
KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

MOI GIRLS ELDORET HIGH SCHOOL
BIOLOGY THEORY
PAPER 1

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MOI GIRLS ELDORET KCSE TRIAL AND PRACTICE EXAM 2016

231/1

BIOLOGY

THEORY

PAPER 1

2 Hours

1. Define;
 - a) Inter-specific competition (1mk)
 - b) Intra-specific competition (1mk)

2. The diagram below is of a stage in cell division

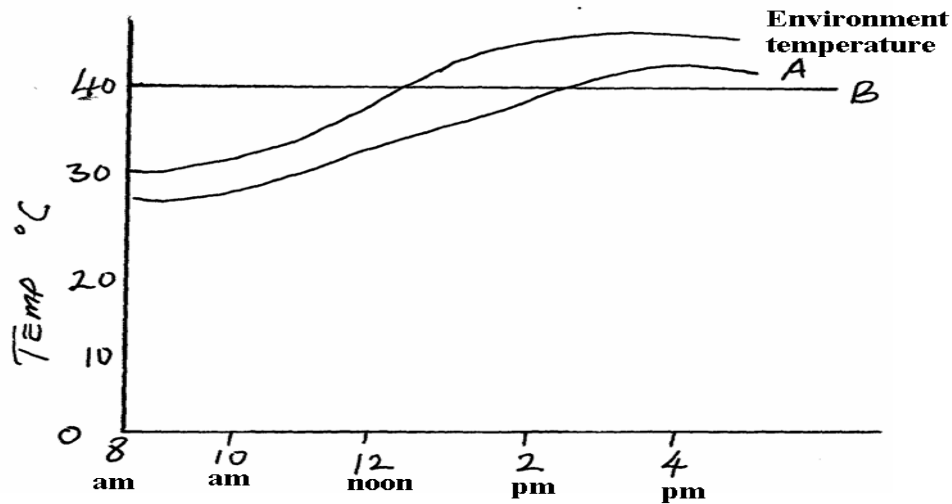


With a reason identify the stage. (2mks)

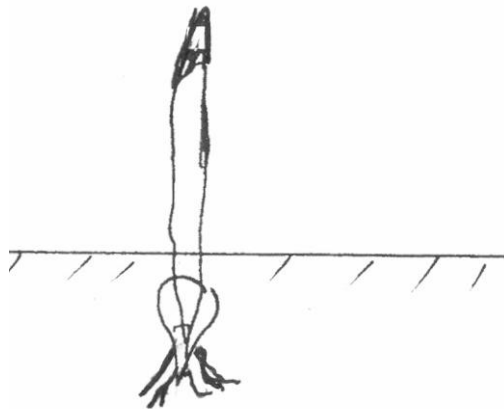
Stage

Reason

3. Name two mutagenic agents. (2mks)
4. The scientific name of the housefly is *Musca domestica*. Classify the fly into; (2mk)
 - i) Genus
 - ii) Species
5. Cyanide is classified as one of the non-competitive inhibitors of enzymes. What is the meaning of the term non-competitive inhibitor? (2mks)
6. Name two Vitamins of which their absence in the diet may cause a dental disease called gingivitis (2mks)
7. State three factors that maintain the transpiration stream. (3mks)
8. State the economic importance of each of the following plant excretory products.
 - i) Cocaine (1mk)
 - ii) Caffeine (1mk)
 - iii) Nicotine (1mk)
9. a) Why is Lamarck's theory on mechanism of evolution not scientifically Acceptable? (1mk)
b) What name is given to;
 - i) Structures in animals that have become reduced in size until they are functionless (1mk)
 - ii) Evolution of structures that have undergone modification to adapt the organism to similar ecological niches. (1mk)
10. The body temperatures of two animals A and B varied as below with environmental Temperature



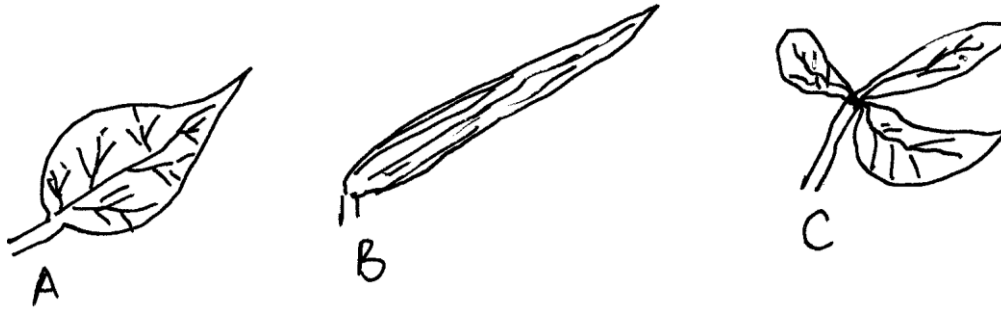
- a) Which of the animals is;
- Endothermic (1mk)
 - Ectothermic (1mk)
- b) With a reason, state which of the animals is likely to be widely distributed (2mks)
11. a) State a structural difference between a sensory and motor neurone (2mks)
- b) What is a reflex arc? (2mks)
12. Identify the type of gene mutations represented by the following pairs of words.
- Shirt instead of skirt (1mk)
 - Hopping instead of shopping (1mk)
 - Eat instead of tea (1mk)
13. State three adaptations of halophytes to their habitat (3mks)
14. State three roles of oestrogen during the menstrual cycle (3mks)
15. A form IV student observed a seedling germinate as below



- With a reason identify the type of germination above. (2mks)
16. A man of blood group heterozygous **A** married a woman of heterozygous **B**; work out the blood groups of their children (3mks)
17. a) How is the stigma of a wind pollinated flower adapted to its function? (1mk)
- b) Define the term double fertilization in plants? (2mks)
18. State three characteristics of cells at the zone of cell division in an apical meristem (3mks)
19. Explain the importance of the label "CFC FREE" on modern refrigerators (3mks)
20. Name three biotic factors of an ecosystem (3mks)
21. Below are diagrams of three leaves A, B and C. Construct a two step dichotomous

key which can be used to identify each of them.

(4mks)



22. A Form IV student observed an heterotrophic organism with jointed appendages and whose body was divided into head, thorax and abdomen. Classify the organism into;
- i) Kingdom (1mk)
 - ii) Phylum (1mk)
 - iii) Class (1mk)
23. Define;
- i) Pulmonary circulation (1mk)
 - ii) Systemic circulation (1mk)
24. Name three diseases against which children are immunized (3mks)
25. Name the site for gaseous exchange in the following animals
- i) Insects (1mk)
 - ii) Fish (1mk)
 - iii) Mammals (1mk)
26. Students estimating the number of grasshoppers in a field captured 72 grasshoppers which they marked and released. After two days the students captured 90 grasshoppers of which 8 were marked.
- a) Why did the second capture take place after two days? (1mk)
 - b) Calculate the total number of grasshopper in the field (3mks)
27. Name the causative agent of typhoid and state two symptoms of the disease (3mks)
28. Name two neurotransmitter substances across neurons (2mks)
29. What type of variation is exhibited by the ability of man to roll or not roll the tongue? (1mk)