



(Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2021/2022

ACADEMIC YEAR

SECOND YEAR FIRST TRIMESTER

MAIN EXAMINATION

FOR BACHELOR OF SCIENCE IN NURSING DEGREE

COURSE CODE: NUR 211

COURSE TITLE: HUMAN PATHOLOGY II

DATE: 13/12/2022

TIME: 9.00 – 12.00PM

INSTRUCTIONS TO CANDIDATES

Answer ALL Section one (1) MULTIPLE CHOICE QUESTIONS and ALL Section two (2) SHORT ANSWER QUESTIONS and any one (1) section THREE (3) LONG ANSWER QUESTION.

TIME: 3 Hours

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SECTION 1: MULTIPLE CHOICE QUESTIONS - ANSWER ALL QUESTIONS (50 MARKS)

1. Which of the following is an indication of splenectomy
 - a) Trauma
 - b) Hodgkin's disease
 - c) Autoimmune hemolytic disorders
 - d) All of the above
2. The most common cause of Cushing's Syndrome is
 - a) Due to pituitary tumors
 - b) Due to adrenal lesions
 - c) Due to ectopic production of cortisol
 - d) Iatrogenic (drug induced)
3. A patient of Cushing's syndrome was given high doses of Dexamethasone. It can suppress hypercortisolism due to:
 - a) Adrenal carcinoma
 - b) Pituitary or hypothalamic lesions
 - c) Exogenous glucocorticoids intake
 - d) Loading effect
4. A lady aged 58 years complains of gradual onset of bone pain, polydipsia and muscular weakness. Her serum calcium and alkaline phosphatase were raised and phosphate (PO₄) was low. She was probably suffering from
 - a) Hypercalcemia
 - b) Bone tumor
 - c) Hyperparathyroidism
 - d) Hypoparathyroidism
5. A 58 year old man presented to the doctor with weight loss, generalized weakness and lethargy for 6 months duration. He complained of polyuria especially at night. He had become impotent. On examination, patient found to be slightly anemic, BP was 185/115mmHg. His urine contained protein but no glucose. His serum Na was 130, K 5.2, HCO₃ 16mmol/L, urea 65mg/dl, creatinine 5.3mg/dl, glucose 135mg/dl, Alk phosphate 205 U/L, and Hb 9.1g/dl. The patient was suffering from
 - a) Nephrotic syndrome
 - b) Diabetes mellitus
 - c) Renal osteodystrophy
 - d) Chronic renal failure
6. A girl aged 8 years old was admitted to hospital with generalized edema. Her urine became frothy and family doctor had found proteinuria. Results of other investigations showed serum is lipemic with raised total cholesterol and triglyceride levels. Her sodium, potassium, urea and

creatinine levels were low. Total proteins and serum albumin were also low. Urinary protein excretion in 24 hours was 12g/dl. In your opinion what is the diagnosis?

- a) Hyperlipidemia
- b) Nephrotic syndrome
- c) Hyperproteinemia
- d) Acute renal failure

7. Bulla is fluid filled raised lesion 5mm or less in diameter. Which skin lesion is associated with bulla formation?

- a) Psoriasis
- b) Panniculitis
- c) Pemphigus
- d) Erythema multiforme

8. In most laboratories a serum Protein Specific Antigen (PSA) level of 4ng/ml is taken as cut off point between normal and abnormal. Serial measurements of PSA are of great value in

- a) Diagnosing prostate cancer
- b) Benign Prostate Hyperplasia
- c) Prostatic infarction
- d) Assessing the response to radiotherapy

9. In prostatic adenocarcinoma fatal outcome is associated with

- a) Gleason grade
- b) Lymph node metastases
- c) Raised PSA levels
- d) Associated with chronic prostatitis

10. The following serum tumor markers are helpful in supporting testicular neoplasm. In a yolk sac tumor of testis which marker is raised?

- a) Beta Human chorionic gonadotropin (HCG)
- b) Placental Alkaline Phosphate
- c) Alpha Fetoprotein
- d) Placental lactogen

11. Alzheimer disease is the most common cause of dementia in the elderly. Autopsy of the patient who died of this disease shows characteristic histological features in the brain. Which of the following is NOT a feature of this disease?

- a) Neuritic plaques
- b) Lewy body
- c) Cerebral amyloid angiopathy
- d) Granulovascular degeneration

12. A 40 year old male is diagnosed to have gout. The different pathological lesions associated with gout DO NOT include

- a) Chronic tophaceous arthritis
- b) Tophi
- c) Gouty retinopathy
- d) Acute arthritis

13. Malignant melanoma is a very aggressive neoplasm. Its common site is skin. Other primary sites are oral and anogenital mucosal surfaces, esophagus and meninges. Identify one more primary site where the lesion can occur

- a) Brain
- b) Breast
- c) Testis
- d) Eye

14. X-ray skull of a 60 year old male showed multiple punched out lytic lesions. Identify the neoplasm which produces such lesions

- a) Giant cell tumor
- b) Multiple myeloma
- c) Ewing Sarcoma
- d) Lymphoma

15. A 50 year old female presented with bilateral breast lumps. Mammography showed densities with irregular borders. Fine Needle Aspiration (FNA) of both lumps shows malignant cells. Which histological type of malignancy usually presents with this clinical picture?

- a) Invasive lobular carcinoma
- b) Tubular carcinoma
- c) Invasive ductal carcinoma
- d) Medullary carcinoma

16. In a 30 year old female breast lump of 2cm is excised having irregular borders. Histopathology report shows sclerosing adenosis. Which lesion is not part of benign proliferative breast disease

- a) Fibrocystic change
- b) Papilloma
- c) Complex sclerosing lesion
- d) Epithelial hyperplasia

17. Which one is the most important prognostic factor in the carcinoma of breast?

- a) Tumor grade
- b) Involvement of resection margin
- c) Axillary lymph node metastases

d) Tumor necrosis

18. A 35 year old female having multiple gallstones is waiting for surgery. One day she presented in the emergency with acute abdomen. Pain was continuous and also referred to the upper back. Laboratory investigations shows elevated serum amylase and lipase. What is your diagnosis?

- a) Chronic pancreatitis
- b) Perforated duodenal ulcer
- c) Acute pancreatitis
- d) Acute gastritis

19. A patient with Non Hodgkin lymphoma is receiving cytotoxic antitumor drugs. Which type of cystitis is suspected in these patients?

- a) Eosinophilic cystitis
- b) Hemorrhagic cystitis
- c) Suppurative cystitis
- d) Chronic cystitis

20. The skin lesion which is NOT associated with disorders of pigmentation is

- a) Leucoderma
- b) Melasma
- c) Psoriasis
- d) Vitiligo

21. A 50 year old male develops bilateral enlargement of breasts resembling adolescent female breast. The lesion is termed

- a) Mastitis
- b) Fibro adenoma
- c) Gynaecomastia
- d) Fibrocystic disease

22. The screening test used for early detection of breast cancer in the elderly is called

- a) CT Scan
- b) MRI
- c) Ultrasonography
- d) Mammography

23. Type I diabetes mellitus

- a) Is associated with obesity
- b) Results from immunologically mediated destruction of B cells
- c) Is associated with high circulatory insulin levels
- d) Always affects females

24. Adult female with hypertension, sodium and water retention and hypokalemia with decreased serum rennin levels. He was diagnosed as a case of

- a) Cushing's disease
- b) Nelson's syndrome
- c) Conn's syndrome
- d) Bartter's syndrome

25. Inflammatory bowel diseases are associated with

- a) Viruses
- b) Autoimmune disorders
- c) Refined diet
- d) Psychosomatic factors

26. Classic lesion of Crohns disease is

- a) Flask shaped ulcer
- b) Skin lesion
- c) Pseudo polyps
- d) Crypt abscess

27. Deep ulcers, marked lymphoid reaction, fibrosis, serositis, granuloma mass and fistulas are features of

- a) Intestinal polyposis
- b) Colorectal carcinoma
- c) Crohns disease
- d) Ulcerative Colitis

28. A 70 year old lady has colon cancer. On biopsy, her cancer has invaded the muscularis propria. Two pericolic nodes are involved with no metastasis. What is the TNM stage of her colon cancer?

- a) T₂ N₁ M₀
- b) T₂ N₂ M₀
- c) T₂ N₁ M₁
- d) T₁ N₂ M₀

29. Identify the risk factors associated with gastric carcinoma

- a) Helicobacter Pylori
- b) More use of fruits in diet
- c) Family history
- d) Fatty food

30. What is another name for aphthous ulcer?

- a) Leukoplakia
- b) Bed sore
- c) Canker sores

d) Erythroplakia

31. A 30 year old male presents with multiple soft, raised, beefy red superficial ulcers in his left groin. Physical examination reveals several enlarged left inguinal lymph nodes. A histologic section from an enlarged lymph node that is stained with a silver stain reveals characteristic Donovan bodies with macrophages. What is the most likely diagnosis?

- a) Chancroid
- b) Gonorrhea
- c) Granuloma Inguinale
- d) Lymph granuloma Venereum

32. Tests used to screen colorectal cancer include

- a) Fecal occult blood test
- b) Flexible sigmoidoscopy
- c) Double contrast barium enema
- d) All of the above

33. Cancer arises least often in the

- a) Adrenal cortex
- b) Parathyroid glands
- c) Anterior pituitary
- d) Thyroid gland

34. The common thyroid lesion in Down's syndrome is

- a) Fibrosis
- b) Granulomas
- c) Hypoplasia of the thyroid
- d) Lymphocytic infiltration without follicles

35. Hepatocellular carcinoma metastasize most often to which of the following sites?

- a) Lungs
- b) Portal lymph nodes
- c) Central Nervous System
- d) Kidneys

36. Carcinoma of the gallbladder has a strong association with

- a) Exposure to aflatoxins
- b) Presence of gallstones
- c) Exposure to vinyl chloride
- d) Accumulation of biliary sludge

37. Renal cell carcinoma most commonly metastasize to

- a) Lungs
- b) Lymph nodes

- c) Adrenals
- d) Bones

38. In acute nephrotic syndrome the cardinal sign is

- a) Proteinuria
- b) Generalized edema
- c) Severe hypertension
- d) Gross hematuria

39. The main cause of renal dysfunction is multiple myeloma is

- a) Hypercalcemia
- b) Urinary tract obstruction
- c) Hyperurecemia
- d) Bence Jones protein

40. A patient with hematuria, flank pain, fever, dysuria, if infection is suspected then diagnosis is confirmed by

- a) Urine DR
- b) Pus casts
- c) Quantitative urine culture
- d) Ultra sound

41. Patient history of bladder cancer, his occupation would be worker at

- a) Plastic factory
- b) Rubber factory
- c) Dye factory
- d) Coal mine factory

42. In renal failure GFR reduces to

- a) 50%
- b) 20-50%
- c) 20-25%
- d) 10%

43. A freckle is an example of which type of primary skin lesion?

- a) Lentigo
- b) Papule
- c) Macule
- d) Leukoderma

44. Herpes simplex is a technical term for

- a) Acne
- b) Eczema
- c) Psoriasis
- d) Fever blisters

45. A cyst is defined by which of the following?
- a) Oozing sore
 - b) Wheal lesions
 - c) Crack in the skin
 - d) Abnormal membranous sac
46. A secondary lesion appearing as round, dry patches of the skin covered with rough, silvert scales is called
- a) Acne
 - b) Eczema
 - c) Psoriasis
 - d) Herpes simplex
47. Down's syndrome is characterized by
- a) 19 Trisomy
 - b) 21 Trisomy
 - c) Only one X chromosome
 - d) Two X and one Y chromosome
48. The most important example of point mutation is found in a disease called
- a) Thalassemia
 - b) Night blindness
 - c) Sickle cell anemia
 - d) Down's syndrome
49. A man has enlarged breasts, sparse hair on body and sex complement as XXY. He suffers from
- a) Down's syndrome
 - b) Klinefelter's syndrome
 - c) Turner's syndrome
 - d) Edward's syndrome
50. The metabolic syndrome is also called
- a) Syndrome M
 - b) Syndrome X
 - c) Syndrome Y
 - d) Syndrome Z

SECTION 2 (SHORT ANSWER QUESTIONS) - Answer ALL Questions (30 MARKS)

1. State the four (4) general functions of the Reticuloendothelial system (RES) (4 Marks)
2. Outline five (5) differences between benign and malignant neoplasms (5 Marks)
3. State the four (4) cardinal signs of inflammation (2 Marks)
4. Several environmental and other factors have been associated with DNA mutations and subsequent benign or malignant tumor growth. Outline 10 factors (5 Marks)
5. There are many types of cancer treatment. The types of treatment will depend on the type of cancer one has and how advanced it is. Briefly describe any three (3) forms of cancer treatment (6 Marks)
6. Hemolytic anemia occurs when destruction of red blood cells outpaces the bone marrow's production of these cells. It can be extrinsic or intrinsic. List two (2) intrinsic and two (2) extrinsic causes of hemolytic anemia (2 Marks)
7. Signs and symptoms of sickle cell anemia usually appear around 6 months of age. They vary from person to person and may change over time. Explain six (6) signs and symptoms of sickle cell anemia (6 Marks)

SECTION 3 (LONG ANSWER QUESTIONS) (20 MARKS) – Answer any ONE Question

1. Genetic disorders occur when a mutation affects one's genes. Down's syndrome is an example of a genetic disorder
 - a) Define Down's syndrome (2 Marks)
 - b) State eight (8) common features of Down's syndrome (4 Marks)
 - c) Describe three (3) risk factors of Down's syndrome (6 Marks)
 - d) Describe any four (4) complications of Down's syndrome (8 Marks)
2. Kidney failure (renal failure) means one or both kidneys no longer function well on their own. Kidney failure is sometimes temporary and develops quickly (acute). Other times it is a chronic (long term) condition that slowly gets worse
 - a) State five (5) complications of kidney disease (5 Marks)
 - b) Explain five (5) causes/risk factors of chronic kidney disease (5 Marks)
 - c) Outline four (4) symptoms of Chronic Kidney Disease (CKD) and kidney failure (2 Marks)
 - d) Your Glomerular Filtration Rate (GFR) is a calculation of how well your kidneys filter substances. A normal GFR is about 100. The lowest GFR is 0, which means there is no remaining kidney function. Briefly describe the stages of kidney failure (8 Marks)