Definitions and Categories of Disease

1. What is disease?
   • There are no universal or timeless definitions of disease, they have varied over time and space
   • Disease is an ‘alteration of living cells or tissues, that jeopardises survival in their environment’ (Jacques May)
     1. Environmental context - disease does not occur independently of the broader external environment
     2. Implication; varying levels of health in the absence of disease

2. Major categories of disease
   **Major categories of disease**
   1. Infectious conditions
      • (conditions transmitted from one host to another) caused by viruses, bacteria, protozoa, *Rickettsiae* and helminths
      • Infectious diseases - ‘alteration of living cells resulting from the invasion of a host by a parasite which, every so often, leaves its host to establish itself in another.’
      • Infection refers to the process by which the parasite becomes established in a new host
   2. Degenerative and chronic conditions
      • cancers, cardiovascular and cerebrovascular disease, etc.
   3. Inherited conditions
      • (resulting from chromosomal abnormalities) - haemophilia, etc.

5. *Infectious disease parasites*
   1. Viruses
      • the smallest of life forms, that can only multiply in the cells of a host
      • associated with diseases such as influenza, smallpox and AIDS
   2. Bacteria
      • unicellular plants which multiply by binary fission
      • damage the tissues of hosts by the production of toxins which occurs when cells are multiplying rapidly
      • associated with diseases such as cholera, tetanus and tuberculosis
   3. Protozoa
      • unicellular animals associated with malaria and sleeping sickness
   4. *Rickettsiae*
      • group of disease agents associated with diseases such as typhus fever
   5. Helminths (worms)
      • multicellular animals associated with diseases such as hookworm, tapeworm and river blindness

(6) *Prions*
   • proteins transmitted via food chains, associated with a relatively small number of diseases such as Creutzfeldt-Jakob (CJD)

Routes of entry for *infectious diseases into the human body*
1. Through the mouth into the respiratory tract
2. Through the mouth into the alimentary tract (into intestines)
3. Urinogenital tract
4. Conjunctiva (eye) - e.g. measles can be contracted this way
5. Scratch/Injury/Wound - e.g. Tetanus
6. Arthropod - inoculation of vectored diseases - e.g. Plague