KENYATTA UNIVERSITY

EXAMINATION FOR THE DEGREE OF BACHELOR OF PHARMACY

PPF 430: CLINICAL PHARMACY III

3RD TRIMESTER 2021/2022 TIME: 2 Hours

INSTRUCTIONS

- **The paper consists of THREE sections: A, B and C.**
- **Answer each section in a separate booklet. Label each booklet CLEARLY.**
- **Answer ALL questions.**

SECTION A: GASTROINTESTINAL DISORDERS

1. A patient with a liver disease will most likely have pain at the ……..…… part of the abdominal region.
   A. epigastrium
   B. left upper quadrant.
   C. hypogastrium
   D. right upper quadrant
   E. umbilicus
2. Ascites in liver disease is due to….
   A. jaundice
   B. portal hypertension
   C. variceal hemorrhage
   D. biliary blockage
   E. encephalopathy
3. Which hepatotropic viruses are most contagious?
   A. HBV
   B. HAV
   C. HGV
   D. HEV
   E. HCV

4. Pain is often an important symptom of gastrointestinal diseases. It must be analyzed in relation to the following **EXCEPT** …

   A. main site
   B. radiation
   C. severity
   D. onset
   E. frequency

5. The class of drug mostly associated with etiology of inflammatory bowel disease(IBD) is…..

   A. NSAIDS
   B. Antivirals
   C. Antifungals
   D. Polyene antibiotics
   E. Benzodiazepines

6. The best method for visualization of gastrointestinal tract tissues is …

   A. radiology
   B. CT scan
   C. MRI
   D. endoscopy
   E. ultrasound

Indicate TRUE or FALSE for the following statements.

7. Antimicrobials alone or acid suppressing agents alone do not eradicate *H.Pylori.*
8. Fluconazole is sometimes used in the management of IBD.
9. Sudden vomiting without preceding nausea may be due to pregnancy.
10. GERD is an infective disease which management include surgical fashioning of the LOS.
11. Illustrate four instances where type, timing and related features of vomiting are important diagnostically. (4 marks)
12. Outline three forms of radiography commonly used in investigation of gastrointestinal diseases. (3 marks)
13. Enumerate four risk factors associated with NSAID induced ulcers. (4 marks)
14. Indicate the four alarm features of peptic ulcer disease. (4 marks)
15. As regards aphthous ulcers describe:
    a) Causes (4 marks)
    b) Management (2 marks)

16. A patient presented with pain, weight loss, diarrhoea (with no blood) and also reported steatorrhea. He had been fatigued for the last six months with general malaise. The pain was colicky with gurgling bowel sounds.

a) What was the most likely diagnosis? (1 mark)

b) Outline the factors associated with diarrhoea. (4 marks)

c) Describe the management plan of the diagnosed condition. (4 marks)

SECTION B: ENDOCRINE AND HAEMATOPOEITIC DISORDERS

1. All the following best describe type 1 diabetes mellitus (DM) **EXCEPT ....**
   A. very strong genetic link
   B. rapid onset
   C. insulin should be administered.
   D. usually develop in the young
   E. there is destruction of beta cells.
2. Which one of the following is not a characteristic manifestation of hemophilia?
   A. Hemarthroses
   B. Muscle hemorrhage
   C. Hemorrhagic stroke
   D. Hematuria
   E. Excessive bleeding with tooth extraction
3. The exocrine functions of the pancreasare carried out by …
   A. beta cells
   B. pancreatic duct
   C. islet of Langerhans
   D. delta cells
   E. alpha cells
4. A prodromal sign of hyperglycemia is …
   A. fatigue
   B. weight loss
   C. blurred vision
   D. dry skin
   E. glycosuria

5. A neuroglycopenic symptom of hypoglycemia is …
   A. sweating
   B. trembling
   C. confusion
   D. pallor
   E. tachycardia
6. A drug mostly implicated with hypoglycemic unawareness is…
   A. verapamil
   B. diltiazem
   C. atenolol
   D. frusemide
   E. amlodipine
7. Peripheral de-iodination of tetra-iodothyronine to triiodothyronine is inhibited by …
   A. thiocyanates
   B. propylthiouracil
   C. TSH
   D. percholates
   E. iodides
8. A type of hyperthyroidism caused by an adenoma of the thyroid gland is …
   A. Grave's disease
   B. nodular disease
   C. thyroiditis
   D. toxic diffuse disease
   E. myxedema
9. The factors that contribute to anaemia in critically ill patients are the following EXCEPT ….
   A. sepsis
   B. surgical blood loss
   C. frequent blood samples
   D. reduced RBC life span.
   E. reduced production of hemoglobin
10. A drug-induced hematologic disorder due to phenytoin is ….
   A. aplastic anaemia
   B. thrombocytopenia
   C. megaloblastic anaemia

D. agranulocytosis

E. hemolytic anaemia

11. Comment on the following two statements.

    a. Folate deficiency does not require parenteral treatment. (1 mark)

    b. Hydroxocobalamin is linked to intrinsic factor. (2 marks)

12. Outline four signs and symptoms of hypothyroidism. (4 marks)

13. Explain the etiology and treatment of these two sub-types of type 2 DM:

    a. LADA (latent autoimmune diabetes in adults). (2 marks)

    b. MODY (maturity onset diabetes of the young). (3 marks)

14. As regards hematologic disorders describe the following:

    a. Thrombocytopenia. (4 marks)

    b. Pathophysiology of sickle cell anaemia. (6 marks)

15. Mr. Jones, a 60-year-old farmer with long standing diabetes, reported in the casualty department ofKiambu L5 Hospital. He had the following signs and symptoms for the last 6 hours: Sweating, tachycardia, trembling, pallor, headache and confusion.

    a. What was the diagnosis? (1 mark)

    b. Enumerate two laboratory investigations that should be done. (2 marks)

    c. Outline the treatment given. (2 marks)

    d. Enumerate three likely causes of the above diagnosis. (3 marks)

SECTION C: NEUROLOGICAL AND MUSCULOSKELETAL DISORDERS

1. A patient presents with a head injury. On arrival his eyes open to painful stimuli, he is confused and withdraws to pain. What is the GCS for the patient?

    A. 7

    B. 9

    C. 10

    D. 11

    E. 15

2. Which of the following antiseizure medications **IS NOT** metabolized by the liver?

    A. Zonisamide

    B. Levetiracetam

    C. Topiramate

    D. Lamotrigine

    E. Tiagabine

3. Which of the following symptom is **NOT EXPECTED** in myasthenia gravis?
    A. Fatigable double vision
    B. Ptosis
    C. Difficulty in swallowing and speech
    D. Weakness in the arms and legs
    E. lack of sensation
4. Which of the following best reflects the evidence of the benefits of aspirin in acute stroke?
    A. Similar in old versus young patients
    B. Similar in female versus male patients
    C. Similar in those with or without atrial fibrillation
    D. More effective at reducing death at six months in older, male patients than in younger female.
    E. More effective at reducing death six months in patients with atrial fibrillation.
5. Which of the following antipsychotic agents is most associated with the possibility of a haematological dyscrasia such as agranulocytosis in a patient being treated for schizophrenia?
    A. Cariprazine
    B. Clozapine.
    C. Chlorpromazine.
    D. Fluphenazine
    E. Haloperidol
6. The first psychotic episode of schizophrenia is often preceded by a prodromal phase lasting weeks or even years. Which of the following symptoms is **NOT** consistent with the prodromal phase?
    A. Delusions.
    B. Sleep disturbance.
    C. Poor concentration.
    D. Irritability.
    E. Anxiety.
7. About the symptoms that may be present in a patient with schizophrenia, which of the following symptoms is **LEAST LIKELY** to be present?
    A. Hallucinations.
    B. Delusions.
    C. Alogia.
    D. Grandiosity.
    E. Anhedonia.

8. Which of the following drugs is normally used to treat bipolar illness?
    A. Chlorpromazine
    B. Naloxone
    C. Imipramine
    D. Lithium
    E. Trihexyphenidyl
9. DSM-IV-TR criteria for a major depressive episode includes all the following **EXCEPT**...
    A. Inability to perform cognitive functions.
    B. Psychomotor agitation or retardation
    C. Insomnia or hypersomnia
    D. Weight loss or gain
    E. Attempted suicide.
10. Which of the following is the most common cause of secondary parkinsonism?
    A. Severe depression
    B. Early dementia
    C. Use of antipsychotics
    D. Cerebrovascular disease
    E. Traumatic brain injury
11. A first-line anti-Parkinson drug also used to treat hyperprolactinemia at lower doses is...
    A. Amantadine
    B. Levodopa
    C. Bromocriptine
    D. Selegiline
    E. Benztropine mesylate
12. Which of these is the strongest risk factor for developing Alzheimer's disease?
    A. Heredity
    B. Age
    C. Exposure to toxins
    D. Obesity
    E. Low social economic status
13. Which of the following agents is not commonly used due to its potential to cause hepatotoxicity?
    A. Rivastigmine
    B. Tacrine
    C. Galantine

D. Memantine

E. Donepezil

14. Which of the following medications will improve cognitive function in a patient with Alzheimer's disease?

A. Diphenhydramine

B. Memantine

C. Valproate

D. Duloxetine

E. Venlafaxine

15. Which of the following is a common side effect of pentobarbital coma?

A. Hypotension

B. Gastrointestinal hypomotility

C. Pulmonary oedema

D. CNS hemorrhage

E. Hyperkalemia

16. **_____is recommended as an initial therapy for gout.**

A. Probenecid

B. Allopurinol

C. Febuxostat

D. Benzbromarone

E. Colchicine

17. In patients with rheumatoid arthritis, which of the following predicts a worse prognosis?

A. Interferon-gamma

B. Granulocyte-macrophage colony-stimulating factor (GM-CSF)

C. Anti-CCP

D. Tumor necrosis factors (TNF)

E. Rheumatoid Factor (RF)

18. All of the following statements are true about osteoarthritis (OA) **EXCEPT**…

A. It is simply a "wear and tear" process.

B. Risk factors include ageing, joint injury, obesity, and genetics.

C. X-rays may be normal despite significant pain from OA early in the process.

D. Current treatments for OA are directed at controlling pain.

E. DMARDs have been proven to alter the progression of the disease.

19. While TNF-alpha inhibitors are the most commonly used biologic DMARDs, an IL-6 receptor antagonist has also been found to be effective in treating arthritis. An example of this drug class is …

    A. Infliximab
    B. Adalimumab
    C. Etanercept
    D. Rituximab
    E. Tocilizumab

20. Which of the following medication has been shown to reduce the risk of vertebral, non-vertebral and hip fractures significantly?

    A. Alendronate
    B. Teriparatide
    C. Ibandronate
    D. Raloxifene
    E. Tibolone

21. JQ is a professional 40-year-old golfer who has developed a progressively more painful stiffness in her arms and legs over the past year that interferes with her ability to compete in golf tournaments. During her most recent medical checkup, her laboratory results reveal an elevated erythrocyte sedimentation rate (ESR), elevated CRP level and a high RF level. X-ray imaging revealed the presence of bilateral erosion of several joints in her arms and legs.

    i. What is the most likely diagnosis for JQ? (1 mark)
    ii. What first-line drug would you recommend for JQ? (1 mark)
    iii. Recommend three lifestyle changes for JQ (3 marks)

22. WF, a 70-year-old woman with moderate dementia, comes to your pharmacy with her daughter, DF, to fill a new prescription for aripiprazole 5 mg orally every 4 to 6 hours as needed. WF was diagnosed with dementia 3 years ago and has developed depression with periods of anxiety, for which she presented to the emergency department (ED). WF has no other significant health conditions and has no known drug allergies.

    i. What is the likely indication for aripiprazole? (1 mark)
    ii. List two medication problems in the case above. (2 marks)
    iii. For each medication problem identified, propose an appropriate drug. (2 marks)

23. Concerning migraine, describe five (5) criteria for preventive therapy. (5 marks)

24. Describe the role of the following investigation studies in the evaluation of spinal cord injury.

(5 marks)

i. Arterial blood gas (ABG) measurements

ii. Lactate levels

iii. Hemoglobin and/or hematocrit levels

iv. Urinalysis

v. Computed tomography.