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Faculty of ENGINEERING & TECHNOLOGY

DEPARTMENT OF MEDICAL SCIENCES
FACULTY OF APPLIED AND HEALTH SCIENCES
CMLS 13 M MID ENTRY

AML 1108 : MEDICAL VIROLOGY I

END OF SEMESTER EXAMINATIONS

SERIES: DECEMBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

1. This paper consists of Two sections, Answer all questions in A and B.
2. This paper consists of Eight printed pages

SECTION A

1. Which of the following is not true regarding viruses?
 - A. May be DNA, DNA single or Double stranded
 - B. All are obligate intracellular parasites.
 - C. All have a protein capoid and envelope
 - D. Release various during cell lysis or budding

2. What type of immunity is most responsible for fighting viral infections
 - A. Humoral Immunity
 - B. Cell-mediated Immunity
 - C. Innate Immunity
 - D. Mechanical barrier

3. How are viruses different from bacteria
 - A. Virus do not replicate by binary fission
 - B. Viruses are smaller with definite nucleas.
 - C. Viruses have enzymes for protein metabolism.
 - D. Virus are susceptible to antibiotics.

4. Which of the following is not true about absorption.
 - A. Virus attach to lost membrane
 - B. The process is random and reversible
 - C. Does not occur to none enveloped viruses
 - D. Occurs to both enveloped and none enveloped viruses

5. Virus are classified according to the following except
 - A. Structure of the virus
 - B. Host require for survival
 - C. Type of nucleic acid
 - D. Frequency of infection caused.

6. A particular virus genetic material first need to be copied to +ve sence SS RNA. What type of virus is this?
 - A. SS +ve sense RNA
 - B. SS -ve sense RNA
 - C. DS RNA
 - D. DS DNA

7. Viral symmetry is defined by
- A. Envelope
 - B. Viral genome
 - C. Capsid
 - D. Nucleic acid
8. Which of the following is not in the viral taxonomic structure.
- A. Family
 - B. Species
 - C. Genera
 - D. Strains
9. Which of the following statement is true about capsid.
- A. Derived from host cell during budding.
 - B. It is not present in all viruses.
 - C. Formed from a small number of protein subunits
 - D. Makes the virus to be capable to resist solvents
10. Visible changes in the cells that are induced by viruses are referred to as
- A. Pathogenesis
 - B. Replication
 - C. Cytopathic effects
 - D. Viral symmetry
11. Which of the following viruses can replicate without causing obvious CPE.
- A. Retroviruses
 - B. Poxviruses
 - C. Parvoviruses
 - D. Togaviruses
12. Group V viruses according to Baltimore classification are:
- A. Ss DNA
 - B. Ds RNA
 - C. (+ve)ss RNA
 - D. (-ve) ss RNA
13. Naming viruses according to their host range and structure size may be categorized as
- A. Baltimore classification
 - B. ICTV classification
 - C. Normal classification
 - D. Secondary classification

14. Which of the following is a function of the capsid
- A. Responsible for introduction of viral genome to host cell
 - B. Offer protection to viral nucleocapsid.
 - C. Responsible for release of replicated virions
 - D. Responsible for antigenic properties of the virus.
15. Icosahedron symmetry has
- A. 3 triangles
 - B. 12 triangles
 - C. 60 triangles
 - D. 20 triangles
16. Rod shaped viruses include
- A. Bacteriophage
 - B. Rhabdoviridae
 - C. Poxviridae
 - D. Herpesviridae
17. The family of viruses usually ends with suffix ----- when naming.
- A. Virales
 - B. Viridae
 - C. Virinae
 - D. Virus
18. When viral particles gain entry into the body and cause infection at the point of entry the type of infection is known as
- A. Slow infection
 - B. Acute infection
 - C. Localized infection
 - D. Disseminated infection
19. The clinical disease during viral infection may be contributed by
- A. Type of disease
 - B. Transmission vectors
 - C. Viral factors
 - D. Viral genetics

20. Which of the following disinfectant does not inactivate most viruses

- A. formaldehyde
- B. chlorine
- C. Iodine
- D. Phenols

21. At what temperature will viruses be inactivated within 30 minutes.

- A. 100⁰c
- B. 50⁰c
- C. 56⁰c
- D. 36⁰c

22. Viruses cause cancer to their host by

- A. Killing the host cells as they survive
- B. Transforming the host cells as they survive
- C. Kill the Immunie system if the host
- D. Multiply the host cells

23. Arbutive viral infection may results from

- A. Slow viral pathogenesis
- B. Selection of non-permissive host cells
- C. Lack of obvious cytopathic effects
- D. Failure of virus to disseminate.

24. During viral replication , biosynthesis is achieved by

- A. Physical separation or nucleic acid from its normal component.
- B. Viral genome directs host cells to produce component from the virus
- C. Assembly of genome and capsid polypepture component from the virus.
- D. Penetration of virus to host cell

25. ‘Eclipse phase’ is used in virology to indicate ?

- A. Interval between Replication to release of vivions
- B. Interval between absorption to uncoating
- C. Interval between uncoating to budding
- D. Interval between penetration to the formation of first infections and viral particle.

26. Viral specific antibodies plays an important role in

- A. Destroy the viral infected cells
- B. Preventing re-infection
- C. Induce cell cytotoxicity
- D. Produces virus-induced lysis.

27. 'Eclipse phase' is used in virology to indicate ?

- E. Interval between Replication to release of virions
- F. Interval between absorption to uncoating
- G. Interval between uncoating to budding
- H. Interval between penetration to the formation of first infections and viral particle.

28. Which of the following is not viral cytopathic effect

- A. Cytolysis
- B. Replication in the cell
- C. Inclusion formation
- D. Rounding up of cells

29. The viral families belong to double stranded DNA group except

- A. Adenoviridae
- B. Poxviridae
- C. Rabdoviridae
- D. Herpesviridae

30. Which of the following viruses use reverse transcriptase to convert the sense into DNA

- A. Parvoviridae
- B. Picornaviridae
- C. Adenoviridae
- D. Retroviridae

31. A group of related viruses that share significant properties but mostly differ in host range and virulence referred as

- A. Species
- B. Genus
- C. Family
- D. Order

32. Which of the following is not a viral pathogenesis factor
- A. Infectious dose
 - B. Surface receptors
 - C. Permissiveness
 - D. Focal point
33. In a case where particular range of host is affected by certain viruses is likely to be referred as
- A. Major host range
 - B. Experimental host range
 - C. Natural host range
 - D. Minor host range
34. An infection characterized by short incubation periods and Immediate manifestation of clinical symptoms is known as.
- A. Chronic infection
 - B. Latent infection
 - C. Acute infection
 - D. Slow infection
35. The following statement are not true about live vaccine except
- A. Preferred from Inactivated various proteins
 - B. Have long shelf life
 - C. Administered by natural route of infection
 - D. Can easily combined into poly-valent.
36. Which of the following is not a stage in viral replication
- A. Translation
 - B. Repletion
 - C. Releasing
 - D. Budding
37. Which of the following viruses replicate in the nucleus
- A. Herpes viruses
 - B. Poxviruses
 - C. Picorna viruses
 - D. Orthomyxoviruses

38. The following viruses may cause congenital infection

- A. HBV
- B. Adeno virus
- C. Rubella
- D. Cytomegalo virus

39. Which among the following viruses may be transmitted through blood

- A. HIV
- B. Labies
- C. SARS
- D. SARS

40. The following are features of viral genes except

- A. Subjected to mutation
- B. Can recombine
- C. Can be regulated
- D. Can disappear.

41. Recombination occurs when

- A. All viruses affect the same host
- B. Same virus disseminate in the body
- C. Different virus strains affect and replicate in different host cells.
- D. Different virus strains infect and replicate in the same host cell.

SECTION B ANSWERS ANY TWO QUESTIONS.

- 1.i) Briefly explain the viral symmetry and give example in each category. (9marks)
- ii) Draw a well labeled diagram of an enveloped virus and state the function of each part (6marks)
- iii) State five properties used in taxonomy of viruses (5marks)
- 2.i) Differentiate between viruses and bacteria (5marks)
- ii) Briefly elaborate the Baltimore classification of viruses (5marks)
3. Explain in detail viral immunology (20marks)