

1. Describe various methods for (a) serological and (b) molecular diagnoses of microbial infections. (15%)
2. Describe strategies of transcription employed by different viruses based on Baltimore's classification. (15%)
3. (a) How many different factors can make a host become immunocompromised? (10%)  
(b) List five common opportunistic infections that may occur in a compromised host. (5%)
4. (a) Describe the steps in viral replication that are targets for antiviral drugs. (7%)  
(b) List one antiviral drug and its targeted virus for each step. (8%)
5. How do the differences between prokaryotes and eukaryotes influence bacterial infection and treatment? (15%)
6. List the viral characteristics (structure, replication, target tissue) that would promote transmission by the fecal-oral route, by arthropods, by fomites (contaminated objects), by mother's milk, and by sexual activity. (15%)
7. What are the advantages and disadvantages of chemotherapy compared with vaccination? (10%)