

## Model A

- 18- Which of the following statements is not true about Rabies ?
  - a) Negative sense RNA genome
  - b) Has segmented genome
  - c) Replicate in the cytoplasm
  - d) Has matrix protein layer
- 19- Subunit influenza vaccines can be produced by purifying.....
  - a) HA and NA proteins
  - b) Nucleocapsid protein
  - c) Matrix protein
  - d) All of them
- 20- Which species may carry several AIV simultaneously which may lead to production of a new strain?
  - a) Chicken
  - b) Pigs
  - c) Equines
  - d) Canines
- 21- Which is mostly responsible of a new pandemic of Influenza viruses?
  - a) Point mutations
  - b) Antigenic drift
  - c) Antigenic shift
  - d) Interference
- 22- Which of the following viruses are transmitted by insects?
  - a) LSD
  - b) Avian pox
  - c) IBV
  - d) a and b
- 23- .....virus produce haemorrhagic pock lesions in the CAM pf ECE.
  - a) NDV
  - b) IBV
  - c) Cowpox
  - d) LSD
- 24- The preferable sample for poxvirus diagnosis is .....
  - a) Blood
  - b) Urine
  - c) Skin nodules
  - d) a and c
- 25- There is close antigenic relationship between.....
  - a) LSDV, goat pox, sheep pox
  - b) LSDV, cowpox, sheep pox
  - c) LSDV, goat pox, cowpox
  - d) LSDV, cowpox., pseudocowpox
- 26- Which of the following viruses have segmented genome?
  - a) AIV
  - b) cowpox
  - c) IBV
  - d) Rabies
- 27- Which of the following viruses are non enveloped?
  - a) Orthomyxoviridae
  - b) Rhabdoviridae
  - c) Coronaviridae
  - d) Picornaviridae
- 28- Influenza A viruses are classified into.....
  - a) 18 H and 11N
  - b) 11 H and 18 N
  - c) 19 H and 11N
  - d) 18 H and 12 N
- 29- Cleavage of .....protein is essential for AIV infection and replication. ?
  - a) Matrix
  - b) Nucleoprotein
  - c) Neuraminidase
  - d) Haemagglutinine
- 30- What are Bollinger bodies ?
  - a) Intracellular inclusion bodies of fowlpox
  - b) Intracytoplasmic inclusion bodies of fowlpox
  - c) Intracellular inclusion bodies of rabies
  - d) Intracytoplasmic inclusion bodies of IBV
- 31- Antigenic drift is a gradual accumulation of point mutations such as.....
  - a) Nucleotide substitution
  - b) Nucleotide deletion/ insertion
  - c) Reassortment
  - d) a and b



## Model A

- 32- Absence of MBS in the AIV allows the virus to be cleaved by proteases of.....  
a) Digestive system only b) Respiratory system only c) All body systems d) a and b
- 33- Poxvirus replicate in the cytoplasm due to.....  
a) Very big virus b) Complex capsid c) Non enveloped d) Has its own transcriptase enzyme
- 34- Some viruses don't have neither helical nor icosahedral capsid but have a complex one such as  
a) Pox b) Rabies c) Herpes d) Influenza
- 35- Orthomyxovirus can be classified into genera according to .....protein  
a) HA b) NA c) HA and NA d) NP and Matrix
- 36- Genome of influenza virus is  
a) Linear –ve sense ssRNA b) Circular –ve sense ssRNA  
c) Linear –ve sense dsRNA d) Linear positive sense ss RNA
- 37- Which of the following viruses have not a helical capsid?  
a) FMDV b) IBV c) AIV d) Rabies
- 38- Electron dense central body of poxvirus is called.....  
a) Lateral body b) Nucleoid c) Spikes d) Filaments
- 39- Rabies virus can be isolated by inoculation in the ECE through .....route  
a) Yolk sac b) Allantoic c) Amniotic d) CAM
- 40- A protein which is responsible for inducing neutralizing antibodies to Rabies virus and plays critical role in pathogenicity of virus  
a) Matrix b) Nucleoprotein c) G glycoprotein d) Phosphoprotein
- 41- IBDV isolation in ECE resulted in formation of .....  
a- Negri bodies b- plaques c) Syncytia d- Dwarfing
- 42- Most members of the Bunyaviridae are transmitted by .....  
a- Inhalation b- Arthropods c- Ingestion d- Contact
- 43- Carcass previously infected with FMDV is safe to be consumed due to .....  
a- Acid labile b- Trypsin sensitive c- Proteases sensitive d- Alcohol sensitive
- 44- Mares suffering from abortion, high mortality in newly born foal, the virus infection may be  
a- Influenza b- Rabies c- Herpes virus d- RVFV

## Model A

45-To which viral Families do Rift valley fever viruses belong?

- a- Coronaviridae    b- Picornaviridae    c- Birnaviridae    d- Bunyaviridae

46-The important site in FMDV for initiation of protein synthesis is .....

- a-cre/bus    b- 3UTR    c- VP1    d- IRES

47-In order to differentiate the serotypes of IBDV the sequencing of .... is essential

- a-S gene    b- F gene    c- VP2    d- H&N

48-IB virus is classified under the family.....

- a-Herpesviridae    b- Birnaviridae    c-Coronaviridae    d-Poxviridae

49-Cattle suffering from fever, lameness, recovery within few days having ..... infection

- a- BEFV    b- Poxvirus    c- BTV    d- FMDV

50-The most susceptible animal for EHV-1 infection is .....

- a- horse    b- chickens    c- guinea pigs    d- cattle

51-The genome of ILT virus is.....

- a-ss RNA    b- ds DNA    c-ds RNA    d- ds DNA segmented

52-The IBDV replication site in the affected chicken is .....

- a- lung    b- brain    c- bursa    d- skin

53-The Birnaviridae family has ..... genome

- a- ds-RNA    b- ds -DNA segmented    c-ds RNA segmented    d- dsDNA

54-All the following viruses have segmented genomes except

- a-AIV    b-IBDV    c-RVfV    d- FMDV

55-Petal shape structure is characteristics for .....

- a-Rabies virus    b- IBV    c- IBDV    d- AIV

56-The inhibitory PH level for FMDV infection is .....

- a- 7    b- 6    c-9    d- b and c

57-Which of the following statements about Birnaviridae is correct ?

- a- Non segmented    b- helical symmetry    c- non enveloped    d- ds DNA

58- All the following viruses have no matrix protein except.....

- a-EHV-1    b-IBV    c-RVfV    d- FMDV



## Model A

59-IBDV can make haemagglutination for .....RBCs

- a- Chicken    b- Guinea pig    c- Human type O    d- None

60- Concerning herpesviruses, which statement is inaccurate?

- a- Produce acidophilic intranuclear inclusion bodies    b- Double stranded DNA  
c- Very stable viruses    d- Associated with latent infections

61-FMDV virus is classified under the genus .....

- a- Lyssa    b- Phlebo    c- Rubula    d- Aphtho

62- Which of the following viruses is non-enveloped?

- a- AIV    b- IBDV    c- NDV    d- IBV

63-RVFPV is classified under the genus .....

- a- Lyssa    b- Phlebo    c- Rubula    d- Aphtho

64-IB viruses are .....

- a- Haemagglutinating & eluting    b- Haemagglutinating with magnesium presence  
c- Haemagglutinating & non eluting    d- non haemagglutinating

65-The most diagnostic sign for FMDV isolation in mice is .....

- a- Salivation    b- Paralysis    c- Lacrimation    d- Vesicle formation

66-The typical sings of IBV isolation in embryonated eggs are .....

- a- Pock lesions    b- Hemorrhage    c- Curling    d- Inclusion bodies

67-To which viral Families does the IBDV belong?

- a- Birnaviridae    b- Picornaviridae    c- Coronaviridae    d- Orthomyxoviridae

68-Many variants of IBV are detected due to point mutation in .....gene.

- a- S    b- F    c- H&N    d- E1

69-The most susceptible host for RVFPV infection is.....

- a- Dog    b- Cattle    c- Horse    d- chicken

70-Concerning the nucleic acid content of viruses, which statement is most accurate?

- a- Herpesviruses of single-stranded DNA    b- Birnaviruses of double stranded RNA  
c- Orthomyxoviruses contain segmented DNA    d- Coronavirus of -ve strand RNA

## Model A

71-The preferred sample for isolation of FMDV from the dead animal is .....

a- Lymph node

b- Saliva

c- Tongue

d- Vesicular fluid

72-The preferred sample for isolation of IBV is .....

a- Tongue

b- lung

c- Brain

d- saliva

73-The most prevalent serotypes of FMDV present in Egypt are .....

A-O, A, C, SATII

b- A, O, SAT I, SATII

c- O, A, Asian I

d- O, A, SATII

74-All the following viruses are resistant to ether, chloroform and detergents except

a- AIV b- IBV

c- EHV-1

d- FMDV

75-The preferred sample for isolation of IBDV is .....

a- Tongue

b- lung

c- Brain

d- Bursa

76-The preferred sample for isolation of EHV-1 is .....

a- Tongue

b- Vesicular fluid

c- Placenta

d- Saliva

77-The viruses in different genera of Bunyaviridae are antigenically .....

a- Different

b- Related

c- Recombinant

d- Mutation

78- RVF virus belongs to the family

a- Orthomyxoviridae

b- Retroviridae

c- Bunyaviridae

d- Coronaviridae

79-ILT virus belongs to genus .....

a- Gallid

b- Phlebo

c- Aphtho

d- Lyssa

80- Gamma herpes viruses established in the host for long time due to presence of .....

a- F protein

b- LANA protein

c- S protein

d- H protein

Best Wishes

Dr/Amr M. Magaz

Dr/ Noura Fayed



## Model A

Please answer the following questions:-

1- Mark the following sentences with T or F : (ILOOS-A2-A4--B3-B4)

1. The rabies virus produces intranuclear inclusion bodies which are highly diagnostic.	✓
2. HA of poxvirus is separated from the virion by centrifugation.	✓
3. HA and NA of Influenza virus are subtype specific antigenic determinants.	✓
4. Human-to-human transmission of rabies was recorded by Corneal transplants only.	✗
5. There is only one immunological type of LSDV.	✓
6. Eosinophilic intracytoplasmic viral inclusion bodies in keratinocytes of the epidermis are found in Herpesvirus infection.	✓
7. The genome of LSDV is linear segmented ds DNA.	✗
8. There is major cross protection between all viruses of family Poxviridae.	✓
9. Antibodies to HA protein offer immunity against re- infection with any Flu viral strain containing the same HA.	✓
10. Poxviruses are very resistant in the dry state.	✓
11. IBV can haemagglutinate bovine RBCs after treatment with trypsin.	✓
12. In IBDV, the major antigenic determinants are encoded by VP1 gene.	✓
13. FMD viruses is classified as an acid labile virus.	+
14. 0.1% formalin has an inactivation effect on FMDV.	✓
15. Bunyaviruses have enveloped spherical virions with icosahedral capsid.	✓
16. Latency is the most important feature of Birnaviridae.	+
17. RVFV has only one antigenic type with different serotypes.	✓
18. Genome of IBV is ss RNA of -ve sense and is itself infectious.	✓
19. Solipeds are completely resistant to FMDV infection.	✓
20. Vaccination the flock with O strain of FMDV confirm protection against O and other viral strains.	✓

2-Choose the correct answer: (ILOOS-A2-A4--B3-B4)

- Which Influenza virus can infect Human, Animal and Avian species?  
a) Influenza A    b) Influenza B    c) Influenza C    d) Thogotovirus
- The segmented genome of Influenza virus allows .....between two viral genomes.  
a) Reassortment    b) Complementation    c) Deletion    d) Interference
- Cytoplasmic inclusion bodies in the nerve cells infected with Rabies virus.....  
a) Bollinger bodies    b) Pock lesions    c) Plaques    d) Negri bodies
- Rabies virus attaches to .....receptors of susceptible nerve cells.  
a) Sialic acid    b) acetyl choline    c) CD4    d) ACE2





## Model A

- 5- All of the following statements concerning Orthomyxoviruses are true except:  
a) Single molecule b) -ve sense RNA genome c) enveloped d) Single stranded RNA
- 6- Rabies virus is classified under the genus.....  
a) Aphovirus b) Ephemerovirus c) Vesiculovirus d) Lyssavirus
- 7- LSD virus is a member of genus .....  
a) Parapoxvirus b) Orthopoxvirus c) Capripoxvirus d) Leporipoxvirus
- 8- Antigenic drift:  
a) Doesn't cause any changes in the flu virus  
b) Causes genome reassortment  
c) Causes minor changes in the flu virus  
d) Causes major changes in the flu virus
- 9- Chickenpox is a viral disease infecting .....  
a) Chicken b) Turkey c) Human d) Pigeon
- 10- Bovine Ephemeral Fever virus is a member of family  
a) Picornaviridae b) Orthomyxoviridae c) Rhabdoviridae d) Herpesviridae
- 11- Which of the following is not true regarding Fixed Rabies strains?  
a) Fixed incubation period  
b) Agglutinates goose RBCs  
c) Produce negri bodies  
d) Used for vaccine preparation
- 12- Which of the following is not true regarding Pox viruses?  
~~a)~~ Viruses have a complex capsid  
b) Viruses replicate in the nucleus  
~~c)~~ Viruses have a complex capsid  
d) Virus have a large ds DNA genome
- 13- Which of the following is not true about Negri bodies?  
a) Intracytoplasmic b) Intracellular c) eosinophilic d) found in nerve cells
- 14- Which of the following Poxviruses is not zoonotic?  
a) Cowpox b) Pigeonpox c) Orf d) Pseudocowpox
- 15- Flury HEP vaccine was passaged in ECE to over .....passage  
a) 40 b) 60 c) 180 d) 120
- 16- The preferred sample for Rabies diagnosis .....  
b) Saliva b) Stools c) CSF d) a and b
- 17- Which of the following viruses are not zoonotic ?  
a) Influenza A b) Rabies c) FMD d) Fowlpox