

MANIPAL UNIVERSITY**SECOND MBBS DEGREE EXAMINATION – NOV/DEC 2010****SUBJECT: MICROBIOLOGY – PAPER I (ESSAY)**

Friday, November 26, 2010

Time: 10:30 – 13:00 Hrs.

Maximum Marks: 60

✍ Answer ALL the questions.

✍ Draw diagrams and flow charts wherever appropriate.

Health Sciences Library

1. Describe the structure of Immunoglobulin. Write briefly on properties of each class of Immunoglobulin.

(10 marks)

2. A 2 year old child was brought to emergency ward with high fever, vomiting, headache. On examination child had temperature of 103° F, stiff neck and lethargic. No skin rash. The immunization was upto date. Complete blood count showed leukocytosis with total leukocyte count of 21000/ μ l. Lumbar puncture revealed cloudy CSF with cell count of 210 leukocytes/ mm^3 with 85% neutrophils. The CSF protein was elevated to 450mg/dL and glucose decreased to 15mg/dL. The Gram stained direct smear revealed many WBCs and many small gram negative bacilli. Culture of CSF and blood produced heavy bacterial growth on chocolate agar but not on sheep blood agar and MacConkey agar.

2A. What is the causative agent and the condition?

2B. Name two other aetiological agent associated with similar condition.

2C. What are the virulence marker of this agent.

2D. Discuss the rapid tests for the diagnosis of this condition.

2E. Discuss the prophylaxis of this agent.

(2×5 = 10 marks)

3. Write short notes on:

3A. Bacterial spore

3B. Type III hypersensitivity reaction

3C. Laboratory diagnosis of cholera

3D. Atypical Mycobacteria

3E. Bacterial filters

(5×5 = 25 marks)

4. Write briefly on:

4A. McIntosh fildes jar

4B. Plasmids

4C. Adjuvants

4D. Malignant pustule

4E. Q fever

(3×5 = 15 marks)



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Saturday, November 27, 2010

Time: 10:30 – 13:00 Hrs.

Maximum Marks: 60

✍ **Answer ALL the questions.**

Health Sciences Library

1. Classify Picornaviruses. Describe the pathogenesis, laboratory diagnosis and prophylaxis of poliomyelitis.

(1+3+2+4 = 10 marks)

2. A 45 year old man presented with chronic pain and discomfort in the right hypochondrium and intermittent fever of 2 years duration. On examination there was hepatomegaly and a palpable mass in the right upper quadrant of the abdomen. The patient gave a history of spending his childhood years on a sheep ranch with a close association with sheep dogs. Ultrasonography reveals the presence of a cystic lesion in the right lobe of the liver, with a well defined margin and a fluid level marking.

- 2A. What is the most probable diagnosis?
2B. Describe the pathogenesis of this disease and the life cycle of the parasite involved.
2C. Describe the laboratory diagnosis of this disease.

(1+5+4 = 10 marks)

3. **Write short notes on:**

- 3A. Laboratory diagnosis of Kala-azar.
3B. Microfilaria.
3C. Varicella zoster virus.
3D. Laboratory diagnosis of Hepatitis B.
3E. Mycetoma.

(5×5 = 25 marks)

4. **Write short notes on:**

- 4A. Larva migrans
4B. *Trichomonas vaginalis*
4C. Labeled diagram of HIV
4D. Laboratory diagnosis of Candidiasis
4E. *Pneumocystis jiroveci*

(3×5 = 15 marks)

