



6. *Neisseria gonorrhoea* is leading causes of STDs. Females affected by *Neisseria gonorrhoea* usually remain asymptomatic. Which of the following is the best site to obtain a swab in asymptomatic gonorrhea?
- Endocervix
  - Urethra
  - Lateral vaginal wall
  - Posterior fornix
7. A young male had unprotected intercourse with a commercial sex worker. 2 weeks later, he developed painless indurated ulcer on his glans penis that exuded clear serum on pressure. Bilateral inguinal lymph nodes were enlarged but not tender. The most appropriate diagnostic test is:
- Western blot for HIV
  - Gram staining of ulcer discharge
  - Leishman stain of lymph node aspirate
  - Dark field microscopy of ulcer discharge.
8. A 30 year old female came with multiple painful tiny vesicular ulcers on vulva and vaginal walls. On examination, there was painful enlarged lymph nodes. The causative organism might be:
- C. granulomatis*
  - HSV-2
  - H. ducreyi*
  - HSV-1
9. Plague is transmitted by:
- Cat flea
  - Soft tick
  - X. cheopis*
  - Louse
10. A 25 year old patient presented with features of acute meningoencephalitis. Her CSF examination revealed motile unicellular microorganisms. The most likely organism is:
- Trypanosoma cruzi*
  - Neisseria meningitidis*
  - Cryptococcus neoformans*
  - Naegleria fowleri*
11. The most common organism amongst the following that causes acute meningitis in an AIDS patient:
- Neisseria meningitidis*
  - Cryptococcus neoformans*
  - Streptococcus agalactiae*
  - Listeria monocytogenes*
12. A diabetic patient suffers from a soft tissue infection, microbiological examination of which reveals broad ribbon shaped aseptate hyaline hyphae. Which fungus is the likely responsible for this infection:
- Candida*
  - Mucor*
  - Penicillium*
  - Aspergillus*
13. An HIV +ve immunocompromised patient presented with symptoms of difficulty in vision and photophobia. On ocular examination, the physician observed features of chorioretinitis. Which parasite is likely responsible for this infection:
- Acanthamoeba*
  - Toxoplasma*
  - Plasmodium*
  - Entamoeba*
14. Multidrug therapy is given for tuberculosis because:
- To decrease toxicity
  - To widen antimicrobial spectrum
  - To delay development of resistance
  - To prevent toxin release by the pathogen.
15. A pleural fluid sample from pulmonary medicine ward is received in the microbiology laboratory for ZN staining. On smear examination, acid fast bacilli were observed. All of these can be the likely pathogen except:
- Nocardia*
  - M. tuberculosis*
  - NTM
  - Actinomyces*
16. A 70 year old male patient presented to emergency with high grade fever, chest pain, increased respiratory rate and cough with expectoration. His sputum was sent to the lab for gram staining which showed presence of pus cells and Gram positive cocci in pairs. Which of the following will help in confirming the diagnosis?
- Coagulase test
  - Catalase test
  - Bile solubility
  - Bacitracin sensitivity

dermatophyte infects skin and hair only?

- a. Trichophyton rubrum
- b. Microsporum spp
- c. Epidermophyton spp
- d. Trichophyton mentagrophytes

18. A 8 month old infant with history of incomplete childhood vaccination presented with bouts of spasmodic cough with cyanosis and a typical inspiratory whoop. What is the most appropriate diagnosis?

- a. Tuberculosis
- b. Interstitial pneumonia
- c. Pertussis
- d. Pharyngitis

19. Mycetoma is chronic slowly progressive granulomatous infection of skin and subcutaneous tissue. Which of the following triad is manifestation of Mycetoma?

- A. Swelling, discharging sinuses, presence of granules
- B. Swelling, nodule formation, lymphadenopathy
- C. Lymphadenopathy, ulcerative lesions, osteoarthritis
- D. Swelling, erythema, nodulo-ulcerative lesions

20. A patient presented with headache and projectile vomiting along with alteration in sensorium. India ink staining shows a capsulated organism. Which of the following is the most likely diagnosis?

- a. Cryptococcus
- b. Blastomyces
- c. Histoplasma
- d. Coccidiodes

Q.2. A 35 year old truck driver has been brought to the emergency ward with history of bouts of acute diarrhea, weight loss and fever for the last three months. On examination there was diminished breath sound on both sides of the chest. Chest X-ray revealed consolidation of both lungs. There was generalized lymphadenopathy. [4x3]

- a. Define opportunistic infections
- b. What are the possible etiological agents of opportunistic infections in this individual
- c. Discuss the pathogenesis of opportunistic infections

Q.3. **Describe briefly:** [5x4]

- a. Name the clostridium tetani toxins and mechanism of action
- b. Classification of mycobacterium
- c. Define acute bacterial neonatal meningitis. Discuss the aetiological agents
- d. Discuss the aetiological agents chronic meningitis and laboratory diagnosis

Q.4. **Write briefly: -** [3x5]

- a. Herpes virus infections
- b. Serological diagnosis of syphilis
- c. Primary amebic meningoencephalitis
- d. Candidal infections
- e. Cerebral malaria

Q.5. **Discuss briefly: -** [6x3]

- a. Laptospirosis and its diagnosis
- b. Mention the microbial pathogens causing congenital infections. Discuss the laboratory diagnosis.
- c. Biological waste disposal methods

Q.6. **Write short notes: -** [5x3]

- a. Laboratory diagnosis of leprosy
- b. Prevention of hospital acquired infections
- c. Confidentiality in microbiology reports

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