

**CALTEC ACADEMY MAKERERE**  
**GASEOUS EXCHANGE - REVISION QUESTIONS**

1. (a) Give five properties of expired air in man. (05 marks)  
(b) Describe an experiment you would use to test for any one of the properties stated in (a) above. (10 marks)
2. (a) Compare the respiratory system of an insect and a mammal. (11 marks)  
(b) Explain why the rate of breathing is higher at high altitude? (04 marks)
3. (a) What are the characteristics of a good respiratory surface? (04 marks)  
(b) Stating the respiratory surface(s), explain how the characteristics stated in (a) are displayed in a;
  - (i) Fish(04 marks)
  - (ii) Mammal(06 marks)
4. (a) Describe the breathing mechanism in man. (11 marks)  
(b) How are the respiratory surfaces in man adapted to their functions? (04 marks)
5. (a) Describe the structure of the gill of a fish(05 marks)  
(b) Explain how the gill is adapted to its function(s) (10 marks)
6. (a) How does gas exchange occur in amphibians such as frogs? (11 marks)  
(b) What are the advantages and disadvantages of the mechanism of gas exchange in amphibians? (04 marks)
7. (a) Compare the respiratory surface of insects with that of man(06 marks)  
(b) Describe the route taken by air into the cells of an insect for respiration(09 marks)
8. (a) Define the term gaseous exchange (01 mark)  
(b) Of what importance is gaseous exchange to living organisms? (04 marks)
  - (c) (i) Explain how size of an organism affect gaseous exchange in animals. (08 marks)
  - (ii) State any two factors that affect the rate of gaseous exchange in organisms. (02 marks)
9. (a) how are aquatic organisms adapted for gaseous exchange(08 marks)  
(b) Explain why the rate of respiration in animals higher than in plants? (07 marks)
10. (a) Outline the characteristic features of a respiratory surface. (5 marks)  
(b) Describe the mechanism by which gases are brought into and moved out of the respiratory organs of a named mammal. (10 marks)