



**KISII UNIVERSITY**  
**UNIVERSITY EXAMINATIONS**

**FIRST YEAR EXAMINATION FOR THE AWARD OF THE**  
**DIPLOMA IN CLINICAL MEDICINE AND SURGERY**  
**THIRD SEMESTER 2021/2022**  
**[JUNE-SEPTEMBER, 2022]**

**CIMS 0126: GENERAL PATHOLOGY III**

**STREAM: Y1S3**

**TIME: 2 HOURS**

**DAY: THURSDAY, 12:00 – 2:00 PM**

**DATE: 08/09/2022**

**INSTRUCTIONS**

- 1. Do not write anything on this question paper.***
- 2. Answer ALL Questions.***

**Answer all questions**

**PART 1: SECTION A: SHORT QUESTIONS 60 (MKS) ANSWER ALL QUESTIONS**

1. Discuss tetanus under the following subheadings
  - a) Definition of tetanus
  - b) Mode of spread of tetanus
  - c) Effects of tetanus
2. Discuss the pathology of primary pulmonary tuberculosis
3. Outline five
  - a) Clinical features of lepromatous leprosy
  - b) Clinical features of tuberculous leprosy
4. Discuss factors influencing infection establishment
  - a) In the host (factors that prevent and the spread of infection) (5marks)
  - b) In micro-organisms (factors enhancing invasive capacity) (5marks)
5. Outline causes of failure of protective and defense mechanisms against infections. (10 marks)

6. Outline five
- a) Complications of actinomycosis (5marks)
  - b) Manifestation of secondary syphilis (5marks)

**SECTION B LONG ESSAY QUESTIONS 40 MARKS**

**ANSWER ONLY TWO QUESTIONS**

1. Discuss hosts and virus interactions under the following subheadings. (20 marks)
- a) Interferon production by infected cells especially T lymphocytes
  - b) Change in the infected cells
  - c) Immune response
  - d) Inflammatory response,
2. Discuss the pathology of
- a) Tertiary (late) syphilis (10 marks)
  - b) How a DNA virus uses the host cell to replicate and at the same time cause cell death. (10marks)
3. Outline both DNA and RNA on congenic
- a) Viruses and their associated malignancies. (10marks)
  - b) Discuss the pathology and pathogenesis of malaria

**PART II: MCQS & TRUE OR FALSE**

**SECTION A: MCQS: ONLY ONE CHOICE IS CORRECT**

1. Local skin lesion caused by staphylococcus aureus is
- a) Boils
  - b) Impetigo
  - c) Erysipelas
  - d) Tonsillitis
2. Exotoxins
- a) Are secreted by living bacteria
  - b) Usually produced by Gr -ve bacteria
  - c) Do not stimulate antibody production

- d) Are complex proteins (LPS)
3. Staphylococcus aureus
- a) Is a gram +ve bacteria
  - b) Occur in chains
  - c) Produce hyaluronidase
  - d) Commonly cause septicemia as a general complication.
4. Commonest lesion caused by streptococcus pyogenes include
- a) Septicemia
  - b) Pyemia
  - c) Osteomyelitis especially in children
  - d) Rheumatic heart disease.
5. The following bacteria cause chronic bacterial infections (granuloma)
- a) Staphylococcus aureus
  - b) Neisseria gonorrhoea
  - c) Neisseria meningitidis
  - d) Mycobacterium TB
6. Example of oncogenic virus is
- a) Epstein bar virus (EBV)
  - b) Cytomegalovirus (CMV)
  - c) MEASLES
  - d) Herpes simplex virus (HSV)
7. Benign tumors
- a) Spread very fast
  - b) Rate of spread is very fast
  - c) Invade and destroy normal tissues
  - d) Have well circumscribed boundaries and are often encapsulated.
8. The following are benign epithelial tumors
- a) Papillomas

- b) Osteomas
  - c) Chondromas
  - d) Leiomyomas
9. Connective tissue benign tumors include
- a) Villous adenoma
  - b) Tubular Adenoma
  - c) Osteoma
  - d) Papilloma
10. The following is not a connective tissue
- a) Fibrous tissue
  - b) Bone
  - c) Cartilage
  - d) Neuroectodermn
11. Commonest site otlipomas include
- a) Deep soft tissues of the limbs
  - b) Retro peritoneum
  - c) Viscera
  - d) Arms, subcutaneous tissue, shoulders and buttocks.
12. Malignant epithelial tumors include
- a) Squamous cell carcinoma of the skin
  - b) Malignant fibrous histiocyoma (MFH)
  - c) Leiomyosarcoma
  - d) Rhabdomyosarcoma.
13. Pneumocystis ferovecil ( Carinil) is a
- a) Protozoa
  - b) Bacteria
  - c) Fungus
  - d) Clinical effects Occur in patients with normal immunity

14. Histological features of benign tumors are
- Show frequent mitoses often of abnormal type
  - Provide little resemblance of the cells of origin
  - Bear little evidence of normal function
  - Mimic the structure of their parent organ.

15. Sarcomas

- Have ill-defined edges
- Naked eye assessment suggests that they are encapsulated but histology disproves this
- Malignant cells do not infiltrate between the normal tissues
- They do not recur after surgery

**PART B: TRUE OR FALSE: YOU LOSE ONE FOR EACH WRONG RESPONSE AND NONE FOR NO RESPONSE**

- Mechanisms by which pathogens cause a disease include
  - Pathogen to cell contact
  - Release of toxins
  - Induction of systematic inflammatory response
  - Obstruction or damage of blood vessels
  - Induction of cell mediated immunity
- Local lesions caused by staphylococcus aureus include
  - Pustules
  - Boils
  - Carbuncles
  - Pharyngitis
  - Wound infections
- Complications of N. gonorrhoea in females are
  - Cervicitis
  - Oophoritis

- c) Acute salpingitis
  - d) Infertility
  - e) Urine retention
4. Following enzymes are produced by staphylococcus aureus
- a Streptokinase
    - b) hyaluronidase
    - c) Neurocalcin
    - d) Exotoxins
    - e) Coagulase
5. Clinical features of E. coli 0157 due to haemolyticuraemic syndrome(HUS) include
- a) Haemolytic anemia
  - b) Hypertension
  - c) Renal failure
  - d) Purpura with thrombocytopenia may occur
  - e) Death in young and elderly may occur.
6. Predisposing factors to candidiasis are
- a) Diabetes mellitus
  - b) Steroids
  - c) Pregnancy
  - d) Leukemia
  - e) HIV injection
7. Risk factors for PTB are
- a) Hiv/AIDS
  - b) Diabetes mellitus
  - c) Elderly
  - d) Malnutrition
  - e) Poverty

8. Causes to anemia in visceral leishmaniasis (kala-azar) are
- a) Splenomegaly with hypersplenism
  - b) Depresses bone marrow function
  - c) Auto immune hemolysis
  - d) Ineffective erythropoiesis
  - e) G.I.T Hemorrhage
9. Complications of *S. haematobium* are
- a) Cystitis
  - b) Haematuria
  - c) Renal failure
  - d) Squamous cell carcinoma of bladder
  - e) Haemospermia
- 10) Causes of pyrexia due to infections are.
- a) resetting of T temperatures regulating center in hypothalamus due to pyrogens
  - b) heat stroke
  - c) infarction
  - d) cerebral disease in the region of pons
  - e) Tumours.
11. Features of visceral leishmaniasis are
- a) Weight loss
  - b) High grade fevers
  - c) Hepato splenomegaly
  - d) Lymphadenopathy
  - e) Anaemia
12. Complications of congenital toxoplasmosis in second trimester of pregnancy are
- a) Moderate brain damage
  - b) Epilepsy

- c) Chorioretinitis
- d) Microcephaly
- e) Encephalitis

13. Complications due to hyperinfection due to reduced immunity in strongly immunosuppressed patients include.

- a) Multi organ failure
- b) Acute pneumonia
- c) Fulminant diarrhoea
- d) Septic shock
- e) Meningitis

14. Histological glandular tissue carcinomas include

- a) Adenocarcinomas
- b) Mucoid carcinoma
- c) Pleomorphic cell carcinoma
- d) Colonic carcinoma
- e) Breast cancer

15. About sarcomas

- a) Majority consist of spindle cells
- b) A few are of round cells type
- c) Are associated with large thin-walled blood vessels
- d) Blood borne metastases to lungs is common
- e) Spread via lymphatic is rare