

**2019 Scheme**

Q.P. Code: 216001

Reg. no.: .....

**Second Professional MBBS Degree Regular Examinations February 2022****Microbiology - Paper II**

Time: 3 Hours

Total Marks: 100

- Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers
- Indicate the question number correctly for the answer in the margin space
- Answer all parts of a single question together • Leave sufficient space between answers
- Draw table/diagrams/flow charts wherever necessary

**Long Essays**

(2x15=30)

1. A 5-year-old girl was brought in by her mother with the symptoms of fever, vomiting (7-8 episodes) and altered sensorium for the last 24 h. Central nervous system examination showed that she was drowsy, had signs of meningeal irritation, neck rigidity. Examination of CSF showed neutrophilic predominance.
  - (a) What is the clinical diagnosis.
  - (b) Name SIX common probable causes of this clinical condition.
  - (c) Name two rapid tests to detect these causes.
  - (d) What are the confirmatory tests that can be done in the laboratory.
  - (e) Name the antimicrobial given empirically for this condition.
  - (f) Give details of vaccines available for these microbial agents. Name two other drugs which can be used for treating this condition". (sub (1+3+2+2+1+4)
  - g) Give details of vaccines available for these microbial agents.
2. A 21-year-old female presented with recurrent episodes of seizures, headache and vomiting and vertigo. MRI of the brain showed multiple ring enhancing lesions in the brain parenchyma. The causative agent was thought to be a cestode.
  - (a) What is the probable causative agent.
  - (b) Which is the infective stage of the parasite responsible for the above-mentioned condition.
  - (c) What is the mode of transmission.
  - (d) Name other four cestodes with their definitive hosts.
  - (e) Name two stool concentration methods.
  - (f) How do you treat the patient.
  - (g) How to prevent this infection. (1+1+2+4+2+2+3)

(PTO)

**Short essays**

(5x8=40)

3. MRSA – mechanism of resistance, detection and treatment of cases and carriers, prevention.
4. Discuss laboratory diagnosis of LRTI.
5. What is antigenic shift and drift in influenza virus. What are the implications. What are the risk factors for complications following influenza infection
6. Explain the reasons that helped successful eradication of smallpox.
7. Cryptococcal meningitis – risk factors, pathogenesis and laboratory diagnosis

**Short answers**

(5x4=20)

8. List risk factors that can lead to disseminated herpes infection and the common manifestations seen.
9. Tzanck smear.
10. Vaccine against Varicella zoster virus.
11. MMR vaccine.
12. A swab is collected from an abscess in the ward. The details of the patient on the sample container do not match those on the request form. Discuss the correct decision and the appropriate action to be taken.

**Objective type questions**

(10x1=10)

13. List TWO common viral causes of community acquired pneumonia.
14. What is the mechanism of action of the virulence factor in diphtheria.
15. Schedule and dosage of DPT vaccine.
16. List two common bacterial causes of healthcare acquired pneumonia.
17. What is the pathognomonic clinical feature of measles.
18. List modes of transmission of molluscum contagiosum.
19. Name two viruses which can cause latent infections.
20. Define mycetoma and give examples of two causative agents.
21. Name the reservoir of infection and method of transmission of *Penicillium marneffei* infection.
22. Sample, from the respiratory tract, received for Ziehl Neelsen stain is found to be mainly saliva. Discuss the correct decision and the appropriate action to be taken.

\*\*\*\*\*