



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SUPPLEMENTARY EXAMINATION FOR THE DEGREE OF BACHELOR OF

MEDICINE AND BACHELOR OF SURGERY (MBChB Level III)

HPA 300: PATHOLOGY II PAPER II – MULTIPLE CHOICE QUESTIONS

DATE: MONDAY, 25TH AUGUST 2014

TIME: 9.00 A.M. – 11.00 A.M.

INSTRUCTIONS:

1. This paper is composed of 100 multiple choice questions(MCQs)
2. Answer all the questions by encircling the letter of the alphabet corresponding to your single best answer unless otherwise instructed.
3. Each correct answer will be awarded one (1) mark.

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For question 1 – 5, select the best response from list A that matches with statements in list B below. Indicate your response in the brackets.

LIST A

- | | | |
|-----------------------------|--------------------|----------------|
| a) Granulation tissue | e) dysplasia | h) Fibrosis |
| b) Metaplasia | f) C3b | i) Hyperplasia |
| c) Histamine | g) Differentiation | j) Anaplasia |
| d) Dystrophic Calcification | | |

LIST B

1. () Degree of resemblance to tissue of origin
2. () Characterized histologically by proliferation of fibroblast and angiogenesis
3. () Vasoactive amine
4. () Complete loss of resemblance to tissue of origin
5. () Increase in number of cells in organ or tissue

6. One of the following group of cells represent stable cells;
- a) Fibroblasts, Endothelial cells
 - b) Endothelial cells, Epithelial cells
 - c) Myocardial cells, Skeletal muscle cells
 - d) Myocardial cells, Fibroblasts
7. One of the following best describes metaplasia;
- a) Change from one adult cell type to another adult type
 - b) Increase in number of cells in an organ or tissue
 - c) Increase in individual cell size
 - d) Decrease in individual cell type
8. One of the following statements is true;
- a) Malignant tumours are always capsulated
 - b) Rate of growth is the best criteria for differentiating benign from malignant tumours
 - c) Anaplasia is a hallmark of malignancy
 - d) Benign tumours usually metastasize
9. One of the following statement is FALSE;
- a) Pulmonary embolism commonly results from thrombotic or embolic effects
 - b) The commonest source of arterial embolism is the left ventricle
 - c) Most pulmonary emboli are clinically silent
 - d) Thrombi in saphenous vein are a common source of systemic embolism
10. A sarcoma is a:
- a) Malignancy arising from mesenchymal tissue
 - b) Malignancy arising from simple squamous epithelium
 - c) Malignancy arising from glandular epithelium
 - d) Undifferentiated malignancy
11. One of the following best defines a neoplasm;
- a) A malignant tumour
 - b) New growth which can be benign or malignant
 - c) Pre- malignant change
 - d) Benign tumour

12. One of the following DOES NOT define carcinoma in – situ;
- a) Intra – epithelial cancer
 - b) Pre – invasive cancer
 - c) Focal metaplasia
 - d) Non – invasive cancer
13. One of the following is NOT a cause of oedema;
- a) Acute inflammation
 - b) Increased plasma oncotic pressure
 - c) Lymphatic obstruction
 - d) Sodium retention
14. Damaged organelles are degraded by lysosome by one of the following mechanisms ;
- a) Autophagy
 - b) Heterophagy
 - c) Reverse endocytosis
 - d) Regurgitation
15. One of the following is a chemical mediator of pain;
- a) Bradykinin
 - b) C3a
 - c) C5a
 - d) Thrombin
16. The cardinal signs of acute inflammation were first listed by;
- a) Virchow
 - b) Lewis
 - c) Ehrlich
 - d) Celsus
17. One of the following cells is NOT a member of monocyte phagocyte system (MPS);
- a) Alveolar macrophages
 - b) Kupffer cells
 - c) Monocytes
 - d) Fibroblasts

For question 18 – 20, select the best response from list A that matches with statements in list B below. Indicate your response in the brackets.

LIST A

- a) Leukoplakia
- b) Mucoepidermoid carcinoma
- c) Squamous cell carcinoma
- d) Hairy leukoplakia
- e) Pleomorphic adenoma

LIST B

- 18. () Commonest malignancy of head and neck
- 19. () Commonest malignant tumour of salivary gland
- 20. () Commonly seen in immunocompromised patients
- 21. The standard solution of formalin used routinely in histology laboratories is;
 - a) 10% neutral buffered formalin
 - b) 4% neutral buffered formalin
 - c) 95% neutral buffered formalin.
 - d) 100% neutral buffered formalin.
- 22. Hopwood's classification of fixatives includes all the following EXCEPT;
 - a) Aldehydes
 - b) Oxidizing agents
 - c) Xylene
 - d) Protein-denaturing agents
- 23. The standard solution of Glutaldehyde fixative used in electron microscopy is;
 - a) 10% neutral buffered
 - b) 2 % neutral buffered
 - c) 4% neutral buffered
 - d) 95% neutral buffered
- 24. Concerning haematoxylin stain, one of the following statements is FALSE;
 - a) It is basic and stains acidic components of cells.
 - b) It stains acidic components of cells blue color.
 - c) It stains basic components of cells pink.
 - d) It stains the nuclei of cells.

25. In regards to tissue fixation, ischaemic time refers to;
- a) The time taken by specimen from ischaemic organs to fix.
 - b) The time from surgery to the time the specimen is placed in a fixative.
 - c) The time the specimen is in a fixative.
 - d) The time it takes to fix tissues to avoid ischemia.
26. The recommended reporting system for pap smears is;
- a) Bethesda system
 - b) Papanicolaou system
 - c) Classic system
 - d) TNM system
27. One of the following dyes stains keratin in the routine pap stain technique;
- a) Hematoxylin
 - b) Eosin
 - c) Orange G
 - d) Bischmarck
28. One of the following statements concerning pap smear screening is FALSE;
- a) Start screening within 3 years of onset of sexual activity
 - b) Start screening by 21 years of age
 - c) Screen high risk women every 3 years
 - d) Yearly screening until 3 consecutive normal pap smears
29. One of the following is NOT a Cytodiagnostic criteria for malignancy;
- a) Nuclear Pleomorphism.
 - b) Nuclear hyperchromasia.
 - c) Smooth nuclear membrane.
 - d) High nuclear: cytoplasm ratio.
30. One of the following statements on fluid cytology is FALSE;
- a) Malignancies are the most common cause of effusions
 - b) Pleural fluid cytology is superior to pleural biopsy
 - c) Sensitivity increases when multiple specimens are examined
 - d) Special studies like immunocytochemistry can be performed

31. One of the following is NOT a feature used in Nottingham grading system for breast cancer;
- a) Tubular formation
 - b) Mitoses
 - c) Necrosis
 - d) Nuclear pleomorphism
32. The neoplastic component in a fibroadenoma is;
- a) Fibrous stroma
 - b) Adipose tissue
 - c) Ductal epithelium
 - d) Myoepithelial cells
33. One of the following is the most common breast lesion in women ;
- a) Fibroadenoma
 - b) Carcinoma of the breast
 - c) Fibrocystic disease
 - d) Ductal papilloma
34. Paget's disease of the nipple has all of the following characteristics EXCEPT ;
- a) Is a neoplastic breast disease involving the epidermis
 - b) Histologically shows characteristic large clear cells
 - c) Part of the picture of long standing fibrocystic disease
 - d) Associated with intraductal carcinoma
35. The following are associated with an increased risk of breast cancer EXCEPT;
- a) Previous mastectomy for cancer
 - b) Maternal history of breast cancer
 - c) Breast feeding
 - d) Increasing age beyond 50 years
36. One of the following is the most common lung tumor seen in Smokers;
- a) Small cell carcinoma
 - b) Large cell carcinoma
 - c) Adenocarcinoma
 - d) Squamous cell carcinoma

37. Pulmonary surfactant is secreted by;
- a) Type I pneumonocytes
 - b) Type II pneumonocytes
 - c) Clara cells
 - d) Bronchiolar epithelium
38. One of the following statements is FALSE regarding resorption atelectasis;
- a) It is a consequence of complete airway obstruction
 - b) It is irreversible
 - c) Mediastinum shifts towards the atelectatic lung
 - d) It reduces oxygenation and predisposes to infection
39. The following statement is TRUE concerning panacinar emphysema;
- a) It is associated with $\alpha 1$ anti-trypsin deficiency
 - b) Proximal parts of the acini are spared
 - c) Affects the distal parts of the acini
 - d) Occurs predominantly in heavy smokers
40. One of the following is not a feature of Kartagener's syndrome:
- a) Bronchiectasis
 - b) Sinusitis
 - c) Situs inversus
 - d) Female infertility
41. One of the following statements regarding osteochondroma is FALSE;
- a) It is the most common benign bone tumor
 - b) More common in males than in females
 - c) Can transform to chondrosarcoma.
 - d) Metaphyseal lesions grow in same direction as adjacent joint.
42. One of the following statements pertaining to Ewing's sarcoma is FALSE;
- a) It is the commonest bone sarcoma in children.
 - b) May mimic osteomyelitis
 - c) May present with pain, fever and weight loss.
 - d) X – Rays show destructive lytic lesion having onion skin appearance

43. Enneking's staging of bone tumors uses one of the following parameters;
- a) Tumor grade and anatomic location
 - b) Tumor grade and lymph node metastasis
 - c) Tumor size and lymph node metastasis
 - d) Distant metastasis and tumor grade.
44. One of the following is NOT a microscopic diagnostic criteria for Sarcomas;
- a) Atypical mitoses.
 - b) Necrosis.
 - c) Hemorrhage.
 - d) Nuclear pleomorphism.
45. In regard to Rheumatoid arthritis, one of the following statements is FALSE;
- a) Affects small joints of the hand first
 - b) Parvovirus B19 may be important in pathogenesis
 - c) HLA-DR4 genetic association
 - d) More common in males than females
46. A bone marrow aspirate smear stained with Perl's Prussian blue stain will be useful in the assessment of;
- a) Bone marrow hypoplasia
 - b) Helicobacter pylori
 - c) Storage Iron
 - d) Miliary tuberculosis
47. Femtolitre, is the unit of measurement for;
- a) Red blood cell count
 - b) Mean corpuscular volume
 - c) Haematocrit
 - d) Mean corpuscular haemoglobin concentration
48. Basophilia would most likely to be associated with;
- a) Glomerulonephritis
 - b) Pyomyositis
 - c) Acute myeloblastic leukaemia
 - d) Urticaria

49. Infestation with *Ancylostoma duodenale* may cause a deficiency of one of the following haematinics;
- a) Folic acid
 - b) Iron
 - c) Vitamin B12
 - d) Vitamin C
50. The sickling crises that may present with jaundice is;
- a) Megaloblastic crises
 - b) Haemolytic crises
 - c) Occlusive crises
 - d) Sequestrative crises
51. The following are features of hypersplenism EXCEPT;
- a) Splenomegally
 - b) Anaemia
 - c) Leukocytosis
 - d) Thrombocytopenia
52. Risk factors for idiopathic thrombocytopaenic purpura include the following EXCEPT;
- a) Respiratory infections
 - b) Female sex
 - c) Spontaneous internal bleeding
 - d) Viral infections
53. Identify the TRUE statement with regard to splenomegally in adults;
- a) Neutropaenia is uncommon
 - b) Can be caused by liver cirrhosis
 - c) The bone marrow is hypocellular
 - d) The plasma volume is reduced
54. The most life threatening bleeding due to haemophilia A would be;
- a) Retropharyngeal bleeding
 - b) Muscle haematomas
 - c) Intracranial bleeding
 - d) Haemarthroses

55. One of the following is FALSE regarding haemolytic uraemic syndrome;
- a) Most affected children require long term dialysis for chronic renal failure
 - b) It may result from verotoxin producing *Escherichia coli*
 - c) Intravascular haemolysis occurs
 - d) Administration of fresh frozen plasma is indicated
56. With regard to blood transfusion, identify the correct statement;
- a) A febrile reaction may be due to re-exposure to minor red-cell antigens
 - b) Acute haemolytic transfusion reactions are the most common
 - c) Donor blood is usually collected in EDTA which acts as an anticoagulant
 - d) Hypokalemia may follow if massive haemolysis has occurred
57. With regard to transfusion reactions, a manifestation presenting with hypotension, angioedema, respiratory distress and shock could suggest:
- a) Acute renal failure
 - b) Anaphylactic shock
 - c) Post-transfusion purpura
 - d) Transfused blood contaminated with CMV
58. One of the following is a known complication of massive blood transfusion in neonates ;
- a) Circulatory overload
 - b) Hypothermia
 - c) Metabolic acidosis
 - d) Urticaria
59. Irradiated blood is NOT recommended for transfusion to the following categories of patients;
- a) With Hodgkin's disease
 - b) At risk for developing transfusion associated Graft-versus-Host disease
 - c) Undergoing minor surgery
 - d) On chemotherapy
60. Plasmapheresis is therapeutically useful in the following situations;
- a) Hyperviscosity syndrome associated with a paraprotein
 - b) Cell mediated immune disorders
 - c) To obtain platelets for therapeutic use
 - d) In a patient with homozygous sickle-cell disease who develops a stroke

61. Donor blood preserved in a rejuvenating solution has a recommended maximum shelf life of:

- a) 21 days
- b) 35 days
- c) 42 days
- d) 50 days

62. Hyperplastic arteriolitis is a manifestation of;

- a) Malignant hypertension
- b) Diabetic nephropathy
- c) Thromboangitis obliterans
- d) Myeloma kidney

63. One of the following would be the most likely cause of death due to a dissecting aneurysm of the intra-thoracic part of the aorta;

- a) Restrictive cardiomyopathy
- b) Haemopericardium
- c) Pressure atelectasis
- d) Cardiac tamponade

64. One of the following is an acyanotic congenital heart disease;

- a) Tetralogy of Fallot
- b) Tricuspid atresia
- c) Transposition of great vessels
- d) Overriding aorta

65. One of the following biochemical markers of acute coronary syndromes would be a substitute for troponin-I;

- a) CK-MB
- b) Lactate dehydrogenase
- c) Myoglobin
- d) Aspartate transaminase

66. One of the following describes the gross appearance of acute rheumatic pericarditis;

- a) "Anchovy sauce"
- b) Catarrhal exudate
- c) "Bread and butter" exudate
- d) Chocolate cyst

67. The most common clinical presentation of prostatic carcinoma is;

- a) Acute urinary retention
- b) Haematuria
- c) Low back pain
- d) Cerebral metastasis

68. Macroscopic haematuria would be a manifestation of;

- a) Acute pyelonephritis
- b) Diabetic glomerulosclerosis
- c) Renal papillary necrosis
- d) Nephrotic syndrome

69. Unilateral hydronephrosis would be a manifestation of;

- a) Retroperitoneal fibrosis
- b) Posterior urethral valves
- c) Paraphimosis
- d) Nodular prostatic hyperplasia

70. One of the following is the hallmark of chronic urinary bladder outlet obstruction;

- a) Trabeculations
- b) Chronic cystitis
- c) Bladder calculi
- d) Malakoplakia

71. Testicular atrophy may be caused by all the following EXCEPT:

- a) Atherosclerotic narrowing of blood supply to the testis
- b) Cryptorchidism
- c) Hypopituitarism
- d) Seminoma

72. Which one of the following is a premalignant lesion of the endometrium :
- a) Simple cystic hyperplasia
 - b) Endometrial atrophy
 - c) Chronic endometritis
 - d) Complex hyperplasia
73. The recommended treatment for Bartholin's cysts is;
- a) Antibiotics
 - b) Incision and drainage
 - c) Marsupialization
 - d) Simple excision
74. One of the following immunomarkers would show a positive reaction with an Embryonal rhabdomyosarcoma of the vagina;
- a) Desmin
 - b) Smooth muscle actin
 - c) Leukocyte common antigen
 - d) Epithelial common antigen
75. One of the following serotype of Human papilloma virus is LEAST likely to cause carcinoma of cervix uteri;
- a) 11
 - b) 16
 - c) 18
 - d) 33
76. One of the following is NOT a characteristic finding in alcoholic hepatitis;
- a) Nutmeg appearance
 - b) Mallory bodies
 - c) Hepatocyte swelling and necrosis
 - d) Neutrophilic reaction

77. One of the following statements is FALSE in regard to hepatocellular carcinoma;

- a) Rare in the absence of cirrhosis
- b) Encapsulated tumors have poor prognosis
- c) Microscopic vascular invasion is a poor prognostic factor
- d) Elevated serum AFP is a characteristic finding

78. One of the following statements is FALSE in regard to Chronic cholecystitis

- a) Majority of cases are associated with cholelithiasis
- b) It may result in acute cholecystitis
- c) Majority of the patients are of the male gender
- d) Results in biliary colic

79. One of the following statements is NOT true regarding acute gastric ulcers

- a) Curling ulcers occur after severe burns
- b) Cushing's ulcers occur after severe burns
- c) Abuse of NSAIDS may result in acute gastric ulceration
- d) Bleeding may be severe as to require transfusion

80. The extraintestinal manifestations of Crohns disease include all of the following EXCEPT;

- a) Migratory polyarthrits
- b) Glossitis
- c) Ankylosing spondylitis
- d) Erythema nodosum

81. Skip lesions in the gastrointestinal tract are associated with;

- a) Juvenile polyposis
- b) Ulcerative colitis
- c) Crohns disease
- d) None of the above.

82. One of the following conditions DOES NOT cause Achalasia;

- a) Allgrove's Syndrome
- b) Polio
- c) Chaga's disease
- d) Tuberculosis

83. The most common cause of oesophageal varices is;
- a) Alcoholic cirrhosis
 - b) Schistosomiasis
 - c) Viral hepatitis
 - d) Hemochromatosis
84. The most significant cause of chronic gastritis is;
- a) Chronic infection by H.Pylori
 - b) Immunologic (autoimmune) in association with pernicious anemia
 - c) Toxic, as with alcohol and cigarette smoking
 - d) Reflux of bilious duodenal secretions
85. One of the following polyps in NOT typically found in the stomach;
- a) Fundic gland polyp
 - b) Adenomatous polyp
 - c) Brunner's gland polyp
 - d) Hyperplastic polyp
86. The typical features of squamous cell carcinoma include all the following EXCEPT;
- a) Association with chronic immunosuppressant drug therapy
 - b) preceded by leucoplakia on the lips, mouth or genitalia
 - c) metastatic spread to the bone and bone marrow
 - d) unresponsive to radiotherapy
87. The characteristic clinical features of psoriasis include;
- a) Extensive involvement of head, face and neck
 - b) nail changes with pitting and onycholysis
 - c) Poly arthritis in many cases
 - d) Dried non-scaly skin areas in the natal cleft and submammary folds

88. In bullous pemphigoid;

- a) Blisters are intra-epidermal
- b) Seen in Elderly >60yrs.
- c) No mucosal involvement
- d) Direct Immunofluorescence microscopy shows Linear Deposits of IgA in epidermal basement membrane.

89. One of the following is considered a premalignant skin lesion;

- a) Arsenic keratosis
- b) Seborrheic keratosis
- c) Bowen's disease
- d) naevus sebaceous

90. Regarding skin cancer;

- a) These cancers are more common in outdoor workers
- b) These cancers are commoner in dark skinned people
- c) Proximity to the equator is protective
- d) UV A is more harmful than all other types of radiation

91. In type 1 diabetes mellitus, insulin is;

- a) Increased
- b) Low
- c) Normal
- d) Correlated to age of patient

92. A tests used to monitor the glycemic status of patients over a period of three to four months;

- a) Urictix
- b) Fasting blood sugar
- c) Fructosamine
- d) HbA1c

93. A heavy band in the gamma region of the serum protein electrophoresis indicates;
- a) Nephrotic syndrome
 - b) Polyclonal gammopathy
 - c) Monoclonal protein
 - d) Acute inflammatory state
94. One of the following enzymes shows the greatest specificity in liver damage;
- a) LDH
 - b) ALP
 - c) AST
 - d) ALT
95. One of the following may differentiate between liver disease and active bone growth in a teenage patient;
- a) ALP
 - b) GGT
 - c) ALT
 - d) CK-MM
96. In addition to pancreatitis, plasma lipase may increase in the following disease;
- a) Acute myocardial infarction
 - b) Renal disease
 - c) Cystic fibrosis
 - d) Viral hepatitis
97. One of these diseases is consistent with the following findings; (Total bilirubin – increased, direct bilirubin – normal, urine bilirubin – negative, urine urobilinogen – reduced)
- a) UDP glucuronyl transferase deficiency
 - a) Extra-hepatic biliary obstruction
 - b) Dubin Johnson syndrome
 - c) Hemolytic disease

98. The following are causes of metabolic acidosis EXCEPT;

- a) Renal failure
- b) Cardiac failure
- c) renal tubular acidosis type IV
- d) Excessive vomiting

99. To screen a short child for growth h hormone deficiency, you will probably order one of the following tests;

- a) dexamethasone suppression test
- b) serum IGF-1
- c) somatostatin assay
- d) spot growth hormone assay

100. One of the following lab findings is not consistent with SIADH;

- a) Low plasma osmolality
- b) Low serum sodium
- c) Low urine volumes
- d) High serum creatinine