Explain what is meant by the term 'antagonistic muscle action'.
b) Describe two examples of antagonistic muscle action which do not involve the skeleton.
c) By giving examples in each, list types of skeleton and state the functions of skeleton.
9. Name types of muscle tissue and describe how the structure of each is adapted to its function.
10. Copy and complete the following table for **two** named tropisms.

Tropism	Stimulus	Description of response	
		Root	Shoot

11. Give the meaning of the following terms; Coordination, irritability, Neurone, Nerve impulse and Synapse.
12. By giving examples in each, explain the major components of nervous coordination.
13. a) Describe the ways in which the structures of:
i) a relay neurone
ii) a motor neurone differ from the structure shown in part a.
b) Describe the functions of sensory, relay and motor neurones.
12. Use a flow diagram to describe the neurone pathway of a reflex action.
13. Draw a table with two columns. The first should be headed 'Structure', the second 'Function'.
Complete the table with information about the human eye.
14. a) Outline the mechanism of hearing.
b) Describe the way in which the human ear provides us with:
i) a sense of acceleration and ii) a sense of balance
15. Write an essay on drug abuse under the following guidelines:
 - meaning of drug and drug abuse
 - examples of drugs
 - causes of drug addiction

- effects of drug addiction
 - preventive and control measures of drug abuse
16. Describe the structure and explain how the following mammalian organs are adapted to their functions; a) skin b) ear c) eye
17. Explain causes, effects and preventive measures of irresponsible sexual behaviours. (Give four points in each).
18. a) Explain how homeotherms respond to changes in temperature when
- i) when the environmental temperature rises
 - ii) when the environmental temperature falls
- b) Explain ways used by ectotherms to overcome temperature changes.
19. Explain the mechanism of blood sugar regulation in the human body.