

NEET PG 2025

**Microbiology Previous
Year Questions with
Solutions**

TUTORIALS

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

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



Options:

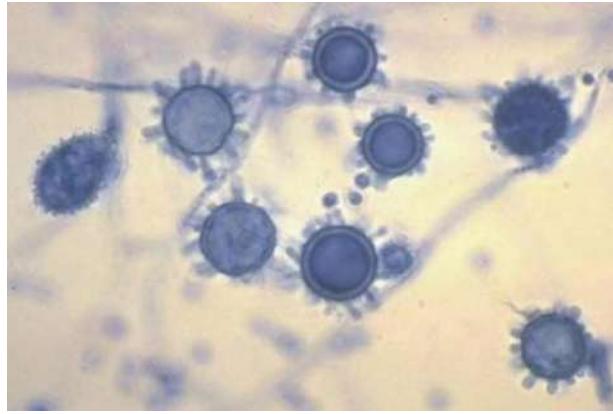
- A) *Streptococcus pneumoniae*
- B) *Haemophilus influenzae* type B
- C) *Neisseria meningitidis*
- D) *Listeria monocytogenes*

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

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

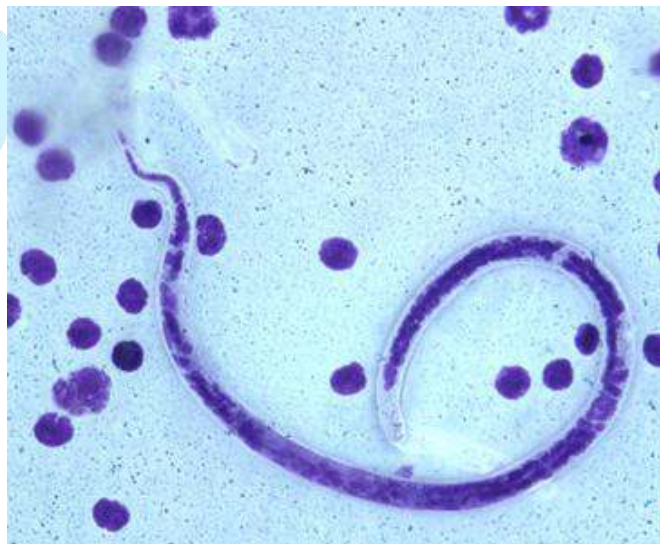
Question 9

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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