Scientific team

# Dr.Ashraf's quiz

# (Virology)

Done by : Scientific team

1.A 42 -years -old man developed a flue-like syndrome with fever ,sore troat ,headache and myalgia. Which of the following factors increase the possibility of antigenic shift in this causetive agent ?

A. Aerosal transmission of the viral infection
B. Simultaneous infection of patient with tow different strains of virus
C. The presence of the neutralizing antibodies to the virus
D. The presence of herd immunity against the causative virus
E. Taking the vaccin against the causative virus with every update

Answer: B

2. A 7-month-old child presents wirh a 4 day history of fever ,deeping cough and dyspnea.A chest x ray film shows multiple interstetial infltrates and hyperinfection of the lungs.The child was diagnosed to have bronchiolitis bronchopnea caused by respiratory syncytial virus. Which of the following cytopathic effects is expected to be seen in the virally infected cells ?

A. Rounding up of the cells
B. Nuclear inclusion bodies
C. Multinuclear giant cells
D. DNA alteration
E. No change in the cell shape

Answer:c

3. A 5-years-old child was brought by his parents to the ER after the appearance of bright red macular exanthem on the cheeks as seen in the picture . The parents also reported that thier child had fever , malaise.headache ,myalgia nausea and rhinorrhea one week prior to the appearnce of the rash . Knowing that the causative agent of the child illness was parvovirus B10. Which of the following is correct about the causative virus?

A. It is the smallest human virus in term of genom size
B. It is a positive sense single stranded RNA virus
C. Virus replication is totally dependent on the host cell
D. It is an enveloped virus
E. It has a helical capsid

Answer:C

4. In the virology lab a scientist has seeded 1*104 293T cells into a 25cm2 flask . Four hours later he inoculated the cells with the virus X. 24 hours later the cells looked as follows under the light microscope . Which of the following viruses is virus X?

A. Rotavirus
B. Rhinovirus
C. Polyoma virus
D. HIV
E. HBV

Answer: D

5. A 52-years-old patient was diagnosed 17 years ago to have contracted viral infection through having unprotected sex . His diagnosis was confirmed with westren blotting . Recently he developed the lesion seen in the picture . Which of the following could be isolated from the patient's lesion ?

A. HPV
B. VZV
C. RSV
D. HHv-8
E. HSV-2

Answer: D

6. The rash seen in the picture is caused by viral infection that has been completely eradicated globally . Which of the following is a characteristic of the causative virus ?

A. Double stranded RNA virus
B. Has a complex capsid
C. It is non enveloped
D. Has asegmented genome
E. Transmitted throug animal bite

Answer: B

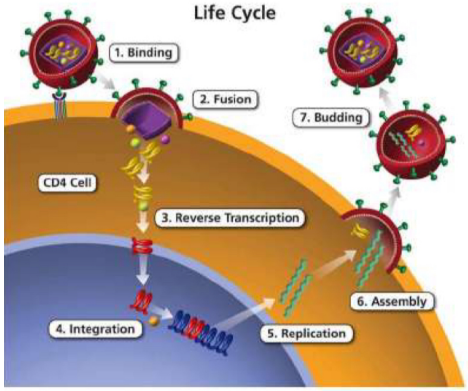
7. A 3-year-old child was brought by his parents to the pediatric ER. His mother has noticed that her child became lethargic , developed fever,and started to have rash on the chest and face that spread later to the extrimities . The child was prescribed antipyretic calamine lotion to relieve the itchiness. Which of the following is correct about the causative agent ?

A. It is the largest RNA virus
B. Double stranded latent DNA virus
C. Positive sense RNA virus with reverse transcriptase
D. Has a long incubation period
E. Transmitted throgh the feco-oral route

Answer: B

8. The replication cycle of the virus(Y) shown in this figure follows which of teh following Baltimore classes?

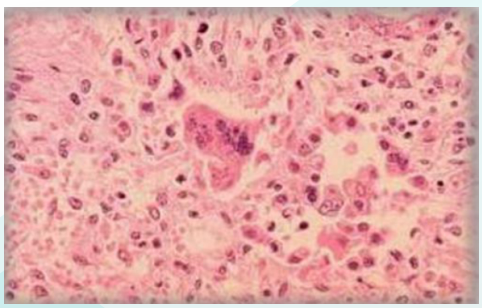
A. Double stranded RNA virus
B. Partial double DNA with RT virus
C. Positive sense ssRNA virus with RT
D. Negative sense ssRNA segmented virus
E. ssDNA virus




Answer:C

9. The picture repersents a histologic section of the lung tissue taken from an immunocompremised child with a virus-induced giant cell pneumonia . Which one of the following viruses is likely to cause the pathology seen in the picture?

A. Rotavirus
B. HIV
C. Rhinovirus
D. HCV
E. Measles



Ansewr:E

10. Which of the following is true about adsorption step in the viral replication?

A. In naked viruses adsorption doesn't facilitate virus penetration
B. Virus entry into the host cell requires a spike-receptor complex only in all viruses
C. Influenza virus has three glycoprotiens that help in viral penetration into target cell
D. Different can use similar receptors on target cells to gain entry
E. Neutralization of receptors by antibodies is an effective way to prevent viral entry

Answer:D

11. In a single -stranded positive sense RNA virus such as rhinovirus the monocistronic mRNA problem is overcome by:

A. Cleavage of the polyprotien product by proteases to form mature individual protiens
B. The virus has a segmented genome
C. The viral mRNA has special features which enable ribosomes to bind internally instead of (or as well as)at the 5' end
D. The virus makes primary transcripts which are processed by the host splicing machinery to give more than one monocistronic RNA
E. All of the above

Answer:A

12. A sexally active 22-years-old college student presents to the local clinic with a localized vesicular eruption on the shaft of his penis . A scraping of the base of one of the vesicles is positive for Tzanck cells . The patient mentions that he had a similar eruptionin the same area 2 months earlier. The reappearance of this eruption may be explainedby:

A. Cell mediated immunity(CM) deficiency in the patient
B. A prologed period of viremia following the initial infection
C. A second infection with a similar virus with a different serotype
D. Failure of the patient to comply with therapy prescribed at the initial episode
E. Reactivation of a latent infection

Answer:E