



NEET PG 2025

**Microbiology Previous
Year Questions with
Solutions**

TUTORIALS

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Microbiology

Question 1

Clinical question

A farmer presents with an ulcerative skin lesion with central necrosis. A smear from the lesion, stained with polychrome methylene blue, shows capsulated bacilli positive for the M'Fadyean reaction. Which of the following is the most likely diagnosis?

Options:

- A) *Bacillus anthracis*
- B) *Yersinia pestis*
- C) *Clostridium perfringens*
- D) *Chlamydia trachomatis*

Correct answer: A) *Bacillus anthracis*

Question 2

Clinical question

A 32-year-old farmer presents with high-grade fever, severe myalgia, and redness of the eyes. Investigations reveal elevated bilirubin. Which of the following is the most likely diagnosis?

Options:

- A) Brucellosis
- B) Weil's syndrome
- C) Malaria
- D) Enteric fever

Correct answer: B) Weil's syndrome

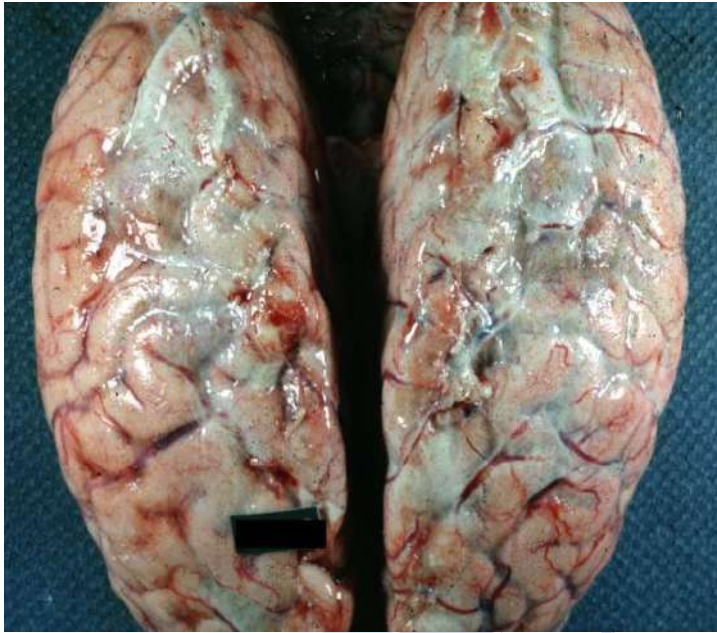
Question 3

Clinical question

A 19-year-old college student presents with sudden-onset fever, headache, vomiting, and a rapidly spreading purpuric rash. He appears confused, and his BP is measured to be 80/50 mmHg, HR 120/min, and Temp 39.5°C. On examination, he has petechiae and purpura over his lower limbs and trunk. He succumbs to his illness, and an autopsy is carried out. The

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gross specimen of the brain is shown below. Which of the following pathogens is the most likely cause of his condition?



Options:

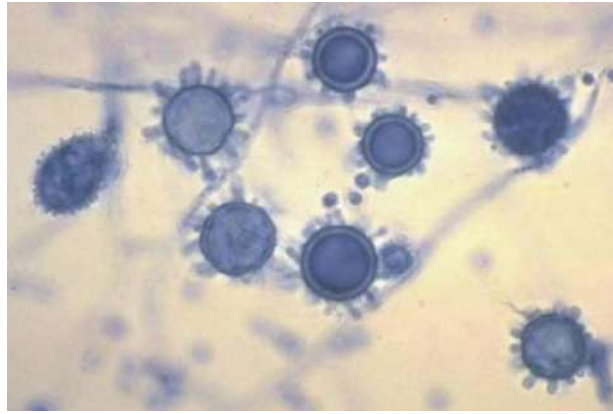
- A) *Streptococcus pneumoniae*
- B) *Haemophilus influenzae* type B
- C) *Neisseria meningitidis*
- D) *Listeria monocytogenes*

Correct answer: C) *Neisseria meningitidis*

Question 4

Clinical question

A 35-year-old man presents with a 2-week history of low-grade fever, nonproductive cough, weight loss, and fatigue. Chest X-ray shows bilateral hilar lymphadenopathy with patchy infiltrates. A lactophenol cotton blue mount from the sputum culture appears as below. What is the most likely diagnosis?



Options:

- A) Pulmonary tuberculosis
- B) Histoplasmosis
- C) Coccidioidomycosis
- D) Blastomycosis

Correct answer: B) Histoplasmosis

Question 5

Non-clinical question

Group A Streptococcus is the most common cause of bacterial pharyngitis in school-aged children. Which of the following bacterial components is primarily responsible for its attachment to fibronectin on the epithelial lining of the pharynx?

Options:

- A) Lipoteichoic acid
- B) Capsule
- C) Flagella
- D) Lipoprotein

Correct answer: A) Lipoteichoic acid

Question 6

Clinical question

A child presents with intense perianal itching, especially at night. On examination, thread-like white worms are seen in the perianal region, and the microscopic examination is shown below. Which of the following is the most likely causative organism?



Options:

- A) Enterobius vermicularis
- B) Ancylostoma duodenale
- C) Trichuris trichura
- D) Ascaris lumbricoides

Correct answer: A) Enterobius vermicularis

Question 7

Clinical question

A child presents with painful vesicular lesions near the mouth. Tzanck smear reveals multinucleated giant cells with intranuclear inclusions. What is the most likely causative organism?

Options:

- A) Cytomegalovirus
- B) Herpes simplex virus
- C) Varicella-zoster virus
- D) Molluscum contagiosum virus

Correct answer: B) Herpes simplex virus

Question 8

Clinical question

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A male patient presents with fever, cough, and hemoptysis. Microscopic examination of bronchoalveolar lavage (BAL) fluid shows septate hyphae with acute-angle dichotomous branching. Which of the following is the most likely diagnosis?

Options:

- A) Mucormycosis
- B) Histoplasmosis
- C) Aspergillosis
- D) Candidiasis

Correct answer: C) Aspergillosis

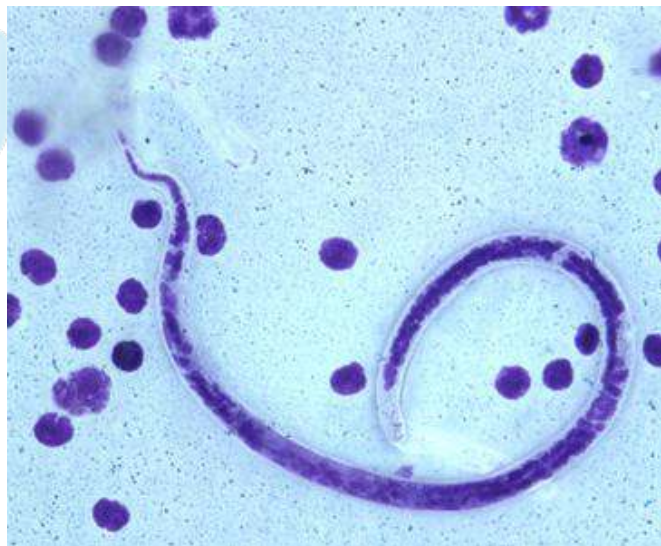
Question 9

Clinical question

A middle-aged man from a tropical region presents with progressive swelling of the lower limb. A peripheral blood smear is shown below. What is the most likely cause of his limb swelling?

Options:

- A) Hypoalbuminemia
- B) Lymphatic obstruction
- C) Hypoproteinemia
- D) Increased hydrostatic pressure



Correct answer: B) Lymphatic obstruction

Question 10

Clinical question

A patient presents with chronic meningitis. Laboratory findings reveal Gram-positive, filamentous branching bacteria which are weakly acid-fast with modified Ziehl–Neelsen (ZN) stain. The paraffin bait technique is used to isolate the organism. Which of the following is the most likely causative organism?

Options:

- A) *Actinomyces israeli*
- B) *Mycobacterium tuberculosis*
- C) *Nocardia asteroides*
- D) *Cryptococcus neoformans*

Correct answer: C) *Nocardia asteroides*

Question 11

Clinical question

In a village, several people develop dysentery after consuming raw milk. Laboratory examination of stool samples reveals: Gram-negative, curved rods with predominant polymorphonuclear infiltration. Which of the following is the most likely causative organism?

Options:

- A) *Clostridium perfringens*
- B) *Staphylococcus aureus*
- C) *Vibrio parahaemolyticus*
- D) *Campylobacter jejuni*

Correct Answer: D) *Campylobacter jejuni*

Question 12

Clinical question

A patient presents with a long-standing swelling and discharging sinuses on the foot as shown below. The discharge contains black granules. What is the most likely finding on the KOH mount?



Options:

- A) Small spores and pseudohyphae
- B) Arthrospores
- C) Septate hyphae with 4-5 microns in width
- D) Filamentous branching bacteria

Correct Answer: C) Septate hyphae with 4-5 microns in width

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