KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2019/2020
FIRST SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF PHARMACY

PPF 530: CLINICAL PHARMACY

DATE: MONDAY 9TH DECEMBER 2019 **TIME: 9.00 A.M - 12.00 P.M**

INSTRUCTIONS:

- The paper consists of sections A, B, C, D and E
- Answer each section on a separate booklet

SECTION A:CARDIOVASCULAR DISORDERS (25 marks)

1. The most specific diagnostic test for deep venous thrombosisis....
   A. Endoscopy
   B. Magnetic resonance imaging
   C. Computed topography scan
   D. Venography
   E. Catheterization

2. Which one of the following is not a secondary cause of hypertension?
   A. Estrogen use
   B. Renal disease
   C. Polycythaemia
   D. Cushing's syndrome
   E. Phaechromocytoma

3. The most common supraventricular arrhythmia is....
   A. Ventricular fibrillation
   B. Sinus bradycardia
   C. Atrial fibrillation
   D. Atrial flutters
   E. Paroxysmal supraventricular tachycardia

4. State the 5Csconsidered in the treatment of cardiac arrhythmias are: (2 ½ marks)
5. Outline four factors that are related to sluggishness of blood flow in thrombosis. (4 marks)
6. Differentiate stable angina and acute coronary syndrome. (4 marks)
7. Indicate four classes of drugs that may cause dyslipidaemia, giving an example in each class. (4 marks)
8. Discuss the following regarding hypertension:
   a) The systolic and diastolic blood pressure in severe hypertension (Grade iii). (½ mark)
   b) Explain the causes of ventricular hypertrophy in hypertension (2 marks)
   c) Explain the AB/CD algorithm that is advocated in pharmacotherapy of hypertension. (5 marks)

SECTION B: RENAL DISORDERS (25 MARKS)

1. The following management principles are applicable in chronic renal failure except...
   A. Dietary protein restriction
   B. Vitamin D supplementation
   C. Blood transfusion every month
   D. Restriction of sodium intake
   E. Phosphate restriction
2. A 44-year-old woman has a weight and height of 80 kg and 165 cm, respectively. Her medical history includes type 2 diabetes mellitus for 20 years. A routine laboratory check-up reveals: Serum Creatinine, = 2.9 mg/dL (normal 0.7 -1.2), uric acid 8.8 mg/dL (3.4. -7.0) and BUN 65 mg/dL (7 - 20). What is her stage of chronic renal disease?
   A. I
   B. II
   C. III
   D. IV
   E. V
3. A 52-year-old man is found at home hypotensive and confused. Laboratory data shows: pH 7.56 (normal 7.35-7.45), actual Bicarbonate 39 (23-33 mmol/L), PCO_2 = 46 (35- 45 mmHg) and PO_2 = 76 (80 - 110 mmHg). What acid base disorder is most likely to be present?
   A. High anion gap metabolic acidosis
   B. Metabolic alkalosis
   C. Normal anion gap metabolic acidosis
   D. Respiratory acidosis
   E. Respiratory alkalosis

4. The most common cause of chronic renal failureis...
    A. Diabetes mellitus
    B. Nephrotoxic drugs
    C. Glomerulonephritis
    D. Polycystic kidney disease
    E. Analgesic nephropathy

5. The following drugs can be used in the treatment of diminished renal function (GFR < 30 ml/min) except:
    A. Furosemide
    B. Hydrochlorothiazide
    C. Spironolactone
    D. Torsemide
    E. Bumetanide

6. Which one of the following is an indicationfor initiation of dialysis in a patient with acute kidney injury?
    A. Severe pulmonary oedema
    B. Serum potassium of 5.5 mMol/L
    C. Arterial blood pH of 7.35
    D. Daily urine output of 700 mLs
    E. Severe haematuria

7. A 68-year-old man with chronic kidney disease presents with weakness and progressively worsening shortness of breath. Laboratory findings show a potassium level of 7.2 mmol/L (normal 3.5 -5 mmol/L); an electrocardiogram reveals tall peaked T waves and widening of the QRS complex. Which one of the following is NOT indicated in the treatment of this patient?
    A. Calcium gluconate
    B. Intravenous glucose and insulin
    C. Beta blockers
    D. Exchange resins
    E. Dialysis

8. Which is not a relatively common finding in end stage renal diseasepatients?
    A. Metastatic calcification.
    B. Peripheral neuropathy
    C. Hypophosphatemia
    D. Bleeding tendencies
    E. Peptic ulcer disease

9. Which one of the following does not causeacute interstitial nephritis?
    A. Penicillins
    B. Cytomegalovirus
    C. Cotrimoxazole
    D. Ciprofloxacin
    E. Gentamicin

10. Regarding drug induced pre-renal acute renal failure:
    a) Explain how a combination of an angiotensin converting enzyme inhibitorand non-steroidal anti-inflammatory drugscan induce acute renal failure in heart failure patients (5 marks)
    b) Outline four laboratory findings suggestive of prerenal acute renal failure. (2 marks)

11. An eighteen-year-old male is admitted to Kenyatta National hospital forworsening of body swelling, weight loss, vomiting, itching, severe fatigue and mental confusion. His previous medical history includes a diagnosis of type one diabetes mellitus made at infancy. He developed proteinuria at 3 years of age with his reaching nephrotic stage when he was 14 years. Despite treatment, he continued excreting large amount of proteins. His renal function has progressively worsened over the years and a diagnosis of end stage renal disease is made. The short and long term management plans are renal replacement therapy (RRT) and transplantation, respectively.
    a) After counselling, the patient opted for continuous ambulatory peritoneal dialysis (CAPD). What are the advantages of CAPD over hemodialysis? (3 marks)
    b) Differentiate between hyper-acute, acute and chronic kidney rejection. (3 marks)
    c) State the two phases in the prevention of kidney transplant rejection (1 mark)
    d) For each of the phases above, state two classes of drugs that can be used (2 marks)

12. SECTION C:SKIN AND OCULAR DISORDERS (25 Marks)

1. Describe the role of apraclonidine in management of glaucoma. (2 marks)
2. Besides known hypersensitivity, state five other contraindications of isotretinoin giving a rationale for each. (5 marks)
3. Regarding psoriasis:
   a) Outline five major laboratory investigations you would request. (5 marks)
   b) Describe the clinical presentation. (5 marks)
4. A five-month-old baby has been treated three times within the last month forgeneralized dry skin, erythematous macules, papules and vesicles that coalesce to form patches and plaques on the face, scratching around the lesions and a running nose.
   a) Stating four differential diagnoses, indicate the most probable diagnosis for this baby. (3 mark)
   b) Describe the clinical management for this baby's condition. (5marks)

SECTION D:WOMEN AND PAEDIATRIC PHARMACY (25 Marks)

1. Differentiate between primary and secondary dysmenorrhea. (2 marks)
2. Explain how the following agents cause teratogenicity. (6 marks)
   a) Sodium valproate
   b) Ethanol
   c) Rubella
3. Concerning eclampsia;
   a) State four signs and symptoms. (2 marks)
   b) Describe the stepwise management. (5 marks)
4. Describe five features of early labour. (5 marks)
5. 4-month-old Master T. was rushed to hospital this morning having had several bouts of profuse watery stool and vomiting. His mother reports that the bouts which started yesterday in the morning have not resolved despite having started him on an antibiotic last night. He has refused to eat or breastfeed.

   a) What is the most likely diagnosis in the case above? (1 mark)
   b) List two likely causative organisms in the case above and thus comment on the appropriateness of the antibiotic as above. (4 mark)

SECTION E: ONCOLOGY

1. Which is the leading cause of cancer mortality in the age group 0 – 19 years in Kenya?
   A. Kaposi sarcoma
   B. Non-hodgkin lymphoma
   C. Cancer of the liver
   D. Nephroblastoma
2. The following biological agents have been associated with development of cancers except...
   A. Human Papilloma virus
   B. Coxsackie virus
   C. Epstein Barr virus
   D. Helicobacter Pylori
   E. Human Herpes virus 8
3. Which one is the most common clinical presentation of cancer of the oesophagus?
   A. Dysphagia
   B. Odynophagia
   C. Weight loss
   D. Pneumonia
   E. Coughing on swallowing
4. Which drug has the least probability of causing emesis during systemic chemotherapy?
   A. Bleomycin
   B. Cyclophosphamide
   C. Etoposide
   D. Carboplatin
   E. Doxorubicin
5. Cervical cancer commonly presents with...
   A. Bone pain
   B. Dyspareunia
   C. Lower abdominal pain
   D. Vaginal bleeding
   E. Lower back pain
6. Describe the four presentations of chemotherapy induced nausea and vomiting. (4 marks)
7. Describe the two common early clinical features of breast cancer. (3 marks)
8. Describe six clinical features of advanced prostate cancer. (3 marks)
9. Discuss acute lymphoblastic leukaemia under the following headings:
   a) Four signs. (2 marks)
   b) Four symptoms. (2 marks)
   c) Describe the treatment phases. (6 marks)