

# UNIVERSITY OF NAIROBI

UNIVERSITY EXAMINATIONS 2013/2014

FIFTH YEAR EXAMINATIONS FOR THE DEGREE OF BACHELOR OF  
MEDICINE AND BACHELOR OF SURGERY

TIME 500: MEDICINE-MCO

DATE: NOVEMBER 6, 2014

TIME: 9.00 A.M. - 12.00 NOON

## INSTRUCTIONS:

1. There are 100 Multiple Choice (MCQs) Questions in this paper. Ensure that your paper has all the questions.
2. Each question has ONE BEST ANSWER.
3. There is no negative marking for incorrect responses.
4. No mark will be given if more than one answer is marked in a single question.
5. An answer sheet is provided where all your answers should be appropriately marked as per instructions.
6. The examination paper should be left in the examination room.

Spondyloarthropathies - joint dis that occur along the vertebrae.

- o Ankylosing spondylitis
- o Reiter's syndrome (Reactive arthritis)
- o Psoriatic dx
- o Enteropathic arthritis

15/11/14

Jeff  
Mwendu

Doing can have a  
the a  
Team



2014

1. A 20 year old woman presents with sudden onset weakness of the right side of the body with normal speech. The MOST likely site of the lesion is?  
A. Internal capsule  
B. Middle cerebral artery territory  
C. Brain stem ✓ *CROSS over.*  
D. Pons  
E. Cerebellar peduncle

2. Which one of the following statements is TRUE regarding characteristics of X-linked recessive disorders?  
A. In the male, X-linked recessive genes only manifest when the genes are homozygous *always manifest*  
B. The condition usually affects females *no*  
C. They are transmitted by healthy male carriers *female*  
D. Male off springs of a male with the disorder inherit the disease *no female*  
E. All female off springs of an affected male will be carriers. ✓

3. Which one of the following drugs used in the treatment of tuberculosis is correctly matched with its expected adverse reaction?  
A. Streptomycin - optic neuritis - *Vestibulo-cochlear*  
B. Isoniazid - hypothyroidism - *None problem. PN, Hepatotox.*  
C. Rifampicin - peripheral neuropathy - *flora etc., red secretion, Hepatotox*  
D. Pyrazinamide - hepatotoxicity ✓ *hepatotoxicity*  
E. Ethambutol - renal failure - *Optic neuritis, Ethambutol causes conjunctivitis*

4. All of the following diseases are classified as spondyloarthropathies EXCEPT:-  
A. Ankylosing spondylitis ✓  
B. Psoriatic arthritis ✓  
C. Reactive arthritis ✓  
D. Polymyalgia rheumatica ✓  
E. Enteropathic arthritis ✓ *(UC, Crohn's dx) IBS*

5. A 25 year old man presents with a 4 month history of swellings on the left lower neck and generalized pruritus. Examination reveals mobile non-tender rubbery lymph nodes. Lymph node biopsy shows features of nodular sclerosis Hodgkin's disease. Bone marrow confirms marrow infiltration. Computerized tomography (CT) scan of the chest, abdomen and pelvis are normal. What is the stage of the disease?  
A. IIA  
B. IIIB  
C. IIIS  
D. IV ✓ *Extranodal. involvement*  
E. IVS

I -> single extranodal site  
II -> 2 or more LN on same side of diaphragm  
III -> LN areas on both sides  
IV -> disseminated or multiple involvement of extranodal organs  
A -> Presence/absence of symptoms  
B -> presence of dx of following

Types  
Ankylosing spondylitis - Schoban test.  
Psoriatic arthritis  
Reactive arthritis  
Assoc Crohn's dx/UC.

In a patient with anuria, 24-hour albumin excretion of 8g and normal glomerular filtration (GFR), the following complications are expected EXCEPT:-

- A. Hypercoagulability ✓
- B. Metastatic calcification ✓ *low Ca vit D*
- C. Atherosclerosis ✓
- D. Susceptibility to infections ✓
- E. Hyponatremia ✓

A 60 year old man presents to his doctor for a medical check. He is found to have a random blood sugar (RBS) of 7mmol/L. An oral glucose tolerance test (OGTT) done showed fasting blood glucose of 6.2 mmol/L, 2 hour post glucose load of 14.4 mmol/L. Which of the following statements is TRUE regarding this patient?

- A. He has diabetes mellitus ✓
- B. He has impaired glucose tolerance ✓
- C. He has metabolic syndrome
- D. He should have fasting lipid assay to determine the diagnosis
- E. Another OGTT should be done in 6 months to determine his diagnostic status ✓

A 22 year old man presents to the emergency department with a 3 day history of fever, cough and pleuritic chest pain. His temperature is 39°C, pulse rate is 110 beats/min and respiratory rate is 26 beats/min. Chest radiograph reveals an opacity in the right lower lung zone. Which of the following is the MOST common cause of the condition?

- A. *Candida albicans*
  - B. *Pseudomonas aeruginosa*
  - C. *Mycoplasma pneumoniae*
  - D. *Staphylococcus aureus*
  - E. *Streptococcus pneumoniae* ✓ *antibiotic*
- Pneumonia*  
*Amoxicillin*  
*Clayton*

A 12 year old boy develops migratory joint pain involving large joints 2 weeks after a sore throat. He has a tachycardia of 110 beats/min, and a systolic murmur MR at the apex. Which of the following statements is TRUE concerning his clinical presentation?

- A. The micro-organism causing the sore throat is likely to be *Staphylococcus aureus* ✓
- B. Blood cultures usually yield the offending organism ✓
- C. The heart involvement is usually pancarditis ✓ *endocarditis*
- D. Erythema nodosum is expected ✓ *mitral regurgitation*
- E. Shortened PR interval is found on the electrocardiogram (ECG) ✓ *Delayed*

A 20 year old man presents with 3 months history of bloody mucoid diarrhea. Colonoscopy shows diffuse erythema and ulcerations in the entire colon and patchy ulceration in the terminal ileum. The MOST likely diagnosis is:-

- A. *Ulcerative colitis* ✓
- B. *Crohn's disease* ✓
- C. *Amoebic colitis*
- D. *Shigellosis*
- E. *Tuberculous enteritis*

FBS  
RBS  
49-61

Confusion  
C → 7  
U → 7  
R → 7:30  
B → 7:30  
65



FBS  
Chlor

11. A patient presents with oral lesions for 1 month. He has flaccid vesicles and bullae on the trunk and limbs. Nikolsky sign is positive. The MOST likely diagnosis is:-

- A. Erythema multiforme major
- B. Mucous membrane pemphigoid
- C. Bullous pemphigoid
- D. Pemphigus foliaceus
- E. Pemphigus vulgaris

12. A 25 year old man with history of HIV disease presents with a history of chronic headache. Neurological examination is normal. CT scan reveals a contrast enhancing ring lesion on the left parietal lobe. The MOST appropriate approach would be:-

- A. Biopsy the lesion
- B. Start patient on steroids
- C. Start patient on empirical antibiotics
- D. Start patient on empirical anti-toxoplasmosis treatment
- E. Start patient on intravenous acyclovir

Toxoplasmosis

→ Sulfadiazine / Pyrimethamine

13. The following are the results of cerebrospinal fluid (CSF) obtained from a 40 year old man with meningitis.

- Protein 100g/l ↑ (0.15 - 0.45g/L)
- Glucose 1mmol/l ↓ (2.8 - 4.2mmol/L)
- White cell count 2000 cells/ $\mu$ l, predominantly lymphocytes ↑
- Gram stain negative

These findings are compatible with:-

- A. Pyogenic meningitis
- B. Viral meningitis
- C. Tuberculous meningitis
- D. Sarcoidosis
- E. Cryptococcal meningitis

Which one of the following is the MOST important attribute necessary for a screening test?

- A. Sensitivity
- B. Specificity
- C. Positive predictive value (PPV)
- D. Negative predictive value (NPV)
- E. Receiver-operator curve (ROC)

15. All of the following statements regarding Plasmodium falciparum are true EXCEPT:-

- A. It causes more severe disease in pregnancy ✓
- B. It is associated with recurrent relapses after effective initial treatment
- C. It is the only malarial parasite causing greater than 20% parasitemia ✓
- D. Infection is associated with thrombocytopenia ✓
- E. It is the only cause of cerebral malaria ✓

Resistant → low in system by hypoxia  
Relapse →

- A. Elevated creatine kinase ✓
  - B. Proximal muscle weakness ✓
  - C. Myopathic electromyogram (EMG) ✓
  - D. Typical changes on muscle biopsy ✓
- ~~E. Heliotrope rash~~

17. A 13 year old boy presents with long-standing mild jaundice, moderate pallor and moderate splenomegaly. The MOST likely diagnosis is:-

M. Jaundice  
e. Moderate Pallor  
a. Splenomegaly

- ~~A. Sickle cell anaemia~~
- B. Non-Hodgkin's lymphoma
- ~~C.  $\beta$ -thalassaemia~~
- D. Chronic myeloid leukemia
- E. Myelofibrosis

18. A 56 year old man presents with severe low back pain, lumbar spine tenderness and general illhealth. He has pallor and mild ankle oedema. Investigations show haemoglobin 6g/dl, MCV 80fl, ESR 110mm/h, serum albumin 30g/l, total protein 130g/l. Xrays show compression fracture L3 to L5 and osteolytic lesions in the pelvic bones. Common causes of renal failure in this condition include all the following EXCEPT:

- ~~A. Neurogenic bladder~~
- B. Hypercalcaemia
- C. Hyperuricaemia
- D. Proteinuria
- E. Hyperparathyroidism

19. A 28 year old woman is followed up for thyrotoxicosis. She is on antithyroid medication. Which one of the following clinical parameters will closely reflect her thyroid hormone status?

- A. Emotional variability (moods) ✓
- ~~B. Menstrual patterns~~
- ~~C. Palpitations~~
- D. Sleep patterns
- E. Weight

20. All of the following interventions are beneficial in the management of patients with chronic obstructive airway disease (COPD) EXCEPT:-

- A. Pneumococcal vaccination ✓
- B. Ceasation of smoking ✓
- C. Short acting bronchodilators ✓
- ~~D. Inhaled anticholinergics~~
- E. High tension oxygen therapy ✓

~~Inhaled anticholinergics~~ ✓ *Salmeterol + Salbutamol*

↓  
 All of the following auscultatory findings are expected in mitral stenosis

EXCEPT:-

- A. Mid-diastolic murmur ✓
- B. Soft first heart sound ✓
- C. Presystolic murmur accentuation ✓
- D. Opening snap ✓
- E. Loud second heart sound ✓

Yates Systolic DAB  
 Pansystolic PMR  
 Early diastolic DAR  
 mid diastolic PMS

22. A patient presents with massive haematemesis for 1 day. Endoscopy reveals acutely bleeding oesophageal varices. All of the following treatments would be recommended EXCEPT:-

- A. Sclerotherapy ✓
  - B. Propranolol infusion ✓
  - C. Octreotide infusion ✓
  - D. Nasogastric tube insertion ✓
  - E. Band ligation ✓
- Prophylaxis  
 Reduce portal pressure acutely

23. A 25 year old woman presents with erosion, weeping and crusted lesions on 30% body surface area. The plan of management should include all of the following EXCEPT:-

- A. Septic screen ✓
  - B. Saline soaks ✓
  - C. Infection control ✓
  - D. Keep warm ✓
  - E. Emollients ✓
- TEN



24. A 58 year old man with HIV develops a vesicular eruption along the left side of the ribcage. The eruption is preceded by days of tingling and burning sensation. Which one of the statements is TRUE regarding the condition?

- A. Corticosteroids should be started immediately ✓
- B. Early acyclovir reduces the duration of symptoms → length of time for new vesicle formation
- C. Previous Herpes simplex virus infection is associated with this → Varicella virus
- D. Disappearance of the rash is associated with disappearance of symptoms in all the patients X
- E. Amitriptylline has no role in the management of this condition ✓ For Pain mgmt



25. A 50 year old man presents with history of wasting of the small muscles of the hand associated with dysarthria and dysphagia. Examination reveals spastic immobile tongue, wasted muscles of the hands with increased deep tendon reflexes. All of the following statements are true regarding the condition EXCEPT:-

- A. Autosomal dominant inheritance
- B. Cause of death is usually respiratory ✓
- C. Is associated with nystagmus
- D. Responds to steroids
- E. Sphincteric involvement is a late complication

26. You notice in the locker room one of your colleagues injecting himself with pethidine. What would be your MOST appropriate actions?

- A. Report to the supervisor
- B. Counsel your colleague yourself
- C. Pretend you did not see him
- D. Ask your senior colleague to talk to him
- E. Report him to the director of the hospital

27. A 28 year old man presents with painful micturition and a purulent urethral discharge for 2 days. Which one of the following is NOT an appropriate drug for his treatment?

- A. Ciprofloxacin
- B. Ceftriaxone
- C. Amoxicillin
- D. Azithromycin
- E. Doxycycline

Gonorrhoea  
 o Ceftriaxone or Cefixime (single dose)  
 o Doxycycline or Azithromycin (for 7 days of therapy)  
 o Azithromycin

28. Which one of the following is NOT a feature of fibromyalgia?

- A. Anxiety
- B. Fatigue
- C. Irritable bowel syndrome (IBS)
- D. Scleritis
- E. Sleep disturbance

condition defined by chronic widespread pain in 4 or more body regions associated with  
 Fatigue  
 Sleep disturbance  
 Allodynia  
 Tenderness  
 Nausea/pain  
 Irritability  
 Pulpation  
 Fibromyalgia disturbance

29. A 30 year old man presents with general body weakness. Physical examination reveals pallor and koilonychia. Which one of the following is the MOST likely positive laboratory finding?

- A. Presence of *Ascaris lumbricoides* ova in his stool
- B. Presence of *Taenia saginata* ova in his stool
- C. Increased faecal stercobilinogen
- D. Mean corpuscular volume (MCV) of 59 fl
- E. Reduced total iron binding capacity (TIBC)

→ V.A.B. def. → koilonychia  
 → koilonychia

30. Which one of the following renal disease is well matched to renal imaging findings?

- A. Chronic glomerulonephritis - bilateral contracted non echogenic kidneys
- B. Obstructive uropathy - echogenic kidneys
- C. Chronic pyelonephritis - enlarged globular kidneys
- D. HIV nephropathy - bilateral small scarred kidneys
- E. Acute tubular necrosis - dilated calyces

Shrunken kidney  
 o Congenital renal dysplasia  
 o Diabetic nephropathy  
 o Kidney failure (Chronic)

31. The metabolic syndrome is defined by the presence of all the following characteristics EXCEPT:

- A. Abdominal obesity
- B. Hypertension
- C. High high-density lipoprotein (HDL) - cholesterol
- D. Hypertriglyceridemia
- E. Impaired glucose tolerance

multiple risk factors that arise from insulin resistance  
 accompanied also adipose tissue deposition

- o HTN
- o Hyperglycemia
- o Hypertriglyceridemia
- o Reduced HDL levels
- o Abdominal obesity
- o Chest pain or shortness of breath
- o Acanthosis nigricans
- o Xanthomas

elevated  
fasting glucose

C

32. All of the following findings are compatible with a diagnosis of Pneumocystis jirovecii pneumonia EXCEPT:-

- A. Elevated white blood cell count ✓
- B. Low CD4 count ✓
- C. Elevated lactate dehydrogenase (LDH) in blood ✓
- D. Marked hypoxia on arterial blood gas analysis ✓
- E. Butterfly appearance on chest radiograph ✓

33. A 65 year old man complains of palpitations. ECG shows irregular QRS complexes with absent P-waves. The diagnosis is :-

- A. Atrial flutter
- B. Atrial ectopics
- C. Atrial fibrillation ✓
- D. Heart block
- E. Ventricular fibrillation

34. A 25-year old man is diagnosed with chronic hepatitis B infection. He has high hepatitis B virus (HBV) DNA at 100 million IU/ml. All of the following investigations would be required before initiation of treatment EXCEPT:-

- A. Liver function tests (LFT) ✓
- B. Hepatitis B e antigen (HBeAg) test ✓
- C. Hepatitis B core antigen (HBcAg) test ✓
- D. Hepatitis C virus screen ✓
- E. Thyroid function tests (TFTs) ✓

35. A 30-year old man presents with scaly papules and plaques. The differential diagnoses include all the following EXCEPT:-

- A. Lichen planus ✓
- B. Psoriasis vulgaris ✓
- C. Discoid dermatitis ✓
- D. Pityriasis rosea ✓
- E. Morphea (Localized scleroderma) ✓

36. A HIV positive woman has generalized cervical lymphadenopathy. Fine needle aspiration (FNA) cytology confirms tuberculous adenitis. Her CD4 count is 60 cells/ul. She is started on antituberculous treatment and HAART simultaneously. 4 weeks later she develops fever and increasing enlargement of the lymph nodes. Which one of the following would be the CORRECT approach to her management?

- A. Stop the anti-tuberculous therapy
- B. Stop the anti-retroviral therapy (Life threatening) ✓
- C. Start on prednisone immediately
- D. Add a broad spectrum antibiotic
- E. Give an antipyretic and continue therapy



found in the morning with weakness of the right side. He is rushed to the hospital where he arrives in 1 hour. Computerized tomography (CT) scan of the head reveals an infarct. Which of the following would be the MOST effective treatment?

- A. Aspirin
- B. Clopidogrel
- C. Atorvastatin
- D. Intravenous tissue plasminogen activator (TPA)
- E. Dipyridamole

TPA filled by Aspirin  
However Aspirin should not be given if TPA

38. Which of the following deficiency is found in patients with terminal ileum disease?

- A. Calcium
- B. Iron  $\rightarrow$  Stomach
- C. Folic acid
- D. Tryptophan
- E. Cobalamin - B12

39. A 41 year old man admitted for management of heart failure develops a cough, chest pain and fever after 1 week in the hospital. Which one of the following antibiotics is the BEST empiric choice?  $\rightarrow$  Fever = CAP

- A. Amoxicillin - clavulanic acid
- B. Clarithromycin  $\rightarrow$  PCAP, Aspiration
- C. Cefazidime
- D. Cefuroxime
- E. Flucloxacillin  $\rightarrow$  Staph

Hospital Acquired Pneumonia  
Aminoglycoside IV + Antibiotic of Penicillin (Piperacillin)  
or 3rd Gen Cephalosporin (Cefuroxime)

40. A 43 year old man presents with 8 week history of symmetrical joint pain and swelling involving the metacarpal-phalangeal (MCP), metatarsal - phalangeal (MTP) and proximal interphalangeal (PIP) joints. Symptoms are worse in the morning and last for 1 hour. Which one of the following statements is TRUE of this condition?

- A. Non-steroidal anti-inflammatory drugs (NSAIDs) are the first line of therapy  $\rightarrow$  followed by DMARDs
- B. Extra-articular manifestations is not a feature
- C. Radiological investigation is required for the diagnosis
- D. Disease modifying therapy should be instituted immediately
- E. Biologic agents have no role in its management

RA

RA  
Kidney  
Not necessarily  
Pain relief  
Pain relief  
Pain relief

41. In a 60 year old man with multiple myeloma and a fracture of the right femur, which one of the following is the MOST appropriate approach to management?

- A. Start melphalan and radiotherapy
- B. Start melphalan then refer for bone marrow transplantation
- C. Start analgesics, internally fix the fracture then administer radiotherapy
- D. Administer radiotherapy then internally fix the fracture
- E. Start neoadjuvant thalidomide then internally fix the fracture

Multiple myeloma

Chemotherapy  
Pain relief  
Pain relief

Mx.  
Initial  $\rightarrow$  Levamisole  
Maintenance  $\rightarrow$  Thalidomide  
Relapse  $\rightarrow$  Bortezomib

A  $\rightarrow$  TIA  
B  $\rightarrow$  Renal failure  
A  $\rightarrow$  Anaemia  
B  $\rightarrow$  Bone lesions

Investigations  
ECG  $\rightarrow$  T Lurch  
P.S. Electrolytes  
pH Electrolytes

42. Which one of the following disease process is well matched with the renal manifestation?

- A. Syphilis - obstructive uropathy *pyelonephritis*
- B. ~~Plasmodium malariae~~ infection - nephrotic syndrome *renal (AKI)*
- C. Systemic lupus erythematosus - acute tubular necrosis *AKI*
- D. ~~Schistosoma haematobium~~ infection - Fanconi syndrome *cystitis - obstructive uropathy*
- E. Rheumatoid arthritis - acute glomerulonephritis *acute*

43. A 46 year old man with diabetes presents with right foot ulceration without gangrene. It is septic with malodorous smell. HbA<sub>1c</sub> is 8.5%, dorsalis pedis pulses are good. Staphylococcus aureus and Klebsiella sp. have been isolated from the wound swab. The following actions are appropriate EXCEPT:

- A. ~~Daily hydrogen peroxide soaks~~
- B. ~~Intravenous antibiotics~~
- C. Daily saline soaks
- D. Platelet - derived growth factor dressing
- E. Insulin therapy

44. A 65 year old man with 25 pack years of smoking presents with cough, weight loss and breathlessness. A chest radiograph shows a right apical homogeneous round opacity. All of the following findings are known to be associated with this presentation EXCEPT:-

- A. Hyperpigmentation of the palms *met. tr. lines*
- B. Radicular pain to the right hand *brachial plexus*
- C. ~~Hypocalcemia~~ *Hypercalcemia, myopathies*
- D. Hoarseness of the voice
- E. Haemoptysis *(worse prognosis)*

*Contributors*  
*- Superior vena cava syndrome*  
*- Horner syndrome*  
*- Atrophy of hand & arm muscles*  
*Lung Ca*  
*Pancreatic tumor*

45. A patient presenting with non-ST elevation acute coronary syndrome will benefit from all of the following therapeutic interventions EXCEPT:-

- A. ~~Thrombolysis~~
- B. Combined clopidogrel and aspirin therapy
- C. ~~Enoxaparin therapy~~
- D. Beta-blocker therapy
- E. Nitrates

*M - P Membrane*  
*O - P Oxygen*  
*N - Nitrate*  
*A - Aspirin*

46. A 70 year old man presents with generalized pruritus and weight loss. Clinical examination reveals green jaundice and a palpable non-tender gall bladder. Which of the conditions listed below is the MOST likely diagnosis?

- A. ~~Acute cholecystitis~~
- B. ~~Cholelithiasis~~
- C. Hepatocellular carcinoma
- D. ~~Pancreatic malignancy~~
- E. ~~Cholangiocarcinoma~~

*- Klabin tumor*  
*- Cholecystitis*  
*- Head of Pancreatic tumor*

A 20-year old patient presents with pruritic lesions on the neck, antecubital and popliteal fossae since 2 year of age. The lesions are lichenified, excoriated and crusted patches. The MOST likely diagnosis is:-

- A. Atopic dermatitis
- B. Seborrheic dermatitis
- C. Allergic contact dermatitis
- D. Nummular dermatitis
- E. Dysidrotic dermatitis

48. In a HIV positive patient with cryptococcal meningitis and CD4 count of 40 cells/ $\mu$ L, which one of the following approaches would be the MOST appropriate? CD4  $\rightarrow$  40

- A. Amphotericin B plus fluconazole for 2 weeks, serial lumbar punctures and HAART initiation at 2 weeks
- B. HAART and amphotericin B plus fluconazole initiation simultaneously, serial lumbar punctures
- C. HAART for 2 weeks followed by amphotericin B plus fluconazole, serial lumbar punctures
- D. Amphotericin B plus fluconazole for 2 weeks, serial lumbar punctures; then fluconazole. HAART initiation after 5 weeks
- E. HAART for 5 weeks; serial lumbar punctures. Initiation of amphotericin B plus fluconazole after 5 weeks.

49. A 40 year old alcoholic goes to bed and wakes up in the morning with a wrist drop. The MOST likely nerve injury is?

- A. Radial nerve
- B. Ulnar nerve
- C. Musculocutaneous nerve
- D. Median nerve
- E. Axillary nerve

50. A 28 year old man presents with pain and swelling of his left leg 3 days after a thorn prick. Which one of the following antibiotics is the BEST empiric choice?

- A. Ciprofloxacin
- B. Clarithromycin
- C. Metronidazole
- D. Amoxicillin - clavulanic acid
- E. Nitrofurantoin

51. All of the following statements are true regarding gout EXCEPT:-

- A. The 1<sup>st</sup> metatarsal-phalangeal joint is commonly involved ✓
- B. Renal failure is a known complication ✓
- C. It can present with extra-articular manifestations
- D. It is common in pre-menopausal women ✓
- E. It results from monosodium urate deposition ✓

52. Which one of the following is TRUE regarding chronic myeloid leukaemia (CML)?
- A. It is almost exclusively a disease of children
  - B. Leucocyte alkaline phosphatase (LAP) score is reduced
  - C. Lymphadenopathy is common in the stable state
  - D. Autosplenectomy occurs
  - E. Spontaneous fractures tend to occur
53. Which one of the following conditions is associated with disional hyponatraemia?
- A. Congestive heart failure
  - B. Acute tubular necrosis
  - C. Gastroenteritis
  - D. Hypothyroidism
  - E. Hypercholesterolaemia
54. A 36 year old man with longstanding bronchial asthma has been on prednisolone 30mg/day for several years. Now he has cushingoid features. The other findings expected in this patient include all of the following EXCEPT:-
- A. Systemic hypertension
  - B. Bone pains
  - C. Normal libido
  - D. Agitated behaviour
  - E. Raised intra-ocular pressure
55. All of the following are danger signs in status asthmaticus EXCEPT:-
- A. Pulse rate of 115 beats/min
  - B. Inability to complete sentences
  - C. Respiratory rate of 16 breaths/min
  - D. Inability to perform peak flow measurements
  - E. Blood pressure of 90/60 mm. Hg
56. All of the following pharmacotherapies have been shown to prolong survival in patients with non-valvular heart failure EXCEPT:-
- A. Spironolactone
  - B. Carvedilol
  - C. Angiotensin converting enzyme inhibitors (ACE I)
  - D. Angiotensin receptor blockers (ARB)
  - E. Loop diuretics
57. A 35 year old man presents with heartburn and a feeling of regurgitation after meals. He frequently clears his throat while talking. Upper gastrointestinal tract (GIT) endoscopy is reported as normal. This condition is associated with all of the following features EXCEPT:-
- A. Poor quality of life
  - B. Increased incidence of malignancy
  - C. Barrett's oesophagus
  - D. Recurrent bronchospasm
  - E. Increased incidence of *Helicobacter pylori*

interdigital clefts, flexor aspects of the wrists and lateral creases of the hands. The MOST likely diagnosis is:-

- A. Larval migrans
- B. Papular urticaria
- C. Urticaria pigmentosa
- D. Scabies
- E. Dermatitis herpetiformis

59. A 34 year old HIV positive man presents with a 3 week history of severe headaches and photophobia. His CD4 count is 36 cells / $\mu$ l. He further reports that 2 months back, he had similar headaches, was admitted and given 2 weeks of amphotericin B for confirmed "fungal meningitis". He did not go for follow-up after discharge. What is the MOST useful test to confirm the diagnosis now?

- A. Cerebrospinal (CSF) cryptococcal antigen (CRAG) test
- B. Serum CRAG test
- C. India ink in CSF
- D. CSF fungal culture
- E. CSF protein level

60. A 30 year old woman presents with a 2 week history of progressive weakness. She has found it difficult to rise from a sitting position and comb her hair. Examination reveals normal deep tendon reflexes and sensory modalities. All of the following statements are true regarding her illness EXCEPT:-

- A. It responds to steroids
- B. It is associated with elevated muscle enzymes
- C. It is associated with acetylcholine receptor antibodies
- D. It is associated with malignancies
- E. Dysphagia occurs

\* Myasthenia Gravis

\* Amyotrophic Lateral Sclerosis

61. A 60 year old man presents with a 1 day history of headache, fever and neck stiffness. Which one of the following organisms is NOT likely to cause this presentation?

- A. *Streptococcus pneumoniae*
- B. Group A  $\beta$ -hemolytic *Streptococcus*
- C. *Haemophilus influenzae*
- D. *Neisseria meningitidis*
- E. *Listeria monocytogenes*

62. All of the following indicators are useful in evaluating the success of treatment of rheumatoid arthritis EXCEPT:-

- A. Tender joint count
- B. Swollen joint count
- C. Markers of inflammation
- D. Number of deformed joints
- E. Functional status of the patient

63. Steroid therapy is indicated in the following oncological emergencies EXCEPT:-

- A. Superior vena cava obstruction
- B. Hypercalcaemia
- C. Severe neutropenic sepsis
- D. Raised intracranial pressure
- E. Spinal cord compression

64. A 35 year old man presents with nausea, vomiting and general malaise. He has been hypertensive for 5 years. Laboratory tests show:-

- A. Urinalysis - protein 3+, RBCs 2+, granular casts
- B. Haemoglobin 9.3g/dl, MCV 80fl, WBC  $6 \times 10^9/L$ , platelets  $119 \times 10^9/L$
- C. Serum  $K^+$  5.4 mmol/L,  $Na^+$  128 mmol/L, urea 28mmol/L, creatinine 837umol/L
- D. Renal ultrasound - bilateral contracted kidneys, Right = 6.2 x 3.8 cm, Left = 6.32 x 3.3 cm

Which of the following statements is TRUE?

- A. This is acute kidney injury secondary to volume depletion.
- B. This is acute glomerulonephritis
- C. Renal biopsy should be performed
- D. Patient requires longterm dialysis
- E. Patient has hypertensive glomerulosclerosis

65. All of the following are rational combinations of oral glucose lowering medications EXCEPT:-

- A. Metformin/Arcabose/Glimepiride
- B. Metformin/Repaglinide/Linagliptin
- C. Metformin/Insulin
- D. Chlorpropamide/Insulin
- E. Metformin/Linagliptin/Insulin

66. A 60 year old male has a 20 pack-year history of cigarette smoking. He presents with a productive cough and shortness of breath especially on cold days and associated chest tightness and wheezing. The MOST likely diagnosis is:-

- A. Asthma
- B. Chronic obstructive pulmonary disease (COPD)
- C. Heart failure
- D. Anxiety attack
- E. Pneumonia

67. An elderly female who is being nursed in hospital for dense hemiplegia from a cerebrovascular accident is suddenly diaphoretic and dyspnoeic. On examination, she is cold, sweaty and tachypnoeic. Her radial pulse is weak and feeble. The electrocardiogram (ECG) is significant only for sinus tachycardia. All of the following investigations are useful in establishing the diagnosis EXCEPT:-

- A. Cardiac troponin assay
- B. D-dimer assay
- C. Computerized tomography (CT)-pulmonary angiography
- D. Blood sugar analysis
- E. Chest radiograph

68. All of the following statements regarding irritable bowel syndrome (IBS) are true EXCEPT:-
- A. Presents with increased loose watery stools
  - B. Diarrhoea often occurs at night
  - C. The stool never contains blood
  - D. Constipation is sometimes the predominant symptom
  - E. Abdominal pain is often relieved by defecation
69. AIDS-defining mucocutaneous disorders include all of the following EXCEPT:
- A. Oesophageal candidiasis
  - B. Kaposi's sarcoma
  - C. Cutaneous cryptococcosis
  - D. Herpes simplex ulcers
  - E. Pyoderma gangrenosum
70. A 26 year old woman presents with a 2 week history of change in speech and a tongue that deviates to the right side on protrusion. Which cranial nerve is involved?
- A. Right glossopharyngeal
  - B. Left glossopharyngeal
  - C. Right hypoglossal
  - D. Left hypoglossal
  - E. Left vagus
71. A 26 year old woman presents with history of chronic cough. She reports that she was on treatment for tuberculosis which she stopped 3 weeks prior after having taken it for 25 days. Which one of the following is NOT appropriate in the approach to her management?
- A. Restart anti-tuberculous treatment with rifampicin, isoniazid, pyrazinamide and ethambutol
  - B. Restart anti-tuberculous treatment with rifampicin, isoniazid, pyrazinamide, ethambutol and streptomycin
  - C. Send sputum for acid fast bacilli staining
  - D. Send sputum for genexpert MTB/RIF
  - E. Apply directly observed therapy
72. A 13 year old boy presents with a 2 day history of fever, right knee pain and swelling. There were no precipitants to this illness. Which one of the following statements is TRUE regarding this condition?
- A. Intra-articular steroids are useful in the management
  - B. Analgesia, oral antibiotics and bedrest is the gold standard in the management
  - C. Antibiotics should be withheld until results of the gram stain are obtained
  - D. Intra-articular antibiotics are useful
  - E. Needle aspiration and drainage of the joint is warranted

73. A middle-aged man is reviewed in the outpatient clinic with complaints of abdominal swelling for several weeks. Physical examination reveals splenomegaly extending 10 cm below the costal margin. All of the following are likely causes EXCEPT:
- A. Chronic myeloid leukaemia
  - B. Miliary tuberculosis
  - C. Myelofibrosis
  - D. Visceral leishmaniasis
  - E. Hyper-reactive malarial splenomegaly (HMS)
74. Which one of the following statements is TRUE concerning urinary tract infections?
- A. *Staphylococcus aureus* is the commonest organism among sicklers
  - B. *Proteus spp.* infection is associated with calculi
  - C. Treatment of *Candida* infections predisposes one to bacterial infections
  - D. Haematogenous route of infection is the commonest origin
  - E. In men, infections are usually associated with sexual intercourse
75. All of the following are established risk factors for diabetic foot ulcer disease EXCEPT:-
- A. Diabetic cardiomyopathy
  - B. Chronic kidney disease stage 3 and higher
  - C. Macular eye disease
  - D. Peripheral neuropathy
  - E. Claw-toe deformity
76. Which one of the following is NOT a recognized risk factor for the development of deep venous thrombosis?
- A. Hormonal contraceptive therapy
  - B. Protein C deficiency
  - C. Heart failure
  - D. Anti-phospholipid syndrome
  - E. Hypertension
77. Which of the following is NOT a cause of constipation?
- A. Hypocalcaemia
  - B. Hypothyroidism
  - C. Aluminium containing antacids
  - D. Cerebrovascular accidents
  - E. Atorvastatin
78. All of the following are risk factors for haemorrhagic stroke EXCEPT:-
- A. Cocaine use
  - B. Cigarette smoking
  - C. Amyloid angiopathy
  - D. Aneurysm
  - E. Warfarin use



79. A tourist suffered a bout of watery diarrhea which became mucoid and blood stained. He had fever and developed severe joint pains a few weeks later. Rheumatoid factor was negative. All of the following statements are true regarding the disease EXCEPT:

- A. *Shigella flexneri* is the causative organism
- B. There is high circulating bacterial antigen
- C. Culture of *Neisseria gonorrhoea* will be obtained from joint aspirate
- D. It is associated with HLA B27 genotype
- E. It is associated with serum leucocytosis

80. A 45 year old woman with a diagnosis of rheumatoid arthritis has been on methotrexate and prednisone for 2 years. Which one of the following complications is NOT likely to be due to her chronic steroid use?

- A. Cataract formation
- B. Peptic ulcer disease
- C. Diabetes mellitus
- D. Liver disease
- E. Hypertension

81. A strict vegetarian presents with general malaise, exertional dyspnoea and pallor. Peripheral blood film shows segmented neutrophils and the mean corpuscular volume (MCV) is 110fl. Which one of the following statements is TRUE?

- A. Gum hypertrophy occurs
- B. Serum ferritin levels are low
- C. Bone marrow Prussian blue stain is negative
- D. Paraesthesias are common
- E. Condition is invariably fatal

82. A 30 year old man has just been diagnosed with HIV. He presents to the clinic with complaints of unintentional weight loss despite a good appetite. His initial weight was 70Kg. He has lost 8 Kg over the past 3 months. Physical exam reveals generalized lymphadenopathy. What is his current WHO stage?

- A. Stage 0
  - B. Stage 1
  - C. Stage 2
  - D. Stage 3
  - E. Stage 4
- W/loss 10%

83. A 28 year old woman presents with goitre. Thyroid profile showed TSH = 0.009m IU/L, FT4 = 30ng/L, FT3 = 12 pmol/L. Ultrasound showed a thyroid nodule in the right lobe, the rest had normal echodensity. Which of the following treatments is LEAST appropriate for her?

- A. Propranolol
- B. Propylthiouracil
- C. Lugol's iodine
- D. Methylprednisolone
- E. Surgery

84. Which of the following conditions is NOT a recognized cause of cardiogenic syncope?
- A. Pulmonary embolism
  - B. Ventricular fibrillation
  - C. Postural hypotension
  - D. First degree heart block
  - E. Third degree heart block
85. A 45 year old man with liver cirrhosis and bleeding tendencies and an otherwise normal blood count comes to you for management. Which of the following is the MOST appropriate therapy?
- A. Tranexamic acid
  - B. Platelet infusion
  - C. Whole blood transfusion
  - D. Transfusion of packed cells
  - E. Vitamin K
86. Which of the following drugs is LEAST useful in myoclonic epilepsy?
- A. Ethosuximide
  - B. Carbamazepine
  - C. Sodium valproate
  - D. Clonazepam
  - E. Lamotrigine
87. Non-modifiable risk factors for osteoarthritis include all of the following EXCEPT:-
- A. Age
  - B. Race
  - C. Female gender
  - D. Obesity
  - E. Prior inflammatory joint disease
88. Which one of the following is NOT a risk factor for hepatocellular carcinoma?
- A. Heavy alcohol consumption
  - B. Exposure to aflatoxins
  - C. Hepatitis A virus
  - D. Hepatitis B virus
  - E. Hepatitis C virus
89. Which one of the following statements is TRUE regarding diabetic nephropathy?
- A. Stage 2 is characterized by microalbuminuria <sup>3</sup>
  - B. Hyperfiltration is only evident in late stages <sup>X</sup>
  - C. The microalbuminuria stage is potentially reversible <sup>X</sup>
  - D. Microalbuminuria precedes the glomerular structural changes <sup>X</sup>
  - E. Stage 4 patients need to be started on dialysis

90. All of the following are evidence-based therapeutic lifestyle changes in the control of systemic arterial hypertension EXCEPT:

- A. ~~A~~ Moderation of alcohol ingestion
- B. Reduced dietary salt ingestion
- C. ~~B~~ Lower dietary potassium intake
- D. Stress management
- E. Regular aerobic exercise

91. A 30 year old pregnant woman is found to be hepatitis B surface antigen (HBs Ag) positive. She is concerned about transmitting the virus to her unborn infant. Which of the following factors is MOST useful in determining the risk of transmission?

- A. ~~A~~ Hepatitis B e antigen (HBeAg) status
- B. Hepatitis B core immunoglobulin G (HBcIgG) status
- C. Alanine aminotransferase (ALT) 231u/L
- D. Her alcohol history
- E. Aspartate aminotransferase (AST)/ALT ratio >2

92. A 38 year old woman presents with a 1 month history of bilateral numbness of the lower limbs. Examination is notable for reduced vibration sense and reduced ankle reflexes. All of the following tests are useful in this patient EXCEPT:

- A. Serum sodium
- B. Serum creatinine
- C. Thyroid stimulating hormone
- D. Glycosylated haemoglobin
- E. ~~D~~ Haemoglobin level

93. A 25 year old woman presents with gradual skin tightening involving the hands and face. She also has first degree heart block on the ECG and reflux oesophagitis. Which one of the following statements is TRUE regarding this condition?

- A. It is commoner in males compared to females
- B. It is easily amenable to treatment
- C. ~~C~~ Raynaud's phenomenon is an invariable feature
- D. It has no renal manifestations
- E. It is usually an indolent disease

94. A 16 year old girl has bilateral haemarthrosis of elbow joints. She has a fluctuant right knee that is tender. She is bled from a venepuncture site for the past 24 hours. Which one of the following is the MOST likely diagnosis?

- A. ~~A~~ Classical hemophilia
- B. Christmas disease
- C. ~~C~~ Von Willebrand's disease
- D. Disseminated intravascular coagulopathy (DIC)
- E. Protein C deficiency

95. All of the following are features of minimal change glomerulonephritis EXCEPT:-

- A. Heavy proteinuria
- B. ~~B~~ Hypertension
- C. ~~C~~ Corticosteroid responsiveness
- D. Lack of active sediment in urine
- E. Hypercholesterolemia

96. A 20 year old woman presents with a history of sudden onset of confusion. This is followed by a severe episode of generalized tonic-clonic seizure. Before the onset of the seizure, she had reported a funny smell. Examination reveals a temperature of  $38^{\circ}\text{C}$ , confusional state with no evidence of meningeal irritation. Which of the following would be the MOST effective treatment in this condition?
- A. Acyclovir
  - B. Gancyclovir
  - C. Anti-tuberculous treatment
  - D. High dose steroids
  - E. Ceftriaxone with vancomycin
97. Low voltages on a 12-lead ECG occur in all the following conditions EXCEPT:-
- A. Amyloid heart
  - B. Chronic obstructive pulmonary disease (COPD)
  - C. Pericarditis
  - D. Obesity
  - E. Pericardial effusion
98. A 22 year old man presents with a 6-month history of left upper quadrant discomfort and early satiety. 2 days prior to presentation, he developed priapism. Abdominal exam revealed splenomegaly 12 cm below left costal margin. White blood cell count (WBC) is  $179 \times 10^9/\text{L}$ , haemoglobin is 9.4g/dL and platelets  $702 \times 10^9/\text{L}$ . What is the MOST appropriate next investigation to confirm the diagnosis?
- A. Abdominal ultrasound scan
  - B. Erythropoietin level
  - C. Haemoglobin electrophoresis
  - D. Bone marrow evaluation
  - E. Peripheral blood film
99. Which one of the following statements is TRUE regarding ascites in liver disease?
- A. Thiazides are the diuretics of choice.
  - B. Malignant ascites responds well to diuretic therapy.
  - C. Portal hypertension is a rare cause.
  - D. Aldosterone antagonists are the preferred diuretics.
  - E. Infectious aetiology is uncommon.
100. A 20 year old woman at 20 weeks gestation presents to the emergency department with dyspnoea class III. On examination, she has a regular pulse rate of 90 beats/min, a non-displaced apex with apical mid-diastolic rumbling murmur with loud first heart sound. Which of the following is the MOST appropriate emergency therapeutic intervention?
- A. Furosemide therapy
  - B. Termination of pregnancy
  - C. Digoxin therapy
  - D. Angiotensin converting enzyme inhibitor (ACEI) therapy
  - E. Beta blocker therapy