



TIME : 3 Hrs

Max. Marks : 100

Note: Attempt all questions. Answer PART- A and PART – B in separate answer books. All part of a question should be answered together.

PART – A

PAPER CODE: 2211130006

Q.1 Long Answer Question

(2 + 3 + 5 + 5 = 15)

A 65 year old male was admitted to a hospital with complaints of severe pain in the lateral aspect of his right thigh and small amount of pus discharge from the ingrown hair. On physical examination, the local area was found to be red, warm and tender. Aspirated pus was subjected to Gram stain and showed Gram positive cocci in clusters. Culture on blood agar showed golden yellow pigmented beta-hemolytic colonies.

- What is clinical diagnosis and its causative organism?
- List the infections caused by this organism
- Describe the virulence factors of this organism
- Briefly discuss the laboratory diagnosis

Q.2 Short Notes Questions

(within 500 words)

(5 x 3 = 15)

- Difference between bacterial endotoxins and exotoxin
- Gram Positive cocci infections
- Importance of confidentiality pertaining to patient identity on lab results.

Q.3 Short Answer Questions

(within 100 words)

(2 x 5 = 10)

- Superantigens
- Immune complex mediated hypersensitivity reactions
- Chronic granulomatous disease
- Graft versus host reaction
- Differences between Disinfection and Sterilisation

Q.4 Multiple Choice Questions

(1 x 10 = 10)

- A patient who recently returned from camping in forest presents with malabsorption diarrhea. How does the most likely agent cause the diarrhea?
 - Co-infection with bacteria
 - Enterotoxin production
 - Suction disk attachment
 - Tissue invasion leading to an inflammatory response and prostaglandin production
- The most effective way of preventing tetanus is:
 - Hyperbaric oxygen
 - Tissue debridement
 - Tetanus toxoid
 - Antibiotics
- Aerosol Transmission occurs in all except:
 - Mycobacterium tuberculosis
 - Pneumococcus
 - Measles virus
 - Varicella (chickenpox and zoster)
- "Malignant pustule" is a term used for
 - An infected melanoma
 - A carbuncle
 - A rapidly spreading rodent ulcer
 - Anthrax of the skin
- If bacteriological examination of CSF is expected to be delayed then it is stored as:
 - It is frozen
 - It is kept at 37°C
 - It is kept at room temperature
 - Sample is discarded
- Which antigen persist in Salmonella carrier state?
 - H antigen
 - M antigen
 - O antigen
 - Vi antigen
- Number of Moments in Hand Hygiene as per World Health Organization is
 - 4
 - 5
 - 6
 - 10
- Which of the following waste should be pre-treated on-site as per Bio Medical Waste Management guidelines 2016
 - Expired/discarded medicines
 - Chemical solid waste
 - Microbiology, other clinical
 - Sharp waste
- Which of the following site is most commonly affected by Corynebacterium diphtheriae :
 - Skin
 - Conjunctiva
 - Faucial
 - Kidney
- Dermatophyte that does not affect nail:
 - Trichophyton
 - Epidermophyton
 - Microsporum
 - Candida albicans



Q.1 Long Answer Question

(2 + 3 + 5 + 5 = 15)

A 6 year old boy was admitted to the hospital with complaints of high grade fever, headache, vomiting, altered mental status, seizure and neck rigidity. CSF was collected by lumbar puncture in a sterile container and sent to Microbiology lab.

- What is the probable clinical diagnosis?
- Enlist the bacterial etiological agents of this disease
- What is the pathogenesis of this disease?
- Briefly discuss the laboratory diagnosis

Q.2 Short Notes Questions

(within 500 words)

(5 x 3 = 15)

- Personal Protective Equipments
- Standard tests for Syphilis
- Bacterial zoonotic infections

Q.3 Short Answer Questions

(within 100 words)

(2 x 5 = 10)

- Enlist types of Culture media
- Difference between active and passive immunity
- Life cycle of Chlamydia
- Bacterial aetiological agents of Urinary tract Infections
- Adjuvants

Q.4 Multiple Choice Questions

(1 x 10 = 10)

1 A 32 year old male has got clean wound without laceration. He had a booster dose of TT 6 years ago. What is the next line of management?	2 Which of the following is not a cause of neonatal meningitis?
(a) Wound care with single dose of tetanus toxoid	(a) Escherichia coli
(b) Wound care with human tetanus Ig with tetanus	(b) Streptococcus agalactia
(c) Wound care with complete course of tetanus toxoid	(c) Listeria monocytogenes
(d) Wound care with no immunisation	(d) Streptococcus pneumonia
3 Which culture medium is preferred for culture of urine specimens?	4 Causes of Non gonococcal urethritis are all, Except:
(a) TCBS agar	(a) Chlamydia trachomatis
(b) CLED agar	(b) Herpes simplex virus
(c) Chocolate agar	(c) Candida albicans
(d) XLD agar	(d) Treponemapallidum
5 Plague is transmitted by:	6 Hand rub should NOT be used in which condition
(a) Rat flea	(a) Before touching patient
(b) Soft tick	(b) After touching patient
(c) Hard tick	(c) After touching patient surroundings
(d) Louse	(d) Hands are visibly soiled
7 Which of the following disinfectants is NOT used currently for disinfection of operation theatres?	8 Solid waste items contaminated with blood and body fluids including cotton dressings belong to which category of biomedical waste?
(a) Formaldehyde	(a) Yellow
(b) Glutaraldehyde based	(b) Red
(c) Hydrogen peroxide based	(c) Blue
(d) Quarternary ammonium compound	(d) White
9 The decreasing order of risk of transmission following occupational exposure:	10 Which of the following agent of meningitis can grow on chocolate agar but not on blood agar?
(a) HIV > HBV > HCV	(a) Neisseria meningitides
(b) HBV > HIV > HCV	(b) Haemophilus influenza
(c) HBV > HCV > HIV	(c) Moraxella catarrhalis
(d) HCV > HBV > HIV	(d) Escherichia coli