



KENYATTA UNIVERSITY
UNIVERSITY EXAMINATIONS 2011/2012
SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF
SCIENCE (FORENSIC SCIENCE)

SML204/205: PHYSIOLOGY AND PATHOPHYSIOLOGY

DATE: Tuesday 27th March 2012

TIME: 11.00a.m -1.00p.m

INSTRUCTIONS

SECTION A (Answer all questions in this section)

1. Which disease is characterized by these symptoms? “Pain first, vomiting next and fever last”.
 - A. Celiac Sprue
 - B. Appendicitis
 - C. Gastritis
 - D. Peptic Ulcer.
2. The following drugs are used in treatment of Achalasia except;
 - A. Nitroglycerin
 - B. Botox
 - C. Isordil
 - D. Prevacid
3. Urea breath test is a rapid diagnostic test for;
 - A. Emphysema
 - B. Bronchitis
 - C. Tuberculosis Pneumonia
 - D. H.pylori
4. Identify the disease associated with α 1-antitrypsin deficiency.
 - A. Asthma
 - B. Emphysema
 - C. Chronic bronchitis
 - D. Bronchiectasis

5. Which cells interact with allergens during the second exposure in COPD?
- A. B lymphocytes
 - B. Macrophages
 - C. T lymphocyte
 - D. Dendritic cells
6. Which one is not applicable when handling reagents strip during urine analysis?
- A. Do not store in a refrigerator
 - B. Discolouration and darkening indicates expiry of reagent strips
 - C. Replace cup immediately and tightly after removing reagent strips
 - D. Replace the desiccant from bottle
7. CELIAC1 gene is associated with celiac disease and is located in chromosome;
- A. 14
 - B. 21
 - C. 6
 - D. None of the above
8. One of the following is associated with fecalith formation?
- A. Peptic ulcer
 - B. Gastritis
 - C. Appendicitis
 - D. Achalasia
9. Identify the cells that secrete high levels of mucus in the respiratory tract.
- A. Monocytes
 - B. Macrophages
 - C. Goblet cells
 - D. Dendritic cells
10. Hypersthenuria is seen in patients with the following except;
- A. Diabetes mellitus
 - B. Diabetes insipidus
 - C. Diarrhea
 - D. Vomiting
11. Which of the following increases the tone of lower esophageal sphincter?
- A. Acid
 - B. Prilosec
 - C. Nexium
 - D. Reglan
12. Hernias are the underlying cause in one of the following.
- A. Gastro esophageal reflux disease
 - B. Appendicitis
 - C. Achalasia
 - D. Gastritis

13. Identify the diseases caused by an immune response directed against myelin components.
- A. Parkinsonism
 - B. Alzheimer's
 - C. Multiple sclerosis
 - D. Bacterial meningitis
14. Identify the specimen normally requested in diagnosis of bacterial meningitis?
- A. Sputum
 - B. Blood
 - C. Urine
 - D. CSF
15. Identify the most common route of entry for infection in the Central Nervous System.
- A. Hematogenous spread
 - B. Direct implantation of micro organisms
 - C. Local extension
 - D. Peripheral nervous system
16. Which of the following interacts with CD4⁺ receptor on T cells during HIV infection?
- A. gp 120
 - B. gp 41
 - C. p17
 - D. p24
17. Angina pectoris is a complex ischemic heart disease characterized by the following except
- A. Constricting
 - B. Squeezing
 - C. Chocking
 - D. Nausea
18. The simplest specific diagnostic test for assessment of cardiac arrhythmias is;
- A. Nuclear magnetic resonance imaging (NMR)
 - B. Positron emission tomography (PET)
 - C. X-ray
 - D. Electrocardiogram (ECG)
19. The following are associated with polyuria except;
- A. Coffee
 - B. Tea
 - C. Alcohol
 - D. None of the above
20. Identify one that is associated with Black urine.
- A. Porphyrins
 - B. Bile pigments
 - C. Urates
 - D. Homogentisic acid

SECTION B: *(Answer all questions in this section. Each question carries 5marks)*

1. Outline the underlying causes of hypothyroidism.
2. Write on key pathological features common in the brain of Alzheimer patients.
3. Explain briefly factors which trigger hypercortisolism in Cushing's syndrome.
4. Give a brief explanation on bacteria associated chronic gastritis.
5. Write briefly how insulin deficiency predisposes to Diabetes type one.
6. Outline bacterial invasion of the respiratory tract leading to pneumonia.

SECTION C: Answer any two questions in this section. Each question carries 10 mks

1. Discuss variations of specific gravity in normal and pathological conditions.
2. Explain the pathogenesis of;
 - a).IgE mediated hypersensitivity in Asthma
 - b).Delayed type hypersensitivity (DTH) in Mycobacteria Tuberculosis.
3. Outline mechanisms associated with Pathophysiology in;
 - a).Celiac Sprue
 - b).GERD