Which statement about virulence and pathogenicity is correct?

A) Every pathogenic virus is virulent, but not every virulent virus is pathogenic

B) Every virulent virus is pathogenic, but not every pathogenic virus is virulent

C) Virulence and pathogenicity are always equivalent

D) Pathogenic viruses are never virulent

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2. Latent viral infections are characterized by:

A) Continuous active replication without symptoms

B) Periodic reactivation from inactive viral genomes within host cells

C) Complete virus clearance after the first infection

D) Viral genome degradation upon entry

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3. Viruses from the same genus compared to viruses from the same family:

A) Share fewer phenotypic similarities

B) Share more phenotypic similarities

C) Always have identical genomes

D) Cannot differ in replication strategy

4. Members of the Orthopoxvirus genus differ from members of another poxvirus genus in:

A) Genome type only

B) Replication strategy only

C) Both genome type and replication strategy

D) Neither genome type nor replication strategy

5. Chronic viral infections can result from:

A) Rapid viral clearance

B) Incomplete clearance after an acute phase

C) Latent infection without replication

D) Transmission via fomites

---

6. Transmission through contaminated surgical instruments is an example of:

A) Direct contact transmission

B) Indirect somite-mediated transmission

C) Vector-borne transmission

D) Airborne transmission

---

7. If viral uncaring is blocked, viral genome synthesis:

A) Can proceed via host RNA polymerase

B) Cannot proceed

C) Occurs normally in DNA viruses only

D) Is accelerated

---

8. Infection via fomites represents:

A) Direct viral entry

B) Indirect viral entry

C) Vector-borne infection

D) Vertical transmission

---

9. Groups VI and VII in the Baltimore classification differ:

A) Only in RNA strand polarity

B) Only in genome type

C) In genome type and replication strategy

D) Only in capsid structure

---

10. The immune response to viruses:

A) Is always protective

B) Can contribute to disease pathology

---

11. Reverse transcription can occur in viruses that have:

A) Only RNA genomes

B) Only DNA genomes

C) Either RNA or DNA genomes

D) Only single-stranded genomes

---

12. Evolutionary divergence decreases when moving from:

A) Family → sub-family → genus

B) Genus → sub-family → family

C) Divergence is equal at all levels

D) Cannot be measured

---

13. Group IV vs. Group VI viruses:

A) Both have positive-sense RNA; only one requires DNA intermediate

B) Both require reverse transcription

C) Both are double-stranded RNA viruses

D) Both are negative-sense RNA viruses

14. The suffix -viridae indicates:

A) Virus family

B) Virus genus

C) Virus sub-family

D) Virus strain

---

15. Early vs. late viral transcription:

A) Early proteins = capsid; late = replication

B) Early = replication; late = capsid

C) Early = immune evasion; late = genome repair

D) No functional difference

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16. An asymptomatic viral infection implies:

A) No viral replication and no immune response

B) Viral replication without immune response

C) Active replication with symptoms

D) Viral genome integration only

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17. Viral transformation of cells:

A) Always leads to cytolytic destruction

B) Can transform cells, distinct from cell lysis

C) Cannot occur in DNA viruses

D) Only occurs in latent infections

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18. Early viral proteins are primarily structural, while late proteins regulate genome replication:

A) True

B) False

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19. SARS-CoV-2 shares more genomic and structural features with:

A) MERS-CoV than with unrelated RNA viruses

B) All coronaviruses equally

C) Cannot be compared

D) Unrelated RNA viruses are more similar

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20. Presence of a virus in the body means symptomatic disease if entry occurs:

A) Symptomatic disease is guaranteed

B) Asymptomatic infection is possible

C) Only occurs if virus replicates slowly

D) Cannot be predicted

Answer Key

1. B
2. B
3. B
4. C
5. B
6. B
7. B
8. B
9. C
10. B
11. C
12. A
13. A
14. A

15. B
16. B
17. B
18. B
19. A
20. B