**KAHUHO UHURU HIGH SCHOOL**

**FORM 2: BIOLOGY**

**MID-TERM EXAM**

**TERM 2:2014**

**TIME: 1 HOUR**

**INSTRUCTION**

Answer **ALL** questions in this paper

1. Differentiate between active immunity and passive immunity (2mks)
2. (a) Give two reasons why blood clotting is important (2mks)

(b) Explain why deficiency of vitamin K leads to excessive bleeding even from small cuts (2mks)

(c) Name two enzymes and one metal ion that are required in the blood clotting process. (3mks)

(d) How can the effects of excessive bleeding be reversed (2mks?)

1. Define the term immunity (2mks)
2. State three adaptations of red blood cells to their function (3mks)
3. In a tabular form, state two structural differences between arteries and veins (2mks)
4. The diagram below shows the structures of three types of mammalian blood vessels. They are not drawn to scale.
5. In which direction with reference to the heart does vessel B transport blood? (1mk)
6. Blood pressure in vessel A is normally higher than that in vessel B .Give reasons to account for this. (2mks)
7. Name one structure that is present in vessel B but absent in the other two. (1mk)
8. State the physiological role of vessel C (1mk)
9. In what ways is vessel C adapted for its functions? (2mks)
10. The diagram below shows the internal structure of a mammalian heart.
11. Draw arrows to show the direction of blood in and out of the heart. (2mks)
12. What are the functions of parts labeled A, B, C and F? (4mks)
13. The muscular wall of chamber D is at least three times thicker than the wall of chamber E .Give a reason for this difference (1mk)
14. Name one special characteristic of heart muscles which distinguishes it from other types of muscles . (1mk)
15. In which of the chambers D and E does blood contain most oxygen? (1mk)
16. In what way does the artery labeled G differ from other arteries in the body? (1mk)
17. The enzymes pepsin and trypsin are secreted as inactive precursors:
18. What are the names the precursors? (2mks)
19. Why are they secreted in an inactive form? (1mk)
20. State any three functions of the mucus which is secreted along the wall of the alimentary canal (1mk)
21. What causes allergies? (2mks)
22. What are enzyme inhibitors (1mk)
23. State two proteins in the blood which are responsible for determining the blood group of a person. (2mks)
24. People can die when they inhale gases from burning charcoal in poorly ventilated rooms. Explain how this death comes about. (2mks)
25. Define the term double circulation (2mks)

15. Explain how chloroplasts are adapted to their photosynthetic functions (3mks)

1. List three adaptations of leaves that maximize efficiency in trapping sunlight for photosynthesis. (3mks)