

## Question bank for 603

### UNIT: 1

#### **1 Mark:**

1. Define Hematopoiesis
2. What is FFP?
3. What is the difference between Serum & Plasma?
4. Who discovered ABO blood group system?

#### **2 & 3 Marks:**

1. Explain the role of platelets in Hemostasis.
2. Explain significance of blood transfusion.
3. Explain concept of Cross matching.
4. Enlist components of blood and write protocol for the separation of packed red cells.

#### **5 Mark:**

1. Human Blood Group System
2. Blood Coagulation.

### UNIT: 2

#### **1 Marks**

- 1) Define Polyclonal Antigen
- 2) Define Agglutination.
- 3) Define Precipitation.
- 4) Define Hetrophile Antibody
- 5) What is Prozone Effect?

#### **2 Marks**

- 1) Heamagglutination.
- 2) Passive Agglutination.

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- 3) Give the name of drugs used in Antifibrinolysine.
- 4) Difference between Radial and Double immunodiffusion.

### **3 Marks**

- 1) Write any two methods for precipitation reaction.
- 2) Write any two methods for Agglutination reaction.
- 3) Write a note on Agglutination Inhibition.
- 4) Write a note on Immunofluorescence.

### **5 Marks**

- 1) Write a note on Nuefeld Quelling Reaction.
- 2) Write a note on CFT
- 3) Write a note on Antifibrinolysine.
- 4) Write a note on antistreptolysine

## **UNIT: 3**

### **1 Marks**

- 1) Give the Name of Radiolabelled Dye Used in Immunofluorescence.
- 2) Give the full form of ELISA.
- 3) Which Enzyme Used in ELISA Methods.
- 4) Who Discovered the RIA.
- 5) Define Blotting.
- 6) What is the importance of Monoclonal Antibody.

### **2 Marks**

- 1) Define Hybridization.
- 2) Define Immunoelectrophoresis.
- 3) Define Immunohistochemistry.
- 4) What is the Full form of FACS and its importance?

### **3 Marks**

- 1) Give any two methods for identification of microorganism from specimens.
- 2) Write a note on API 20E.
- 3) Write a note on Nucleic acid Hybridization methods.
- 4) Write a note on Flowcytometry.

### **5 Marks**

- 1) Write a note on Monoclonal Antibody.
- 2) Write a detail note on ELISA
- 3) Write a note on Methods of Specimen collection.

**DEPARTMENT OF MICROBIOLOGY****UNIT: 4****1 marks**

1. Define Epidemiology.
2. Write causative agent of Typhoid and Syphilis.
3. Give two examples of Opportunistic fungi.
4. What do you mean by Systemic Mycoses?
5. \_\_\_\_\_ is the causative agent of Malaria.
6. Toxins of Clostridium perfringens
7. Serodiagnosis of typhoid fever is done by \_\_\_\_.
8. Define meningitis.

**2 or 3 marks**

1. Write name of Disease caused by Shigella and write two symptoms.
2. Write causative agent and diagnosis of Gonorrhoea.
3. Explain Cutaneous Mycoses with example
4. Enlist Diseases caused by Clostridium and discuss any one.
5. Classify Streptococci. Describe the virulence factors of Streptococcus pyogenes along with the lesions produced and the laboratory diagnosis.
6. What is pyogenic meningitis? Enlist the various etiological agents and describe the pathogenesis, laboratory diagnosis, treatment and prophylaxis of Neisseria meningitis.
7. Enumerate the bacteria causing gastroenteritis. Describe the pathogenesis, laboratory diagnosis, treatment and prophylaxis of cholera.

**5 marks**

1. Epidemiology of infectious disease: Markers, concepts and tools.
2. Mycobacteria
3. Which are the bacterial STDs? Write the pathogenesis, laboratory diagnosis and treatment of gonorrhoea.
4. Describe the pathogenesis, laboratory diagnosis, treatment and prophylaxis of diphtheria.
5. Classify Clostridia. Describe the pathogenesis, laboratory diagnosis, treatment and prophylaxis of gas gangrene.
6. Name the bacteria capable of causing dysentery. Describe the pathogenesis, laboratory diagnosis and treatment of bacillary dysentery.

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7. Classify fungi and their diseases. Describe the procedures involved in laboratory diagnosis of mycoses.
8. What are dermatophytes? Enlist the various dermatophytic infections along with their etiological agents. Describe the process of laboratory diagnosis and treatment.
9. Name the sub-cutaneous fungal infections along with their etiological agent. Describe the pathogenesis and laboratory diagnosis of any one disease.
10. Name the systemic fungal infections along with their etiological agent. Describe the pathogenesis, laboratory diagnosis and treatment of histoplasmosis.
11. Enumerate the opportunistic fungal infections along with their etiological agent. Describe the pathogenesis and laboratory diagnosis of candidiasis.

**UNIT 5****1 marks**

1. Transmission of hepatitis occurs by
2. The diagnosis of hepatitis A virus infection is carried out from the method based on
3. Polioviruses belongs to which of the following groups? a) enteroviruses b) rhinoviruses c) foot and mouth disease viruses d) retroviruses
4. Enlist diseases caused by Protozoa.
5. Enlist diseases caused by virus.

**2 or 3 marks**

A. A 35-year-old hunter from rural India came with sore throat and had trouble in swallowing. The man was treated as usual with antibiotics by a local physician. That night, the man began to pace and spit frequently, his facial muscles twitched uncontrollably, and he became anxious and fearful. He was hospitalized. Physicians thought he might be suffering from a drug overdose or viral encephalitis. Although he remained alert for several days, he became increasingly agitated, he vomited, his body temperature rose to 106°F, and he died. His friend on enquiry revealed that the victim had a tussle with a dog while he was hunting 2 months ago.

1. What is the possible cause for his death?

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2. What are the reservoirs for the organism?
3. What are the presenting symptoms in case of this suspected infection?
4. How can you confirm this condition in laboratory?

B. There was an outbreak of JE in and around Tamil Nadu few years back. As a preventive measure to stop further dissemination of the disease, rural people engaged in pig farming were advised to be away from pig herds and measures were initiated for control of mosquito population.

1. What is the basis of advising people to be away from pig population?
2. How is JE transmitted in a community?
3. What are the laboratory tests used for establishing the diagnosis of JE?
4. Is there any vaccine against JE?

C. A 25-year-old college student, resident of an area endemic for HIV, in Manipur was admitted with several complaints. He had serious bouts of diarrhea with a history of marked weight loss during the past one year. He was found to be a drug addict. His stool samples were positive for oocysts of *Cryptosporidium parvum*. The serum was tested positive for HIV antibodies by ELISA. The person was diagnosed to be suffering from AIDS.

1. What are the other laboratory tests you will perform to confirm the diagnosis?
2. What are the other opportunistic infections associated with AIDS?
3. How did the boy acquire the infection?

**5 marks**

1. Write note on hepatitis.
2. Write note on malaria.
3. Write note on disease caused by *Leishmania donovani*
4. Write note on disease caused by *Trypanosoma spp.*