By the end of this unit you should be able to;

1. Define the term ‘parasite’ and be able to give named examples of parasites (e.g. protists, platyhelminths, nematodes, arthropods, bacteria and viruses), and their hosts.
2. Understand and be able to define the terms: ecological niche, a fundamental niche, a realised niche, competitive exclusion principle and resource partitioning.
3. Compare the differences between ectoparasites and endoparasites , be able to give named examples of both and be able to describe how they are transmitted.
4. Describe the differences between the definitive host and an intermediate host and be able to explain why many parasites require more than one host to complete their life cycle e.g *Plasmodium spp* and *Schistosoma spp.*
5. Define a vector and be able to give named examples of vectors.
6. Name factors which increase transmission rates.
7. Understand that the most successful parasites have efficient modes of transmission and rapid rates of evolution.
8. Define virulence.
9. Describe the ways in which host behaviour is exploited and modified by parasites to maximise transmission.
10. Explain that the distribution of parasites is not uniform across hosts and understand that the sexual and asexual phases allow rapid evolution and rapid build-up of parasite population.
11. Understand and be able to name the differences between non-specific and specific cellular defences in mammals to parasites.
12. Describe epidemiology and be able to explain ‘herd immunity threshold’.
13. Explain how endoparasites evade detection by the host’s immune system and modify host-immune response to reduce their chances of destruction.
14. Understand how antigenic variation in some parasites allows them to evolve faster than the host immune system can respond to new antigens.
15. State that human diseases include tuberculosis caused by bacteria, and influenza and HIV caused by viruses.
16. Describe viruses as infectious agents and be able to describe their structure.
17. Define RNA retroviruses.
18. Name some of the challenges in treatment and control of parasites.
19. Explain why parasites spread most rapidly in those conditions where coordinated treatment and control programs are most difficult to achieve.
20. Explain outcomes of improved parasite control.