KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2019/2020

END OF THE YEAR EXAMINATION FOR THE DEGREE OF BACHELOR OF MEDICINE AND BACHELOR OF SURGERY (MBChB LEVEL III)

HPA II: PATHOLOGY II PAPER II: MULTIPLE CHOICE QUESTIONS

DATE: Friday 16th July 2021 **TIME: 2.00p.m. - 5.00p.m.**

INSTRUCTIONS:

1. This paper consists of 100 Multiple Choice Questions (MCQs).
2. Each question has ONLY ONE correct answer; pick the SINGLE BEST answer.
3. Your answer should be the letter of choice.
4. Write your answers in the provided answer booklets.
5. DO NOT WRITE or INSERT ANY MARKS on the question paper.

QUESTIONS:

1.Epithelium of ectocervix is composed of:
   a) Nonkeratinizing squamous cells
   b) Non ciliated columnar cells
   c) Keratinized squamous cells
   d) Ciliated columnar cells
2. One of the following is NOT true of superficial cells in Pap smear test:
   a) Have affinity for acidic dyes
   b) Have nuclear that is more than cell volume
   c) May appear singly
   d) Stains deeply blue
3. The predominant cells seen in a pap smear from a pregnant woman:
   a) Superficial cells
   b) Parabasal cells
   c) Intermediate cells
   d) Basal cells
4. One of the following is NOT a component of Eosin Azure:
   a) Bismarck brown
   b) Eosin Y
   c) Harris haematoxylin
   d) Light green
5. One of the following is a clearing agent:
   a) Acetone
   b) Ethanol
   c) Formalin
   d) Xylene

6. A false statement about abrasive cytology:
    a) Wide range of target site is sampled.
    b) The cells obtained are poorly preserved
    c) Subepithelial lesion may be sampled
    d) Method enriches the cell sample
7. A pap smear from a 30-year-old female showed superficial cells with enlarged hyperchromatic nuclei and a cytoplasmic halo. The best classification below of this lesion is:
    a) Carcinoma in situ
    b) CIN I
    c) CIN II
    d) CIN III
8. One of the following is true of cervical intraepithelial lesion:
    a) The lesion may regress spontaneously.
    b) The lesion invariably progresses to cancer
    c) The high grade lesions are usually associated with HPV types 6 and 11
    d) The continuum of morphologic changes has clear cut boundaries
9. In regard to hydatidiform mole, one of the following statements is false:
    a) Karyotype of partial mole is commonly triploid
    b) Most patients present with spontaneous pregnancy loss
    c) Partial moles may evolve into choriocarcinoma.
    d) The karyotype of complete mole is mostly 46XX
10. One of the following is UNTRUE of endocervical polyps:
    a) May transform to a malignancy
    b) May protrude through the cervical os
    c) May present with vaginal bleeding
    d) Are often accompanied by inflammation and metaplasia.
11. ONE of the following is true of choriocarcinoma:
    a) All choriocarcinomas elaborates high levels of chorionicgonadotrophins.
    b) Choriocarcinoma arising from placenta tissue is usually preceded by a hydatidiform mole
    c) Most ovarian choriocarcinomas exist together with other Germ cell tumors
    d) Ovarian choriocarcinoma is more responsive to chemotherapy compared to that of placental origin
12. One of the following is the most common type of malignant tumor of the ovary:
    a) Undifferentiated carcinomas
    b) Serous tumors
    c) Mucinous tumors
    d) Metastatic tumors
13. One of the following enzymes shows the greatest specificity in liver damage:
    a) LDH
    b) ALP
    c) AST
    d) ALT

14. One of the following tests is used to monitor the glycaemic status of patients over a period of three to four months:
    a) Uristix
    b) Fasting blood sugar
    c) Fructosamine
    d) HbA1c
15. ONE of the following markers of myocardial ischaemia has the shortest half-life:
    a) Troponin I
    b) Myoglobin
    c) Lactate dehydrogenase
    d) Creatinine kinase
16. Consecutive repeat measurements of blood glucose concentrations in a single blood sample using the same point of care analyser are (in mmol/L) 5.1, 4.9, 5.0, 5.0, 5.1, 5.1, 5.0, 5.2, 5.1, 5.0, and 5.1. On the basis of these data, ONE of the following statements about the analyser is most applicable:
    a) Very accurate
    b) Very precise
    c) Very specific
    d) Very sensitive
17. ONE of the following is the most frequent cause of hypercalcemia in patients with malignant disease:
    a) Calcitonin
    b) Parathyroid hormone
    c) Parathyroid related hormone
    d) Tumour necrosis factor alpha
18. A 22-year-old woman with infertility is overweight and has severe acne. ONE of the following suggests a diagnosis other than polycystic ovary syndrome:
    a) High fasting blood glucose
    b) High plasma LH
    c) High plasma testosterone concentration
    d) Normal plasma progesterone 7 days before expected date of her next period.
19. ONE of the following pairs of nutrient deficiency and clinical features is correctly paired:
    a) Zinc; Infertility
    b) Vitamin B12; nerve paralysis
    c) Iron; macrocytic anaemia
    d) Ascorbic acid; prolonged bleeding time
20. A 45-year-old woman reports a feeling of fullness in her neck that has been gradual and painless for more than 1 year. Physical examination confirms diffuse enlargement of the thyroid gland. Thyroid function tests show a normal free T4 level and a slightly increased TSH level. One of the following is the most likely cause of these findings:
    a) Diffuse nontoxic goitre
    b) Follicular adenoma
    c) Papillary carcinoma
    d) Toxic multinodular goitre

21. A 25-year-old woman has noted breast secretions for the past month. She is not breastfeeding and has never been pregnant. She has not menstruated for the past 5 months. Physical examination yields no abnormal findings. MRI of the brain shows a 0.7cm mass in the adenohypophysis. ONE of the following additional complications is most likely to be present in this patient:
    a) Syndrome of inappropriate antidiuretic hormone
    b) Infertility
    c) Hyperthyroidism
    d) Cushing disease
22. A 42-year-old man sees his physician because he has had polyuria and polydipsia for the past 4 months. On physical examination, there are no specific findings. Laboratory findings include increased serum Na^+ and Cl^-, normal serum K^+; glucose, and creatinine. The specific gravity of urine is 1.002. This patient is most likely to have a deficiency of :
    a) Antidiuretic hormone
    b) Corticotrophin
    c) Melatonin
    d) Oxytocin
23. One of the following conditions is associated with secondary hypercholesterolemia:
    a) Pancreatitis
    b) Oral contraceptive therapy
    c) Hypothyroidism
    d) Diabetes mellitus
24. The result most likely in an adult male with primary testicular failure is:
    a) Decreased LH, FSH, and testosterone
    b) Decreased testosterone, androstenedione, and FSH
    c) Increased androstenedione, decreased testosterone, and normal FSH
    d) Increased LH, FSH, and decreased testosterone
25. One of the following is the mechanism causing Cushing's disease:
    a) Treatment with corticosteroids
    b) Excess secretion of pituitary ACTH
    c) Ectopic ACTH production by tumours
    d) Adrenal adenoma
26. When a therapeutic drug is suspected of causing toxicity, the most appropriate sample for an initial investigation is:
    a) Gastric fluid at the time of symptoms
    b) Peak blood sample
    c) Trough blood sample
    d) Urine at the time of symptoms
27. The analysis of a tumour marker is most useful for:
    a) Testing for recurrence
    b) Screening
    c) Prognosis
    d) Diagnosis

28. One of the following serum protein electrophoresis results suggests an acute inflammatory process:

	Albumin	α 1	α2	β	γ
a)	Increased	Increased	Increased	Increased	Increased
b)	Reduced	Increased	Reduced	Normal	Normal
c)	Reduced	Increased	Increased	Normal	Normal
d)	Normal	Increased	Normal	Increased	Increased

29. One of the following mechanisms is responsible for metabolic acidosis:
    a) Accumulation of volatile acids
    b) Bicarbonate deficiency
    c) Excessive retention of dissolved CO_2
    d) Hyperaldosteronism
30. One of the following laboratory results is consistent with primary hypoparathyroidism:
    a) Low calcium; high inorganic phosphorus (P*i*)
    b) Low calcium; low P*i*
    c) High calcium; low P*i*
    d) High calcium; high P*i*
31. A biopsy specimen from the upper part of the small bowel shows severe diffuse blunting of villi and a chronic inflammatory infiltrate in the lamina propria. ONE of the following serologic tests is most likely to be positive in this patient:
    a) Anti–DNA topoisomerase I antibody
    b) Antigliadin antibody
    c) Antimitochondrial antibody
    d) Antinuclear antibody
32. A biopsy specimen from the rectum shows an absence of the myenteric ganglia. ONE of the following is the most likely diagnosis:
    a) Systemic sclerosis
    b) Hirshprung's disease
    c) Constipation
    d) Colorectal carcinoma
33. Colonoscopy on a woman with chronic intermittent diarrhoea and abdominal pain shows diffuse and uninterrupted mucosal inflammation and superficial ulceration extending from the rectum to the ascending colon. The patient is at high risk of developing ONE of the following complications:
    a) Adenocarcinoma of the colon
    b) Diverticulitis
    c) Fat malabsorption
    d) Perirectal fistula formation
34. Upper gastrointestinal endoscopy of a 67-year-old woman with severe nausea, vomiting, and a 9-kg weight loss over the past 4 months shows that the entire gastric mucosa is eroded and has an erythematous, cobblestone appearance. ONE of the following is most likely to be found on histologic examination of the biopsy specimen:
    a) Chronic atrophic gastritis
    b) Early gastric carcinoma
    c) Gastrointestinal stromal tumour
    d) Signet-ring cell adenocarcinoma

35. A 40-year-old potential blood donor is found to be positive for HBsAg and is excluded as a blood donor. All liver function tests are normal. ONE of the following is true of this patient:
    a) Will develop clinically overt hepatitis within 1 year
    b) These test results are probably erroneous
    c) Should get a hepatitis B vaccination series
    d) Has a chronic carrier state
36. A liver biopsy from a jaundiced tattoo artist shows minimal hepatocyte necrosis, mild steatosis, and minimal portal bridging fibrosis. ONE of the following is the most likely aetiology:
    a) HAV
    b) HBV
    c) HCV
    d) HEV
37. Most common anatomical position for the undescended testis is:
    a) Abdominal cavity
    b) Inguinal ring
    c) Inguinal triangle
    d) Scrotum
38. Histomorphology of testicular atrophy includes the following **EXCEPT**:
    a) Increase in the interstitial fibrovascular stroma
    b) Hypospermatogenesis
    c) Hyaline thickening of tubular basement membrane
    d) Atrophy of interstitial cells of Leydig
39. Tuberculous epididymo-orchitis:
    a) Granulomas are surrounded by foreign body giant cells
    b) Granulomas have a mantle of plasma cells
    c) Granulomas have central areas of suppurative necrosis.
    d) The interstitium contains epithelioid cell granulomas
40. Scrotal elephantiasis is characterized by:
    a) Lymphatic obstruction"is" by larvae
    b) Epidermal hyperkeratosis of the scrotal skin
    c) Chronic lymphangiectasia with tough subcutaneous fibrosis
    d) Affected area of skin may show naevi
41. A feature of hydrocele of the tunica vaginalis:
    a) Abnormal collection of pus the tunica vaginalis
    b) Dilatation and tortuosity of the veins of the pampiniform plexus
    c) May present as a complication of gonorrhea
    d) Occurs due to pressure on the spermatic vein by enlarged liver
42. A germ cell tumour of the testis is:
    a) Leydig cell tumour
    b) Sertoli cell tumour
    c) Seminoma
    d) Granulosa cell tumour

43. Classified as a notochordal tumor:
    a) Enchondroma
    b) Chordoma
    c) Chondrosarcoma
    d) Chondroblastoma
44. The mode of spread for central osteogenic sarcoma is:
    a) Contiguous local spread
    b) Haematogenous
    c) Lymphatic
    d) Periosteal
45. The characteristic pathological feature of rheumatoid arthritis is:
    a) Mostly affects the weight bearing regions of articular cartilages
    b) Formation of osteophytes
    c) Eburnation of subchondral bone
    d) Diffuse proliferative synovitis with formation of pannus
46. Characteristic of gout:
    a) A disorder of pyrimidine metabolism
    b) Crystals of monosodium urate monohydrate may be present in urine samples
    c) Deposits of monosodium urate monohydrate around the joints of the extremities.
    d) Increased serum urea
47. A neuromuscular disease with upper motor neuron involvement is:
    a) Spinal muscular atrophy
    b) Myasthenia gravis
    c) Duchene's muscular atrophy
    d) Amyotrophic lateral sclerosis
48. A type of muscular dystrophy with autosomal recessive inheritance:
    a) Facioscapulohumeral type
    b) Limb girdle type
    c) Myotonic type
    d) Oculo-pharyngeal type
49. The earliest parameter to increase following oral iron therapy for iron deficiency anaemia is:
    a) Reticulocyte count
    b) Mean corpuscular volume
    c) Mean corpuscular haemoglobin concentration
    d) Haemoglobin
50. Vitamin B12 deficiency causes megaloblastic changes by:
    a) Acting as a methyl donor for the synthesis of methionine
    b) Demethylation of neurotransmitters
    c) Restricting the biosynthesis of RNA
    d) Restriction of folate supply
51. The type of haemoglobin (Hb) molecule denoted as β4 is:
    a) Hb Portland
    b) Hb H
    c) Hb Gower 1
    d) Hb Barts

52. Definitive therapy for aplastic anaemia is by:
    a) Allogeneic blood transfusions
    b) Allogeneic haemopoietic stem cell transplantation
    c) Haemopoietic growth factors
    d) Immunosuppressive therapy
53. Diagnosis of acute lymphoblastic leukaemia by WHO criteria is established by:
    a) Demonstration of lymphoblasts in the bone marrow alone
    b) Cytogenetics and polymerase chain reaction (PCR)
    c) Combination of morphology and immunophenotye
    d) Combination of immunophenotype and cytogenetics
54. One of the following conditions may present with neutrophilia:
    a) Malaria
    b) Myocardial infarction
    c) Toxoplasmosis
    d) Viral infection
55. Burkitt's lymphoma:
    a) Is a high grade non-Hodgkin lymphoma
    b) Is a T-cell lymphoma
    c) Possesses JAK-2 mutations
    d) Carries *t*9:22 mutation
56. Hypergammaglobulinaemia causes platelet dysfunction by:
    a) Inhibiting platelet aggregation
    b) Causing defective binding to Von Willebrand Factor
    c) Inhibit binding of ADP to its platelet receptor
    d) Inhibition of cyclo-oxygenase
57. An abnormal parameter in Haemophilia A:
    a) Prolonged bleeding time
    b) Prolonged activated partial thromboplastic time
    c) Prolonged prothrombin time
    d) Thrombocytopaenia
58. Vitamin K:
    a) Is water soluble
    b) Is essential in activation of "proteins formed in vitamin K absence"
    c) Heparin interferes with the action of vitamin K epoxide reductase
    d) Both the PT and APTT are normal in Vitamin K deficiency
59. In bone marrow aspirates, Kala azar LD bodies are found in:
    a) Macrophages
    b) Reticulocytes
    c) Normoblasts
    d) Granulocytes
60. Measures to reduce the risk of serious infection in hyposplenism include the following, **EXCEPT**:
    a) Transfusion of irradiated red blood cells
    b) Prophylactic oral penicillin
    c) Vaccination against meningococcus
    d) Vaccination using live vaccines

61. One of the following blood donors would be deferred:
    a) Known cardiovascular disease
    b) Intravenous drug user
    c) Epilepsy
    d) After receiving live vaccines
62. The following are true about Rhesus (Rh) antibodies, **EXCEPT**:
    a) Anti-d causes haemolytic disease of the newborn
    b) Anti-D is responsible for most of the clinical problems associated with the system
    c) Result from previous transfusion or pregnancy.
    d) Rh antibodies rarely occur naturally
63. The direct antiglobulin test (DAT):
    a) is used as part of the routine antibody screening of the recipient's serum prior to transfusion
    b) is used for detecting antibody on the red cell surface where sensitization has occurred in vivo
    c) is used to detect antibodies that have coated the red cells in vitro
    d) test red cells are incubated with serum before addition of antihuman globulin
64. Febrile non-haemolytic transfusion reactions are mediated by:
    a) White blood cells
    b) HLA antigens
    c) Complement
    d) Anti ABO antibodies
65. The following are methods used in autologous donations, **EXCEPT**:
    a) Apheresis
    b) Blood salvage
    c) Haemodilution
    d) Pre-deposit
66. With regard to acute blood loss and massive haemorrhage:
    a) There is initial vasodilation
    b) There is a fall in neutrophils and platelets.
    c) The plasma volume rapidly rises
    d) The packed cell volume rises
67. The most common cause of breast masses in women is:
    a) Fibrocystic change
    b) Abscess
    c) Fibroadenoma
    d) Galactocoele
68. The most common invasive breast cancer in women after ductal carcinoma is:
    a) Tubular carcinoma
    b) Papillary carcinoma
    c) Colloid carcinoma
    d) Lobular carcinoma
69. The gold standard for diagnosis of breast cancer is:
    a) Mammography
    b) Breast ultrasound
    c) Biopsy for histopathology

d) Biopsy for cytopathology

70. Phylloides tumour is defined as:
    a) Mesenchymal tumour of the breast
    b) A frequently malignant tumour of the breast
    c) Glandular tumour of the breast
    d) Tumour of male breast
71. Pagets disease of the breast occurs in the:
    a) Breast ducts
    b) Adipose tissue
    c) Luminal duct unit
    d) Nipple
72. One of the following is the most commonly used fixative in histopathology:
    a) 40 % formalin
    b) 30 % formalin
    c) 20 % formalin
    d) 10 % formalin
73. The correct order for tissue processing is:
    a) Clearing, impregnation with wax, fixation, staining
    b) Clearing, fixation, impregnation with wax, staining
    c) Fixation, clearing, staining, impregnation with wax
    d) Fixation, clearing, impregnation with wax, staining
74. The purpose of decalcification in histopathology is:
    a) To facilitate cutting and processing
    b) To allow staining of tissue
    c) To allow proper fixation of tissue
    d) To aggregate the calcium deposits
75. Poor fixation of tissue may lead to:
    a) Inactivity of enzymes in the tissue
    b) Preservation of tissue structure
    c) Autolysis
    d) Hardening of the tissue
76. One of the following is an equipment used in histopathology processing:
    a) Autoclave
    b) Electron microscope
    c) Light microscope
    d) Microtome
77. The most common CNS tumour in childhood is:
    a) Meningioma
    b) Medulloblastoma
    c) Lymphoma
    d) Astrocytoma
78. The most common cause of intracerebral haemorrhage:
    a) Hypertension
    b) Diabetes mellitus
    c) Renal failure
    d) Trauma

79. The most common CNS tumour in HIV disease is:
    a) Meningioma
    b) Lymphoma
    c) Kaposi's sarcoma
    d) Astrocytoma
80. The most common primary site of brain metastasis is:
    a) Breast
    b) Lung
    c) Ovary
    d) Prostate
81. The most common site of berry aneurysm is:
    a) Posterior communicating artery
    b) Posterior cerebral artery
    c) Basilar artery
    d) Anterior communicating artery.
82. The most common skin tumour in black skin is:
    a) Squamous cell carcinoma
    b) Basal cell carcinoma
    c) Malignant melanoma
    d) Naevi
83. Parakeratosis is defined by:
    a) Thickened rough skin
    b) Retention of nuclei in the stratum corneum
    c) Raised plaque – like lesion
    d) Abnormal amounts of keratin
84. A bulla is defined as:
    a) Fluid filled, greater than 5 mm diameter
    b) Elevated flat lesion <5 mm diameter
    c) Elevated flat lesion >5 mm diameter
    d) Fluid filled less than 5 mm diameter
85. Neurofibromatosis (von Recklinghausen disease) is inherited as:
    a) Sex linked
    b) Has no genetic linkage
    c) Autosomal recessive
    d) Autosomal dominant.
86. The most common cause of sudden cardiac death is:
    a) Cardiomyopathy
    b) Drug abuse
    c) Mitral value prolapse
    d) Ventricular arrhythmia
87. A characteristics of stable angina is:
    a) Severe crushing chest pain for more than 20 minutes
    b) Chest pain on exertive or stress
    c) Chest pain at rest
    d) Bradycardia

88. The histologic change associated with WBC invasion during 1st week of myocardial infarction is:
    a) Calcification.
    b) Dark discoloration.
    c) White scar.
    d) Yellow pallor.
89. One of the following is the most common vascular tumour:
    a) Haemangioma.
    b) Lymphangioma.
    c) Kaposi's sarcoma.
    d) Angiosarcoma.
90. The most commonly involved artery in ischemic heart disease is:
    a) Descending aorta.
    b) Left anterior descending.
    c) Right anterior descending.
    d) Right circumflex.
91. The following are features of community acquired pneumonia **EXCEPT**:
    a) Contracted by a person with little contact with the healthcare system.
    b) Most cases caused by *Strep. pneumoniae*
    c) None of the above
    d) Usually caused by *P. aeruginosa.*
92. With regard to pulmonary hypertension, one of the following is true:
    a) It is associated with obesity.
    b) There is increased apoptosis of the vascular smooth muscle.
    c) Are useful in all forms of the disease
    d) Respiratory compromise occurs due to poor ventilation of the affected segment.
93. One of the following statements is FALSE:
    a) Antigenic drift causes epidemics.
    b) Antigenic shift causes pandemics.
    c) Influenza type A undergoes antigenic drift and shift.
    d) Influenza type B undergoes antigenic drift.
94. One of the following is a paraneoplastic syndrome associated with small carcinoma cell lung of the lung:
    a) Myasthenia Gravis
    b) Cushing's syndrome
    c) Anaemia
    d) Addison's syndrome
95. *Mycoplasma pneumoniae:*
    a) Contains peptidoglycans in the cell walls.
    b) Is associated with respiratory tract infection.
    c) Is motile.
    d) Is susceptible to cephalosporins.
96. A common cause of infection in pulmonary cavities is:
    a) *Mucor spp*
    b) *Cladosporium carionii*
    c) *Candida parapsilosis*

d) *Aspergillus spp*

97. A statement that best describes the "cause of death" is:
    a) Physiological derangement or biochemical disturbances leading to death
    b) Fashion in which death occurred
    c) Disease or injury initiating the train of events leading to death.
    d) Circumstances in which the death occurred
98. The following disease is recognised as a form of employment (Work place sickness):
    a) Bacterial Bronchopneumonia
    b) Hypersensitivity Pneumonitis
    c) Malaria
    d) Viral Pneumonitis
99. One of the following is an important type of consent prior to major surgical operations and anticipated drug reaction outcomes:
    a) Verbal consent
    b) Informed consent
    c) Implied consent
    d) Express consent
100. A common finding in carbon monoxide poisoning is:
    a) Abrasion on the neck region
    b) Strap muscle Haemorrhage
    c) Congestion of the face
    d) Brink red discolouration of the organs