

2106000102030101
Examination February – March 2024
SECOND MBBS
MICROBIOLOGY (PAPER - I) - LEVEL 3

[Time: Three Hours]

[Max. Marks: 100]

Instructions:

1. Fill up strictly the following details on your answer book

- a. Name of the Examination : **SECOND MBBS**
- b. Name of the Subject : **MICROBIOLOGY (PAPER - I) - LEVEL 3**
- c. Subject Code No : **2106000102030101**

2. Sketch neat and labelled diagram wherever necessary with blue pen/pencil only.

3. Figures to the right indicate full marks of the question.

4. All questions are compulsory.

5. Write heading of each question properly.

6. Write legibly.

Seat No:

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Student's Signature

SECTION 01

(General Microbiology, Immunology, Infections of Blood stream & cardiovascular system, Gastro intestinal tract & Hepatobiliary system)

Q.1 MCQs

(1x20= 20)

1. Most common protozoan parasite responsible for Steatorrhea is:
A. Giardia lamblia B. Entamoeba histolytica
C. Entamoeba coli D. Enteromonas hominis
2. Test done to differentiate between Pathogenic and nonpathogenic strains of Staphylococcus aureus is
A. Oxidase test B. Catalase test
C. Coagulase test D. Glucose fermentation test
3. Dengue virus infection is transmitted by
A. Culex mosquito B. Anopheles mosquito
C. Aedes aegypti D. Tick

4. Infection with *Plasmodium falciparum* is suspected if the infected RBC is
 - A. Normal in size
 - B. showing multiple infections
 - C. Both (A) and (B)
 - D. shows motile form inside the RBCs
5. Which of these techniques is not used for cultivation of viruses
 - A. Inanimate culture media
 - B. Tissue culture
 - C. Animal inoculation
 - D. Embryonated egg
6. Rocky mountain spotted fever is due to
 - A. *R. rickettsii*
 - B. *R. typhi*
 - C. *R. prowazekii*
 - D. *R. conorii*
7. IgE
 - A. Protects body fluids
 - B. Protects body surfaces
 - C. Protects blood stream
 - D. Mediates reaginic hypersensitivity
8. Negri bodies of Rabies are
 - A. Intracytoplasmic eosinophilic inclusions with basophilic inner granules
 - B. Intracytoplasmic basophilic inclusions with basophilic inner granules
 - C. Intracytoplasmic acidophilic inclusions with basophilic inner granules
 - D. None of the above
9. Transduction is a method of gene transfer from one bacteria to another by
 - A. Passage of genetic material through sex pilli
 - B. Direct cell to cell contact and protoplasmic fusion
 - C. Plasmids transfer
 - D. Cross infecting Bacteriophages

10. In Gram's staining " Gull wing" shape is seen in
A. *Yersinia pestis* B. *Vibrio cholerae*
C. *Acinetobacter* D. *Campylobacter*
11. CBNAAT is
A. Chip based nucleic acid amplification test
B. Cartridge based nucleic acid amplification test
C. Both (a) and (b)
D. None of the above
12. Production of germ tube within 2 hours serves as identification character for
A. *Ray fungus* B. *Cryptococcus neoformans*
C. *Rhizopus* D. *Candida albicans*
13. Which of the following parasites cause megaloblastic anemia
A. *Diphyllobothrium latum* B. *Taenia solium*
C. *Ancylostoma duodenale* D. *Echinococcus granulosus*
14. RA factor in Rheumatoid arthritis is a/an
A. Antigen B. Auto-antibody
C. Hapten D. Antibody
15. Graft between two individuals sharing same genetic constitution is referred to as
A. Allograft B. Isograft
C. Xenograft D. Autograft
16. Which of these enzyme is not found inside the core of the virus
A. DNA Polymerase B. Reverse transcriptase
C. Neuraminidase D. RNA Polymerase
17. Amastigote forms of *Leishmania donovani* are found in
A. The cells of Reticuloendothelial system
B. Red blood cells
C. Culture media
D. Digestive tract of insect vector
18. RAST detects _____ hypersensitivity reaction
A. Type I B. Type II
C. Type III D. Type IV

Q.5 Short Note (any 4 out of 5)**(7X4=28)**

1. A 35 year old male was admitted in causality with complain of severe colicky abdominal pain. Patient gave H/O of stool passage of blood and mucus with foul smell for last few days. Wet mount stool preparation showed motile protozoa with pseudopodia. On examination tenderness in right hypochondrium and mild hepatomegaly is found.

a. What is the most probable cause for this condition?

(1 mark)

b. Write pathogenesis of this condition.

(3 marks)

c. Write the details of diagnostic modalities of above condition.

(3 marks)

2. A 25 year old man from urban area admitted in hospital presented with high fever, headache, and retro orbital pain, sever back pain for 5 days and bleeding nose today morning. On examination rash are seen on the body. Blood reports shows platelet count is 20,000/mm³.

a. What is the most probable cause for this condition?

(1 mark)

b. Write pathogenesis of this condition.

(3 marks)

c. Write the details of laboratory diagnosis of above condition.

(3 marks)

3. Enumerate the nematodes infesting intestine. Describe the life cycle, laboratory diagnosis of any one of them.

4. Classify Rickettsia. Describe the etiology, pathogenesis, laboratory diagnosis of spotted fevers.

5. Rheumatic Fever
