Shahjalal University of Science and Technology
Department of Biochemistry and Molecular Biology
Course: BMB 430 (Virology)
Time-60 min, Full Marks-20

1. What is virus? Write down five general characteristics of virus?   2

2. What molecular criteria are used to classify viruses? How many classes of viruses   3
   can be distinguished based on their genetic material and replication strategy,
   write with example?

3. What are the different techniques available for virus detection? Write down one   3
   advantage and one disadvantage of each technique?

4. What are the possible reasons for the low infectivity of physical virus particles?   3

5. A virus suspension was subjected to 10^8 folds dilution and one-mL aliquots of   2
   this diluted suspension gave 12, 12 and 15 plaques in three different petri plates.
   What is the concentration of virus in the original suspension?

6. What is Multiplicity of infection (m.o.i)? One 5-cm diameter petri dish contains   2
   approximately 10 million cells, and 0.4 mL of a suspension containing 200
   million PFU/mL of polyomavirus is used to infact the cells. What is the m.o.i and
   is this sufficient for infection?

7. What are the various steps of viral replication cycle? Among them which step   3
   determine the specificity of host for viral infection and how?

8. What are the basic characteristics of positive-strand RNA virus genomes? Write   2
   with example.