

Virology for second year MD students – School of Medicine – the University of Jordan

Malik Sallam, MD, PhD

Activity for the first lecture (in-campus)

Please read each statement carefully and indicate whether it is True or False:

1. Viral host range is independent of capsid architecture and solely determined by genome polarity. **False**
2. A virion and a virus differ in that only the virion represents a structurally complete, infection-competent form. **True**
3. Variability in viral genome type and structure directly implies variability in replication pathways and strategies. **True**
4. For all viruses, if the capsid is removed, the viral genome retains full infectivity independent of host cellular mechanisms. **False**
5. The capsid serves both as a protective layer and as a determinant of host specificity through receptor interaction. **True**
6. The term virus refers exclusively to RNA-based infectious agents. **False**
7. Because virions contain only a single type of nucleic acid, a hybrid DNA-RNA genome within one virion violates viral definition. **True**
8. Negative-sense RNA viruses require the presence of an RNA-dependent RNA polymerase within the virion for replication to start. **True**
9. A phage can infect archaeal cells since both bacteria and archaea are prokaryotes. **False**
10. The ambiguity of viral living status arises from their metabolic inactivity outside host cells and active replication inside them. **True**
11. The classification of viruses as living depends primarily on their ability to maintain homeostasis outside a host. **False**

12. The virion inability to replicate autonomously demonstrates that it fails to meet one essential criterion for life. **True**
13. A single-stranded RNA virus of positive polarity can be directly translated without prior synthesis of complementary strands. **True**

Good luck!