

The West Bengal University of Health Sciences
MBBS 2nd Professional Examination (New Regulation) May 2022

Subject : Microbiology
Paper : II
Full Marks : 100
Time : 3 hours

Attempt all questions. The figures in the margin indicate full marks.

1. a) One young male patient after RTA was clinically diagnosed as tetanus. 1+2+2+5+4+1
 - i) Name the bacteria causing it.
 - ii) Discuss its morphology.
 - iii) Name one common media where it grows along with its explanation.
 - iv) Discuss its pathogenesis.
 - v) Outline its prevention.
 - vi) Name the model animal for animal pathogenicity testing along with its manifestation.

- b) A 45 year old lady came to the medicine OPD with history of productive cough for last 3 weeks and evening rise of temperature. She also informed the physician about her weight loss over previous few months and two episodes of coughing with blood – tinged sputum 3 days back. 1+1+7+6
 - i) What is your provisional diagnosis?
 - ii) Name the most probable causative bacteria in this country.
 - iii) How will you diagnose the case in the laboratory?
 - iv) Write in brief about different drug resistant pattern of the disease.

2. a) Enumerate the causative agent of bacterial meningitis. How will you diagnose a case of suspected meningococcal meningitis? 5+5
- b) Write the causative agents of UTI. How will you diagnose a case of suspected UTI? 5+5
- c) Name some TTI (transfusion transmitted infection). How will diagnose a case of suspected benign tertian malaria? 5+5

- 3) Write short notes on following: 2 x 5
 - i) Enumerate the agents of Bioterrorism.
 - ii) Atypical Mycobacteria.

- 4) Explain the following statements: 5 x 4
 - i) Isolation of *C. diphtheria* from clinical samples does not-confirm the disease diphtheria.
 - ii) Rabies can be prevented by prophylaxis.
 - iii) Transplant recipients may develop various opportunistic infections.
 - iv) Toxic shock syndrome may be caused by various aetiological agents.
 - v) Rheumatic fever is a immunological sequelae of streptococcal infection.

P.T.O

5) Choose the correct option for each of the following:

1. Spore with drum stick appearance is produced by -
 - i) *Clostridium perfringens*
 - ii) *Clostridium tetani*
 - iii) *Clostridium bifermentans*
 - iv) *Clostridium tertium*
2. False statement regarding Japanese encephalitis
 - i) It is caused by flavivirus
 - ii) Transmitted by aedes mosquito
 - iii) Endemic in India
 - iv) Man is dead end host
3. Which of the following is correct about prions
 - i) Destroyed by autoclaving at 121°C
 - ii) Long incubation period
 - iii) Immunogenic
 - iv) Nucleic acid present
4. All are example of cestodes except-
 - i) *Taenia solium*
 - ii) *Taenia saginata*
 - iii) *Echinococcus granulosus*
 - iv) *Ascaris lumbricoides*
5. Catalase test is the common biochemical test used for the identification of various bacteria. All of the following bacteria have this enzyme except ?
 - i) *Enterobacter*
 - ii) *Pseudomonas*
 - iii) *Corynebacterium*
 - iv) *Streptococci*
6. All are antifungal agents except
 - i) Miconazole
 - ii) Terbinafine
 - iii) Nystatin
 - iv) Fusidic acid
7. Negri bodies can be demonstrated in -
 - i) Street virus
 - ii) Fixed virus
 - iii) Both street and Fixed virus
 - iv) Neither street nor fixed virus
8. Which mycobacterium causes cervical lymphadenitis in children?
 - i) *Mycobacterium kansasii*
 - ii) *Mycobacterium Ulcerans*
 - iii) *Mycobacterium fortuitum*
 - iv) *Mycobacterium scrofulaceum*
9. Hepatitis C virus having following types of genotypes -
 - i) 4
 - ii) 5
 - iii) 8
 - iv) 6
10. Select the culture medium which would be most appropriate to isolate *Haemophilus influenza* from patient.
 - i) Blood agar
 - ii) Chocolate agar
 - iii) Macconkey agar
 - iv) Methicillin mannitol salt agar