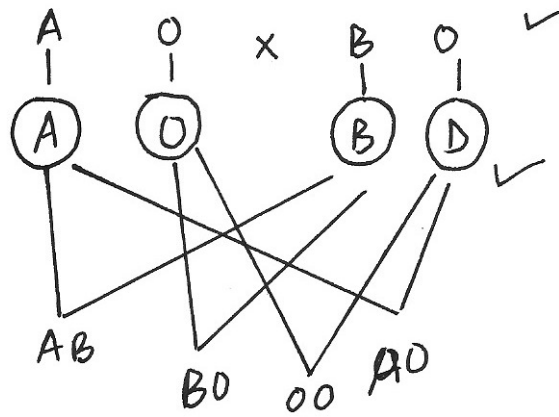

KENYA NATIONAL EXAMINATION COUNCIL
REVISION MOCK EXAMS 2016
TOP NATIONAL SCHOOLS

MOI GIRLS – ELDORET HIGH SCHOOL
BIOLOGY THEORY
PAPER 1
MARKING SCHEME

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1. (a) Competition between organisms of different species ✓ 1
(b) Competition between organisms of same species ✓ 1
2. Prophase I ✓ 1
Chromatids coiled over each other at chiasmata ✓ 1
3. Gamma rays ✓ 1
Mustard gas ✓ 1
4. (i) Genus: musca ✓ 1
(ii) Species: domestica ✓ 1
5. Inhibitors that permanently combine with the enzyme at the active ✓ 1 site
6. Vitamins A and C ✓ 1
7.
 - Transpiration pull ✓ 1
 - Cohesion and adhesion forces ✓ 1
 - Root pressure ✓ 1
8. (i) Local anaesthetic ✓ 1
Causes physical and mental defects
(ii) Mild stimulants ✓ 1
(iii) Manufacture of insecticides ✓ 1
Manufacture of narcotic drugs
9. (a) Acquired characteristics cannot be inherited ✓ 1
(b) (i) Vestigial organs ✓ 1
(ii) Convergent evolution ✓ 1
10. (a) (i) B ✓ 1

(ii) A ✓ 1
(b) B ✓ 1 – because it can keep its temperature constant despite variations in the environment ✓ 1
11. (a) A sensory neurone has a cell body situated off the axon while a motor neurone has a cell body situated at one end of the axon
(b) Pathway followed by nerve impulses during a reflex action ✓ 1
12. (i) Substitution ✓ 1
(ii) Deletion ✓ 1
(iii) Inversion ✓ 1
13. (i) Root cells that concentrate a lot of salts to enable them take in water by osmosis ✓ 1
(ii) They have water storage tissues ✓ 1
(iii) Presence of breathing roots ✓ 1
14.
 - Repair and healing of endometrium ✓ 1
 - Stimulates production of LH ✓ 1
 - Brings about female secondary sexual characteristics ✓ 1
15. Hypogeal germination ✓ 1; cotyledons remain below the ground ✓ 1
16. ♂ ♀



A, B, AB and O

17. (a) Long, feathery and hanging outside the flowers to collect pollen grains ✓1
 (b) Male nucleus + Egg cell nucleus → diploid zygote (embryo)
 Male nucleus + polar nuclei → triploid nucleus (endosperm)
- 18.
- Thin cell walls ✓1
 - Nerval cytoplasm ✓1
 - No vacuoles ✓1
19. The refrigerators do ✓1 not use chlorofluorocarbons; and therefore cannot deplete ✓1; ozone ✓1 layer;
- 20.
- Predation
 - Competition
 - Parasitism
 - Saprophytism
 - Symbiosis
- (Any 3 correct answers) 1x3
21. 1a; Simple leaf..... Go to 2 ✓1
 1b; Compound leaf C ✓1
 2a; With parallel variation..... B ✓1
 2b; With network variation..... A ✓1
22. (i) Animalia ✓1
 (ii) Arthropoda ✓1
 (iii) Insecta ✓1
23. (i) Flow of blood from the heart is the lungs and back to the heart
 (ii) Flow of blood from the heart is the rest of the body organs ✓1
- 24.
- Poliomyelitis
 - Measles
 - Whooping cough
 - Tuberculosis
- Any 3 correct answers (1x3)
25. (i) Tracheoles ✓1
 (ii) Gill filaments ✓1
 (iii) Alveoli ✓1
26. (a) To allow proper mixing of the grasshoppers ✓1

(b)
$$P = \frac{FM \times SC}{MR} = \frac{72 \times 90}{8} = 810$$

27. Salmonella typhi ✓1

- Fever
- Rash
- Severe diarrhoea

Any two correct answers (1x2)

28.

- Acetylcholine
- Noradrenaline

29. Discontinuous variation