

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

JULY 2018 - END OF SEMESTER II COMMON EXAMINATION

PROGRAM: DIPLOMA

CLASS: SEPTEMBER 2017

Module: BIOCHEMISTRY

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE:

GENERAL INSTRUCTIONS

- 1) Write your admission number answer sheet provided
- 2) Read instructions on the question paper carefully
- 3) Number all questions correctly
- 4) Begin each essay question on a new page
- 5) Use legible writings
- 6) All cancellations must be clean and complete
- 7) Do not use a pencil except for drawings and illustrations
- 8) Ensure any extra paper(s) used is/are firmly fastened within the booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ)

- This section contains ten (10) questions
- Each question has four options
- There is no penalty for wrong responses

- Answer the questions on the answer sheet provided by marking "x" against the most correct response

QUESTIONS

1. The following enzymes are produced in the stomach:
 - a) Lactase
 - b) Amylase
 - c) Pepsin
 - d) Maltase
2. Fructose can be absorbed by:
 - a) Simple diffusion
 - b) Osmosis
 - c) Exocytosis
 - d) Facilitated transport
3. Breakdown of complex molecules to simpler molecules with release of ATP is
 - a) Anabolism
 - b) Digestion
 - c) Glycolysis
 - d) Catabolism
4. The following are pathways for sugar metabolism except:
 - a) Pentose phosphate pathway
 - b) Hexose monophosphate shunt
 - c) 3-phosphogluconate pathway
 - d) Tricarboxylic cycle
5. Glucose decarboxylation leads to:
 - a) Pentose sugar formation
 - b) Pyruvate formation
 - c) Polysaccharide formation
 - d) Fatty acid formation
6. The importance of lactate formation in glycolysis is:
 - a) Allows glycolysis to proceed in aerobic conditions
 - b) Allows glycolysis to proceed in anaerobic conditions
 - c) Enables generation of ATP
 - d) Enables the conversion of pyruvate to acetyl coenzyme A
7. About citric acid cycle:
 - a) Common pathway for carbohydrates only
 - b) Common pathway for proteins only

- c) Common pathway for carbohydrates, proteins and fats
d) Common pathway for fatty acids only
8. Glycogen is mainly stored in:
a) Spleen
b) Skeletal muscles
c) Brain
d) Lungs
9. Glycolysis in aerobic environment results into:
a) Pyruvate
b) Lactate
c) Succinate
d) Acetyl co-A
10. The following is true about vitamins:
a) They are synthesized in the body
b) They are not synthesized in the body
c) Vitamin D cannot be synthesized from cholesterol
d) Vitamin D is water soluble

SECTION B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

1. carbohydrate molecule consist of:

- a) carbon
b) sulphur
c) oxygen
d) nitrogen
e) hydrogen

2. monosaccharide's are:

- a) colorless
- b) readily soluble in water.
- c) Insoluble in water
- d) Bitter to taste
- e) crystalline compound

3. Synthesis of ketones by the body is regulated by:

- a) Rate of β -oxidation
- b) Availability of substrates to enter TCA cycle
- c) Mobilization of carbohydrate stores
- d) Availability of food
- e) Presence of fats in the food

4. The importance of body electrolytes is to:

- a) Regulate nerve and muscle function
- b) Regulate blood pressure
- c) Regulate blood pH
- d) Lubricate joints
- e) Lessen the burden of kidneys

5. Functions of lipids in the body include:

- a) Cell signaling
- b) Thermal insulation
- c) Dissolving of vitamins
- d) Building of the body structure
- e) Blood clotting

6. Digestion of carbohydrates in the mouth requires:

- a) Ptyalin
- b) HCL
- c) Lactase
- d) Chloride ions
- e) Optimum PH 6-7

7. Metabolic processes requiring water in the body include:

- a) Digestion
- b) Assimilation
- c) Cellular respiration
- d) Fertilization
- e) Starvation

8. Absorption of carbohydrates occurs through the following mechanisms:

- a) Simple osmosis
- b) Simple diffusion
- c) Active transport
- d) Capillary attraction
- e) Facilitated transport

9. Electrolytes are kept at a constant by:

- a) Liver
- b) Kidneys
- c) Hormones
- d) Pancreas

e) Brain

10. Deficiency of pyridoxine can be manifested in:

- a) Patients on isoniazid
- b) Pregnant mothers
- c) Lactating mothers
- d) Mothers on oral contraceptives
- e) Mother on Depo-Provera

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

1. Tabulate five (5) differences between water soluble vitamins and fat soluble vitamins: (10 marks)
2. Outline five (5) causes of body electrolytes imbalance: (10 marks)
3. State five (5) functions of carbohydrates in the body (10 marks)
4. Outline five (5) properties of water (10 marks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

1. Enzymes are protein catalysts for chemical reaction in biological systems:
 - a. Outline six (6) classes of enzymes (6marks)
 - b. Explain four (4) factors that affect enzyme activity in the body (8marks)
2. Discuss steps involved in anaerobic glycolysis (20marks)

1. Free fatty acids in the plasma
 - a) Circulate in unbound state
 - b) Bind to lipoproteins and circulated
 - c) Bind to albumin and circulated
 - d) Bind to fatty acid binding protein and circulated
2. In mammals, the major fat in adipose tissues is
 - a) Phospholipid
 - b) Cholesterol
 - c) Sphingolipids
 - d) Triacylglycerol
3. Dietary fats after absorption appear in the circulation as
 - a) HDL
 - b) VLDL
 - c) LDL
 - d) Chylomicron
4. Free fatty acids are transported in the blood
 - a) Combined with albumin
 - b) Combined with fatty acid binding protein
 - c) Combined with β -lipoprotein
 - d) In unbound free salts
5. The deficiency of both energy and protein causes
 - a) Marasmus
 - b) Kwashiorkar
 - c) Diabetes
 - d) Beri-beri

TRUE/FALSE

1. During RNA synthesis, the DNA template sequence TAGC would be transcribed to produce which of the following sequences?

- a) ATCG
- b) GCTA
- c) CGTA
- d) AUCG
- e) GCUA

2. Which of the following types of molecules is found in genetic material?

- a. cellulose
- b. enzymes
- c. lipids
- d. nucleic acids
- e. RNA

3. In what category of organic molecules are sugars placed?

- a. proteins
- b. lipids
- c. hormones
- d. carbohydrates
- e. starch

4. What element forms the skeleton of organic molecules?

- a. hydrogen atoms
- b. phosphate atoms
- c. carbon atoms
- d. water molecules
- e. Nitrogen

5. Two conditions in which gluconeogenesis is increased are

- a. Diabetes mellitus
- b. Fed conditions
- c. Starvation
- d. Alcohol intake
- e. Thyrotoxicosis

SHORT ANSWER QUESTIONS

1. Outline the Clinical features of gout
2. What are the structural characteristics common to all amino acids found in naturally occurring proteins?

LONG ANSWER QUESTION

Briefly discuss Glycogen storage diseases



KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE
END OF SEMESTER EXAMINATIONS TIME TABLE

Class: March 2019

Year of study: 1st

Semester: II

Academic Year: 2019/2020

Day/Date	Morning		Afternoon
	9:00 – 11:00 AM		2:00 – 4:00 PM
Monday 10 th /2/2020	Clinical Methods 11		Community Health II
Tuesday 11 th 2/2020	Anatomy 11	First Aid	Parasitology II
Wednesday 12 th /2/2020	General Pathology 11		Microbiology II
Thursday 13 th /2/2020	General Physiology 11		General Pharmacology II
Friday 14 th /2/2020	Biochemistry 11		Behavioral Sciences

Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 20/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

D1CM1/2017/635

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

2017/2018 ACADEMIC YEAR

CLASS: SEPTEMBER 2017

JULY 2018 - END OF SEMESTER I REMEDIAL EXAMINATION

PROGRAM: DIPLOMA

Module: ANATOMY I

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE: 9TH JULY 2018

GENERAL INSTRUCTIONS

- 1) Write your admission number in the spaces provided on the answer booklets
- 2) Read instructions on answer booklets and question paper carefully
- 3) Number all questions correctly
- 4) Begin each question on a new page
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SECTION A - MULTIPLE CHOICE QUESTIONS (MCQs- SBR) - 10%

- This section contains ten (10) questions
- Each question has four options
- There is no penalty for wrong responses
- Answer the questions on the answer sheet provided by marking "x" against the most correct response for each question as shown in the example below

Q1. Kenya is a unitary state with government(s)

- a) 1
- b) 2
- c) 48
- d) 47

Q1	
a	
b	
c	X
d	

Questions

1. Which of the following muscles do not consist of striations?
 - a) Cardiac
 - b) Skeletal
 - c) Smooth
 - d) None of the above

2. It divides the body into two equal right and left halves.
 - a) Coronal plane
 - b) Median plane
 - c) Horizontal plane
 - d) Sagittal plane

3. These skin lines are used for identification:
 - a) Surface pattern lines
 - b) Frictional ridges
 - c) Striae
 - d) Flexure lines

4. The basic and functional unit of the body is known as:
 - a) Neuron
 - b) Cell
 - c) Nephron
 - d) Tissue

5. Anatomical sagittal plane:
 - a) Divides the body into right and left parts
 - b) Divides the body into anterior and posterior parts
 - c) Divides the body into superior and inferior parts
 - d) Obliquely divides the body

6. The correct sequence of cell replication (mitosis) is:
 - a) Metaphase, prophase, telophase, anaphase
 - b) Prophase, Metaphase, anaphase, telophase
 - c) Anaphase, Metaphase, prophase, telophase
 - d) telophase, anaphase, Metaphase, prophase

7. Abdominal cavity visceral organs include all these except:
- a) Prostate
 - b) Uterus
 - c) Sigmoid colon
 - d) Small intestine
8. The adrenal glands are superior to?
- a) Thyroid
 - b) Liver
 - c) Kidneys
 - d) Hypothalamus
9. The following is not a branch from the arch of aorta
- a) Left common carotid artery
 - b) Left subclavian artery
 - c) Brachiocephalic trunk
 - d) Right common carotid artery
10. The following is false about the heart
- a) It is a self-adjusting suction and pressure pump
 - b) The right side receives poorly oxygenated blood
 - c) The left side receives well oxygenated blood
 - d) Systole is a period of ventricular relaxation and filling

SECTION B – MULTIPLE-TRUE-FALSE QUESTIONS (MT-F) – 10%

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "X" against the appropriate response for either true or false as shown in the example below

Q1. Kenya is a

- a) Unitary state with 48 governments
- b) Federal state with 48 governments
- c) Unitary state with 2 levels of governance
- d) Federal state with 2 levels of governance
- e) Unitary state with 47 federal governments

Q1	T	F
a	X	
b		X
c	X	
d		X
e		X

Questions

1. About connective tissues:
 - a) They are predominantly composed of intercellular matrix
 - b) They do not have cells
 - c) Blood is a connective tissue
 - d) They bind structures together
 - e) Muscles are connective tissues
2. Lymphoid tissue is mainly found in the following parts of the body:
 - a) The spleen
 - b) The tonsils
 - c) The heart
 - d) The brain
 - e) The lymph nodes
3. Erythrocytes:
 - a) Are about 7 microns in diameter and 2 microns thick
 - b) Lose their nucleus as they mature, so that mature cells have no nucleus
 - c) Have no mitochondria
 - d) Protect the body from microbial attacks
 - e) Control the clotting mechanism

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

JULY 2018 - END OF SEMESTER II COMMON EXAMINATION

PROGRAM: DIPLOMA

CLASS: SEPTEMBER 2017

Module: ANATOMY

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE:

GENERAL INSTRUCTIONS

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SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ)

- This section contains ten (10) questions
- Each question has four options
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QUESTIONS

- 1) Which one of the following is not a muscle of mastication?
 - a) Masseter
 - b) Temporalis
 - c) Pterigoid
 - d) Orbicularis oculi

- 2) Bones forming cranium include all except
 - a) Temporal
 - b) Parietal
 - c) Zygomatic
 - d) Occipital

- 3) Which one of the following is not a flat bone?
 - a) Carpals
 - b) Ribs
 - c) Sternum
 - d) Skull

- 4) Paranasal sinuses include all except
 - a) Frontal
 - b) Sphenoid
 - c) Mastoid
 - d) Ethmoid

- 5) Which one of the following bones is not in the cranium?
 - a) Parietal
 - b) Temporal
 - c) Superior conchae
 - d) Inferior conchae

- 6) Which part of radius is on the distal end of radius?
 - a) Styloid process
 - b) Interosseus membrane
 - c) Olecranon process
 - d) Trochlear notch

- 7) Which one is true about lumbar vertebral
- a) They are smaller than thoracic
 - b) The distal body forms the lumbo-sacral joint
 - c) They are square shaped
 - d) They have bifid spinous process
- 8) The following muscle connects the upper limb with the thoracic wall:
- (a) Pectoralis major
 - (b) Biceps brachii
 - (c) Extensor carpi ulnaris
 - (d) Pronator teres
- 9) Which of the following is contained in the middle ear?
- (a) Pinna
 - (b) External auditory meatus
 - (c) Auditory ossicles
 - (d) Semicircular canals
- 10) The liver is located in the and extends....., into the.....Region of the body
- a) Left upper quadrant, along the midline, right upper quadrant
 - b) Right lower quadrant, across midline, left upper quadrant
 - c) Right upper quadrant, across the midline, left upper quadrant
 - d) Left lower quadrant, to left upper quadrant

SECTION B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

1. Proximal row of carpal bones include
 - a) Scaphoid
 - b) Hamate
 - c) Trapezoid
 - d) Pisiform
 - e) Triquetrum

2. About the lungs and bronchi
 - a) The right lung has 3 lobes
 - b) The left lung has 2 lobes
 - c) The hilum of the lungs gives a channel of blood vessels
 - d) The left bronchus is shorter and straighter than the right
 - e) The right bronchus is shorter and straighter than the left

3. Components of the upper respiratory tract include
 - a) Larynx
 - b) Nasopharynx
 - c) Trachea
 - d) Bronchi
 - e) Nose

4. The following are paired facial bones
 - a) Maxilla
 - b) Sphenoid
 - c) Zygomatic
 - d) Ethmoid
 - e) Mandible

5. Human ribs:
 - a) Are 6 pairs
 - b) 1st rib is horizontal
 - c) Enclose the lungs
 - d) Do not articulate with thoracic vertebral
 - e) All ribs articulate with the sternum

6. Regarding the distal humerus:
- a) The capitulum is medial condyle
 - b) The trochlear marks the medial condyle
 - c) Has olecranon fossa
 - d) Has a trochlear notch
 - e) Has two epicondyles
7. Respond to the following information pertaining to blood supply to the GIT
- a) The liver and the stomach are supplied by branches of celiac trunk
 - b) Ascending and transverse colon are supplied by branches of superior mesenteric artery
 - c) Descending colon and rectum are supplied by branches of inferior mesenteric artery
 - d) The stomach is supplied by the inferior mesenteric artery
 - e) The duodenum is supplied by the renal artery
8. The following form the external female genitalia:
- a) Mon's pubis
 - b) Clitoris
 - c) Vagina
 - d) Batholith's glands
 - e) Labia minora
9. The following form part of proximal end of humerus:
- a) Lesser trochanter
 - b) Greater tuberosity
 - c) Anatomical neck
 - d) Epicondyle
 - e) Linear aspera
10. About the pancreas:
- a) Is located behind the stomach
 - b) Has both endocrine and exocrine functions
 - c) Islets of Langerhans produce pancreatic juice
 - d) Receives blood supply from coeliac and superior mesenteric arteries
 - e) Pancreatic duct drains enzymes into the jejunum

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

1. Name and give the locations of the three pairs of salivary glands (10 marks)
2. Name the 8 carpal bones and name the two joints of the thumb (10 marks)
3. Name at least 10 parts that form the female genitalia (10 marks)
4. Outline five gross components of the respiratory system (10 marks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

- Q 1. Write notes about the anatomy of the esophagus (20 marks)
- Q2. Draw and name the parts of the nephron (20 marks)



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DEPARTMENT OF CLINICAL MEDICINE
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Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 26/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

2017/2018 ACADEMIC YEAR

CLASS: SEPTEMBER 2017

JULY 2018 - END OF SEMESTER II EXAMINATION

PROGRAM: DIPLOMA

Module: *PHYSIOLOGY*

D/CM/18015/639

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE:

GENERAL INSTRUCTIONS

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- a) 1
- b) 2
- c) 48
- d) 47

Q1	
a	
b	
c	X
d	

Questions

Q1. The process by which the cell ingests nutrients is known as:

- a) Deglutition
- b) Dissolution
- c) Swallowing
- d) Endocytosis

Q2. Substances that make up the cell are collectively known as:

- a) Plasma membrane
- b) Ions
- c) Protoplasm
- d) Intracellular fluid

Q3. The group of tissues in the body forms:

- a) The cell
- b) The tissue system
- c) The organs
- d) The systems

Q4. A transport mechanism where substances are moved from low concentration to high concentration is known as:

- a) Osmosis
- b) Active transport
- c) Diffusion
- d) Co-transport

Q5. The following are cell organelles except:

- a) Cytosols
- b) Mitochondria
- c) Delta cells
- d) Endoplasmic reticulum

Q6. Which of the following fluid is referred to as internal environment?

- a) Lymphatic fluid

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- b) Extracellular fluid
- c) Transcellular fluid
- d) Intracellular fluid

Q7. Fill in the blanks: Glycogen is a storage form of glucose glycogenesis refers to the process of making glycogen and _____ refers to the process of breakdown of glycogen.

- a) Glycogenolysis, glycogenesis
- b) Glycolysis, glycogenolysis
- c) Glycogenesis, glycogenolysis
- d) Glycogenolysis, glycolysis.

Q8. The pressure which is necessary to prevent solvent migration is called:

- a) Pressure difference
- b) Osmotic pressure
- c) Diffusion rate
- d) A buffer pressure.

Q9. Which one of the following statement defines the term osmolarity correctly?

- a) Is the number of osmoles per kilogram of a solvent
- b) Is the number of osmoles per litre of solution
- c) Is the hypertonic state of a solute
- d) Is the tonicity of solution.

Q10. The production of RNA from DNA is called

- a) Transcription
- b) Translation
- c) Replication
- d) Duplication.

SECTION B – MULTIPLE-TRUE-FALSE QUESTIONS (MT-F) – 10%

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- d) Federal state with 2 levels of governance
- e) Unitary state with 47 federal governments

Q1	T	F
a	X	
b		X
c	X	
d		X
e		X

Questions

Q1. The functions of lysosomes include:

- a) Cell autolysis.
- b) Helps in tissue regression.
- c) Breakdown floating lipids and glycogen molecules
- d) Remove unwanted foreign substances.
- e) Production of energy to the cell.

Q2. Respond true or false about homeostasis

- a) Is the maintenance of internal environment of the cell constant.
- b) Refers to ensuring chemical and physical properties of the cell remain constant.
- c) It also synonymous with life.
- d) Ensures that the pathological state of the cell remains constant.
- e) Contribution of various systems helps to achieve the functional activities of the cell.

Q3. The following lipids are soluble in water

- a) Phospholipids.
- b) Cholesterol.
- c) Triglycerides.
- d) Neutral fats.
- e) Phospholipids and cholesterol.

Q4. Respond true or false.

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- a) Biological buffers including bicarbonate, proteins and phosphates can bind or release protons in a solution to help maintain PH.
- b) Necrosis is the process in which healthy cells are destroyed by external process such as inflammation.
- c) Apoptosis is also referred to as cell suicide.
- d) Endocytosis is the reverse of exocytosis.
- e) Cell eating is also referred to as cell necrosis.

Q5. About cell membrane.

- a) Contain relatively few protein molecules.
- b) Contain many carbohydrate molecules.
- c) Are relatively permeable to electrolytes but not to proteins.
- d) Have variable protein and lipid contents depending on their location in the cell.
- e) Have stable composition throughout the life of the cell.

Q6. The rate of diffusion is determined by:

- a) Electrical potential difference.
- b) Pressure difference.
- c) Concentration difference membrane permeability.
- d) Thickness of the membrane.
- e) Membrane permeability.

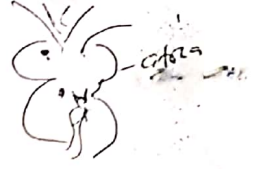
Q7. Which of the following branches of science provides the foundation for understanding body parts and their functions?

- a) Genetics.
- b) Anatomy.
- c) Physiology.
- d) Pathology.
- e) Biochemistry.

Q8. The following are the main functions of the membrane Carbohydrate EXCEPT.

- a) The glycocalyx forms bonds with neighbor cells hence holding body cells compactly together.
- b) They act as receptor sites for certain substances needed by the cell.
- c) They participate in the body immunity.
- d) They have a net negative charge hence repels other negatively charged substances.
- e) They have a net negative charge hence repels other positively charged substances.

Q9. The Golgi complex



MEDICAL PHYSIOLOGY I

- ✓ a) Is an organelle that participates in the breakdown of proteins and lipids.
- b) Is an organelle that participates in posttranslational processing of proteins.
- ✓ c) Is an organelle that participates in energy production.
- d) Is an organelle that participates in transmission and translation,
- ✓ e) Is a sub-cellular compartment that stores proteins for trafficking to the nucleus.

Q10. Respond True or False: About the cell

- ✓ a) The cell and intracellular organelles are surrounded by semi-permeable membranes.
- ✓ b) Cells contain a variety of organelles that perform specialized cell functions.
- c) Cells contain distinct protein complexes that save cellular connections to other cells or the extracellular matrix.
- ✓ d) Cells can communicate with one another via chemical messengers.
- ✓ e) Cells do not communicate to one another since they don't have established communication channels.

SECTION C – SHORT ANSWER (SAQs)/STRUCTURED QUESTIONS – 40 marks

- This section contains FOUR questions
- ATTEMPT all questions

Questions

Q1. (a) List at least 3 nitrogenous bases in building blocks of DNA (3mks)

(b) Name two (2) main processes of cellular reproduction (2 mks)

(c) List the five (5) stages of mitosis (5 mks)

Q. 2 Define the following terms (10 mks)

a) homeostasis
b) hydrostatic pressure
diffusion
colloid

e. tissue

Q. 3. List and explain five (5) characteristics of a cell that make it a living unit. (10marks)

A, describe the conduction process of heat 20mks
Outline the mechanism of transport across the cell membrane 20mks

SECTION D – LONG ANSWER QUESTIONS (LAQs) – 40 marks

- This section contains TWO questions

- Answer the questions on the answer sheet provided by marking "x" against the most correct response

QUESTIONS

1. Posterior lobe of the pituitary produces which of the following hormones;

- a) Oxytocin
- b) Prolactin
- c) Growth hormone
- d) Thyroid hormone.

2. About the eye:

- a) Rods and cones are photo-receptors
- b) The choroid is the nervous tunic
- c) Levator palpebrae superioris moves the eyeball upwards
- d) Inferior rectus is an intrinsic eye muscle

3. The following hormones are necessary for spermatogenesis except;

- a) Follicle-stimulating hormone (FSH)
- b) Testosterone
- c) Estrogen
- d) Human chorion gonadotrophic

4. Which cranial nerve is involved in sense of taste?

- a) Trochlear
- b) Oculomotor
- c) Glossopharyngeal
- d) Vagus

5. Most of the digestion occurs in:

- a) The mouth
- b) Small intestine
- c) The stomach
- d) The large intestines

6. Midbrain controls all except :
- a) cardiac cycle
 - b) respiratory cycle
 - c) intellect of a person
 - d) vomiting in a person
7. The factors that shift Oxygen-hemoglobin dissociation curve to the right:-
- a) Decreased temperature
 - b) Increased PH
 - c) Exercises -
 - d) Decreased 2; 3 diphosphoglycerate concentration
8. Which of the following conditions leads to tissue hypoxia?
- a) Carbon monoxide
 - b) Low altitude
 - c) High haemoglobin
 - d) Respiratory alkalosis
9. During expiration:-
- a) The diaphragm relaxes -
 - b) The diaphragm contracts
 - c) Thoracic volume increases
 - d) Thoracic pressure decreases
10. The visual cortex is located in :
- a) Insula
 - b) Cerebellum
 - c) frontal cerebrum
 - d) occipital cerebrum

SECTION B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

1. The following are general functions of the respiratory system:
 - a) Exchange of gases
 - b) Regulation of pH
 - c) Protection
 - d) Vocalization
 - e) Buffer system
2. The following are the functions of the gastrointestinal system:
 - a) Motility
 - b) Secretion
 - c) Digestion
 - d) Absorption
 - e) Excretion
3. In relation to respiration:
 - a) Pressure in the alveoli is higher than atmospheric pressure during inspiration
 - b) In inhalation the lung volume increases and atmospheric pressure decreases
 - c) During expiration the diaphragm contracts and flattens
 - d) In active inhalation, external intercostal muscle relaxes and elevates ribs
 - e) Exhalation is passive, while Inhalation is active
4. The effects of parasympathetic nerve stimulation includes:
 - a) Hypotension

- b) Mydriasis
- c) Erection
- d) Constipation
- e) Bronchoconstriction

5. The following hormones regulate the menstrual cycle:

- a) luteal phase is associated with increased progesterone
- b) proliferative phase is associated with increased oestrogen
- c) ovulation is initiated by an increase of luteinizing hormone
- d) FSH regulates production of prolactin
- e) Luteinizing Hormone regulates production of prolactin

6. Concerning growth hormone:

- a) Its secreted by the somatotrophes of the anterior pituitary
- b) It increases the size and number of cells by mitotic division
- c) Acts through somatomedins i and ii
- d) Growth hormone releasing factor decreases growth hormone secretion
- e) Is stimulated by fasting

7. Concerning Neurons:

- a) The nerve cell cannot multiply like other cells
- b) Nissil bodies and neurofibrils are found only in the nerve cells and not other cells
- c) Efferent neurons carry impulses to the brain

- d) Mitochondria form the power house of the cell
- e) Myelinated conduct impulses faster than non- myelinated
8. About starch digestion:
- It begins In The Mouth
 - It occurs In The Stomach
 - It requires the action of pancreatic amylase
 - It requires Brush Border Enzymes For Completion
 - Ptyalin that digest starch is secreted from parietal cells
9. The following substances are reabsorbed at the proximal convoluted tubule:
- Glucose
 - Amino acids
 - Sodium
 - Urea
 - Water
10. CO₂ is carried in the blood as:
- As dissolved gas
 - As carbaminohemoglobin
 - As bicarbonate ion
 - As carboxyhemoglobin
 - As carbonic anhydrate

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

1. State five (5) functions of the liver (10 marks)
2. Describe the endocrine functions of the kidney (10 marks)

3. Describe five (5) functions of insulin (10 marks)
4. Outline the effects of sympathetic stimulation on the cardiovascular system (10marks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

1. Discuss the four (4) steps involved in respiration (20 marks)
2. Discuss the formation, circulation and drainage of Cerebro spinal fluid (CSF) in the
Central nervous system (CNS) (20 marks)

SECTION A: MULTIPLE TRUE /FALSE QUESTIONS

1. The following are the main functions of the membrane Carbohydrate EXCEPT.
 - a) The glycocalyx forms bonds with neighbour cells hence holding body cells compactly together.
 - b) They act as receptor sites for certain substances needed by the cell.
 - c) They participate in the body immunity.
 - d) They have a net negative charge hence repels other negatively charged substances
 - e) They participate in protecting the mucous membranes
2. The Golgi complex
 - a) Is an organelle that participates in the breakdown of proteins and lipids.
 - b) Is an organelle that participates in posttranslational processing of proteins.
 - c) Is an organelle that participates in energy production.
 - d) Is an organelle that participates in transmission and translation,
 - e) Is a sub-cellular compartment that stores proteins for trafficking to the nucleus.
3. The rate of diffusion is determined by:
 - a) Electrical potential difference
 - b) Pressure difference.
 - c) Concentration difference membrane permeability.
 - d) Thickness of the membrane.
 - e) Membrane permeability.
4. The following lipids are soluble in water
 - a) Phospholipids.
 - b) Cholesterol.
 - c) Triglycerides.
 - d) Neutral fats.
 - e) Phospholipids and cholesterol.
5. Respond true or false about homeostasis
 - a) Is the maintenance of internal environment of the cell constant.
 - b) Refers to ensuring chemical and physical properties of the cell remain constant.
 - c) It also synonymous with life.
 - d) Ensures that the pathological state of the cell remains constant.
 - e) Contribution of various systems helps to achieve the functional activities of the cell.
6. Respond true or false.
 - a) Biological buffers including bicarbonate, proteins and phosphates can bind or release protons in a solution to help maintain PH.

- b) Necrosis is the process in which healthy cells are destroyed by external process such as inflammation.
- c) Apoptosis is also referred to as cell suicide.
- d) Endocytosis is the reverse of exocytosis.
- e) Cell eating is also referred to as cell necrosis.
7. Energy produced from nutrients in the cells, adenosine triphosphate is used.
- To supply energy to transport sodium across cell membrane
 - For protein synthesis
 - To supply energy for muscle contraction
 - Supply energy for action potential initiation
 - Supply energy for cell production
8. Functions of sodium potassium pump include
- Pumping 3 sodium ions to the outside for every 2 potassium ions pumped in
 - To - co - transport calcium ions
 - To control the volume of fluid in the cells
 - Is required for nerve action potential
 - Promotes nutrient absorption
9. Smooth muscles are found in:
- Long bones^{vertebrae}
 - Ribs
 - Blood vessels
 - Bronchioles
 - Ducts of urinary tract
10. Respond true or false in regard to resting membrane potential in a nerve cell.
- Is due to separation of positive and negative charges across the cell membrane
 - Normally there is a potential difference across the membrane
 - The membrane should not be permeable to membranes
 - It is at negative 90mV
 - The inside of the membrane is always positive
11. Smooth muscles;
- Are also called voluntary muscles
 - Plays a role in regulation of blood pressure
 - Help in movement of food substances in gastrointestinal system
 - Is the chief player in movements of body parts and help in day to day activities
 - Lack actin and myosin contractile proteins.
12. On skeletal muscles T/F

- a) Are found in all parts of the body including the heart.
- b) Depend on stimulus from the motor nerve for its contractions
- c) Sarcomere is the contractile unit of the muscle fiber
- d) Calcium ions plays a role in the contractile process
- e) Also called striated muscle.

13. On neuromuscular junction the following statements are TRUE

- a) It is a terminal junction between two nerves,
- b) It is innervated by axon terminal branch of the nerve.
- c) Contain neurotransmitter acetylcholine in the synaptic cleft.
- d) Presynaptic membrane vesicles contain acetylcholinesterase which transmit impulse in the synaptic cleft.
- e) The negative potential in the presynaptic membrane is -70mlv.

14. Respond true or false to the human body systems functions matched.

- a) Integumentary system – secrete hormones
- b) Nervous system - control temperature
- c) circulatory system – transport blood
- d) Respiratory sustem – Gas exchange
- e) Urinary system – Regulate blood volume

15. About functional organization of the body

- a) Skin protects the human body
- b) Brain regulates body systems
- c) Bone marrow breaks down food
- d) Gonads function in continuation of human species
- e) Glands secrete hormones

16. Which of the following branches of science provides the foundation for understanding body parts and their functions?

- a) Genetics.
- b) Anatomy.
- c) Physiology.
- ~~d) Pathology.~~
- e) Biochemistry.

17. Respond True or False: About the cell

- a) The cell and intracellular organelles are surrounded by semi-permeable membranes.
- b) Cells contain a variety of organelles that perform specialized cell functions.
- c) Cells contain distinct protein complexes that save cellular connections to other cells or the extracellular matrix.
- d) Cells can communicate with one another via chemical messengers.

- e) Cells do not communicate to one another since they don't have established communication channels

18. The following elements are required in erythropoiesis;

- a) Iron
- b) Folate
- c) Cyanocobalamine
- d) Calcium
- e) Vitamin D

19. Factors that influence cardiac output include

- a) Heart rate
- b) Exercise
- c) Adrenaline
- d) Temperature
- e) Blood volume

20. Structures that are involved in relaying electrical impulses in the heart are

- a) Bundle of His
- b) Purkinje fibres
- c) Sino artrial node
- d) Atrial ventricular node
- e) Septum

SECTION B: SHORT ESSAY/STRUCTURED QUESTIONS

1. Differentiate between intracellular and extracellular fluids stating their contents (10 marks)
2. Define the following terms as used in body fluids movement.
 - a) Diffusion (5 marks)
 - b) Osmosis (5marks)
3. Differentiate between the following
 - a) Hydrostatic pressure (5 marks)
 - b) Colloid osmotic pressure (5 marks)
4. In a human cell, outline the functions of the Mitochondria (10marks)

CA, AV P.

SECTION C: LONG ESSAY QUESTIONS

1. Discuss the role of hypothalamus in fluid movement. (20 mark)
2. Differentiate between negative and positive feedback mechanisms (20 marks)

SECTION 1: MULTIPLE CHOICE QUESTIONS (MCQs)- (10 MARKS)

1. Vital capacity is;
 - a) Tidal volume + inspiratory reserve volume
 - b) Tidal volume + inspiratory reserve volume + expiratory reserve volume
 - c) Tidal volume + residual volume + inspiratory reserve volume
 - d) Tidal volume + expiratory reserve volume – residual volume

2. Apnea is ;
 - a) Kussmal's breathing
 - b) Temporary stoppage of breathing
 - c) Irregular breathing
 - d) Reduced rate of breathing

3. HCL is secreted in the stomach by;
 - a) Chief cells
 - b) Parietal (oxyntic) cells
 - c) Goblet cells
 - d) 'G' cells of pyloric mucosa

4. In the GI tract this layer is responsible for absorption and secretions;
 - a) Mucosa
 - b) Sub mucosa
 - c) Muscularis
 - d) Serosa

5. This keeps the chyme in the stomach until it reaches the right consistency to pass into the small intestines;
 - a) Esophageal sphincter
 - b) Intrinsic sphincter
 - c) Cardiac sphincter
 - d) Pyloric sphincter

6. The following are effects of excess blood cortisol levels, EXCEPT:-
 - a) Truncal obesity
 - b) Hypotension
 - c) Moon face
 - d) Hyperglycaemia

7. The following are effects of calcitonin hormone; EXCEPT:-

- a) Increases the plasma calcium levels
- b) Increases the plasma parathyroid hormone levels
- c) Decreasing the calcium GIT absorption
- d) Inhibits the calcium renal excretion

8. The following are effects of catecholamines; EXCEPT:-

- a) Tachycardia
- b) Diarrhea
- c) Urine retention
- d) Pupils dilatation

9. Which following responses occur during parasympathetic stimulation; EXCEPT:-

- a) Increased destrusor muscle tone
- b) Increased salivation
- c) Increased urination
- d) Increased peristaltic movement

10. Which following responses occur during anti-cholinergics administration; EXCEPT:-

- a) Initiate an erection
- b) Causes mydriasis
- c) Causes constipation
- d) Causes bronchial muscle relaxation

SECTION 2: TRUE OR FALSE QUESTIONS (T/FQs)- (10 MARKS)

1. Accessory muscles of respiration include:-

- a) Diaphragm
- b) Intercostal muscles
- c) Trapezius
- d) Sternocleidomastoid
- e) Anterior abdominal muscles

2. Concerning surfactant in the lungs:-

- a) It increases the surface tension of water
- b) Its deficiency causes lung collapse
- c) It is secreted by type II alveolar epithelial cells
- d) It has calcium ions
- e) It reduces the energy required for respiration

3. About mechanism of pulmonary ventilation;-
- During inspiration the diaphragm contracts making the thoracic cavity longer
 - In expiration the chest cage moves outwards
 - Internal intercostal muscles are primary expiratory muscles
 - The size of thorax decreases during expiration
 - There is increase in intrapleural pressure during expiration
4. Carbohydrates are absorbed from intestines;-
- In the form of monosaccharides
 - In the form of polysaccharides
 - By simple diffusion
 - By mechanism of secondary active transport
 - Requires energy
5. Concerning the secretion and action of secretin;-
- Increases secretion of alkaline pancreatic fluid
 - Increases gastric acid secretion
 - Stimulates secretion of pepsinogen
 - Produced by the antrum of stomach
 - Secretion is stimulated by fats and sugars entering the duodenum
6. Action of glucagon includes:-
- Promotes Glycolysis
 - Enhances Glycogenesis
 - Inhibits Lipogenesis
 - Support Ketogenesis
 - Inhibits Glycogenolysis
7. Parasympathetic stimulation causes the following effects:-
- Increased salivation
 - Increased urination
 - Increased pupils dilatation
 - Increased defaecation
 - Increased peristalsis

8. The following are effects of cholinergic sympathetic antagonism:-

- a) Penile erection
- b) Bradycardia
- c) Delayed gastric emptying time
- d) Vasoconstriction
- e) GIT wall relaxation

9. The following are effects of thyroid hormones:-

- a) Decreases BMR
- b) Increases cardiac output
- c) Loss of libido
- d) Heat intolerance
- e) Decreased cholesterol

10. The following are effects of parathyroid hormone (PTH):-

- a) PTH increases phosphate excretion in the urine
- b) PTH acts directly on bone to increase bone resorption
- c) PTH increases the formation of 1,25 dehydroxycholecalciferol
- d) PTH stimulates osteoclasts and inhibits osteoblasts
- e) PTH increases promotes calcium renal re-absorption

SECTION TWO: SHORT ANSWER QUESTIONS (SAQs) - (60 MARKS)

1. A). Describe the calcium metabolic homeostasis by endocrine system, giving examples of various hormones and sites involved. (5 Marks)

B). Outline the Five (5) main physiological actions of Insulin hormone produced by the endocrine pancreas. (5 Marks)

2. A). Outline the Five (5) steps involved in the biosynthesis of thyroid hormones in endocrine physiology (5 Marks)

B). Endocrine system works through negative feedback loop mechanism, explain this statement using example female reproductive system. (5 Marks)

3. A). Discuss the pituitary hypothalamus axis mechanisms controlling steroid production in the adrenal cortex. (5 Marks)
- B). Describe the effects of cholinergic sympathetic agonists on smooth muscles on gastro-intestine. (5 Marks)
4. In the lungs, gas exchange takes place in the alveolar sacs. During exchange, the gases must rapidly cross the respiratory membrane that separates the alveolar and capillary lumens.
- A). With the use of a cross sectional diagram show the components of the respiratory membrane (6 Marks)
- B). Outline 4 factors that may affect the rate of gas diffusion through the respiratory membrane (4 Marks)
5. A). Explain how carbon dioxide is transported from tissues to the alveoli (5 Marks)
- B). List 5 accessory organs of the digestive system (5 marks)
6. Concerning digestive system.
- A). Outline 8 functions of the liver (4 Marks)
- B). Describe the 3 phases of gastric secretions in order to digest a meal (6 Marks)

**WISHING YOU SUCCESS, MERRY CHRISTMAS &
PROSPEROUS YEAR 2020.**

PART A: MULTIPLE CHOICE QUESTION (10%)

Question One

1. The following make up the tubular system of the kidneys;
- a) Loop of henle
 - b) Glomerulus
 - c) Podocytes
 - d) Mesangial cells

Question Two

2. Net filtration pressure causing filtration at glomeruli is;
- a) 20 mmHg
 - b) 10 mmHg
 - c) 5 mmHg
 - d) -2 mmHg

Question Three

3. Glomerular filtration rate increases;
- a) When afferent arterioles constrict
 - b) When mean blood pressure increases to 120 mmHg
 - c) When afferent arterioles dilate
 - d) When colloid osmotic pressure of glomerular capillary blood rises

Question Four

4. The total lung capacity is equal to;
- a) The Vital capacity + Tidal volume
 - b) The functional residual capacity + Respiratory reserve volume
 - c) The anatomical dead space + Alveolar dead space
 - d) The residual volume + Vital capacity

Question Five

5. Parathyroid hormone:-
- a) Decreases calcium absorption in the intestines
 - b) Prevents calcium re- absorption in the kidneys
 - c) Increases calcium re-sorption from the bones
 - d) Decreases calcium mobilization from bone

PART B: TRUE/FALSE QUESTIONS (10%)

Question One

1. Glomerular membrane;

- a) Filter substances only up to molecular weight of 69,000
- b) The pores are 8nm.
- c) Filters at a rate of 1000 ml/min
- d) Causes filtration of globulins easily
- e) Rate of filtration is 125 ml/min

Question Two

2. Active reabsorption of glucose occurs in;

- a) Collecting tubules
- b) Collecting ducts
- c) Distal convoluted tubules
- d) Proximal tubule
- e) Renal corpuscle

Question Three

3. About nephron;

- a) Each kidney contains 2 million nephrons
- b) Each kidney contains 1 million nephrons
- c) Juxtamedullary nephronas have longer loops of Henle
- d) Forms functional unit of the kidney
- e) Consists of glomerulus and tubules

Question Four

4. The factors that shift Oxygen-hemoglobin dissociation curve to the right:-

- a) Decreased temperature
- b) Increased PH
- c) Exercises
- d) Decreased 2; 3 diphosphoglycerate concentration
- e) Hypercarpnia

Question Five

5. During expiration;

- a) The diaphragm relaxes
- b) The diaphragm contracts
- c) Thoracic volume increases
- d) Thoracic pressure decreases
- e) External intercostals muscles contracts

PART C: SHORT ANSWER ESSAY QUESTION - (20%)

1. A) Outline five functions of the kidneys (5 marks)
B) Describe the renal vascular system (5 marks)
2. A) Describe how the respiratory centers control breathing to maintain homeostasis (5 marks)
B) Explain the concept of negative and positive pressures in breathing mechanism (5 marks)
3. A) Enumerate the role/ contribution of cardiovascular system on respiratory system physiology (5 marks)
B) Outline the antagonist influence nature of Haldane's and Bohr's effects in Oxygen - hemoglobin dissociation curve (5 marks)
4. A) Explain how high calcium (Ca^{++}) blood levels are regulated/ corrected to achieve the body Calcium homeostasis (5 marks)
B) Explain why human growth hormone (HCG) is considered as a "Fountain of youth." In your explanations, focus on it's effects on other hormones (5 marks)

PART D: LONG ANSWER ESSAY QUESTION - (40%)

1. Discuss the process of urine formation (20 marks)
2. Explain how negative feedback systems work using the analogy of boss (hypothalamus), master (pituitary) and servant (target cell). In your explanation, use a specific hormone, to schematically illustrate your answers (20 marks)

END OF THE EXAMINATION; SUCCESS.



KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE
END OF SEMESTER EXAMINATIONS TIME TABLE

Class: March 2019

Year of study: 1st

Semester: II

Academic Year: 2019/2020

Day/Date	Morning		Afternoon
	9:00 – 11:00 AM		2:00 – 4:00 PM
Monday 10 th /2/2020	Clinical Methods 11		Community Health II
Tuesday 11 th 2/2020	Anatomy 11	First Aid	Parasitology II
Wednesday 12 th /2/2020	General Pathology 11		Microbiology II
Thursday 13 th /2/2020	General Physiology 11		General Pharmacology II
Friday 14 th /2/2020	Biochemistry 11		Behavioral Sciences

Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 20/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

END OF SEMESTER 11 EXAM

PARASITOLOGY

Time: 11.00AM – 1.00PM

Date: 28TH JUNE 2017

Class: September 2016

College No.

Instructions To Candidate

1. Any cancellation must be complete and clear.
2. Write college numbers on all pages.
3. Answer all questions.

1. Complications of trypanosoma cruzi include:-
 - a) Sleep disturbances
 - b) Mega oesophagus
 - c) Cardiomegally
 - d) Megacolon
 - e) Pleural effusions

2. Concerning Entamoeba histolytica:-
 - a) Usually presents with haematuria
 - b) Cyst forms indicate acute illness
 - c) The egg has 8 nuclei
 - d) It associated with flask shaped ulcers
 - e) Is a common cause of liver abscess

3. Concerning malaria:-
 - a) Human beings are the definitive host
 - b) Fansidar is the drug of choice in management
 - c) May lead to acute renal failure
 - d) The sexual reproductive cycle occurs in human
 - e) Aplasmodium ovale is associated with hyponozoites

4. Filariasis:-
 - a) The microfilaria may have a diurnal variation
 - b) The mango fly is the vector in balba
 - c) Wuchereria bancrofti is associated with hydrocele
 - d) Onchecerca volvulus is a cause of subcutaneous filariasis
 - e) The mosquito is the main vector for wuchereria bancrofti

5. About taenia species:-
 - a) Taenia saginata is associated with cyticercosis
 - b) The cow is a definitive host in taenia saginata
 - c) Suramine is the drug of choice in management
 - d) The pig is an intermediate host in taenia solium
 - e) Are round worms

6. Concerning ^{trematodes} toxoplasma gondii:-
 - a) They are flat worms
 - b) Schistosoma mansoni is an example of intestinal fluke
 - c) Parasoninus westermani may present with haemoptyes
 - d) Fasciola hepatica mainly found in the large intestines
 - e) Their eggs are operculated

7. True or false:-

- * a) Definitive host harbours the acute forms of the parasites
- b) In ^{symbiosis} symbioses, both the host and parasites benefits from each other
- c) The housefly (*Musca domestica*) is a biological vector
- d) Human beings are accidental hosts of *Echinococcus granulosus*
- e) Mebendazole may be used in leishmaniasis

8. About intestinal nematodes without tissue stage:-

- a) *Enterobius vermicularis* is treated by piperazine
- b) *Trichuris trichiura* is also called pin or thread worm
- c) *Dracunculus medinensis* is an example of intestinal nematodes without tissue stage
- d) The posterior end is curved ventrally
- e) *Ancystoma duodenale* and *Necator americanus* are two major species

9. Causes of subcutaneous ^{filariasis} filariasis include:-

- a) ^{Loa loa} *Loa loa*
- b) *Brugia malayi*
- c) *Wuchereria bancrofti* ^{bancrofti}
- d) *Dracunculus medinensis*
- e) *Pneumocystis jirovecii*

10. Complications of *Schistosoma mansoni* include:-

- a) Iron deficiency anaemia
- b) Intestinal polyps may cause obstruction
- c) Squamous cell carcinoma of the bladder
- d) Lung abscess
- e) Cervical polyps

11. Clinical presentation of *Oncocerca vivulus* ^{vivulus} include:-

- a) Cataracts
- b) Blindness
- c) Leopards skin
- d) Bone marrow suppression
- e) Lizards skin

12. *Ascaris lumbricoides* ^{loeffler's}:-

- a) Associated with ^{loeffler's} loeffler's syndrome
- b) May cause intestinal obstruction
- c) Public health and ^{sanitation} sanitation measures play a major role in its control
- d) Praziquantel is the drug of choice in treatment
- e) Mainly transmitted by the feco-oral route

13. Drugs used in management of trypanosome ^{a brucei} burcei include:-
- Prednisolone
 - Amptotericin B
 - Aminosicline
 - Suramin
 - Pentamidine
14. About schistosomiasis (BILHARZIASIS):-
- S.mansoni causes intestinal schistosomiasis
 - SS.mekongi causes vesical schistosomiasis
 - The female worm lies in the gynecophoral canal of the male
 - S.^{Mansoni}marisoni and s.haematobium are prevalent I Ethiopia
 - The snail hosts that harbors s.masoni ^{is} s. trobicorbis ^{tricornis}
15. True or false:-
- S. Haematoblum causes squamous cell carcinoma in the bladder
 - Patients with s.mansoni, suffer from ^{Mansoni} cercarial dermatitis
 - Enlargement of spleen and liver (hepatospleenagly) is not associated with s.haematobium ^{hepatosplenomegaly}
 - Clonorchis sinensis adult live in bile ducts ^{nematodes}
 - Filarial worms are tissue and blood dwelling ^{nematodes} neonatodes
16. Oriental sore:-
- L.tropica minor – dry or urban cutaneous leishmaniasis
 - L.tropica major – wet or rural cutaneous leishmanians
 - L.aethiopica – visiceral leishmaniasis
 - The overlying epithelium shows acantasis ^{acanthosis}
 - The drug of choice is sodium stibogluconate
17. The following are parasitic disease diagnosed through immunodiagnosis except:-
- Leishmaniasis
 - African trypanosomiasis, when parasitaemia is low
 - Filariasis
 - Hydatid disease
 - T.solium
18. About immunodiagnostic:-
- ^{Prinapal} Prinapal type of immunodiagnostic tests are intradermal and serological
 - Techniques is complex and time consuming
 - Used where parasites are easily removed for examination
 - Its not based on antibody and antigen detection
 - Culture methods in general use are for isolation of T.cruzi, leishmanial species.

26. Black flies of the genus simulium are vectors of:-

- a) Leishmaniasis
- b) Onchocerciasis
- c) Malaria
- d) Guinea worm
- e) Loa loa

27. The transmission of dracunculus ^{medinensis} meclinensis is by:-

- a) Mature larvae burrowing into unbroken skin in contact with water
- b) Water containing infected intermediate host is drunk by man
- c) Water containing infective larvae is drunk by man
- d) Raw vegetables and water contaminated with mature eggs are ingested by man
- e) Auto infection

28. Which of the following is matched correctly:-

- a) Hymenolepis diminuta – medina worm
- b) Echinococcus granulosus – dog tape worm
- c) Toxocara canis – dog tape worm
- d) Endemic non – filarial elephantiasis – podoconiosis
- e) Diphylobotrium latum – broad tape worm

29. True or false about arthropods:-

- a) They are bilaterally symmetrical
- b) Ecdysis is a phenomenon characteristic of all arthropods
- c) Their bodies are divided into a number of rings or segments
- d) Cyclopropagative is a biological carrier for diseases transmission
- e) Rickettsia typhi in ticks is an example of propagative biological carrier of disease transmission

30. True or false:-

- Myiasis*
- a) Myiasis is invasion of tissue of humans with dipterous fly larva
 - b) Sand flies transmit leishmaniasis
 - c) Phthirus pubis is also known as crab lice
 - d) Relapsing fever is also transmitted by lice
 - e) Culex mosquito is associated with yellow fever virus

1. Which of these parasitic conditions are best diagnosed by immunodiagnosis:

- a. Toxoplasmosis
- b. Toxocarisis
- c. Trypanosomiasis
- d. Hydatid disease
- e. Trichinosis

2. Identify the parasite diagnosed by microscopic Stool for O/C Examination

- a) *Ascaris lumbricoides*
- b) *E. vermicularis*
- c) *S. stercoralis*
- d) *N. americanus*
- e) *T. trichuria*

3. State true or false to the possible parasites that are found in the following specimens

- a. Stool - *L. donovani*
- b. Blood - *S. stercoralis*
- c. Urine - *T. spiralis*
- d. Sputum - *O. volvulus*
- e. CSF - *T. gondii*

4. Identify the possible sources of specimen for the following parasites by indicating true or false to the matched statements:

- a. Schistosoma mansoni - Duodenal aspirate
- b. E. vermicularis - Rectal scraping
- c. Trypanosome species - Spleen aspirate
- d. Filaria worms - Lymphgland aspirates
- e. Giardia lamblia - Perianal swab

5. Which of the parasite that can complete its life cycle in a single host.

- a. *S. stercoralis*
- b. Hook worms
- c. *G. lamblia*
- d. *E. histolytica*
- e. *A. lumbricoides*

6. Which of the parasite requires an intermediate host or vector to complete its Development.

- a. *Plasmodium* species
- b. *Leishmania* species
- c. *Taenia* species
- d. *Schistosoma* species
- e. *Onchocerca* species

7. The following parasites are diagnosed by Stool specimen examination with the naked eye (Macroscopic Examination):

- a) *Ascaris lumbricoides*
- b) *E. vermicularis*
- c) *Taenia sagnata*
- d) *Giardia lamblia*
- e) *T. vaginalis*

8. The following parasites are classified as Cestodes (Tapeworms):

- a) *Echinococcus Granulosus*
- b) *Taenia Saginata*
- c) *Hymenolepis nana*
- d) *Diphylobotrium Latum*
- e) *Dracunculus Medinensis*

9. The following are acquired by eating undercooked meat:

- a) *Ancylostoma duodenale*
- b) *Ascaris lumbricoides*
- c) *Taeniasolium*
- d) *Strongyloides stercoralis*
- e) *Enterobius vermicularis*

10. The following are acquired through walking bare feet:

- a) *Necator Americanus*
- b) *Paragonimus westermani*
- c) *Taenia solium*
- d) *Hymenolepis Diminuta*
- e) *Echinococcus multilocularis*

11. The following parasites are classified as Tissue nematodes:

- a) *Wuchereria Bancrofti*
- b) *Onchocerca Volvulus*
- c) *Dracunculus Medinensis*
- d) *Mansonella perstants*
- e) *Trichininella spiralis*

12. The following parasites are classified as Intestinal nematodes:

- a) *Enterobius vermicularis*
- b) *Strongyloides stercoralis*
- c) *Dracunculus Medinensis*
- d) *Ancylostoma duodenale*
- e) *Trichininella spiralis*

13. The following parasites are classified as Trematodes:

- a) Necator Americanusi
- b) Trichuris trichuria
- c) Paragonimus westermani
- d) Fasciola hepatica
- e) Clonorchis sinensis

14. The following parasites are classified as Haemoflagelates:

- a) Visceral Leishmaniasis
- b) African trypanosomiasis
- c) Trichomonas vaginalis
- d) Blastocystis hominis
- e) Balantidium coli

15. The following parasites are medically important treatodes (Flukes):

- a) Dientamoeba Fragilis
- b) Giardia Lamblia
- c) Plasmodium falciparum
- d) Blastocystis hominis
- e) Schistosoma Mansonii

16. The following parasites are classified as coccidia (sporozoa):

- a) Cryptosporidium parvum
- b) Entamoeba histolytica
- c) Isospora belli
- d) Plasmodium vivax
- e) Toxoplasma gondii

17. The following parasites are classified as Intestinal nematodes without tissue stage:

- A) Strongyloides stercoralis
- B) Paragonimus westermani
- C) Onchocerca Volvulus
- D) Necator Americanus
- E) Enterobius vermicularis

18. The following parasites are classified as Intestinal nematodes with tissue stage:

- a) Enterobius vermicularis
- b) Wuchereria Bancrofti .
- c) Ascaris lumbricoides
- d) Dracunculus Medinensis
- e) Ancylostoma duodenale

19. The Mosquitoes flies are the main insect vectors for the following conditions:

- a) Elephantiasis
- b) Loaliasis
- c) Wuchereriasis
- d) Onchocerciasis
- e) Malayiasis

20. The following species of mosquitoes are associated with the disease they cause? True or false.

- A. Culex mosquito - lymphatic filiriasis
- B. *Simulium damnosum* - Wuchereria bancrofti
- C. Aedes Egypti - yellow fever virus
- D. Black fly - Onchocerciasis
- E. Sandfly - Brugia malayi

21. The following parasites are associated with auto-infection mode of transmission?

- a) Strongyloides stercoralis
- b) Ascaris lumbricoides
- c) Ancylostoma duodenale
- d) Enterobius vermicularis
- e) Entamoeba Histolytica

22. The following Diseases are associated with trypanosomes? true or false.

- a) Chaga,s disease
- b) Sleeping sickness
- c) Nagana
- d) Kala -zar
- e) Giardiasis

23. The following Reservoir hosts are correctly matched with parasites of their disease transmission:-

- a) Man - Entamoeba histolytica
- b) Pig - Taenia solium
- c) Dog - Enterobius vermicularis
- d) Sheep - Fasciola hepatica
- e) Cat - Toxoplasma canis

24. True match about medical conditions related to parasite arthropods:

- a) Myiasis - Glossina for ticks
- b) Relapsing fever - Phlebotomus for mites
- c) Epidemic typhus - Cyclops for lice
- d) Scabies - Sarcoptic for flies
- e) Pediculosis - Triatoma for jiggers

25. True to Blood sucking insects may transmit:-

- a) Schistosoma Intercalatum - Intestinal sporozoa
- b) Oriental sore leishmaniasis - Haemoflagelates
- c) Wechereria bancrafti - coccidian parasites
- d) Strongyloides stercoralis - Tissue nematodes

e) Trachomonas vaginalis – Urogenital ciliates

26. True Parasite which may be transmitted by sexual contact is:-

- a) Trichomonas vaginalis
- b) Balantidium coli
- c) Schistosoma haematobium
- d) Enteromonas hominis
- e) Dientamoeba Fragilis

27. Specimen collected for demonstration of parasite diagnosis include;-

- a) Blood - Visceral Leishmaniasis
- b) Stool - Schistosoma Mansoni
- c) Urine - Trichomonas vaginalis
- d) Genital specimen - Schistosoma Japonium
- e) Cerebral spinal fluid – Toxoplasma gondii

28. Concerning Trichuris trichuria Medical heminthology ;

- a) It is a common infection acquired by eating raw vegetables
- b) Cattles are intermediate host of the helminthes
- c) Adult worms are mostly found in the caecum and ascending colon
- d) Albendazole is highly effective in treatment
- e) Auto infection is common

29. Concerning Hookworm Medical heminthology ;

- a) Hookworm infection is acquired by walking barefoot
- b) Loeffler's syndrome) – pneumonia-like symptoms in the lungs.
- c) Man is an accidental intermediate host of Ancylostoma duodenale
- d) Moves out at night to the anus to glue its eggs on the peri-anal skin causing pruritus – in ano (Icthy anus).
- e) Some species of hookworm cause hydatid cyst disease problem in Kenya

30. Concerning Medical anti-heminthologies:

- a). Praziquantel is the drug of choice for dracunculus medinensis treatment
- b). Niclosamide is the drug of choice for *Trypanosoma brucei complex* causing African trypanosomiasis (sleeping sickness) treatment
- c). Albendazole is the drug of choice katayana syndrome causing biomphalaria mollusk for Schistosoma haematobium treatment
- d). Sodium stibogluconate is the drug of choice for *Trypanosoma cruzi* causing American trypanosomiasis (Chagas' disease) treatment
- e). Suramin is the drug of choice for Echinococcus granulosus treatment

END AND BEST LUCK

1. Mutualism is a host and parasite association which involves:-
 - a. An association where both the host and parasite depend on each other and one cannot live without the help of the other
 - b. An association where a parasite benefits from the host and in return the host suffers some degree of injury
 - c. An association in which the parasite takes the benefit without causing injury to the host
 - d. An association in which the living organisms are able to depend entirely on their own without association of the host

2. Which of the following filarial is associated with eyes :-
 - a. onchocerca volvulus
 - b. loaloa
 - c. burugiamalayi
 - d. wuchereriabanchofti

3. The common method for diagnosis of Ascarislumbricoides is :-
 - a. Detection of rhabditiform larvae of Ascarislumbricoides in stool.
 - b. Examination of stool for eggs of Ascarislumbricoides
 - c. Blood film examination of Ascarislumbricoides eggs
 - d. Blood film examination of Ascarislumbricoides larva

4. In prevention and control of parasites ,covering of food will protect one from infections with :-
 - a. Necatoramericanus
 - b. Ancylostoma duodenum
 - c. Schistosomahaematobium
 - d. **Trichuristrichiura**

5. Intestinal nematode includes :-
 - a. Trichinelaspiralis, Filarial worms
 - b. Trichuristrichiura, ascarislumbricoid
 - c. Trematodes , ascarislubricoid
 - d. Filarial worms , Trichuristrichiura

6. Ascariasis is treated using
 - a. a azithromycin.
 - b. Levamisole
 - c. paromycin.
 - d. Cyclophosphamide

7. One of the following helminths can cause anaemia
 - a. Hookworm
 - b. Filaria worm
 - c. Liver fluke
 - d. Loa loa

8. Schistosomiasis can be prevented by

- a. Zoo prophylaxis.
- b. Cooking meat properly.
- c. Wearing of gloves and gumboots.
- d. Application of insect repellants

9. Definitive host of Echinococcus granulosus

- a. Man
- b. Dog
- c. Cow
- d. Pig

10. The only intracellular helminth whose larva stage is intracellular within a cell is

- a. Wucheria bancrofti
- b. Brugia malayi
- c. Taenia saginata
- d. Trichinella spiralis

SECTION B – MULTIPLE-TRUE-FALSE QUESTIONS (MT-F) – 10%

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "X" against the appropriate response for either true or false as shown in the example below

Q1. Kenya is a

- a) Unitary state with 48 governments
- b) Federal state with 48 governments
- c) Unitary state with 2 levels of governance
- d) Federal state with 2 levels of governance
- e) Unitary state with 47 federal governments

Q1	T	F
a	X	
b		X
c	X	
d		X
e		X

Questions

1. All these are helminthes

- a) trypanosome Cruzi.
- b) leishmania.
- c) taeniasolium.
- d) dwarf tapeworm.
- e) trichuristrichuria.

2. Strongyloidiasis is prevented by
 - a) consumption of alcohol.
 - b) wearing of shoes.
 - c) proper treatment of patients.
 - d) boiling of drinking water.
 - e) proper disposal of stools.
3. Strongyloidiasis presents with
 - a) abdominal pains.
 - b) blood stained mucoid diarrhea.
 - c) larva currens.
 - d) ground itch.
 - e) creeping eruption.
4. All these are types of schistosomes
 - a) Mekongi
 - b) Chagga.
 - c) Japonicum.
 - d) mansoni.
 - e) intercalatum
5. schistomiasis is treated using
 - a) praziquantel.
 - b) 5-flourouracil.
 - c) metrofonate.
 - d) erythromycin.
 - e) artimeter- lumefantrin
6. These are ectopic lesions of schistosomiasis
 - a) space occupying lesion.
 - b) corpulmonale.
 - c) pulmonary hypertension.
 - d) transverse myelitis.
 - e) granulomatous reaction.
7. Investigations for schistosomiasis include
 - a) Fairley's test.
 - b) blood slide.
 - c) cystoscopy.
 - d) blood culture.
 - e) urine microscopy.
8. Hookworm infection presents with
 - a) iron deficiency anaemia.
 - b) blood stained diarrhea.
 - c) itching of genitalia.
 - d) haematuria.
 - e) ankylostoma dermatitis.

9. Cutaneous larva migrans is treated by
- surgery.
 - ethyl chloride spray.
 - thiabendazole solution application.
 - oral thiabendazole.
 - all the above.

10. These are zoonotic types of hookworms
- ankylostomaduodenale.
 - ankylostomabrasiliense.
 - ankylostomacanicum.
 - ankylostomaceylanicum.
 - ankylostomaamericanus

SECTION C – SHORT ANSWER (SAQs)/STRUCTURED QUESTIONS – 40 marks

- This section contains FOUR questions
 - ATTEMPT all questions
-

Questions

1. Define the following terminologies and give one example in each (10 marks)
 - a. Intermediate host
 - b. Accidental host
 - c. Definitive host
 - d. Ectoparasite
 - e. Endoparasites
 2. Outline Five (5) ways in which the parasite harms the host (10 marks)
 3. Explain the life cycle of ascaris lumbricoides (10 marks)
 4. Dracunculus medinensis (guinea worm) are parasites affecting human beings.
 - a. What is the mode of infection (4marks)
 - b. state six (6) clinical features of dracunculus medinensis (6marks)
-

SECTION D – LONG ANSWER QUESTIONS (LAQs) – 40 marks

- This section contains TWO questions
 - ATTEMPT all questions
-

Questions

1. Describe the life cycle of plasmodium falciparum (20 marks)
2. Discuss how you will prevent schistomiasis in Mwea Tebere irrigation scheme (20 marks)

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

JULY 2018 - END OF SEMESTER II COMMON EXAMINATION

PROGRAM: DIPLOMA

CLASS: SEPTEMBER 2017

Module: PARASITOLOGY

Time: 2 Hours

Session: Afternoon (02.00 – 04.00 hours)

DATE: 27th, July, 2018

GENERAL INSTRUCTIONS

- 1) Write your admission number answer sheet provided
- 2) Read instructions on the question paper carefully
- 3) Number all questions correctly
- 4) Begin each essay question on a new page
- 5) Use legible writings
- 6) All cancellations must be clean and complete
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- 8) Ensure any extra paper(s) used is/are firmly fastened within the booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ)

- This section contains ten (10) questions
- Each question has four options
- There is no penalty for wrong responses
- Answer the questions on the answer sheet provided by marking "x" against the most correct response

QUESTIONS

1. The mode of infection of whip worm is: -
 - a. by skin penetration of larva
 - b. by ingestion of eggs containing larvae
 - c. by ingestion of larvae
 - d. by skin penetration of egg containing larva
2. Host that serves as a temporary refuge and vehicle for reaching an obligatory: -
 - a. Paratenic host
 - b. Natural host
 - c. Obligate host
 - d. Temporal host
3. The following worms may be present as parasitic in the host or free living in the soil:-
 - a. strongyloidesstercoralis
 - b. enterobiusvermicularis
 - c. trichuristrichiura
 - d. ascarielumbrioides
4. The mode of infection of necatoramericanus is:-
 - a. The larva infects by skin penetration
 - b. The larva infects by ingestion in contaminated vegetables
 - c. The larva infects by drinking contaminated water
 - d. It infects by inhalation of eggs containing the larva
5. Characteristic features of cestodes includes:-
 - a. They Possess mouth, oesophagus and anus, segmented
 - b. They are Segmented , hermaphroditic
 - c. They are leaf like, segmented
 - d. They have separate sexes, They are Segmented
6. The mode of infection of ancylostomaduodenale is:-
 - a. The larva infects by skin penetration
 - b. The larva infects by ingestion in contaminated vegetables
 - c. The larva infects by drinking contaminated water

- d. It infects by inhalation of eggs containing the larva
7. The following types of worms are unsegment:-
- Ascarislumbricoidesechinococustaenia saginata
 - Hookworms trichinellataenia saginata
 - Strongyloidesstercoralis Hookworms Trichuristrichuira
 - Trichuristrichuira. Ascarislumbricoidesechinococcus
8. Tape worms are classifies as :-
- Platyhelminthes
 - Nematodes
 - Helminths
 - Trematodes
9. The intermediate host of dracunculusmedinensis is:-
- snail
 - Cyclops
 - Man
 - Worm
10. Intermediate host :-
- Harbours the larval stages of the parasite.
 - Harbours the adult stage of the parasite.
 - parasite that is available for the transmission of disease
 - Parasite that naturally infects certain species with disease

SECTIN B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

1. Protozoa cells consist of
 - a) Cytoplasm
 - b) Mitochondria
 - c) Ribosome
 - d) Nucleus
 - e) Chromosome
2. The following are organelles of locomotion for protozoa
 - a) Golgi body
 - b) Flagella
 - c) Cilia
 - d) Pseudopodia
 - e) Endoplasmic reticulum
3. The following are mastigophora protozoas
 - a) Entamoeba histolytica
 - b) Trypanosome
 - c) Giardia lamblia
 - d) Trichomonas
 - e) Leishmania
4. Intestinal flagellates include
 - a) Leishmania tropica
 - b) Giardia lamblia
 - c) Enteromonas hominis
 - d) Trypanosome
 - e) Entamoeba histolytica
5. On entamoeba histolytica the following are true
 - a) Inhabits large intestine submucosa
 - b) Can exist as trophozoites
 - c) Their cysts are destroyed by gastric acid
 - d) Cysts stain brown with iodine
 - e) Passes its life cycle in only one host
6. Entamoeba histolytica
 - a) Secrete procolytic enzyme
 - b) Cause blood and mucus in stool
 - c) Stool culture yields positive
 - d) Trophozoites passed through stool rapidly die
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7. Intestinal amoebiasis can lead to
 - a) Local peritonitis
 - b) Appendicitis
 - c) Pericolic abscess
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 - a) Inhabits in the upper part of jejunum
 - b) Has an intermediate host
 - c) Mature cyst is the infective form
 - d) Stool consist of blood
 - e) Responds to tinnidazole treatment
10. Answer true or false
 - a) Trichomonas exist only in trophozoite state
 - b) Trichomonas tenax is transmitted by kissing
 - c) Trichomonas hominis inhibits in the mouth
 - d) Trichomonas vaginalis is sexually transmitted
 - e) Trichomonas vaginaalis is an obligate parasite

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

1. Tabulate difference between amoebic and bacillary dysentery (10 mks)
2. Name 5 biological characteristics of each of plasmodium falciparum and plasmodium malariae (10 mks)
3. About Leishmania donovani (5mks)
 - A) What is the habitat in man (5mks)
 - b) List 3 parasitological diagnostic tests to confirm the illness (10mks)
4. Discuss methods of prevention of malaria infection (10mks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

1. Briefly outline the life cycle of plasmodium (20 mks)
2. Describe the life cycle of giardia lamblia (20mks)

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QUESTIONS

1. Briefly outline the life cycle of plasmodium (20 mks)
2. Describe the life cycle of giardia lamblia (20mks)



KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE
END OF SEMESTER EXAMINATIONS TIME TABLE

Class: March 2019

Year of study: 1st

Semester: II

Academic Year: 2019/2020

Day/Date	Morning		Afternoon
	9:00 – 11:00 AM		2:00 – 4:00 PM
Monday 10 th /2/2020	Clinical Methods 11		Community Health II
Tuesday 11 th 2/2020	Anatomy 11	First Aid	Parasitology II
Wednesday 12 th /2/2020	General Pathology 11		Microbiology II
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Friday 14 th /2/2020	Biochemistry 11		Behavioral Sciences

Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 20/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

END OF SEMESTER THREE

BEHAVIOURAL SCIENCE

Time: 1 ½ hrs

Date: 13/02/2014

Class: September 2013

College No.

INSTRUCTIONS

1. Write your college number on all scripts used
2. Attempt all questions
3. You will be penalized one mark (minus 1 mark) for every wrong response
4. Do not use pencil
5. All cancellations must be clear

1. Right of a client patient in health care service delivery include the right to:-
 - a) Privancy
 - b) Be heard
 - c) Choose
 - d) Be informed
 - e) Safety

2. Methods of communicating health information in clinical area includes:-
 - a) Charts
 - b) Change of shift reports
 - c) Clinical conferences
 - d) Clinical Round
 - e) Computer terminals interconnection

3. Criteria for an ideal intravenous infusion set include the following except:
 - a) Sterile
 - b) Patent
 - c) Right size
 - d) Re – usable
 - e) All of the above

4. True or False
 - a) In maslow's hierarchy of needs, status recognition includes safety needs self – esteem, self actualization and social needs.
 - b) When children learn to respect the elderly , wash their clothes and bathe themselves, that form of learning is known as secondary socialization
 - c) Social inequality describe the situation in which society members have different statuses.
 - d) The following are activities of daily living: Respiration safe environment maintenance, personal hygiene and gromy socializing.
 - e) Levels of health care delivery system in Kenya includes the community , dispensary , Health Centre, District Hospital.

5. Agents of socialization includes the following except:
 - a) Schools
 - b) Family
 - c) Peer group
 - d) Mass media
 - e) State

6. Match the following statement in column A to those in column B.

Column A

- a) An important measure for victims of unsafe needle stick injury.
- b) The medication that can effectively manage a convulsion resulting from an injection.
- c) The most appropriate method of destroying non – solid bio – hazard health care waste is.
- d) Attacking the source of infection is a principle of infection prevention and control that includes.
- e) Patient ambulation is an essential infection prevention and control measure because.

Column B

- 1. Personal hygiene and vector control
 - 2. Diazepam
 - 3. Burying
 - 4. It prevent decubitus ulcers
 - 5. Burning
 - 6. Carbamazepine
 - 7. Treatment of clinical and wound care.
 - 8. It facilitates movement using ditches
 - 9. Post – exposure prophylaxis
 - 10. Reporting the incident to the immediate supervisor.
7. Mechanisms that support the functioning of groups are:
- a) Norms and principles
 - b) Registration of groups
 - c) Incentives
 - d) Constitution and memorandum of understanding
 - e) Monetary subscriptions.
8. The most appropriate size of a small group membership is:
- a) Seven (7)
 - b) Twenty – four (24)
 - c) Twelve (12)
 - d) Eighteen (18)
 - e) Twenty – one (21)
9. Culture is a universal phenomenon in that it is:
- a) Learned
 - b) Shared
 - c) Adapted
 - d) Dynamic
 - e) None of the above

10. The following are elements of disease transmission cycle except:
- Agent
 - Reservoir
 - Susceptible Host
 - Mode of transmission
 - Place of exit.
11. Health measures that are employed in various situation to prevent and control infection include:
- Body cleansing
 - House hygienie
 - Safe waste disposal
 - Ant – microbial agents use
 - Sterilization of animate objects
12. True or False
- An extended family comprises of married couples, children, cousins , blended members, in – laws.
 - Religion is a cultural univercal , eamples of which include catholics, islum, Judaism, protestants.
 - Factors that influence social mobility include occupation structure, level of education, gender, race.
 - The movement of individuals or groups from one position of society ranking system to another is known as social mobility.
 - Social change is defined as significant change over time in behaviour patterns and culture.
13. Functions of the of the family include the following except:
- Reproduction
 - Protection
 - Socialization
 - Regulation of social behaviour
 - Providing Social strafification
14. The following category of individuals can be recognised as socially mobile vertically.
- A registere clinical officer becomes a supplier of text books.
 - A High school teacher becomes a lawyer.
 - A parent becomes a shopkeeper.
 - A secretary of a group a group becomes the chairperson of the same group.
 - The principal of a medical training school becomes the head of departement of the faculty of medical engineering.

15. Match the questions in column A to the responses in Column B.

COLUMN A

- a) Denominations are large, organized religions such as :
- b) State of feeling ill.
- c) Religious belief system.
- d) The functioning of society such that various positions are occupied by capable individuals who satisfy different needs for the community is .
- e) The most commonly used indicator of social class is.

COLUMN B

1. level of education
2. sickness
3. sectorism
4. social stratification
5. New religious movements
6. Occupation
7. Social class
8. Theism
9. Illfeeling
10. Christianity
16. Types of social stratification includes.
 - a) Castes
 - b) Slavery
 - c) Estates
 - d) Class
 - e) All of the above.
17. Components of Health institution includes:
 - a) Personnel
 - b) Medication and medical accessories
 - c) Society members
 - d) Clients
 - e) Pathological conditions
18. True or False
 - i) Infection prevention refers to measures that are put in place to ensure safety of persons in their present environment.
 - ii) Aseptic technique may be used for invasive procedures.
 - iii) Sterile instruments covered with a porous dry wrapper can be used safely even if the cover becomes wet.
 - iv) The most commonly used mechanical barrier in infection prevention is later glaves.
 - v) The right ways to administer a safe injection includes right prescription, right dosage, right disposal method.

19. True or False

- i) Components of patient services are emotional services , physical service, social services and spiritual services.
- ii) The most important aspect of recording patient/ client information is clarity , correctness , accuracy and completeness of information.
- iii) The abbreviation RX or recipe in latin , means
- iv) When recording patient client information, **Ditto marks** can be used as they are internationally recognised.
- v) After derking a patirnt and results of a blood slide for malaria parasites are positive, It is logical to write” **the patient seems to have malaria**” as your conclusion.

20. The following are indications for wood transfusion except;-

- a) Total blood exchange in neonate
- b) Replacement of clotting factors
- c) Restoring circulatory blood volume
- d) Improvement of oxygen carraying capacity of blood
- e) All of the above

21. Problems associated with placement of naso-gastric tube include:-

- a) Acute otitis media
- b) Irritation of oral mucous membranes
- c) Chronic diarrhoea
- d) Aspiration pneumonia
- e) Ulceration of nasal and palate tissues

22. True or false:-

- a) Some of the reasons why patirnt are discharged from inpatient care after clinicalns feel that nothing more can be done to the patient and when the health team feels that a patient needs referral to a higher level of care.
- b) When referring a patient to another level of care, the referring officer needs not register accountability to the referral letter.
- c) Adverse effects related to patients feeding includes anorexia, flatus,ernctation
- d) According to WHO (1946) health is defined as a state of absolute physical, mental and social well being and not merely absence of disease or infirmity
- e) When transfusing blood into a patient the transfusion set without a filter can be used.

23. The following are injection practices that harm patients clients, health care providers or community:-

- a) In appropriate disposal of used injection instruments
- b) Re-use of non sterile injection instruments
- c) Irresponsible handling of injection instruments
- d) Under prescription of injectable medications
- e) Administration of expired or contaminated inject able drug

24. You are a registered clinical officer in charge of a health care facility and find out that your staff is arriving late for work and leaving early from work. What type of leadership are you going to utilise to ensure that work ethics are observed:-
- Democratic
 - Authoritarian
 - Laissez-faire
 - Democratic and authoritarian
 - All of the above

25. Match the statements in column A to the items in column B:-

Column A

- Refers to the process in which a new individual becomes part of the society.
- Defines a procedure of diagnosing and prescription of treatment of a medical condition
- The outcome of assessment in case management
- The time 3 O'clock in military time method
- Foods that add large amounts of calories without contributing much to nutrition.

Column B

- 1600 hours
- Culture integration
- Clerkship
- Carbohydrate foods
- Signs and symptoms
- 3.00PM
- Socialization
- Nursing and medical diagnosis
- Junic foods
- Consultation

26. Column A

- The type of feeding method that is appropriate for a patient who has undergone a laparotomy in the first 48 hours.
- A crystalloid solution
- A composition of two or more people who interact and share common values, norms and objectives for a period.
- Unwritten rules that specify the expected and acceptable behaviour of a small group
- State of being free from vegetable forms of microorganisms

Column B

1. 5% Dextrose
2. Roles
3. Sterile
4. Gastrostomy feeding
5. Social norms
6. Group
7. Intra venous feeding
8. Whole blood
9. Social group

27. True or false:-

- a) In case of an emergency an artery can be used to administer urgently needed fluids and drugs to a patient
- b) The most common cause of failure of fluid to flow in the fusion transfusion tubing is absence of air and narrow tubing lumen
- c) After administering a fluid into the patient's body, it is very important to record the procedure in the input/output chart
- d) Branches of behavioural sciences include anthropology and sociology, public health, psychology, economics
- e) The hierarchical steps in medical instrument processing are cleaning, sorting, decontamination, packaging and labelling sterilization

28. True or false:-

- a) An injury to the mucous membrane or skin is referred to as a wound
- b) The virus that causes common cold is an example of a transient microorganism
- c) Environment in clinical terms refers only to external surroundings in which micro and macro-organisms live.
- d) Hand washing is a form of medical asepsis
- e) The following situations constitute a social change: adoption of another tongue and foreign languages, shift from barter trade to currently exchange of goods and service.

29. Categories of high risk health care wastes are:-

- a) Infectious wastes
- b) Anatomical wastes
- c) Radio active wastes
- d) Communal thermometers
- e) Mercury thermometers



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KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

2017/2018 ACADEMIC YEAR

Semester I Examinations (supplementary) for September 2016 class Diploma in Clinical
Medicine and Surgery

MAY 2018

STREAM: BASIC DIPLOMA
MODULE: PHARMACOLOGY & THERAPEUTICS III
TIME ALLOWED: 2 HOURS
SESSION: MORNING (09:00 AM – 11:00 AM)
DATE: FRIDAY, 11TH MAY 2018

GENERAL INSTRUCTIONS

- 1) Write your examination number in all sheets provided
- 2) Read instructions on question paper carefully
- 3) This paper has **THREE** sections;

SECTION A: MULTIPLE TRUE /FALSE QUESTIONS – 20 Marks

SECTION B: SHORT ESSAY/STRUCTURED QUESTIONS – 40 marks

- This section contains **Four** questions (Each carrying 10 Marks)
- **ATTEMPT** all questions

SECTION C: LONG ESSAY QUESTIONS – 40 MARKS

- This section contains **TWO** questions
- Attempt the **TWO** questions

SECTION A: (MULTIPLE TRUE FALSE)

1. Uses of alpha adrenergic blockers
 - a) Hypertension
 - b) Benign prostatic hyperplasia
 - c) Heart failure
 - d) Phaeochromocytoma
 - e) All the above

2. The following are true about digoxin.
 - a) It increases the cardiac output
 - b) Indicated in cardiogenic shock
 - c) Doses should be reduced among the elderly patients
 - d) It's a neurotoxic drug
 - e) Its contraindicated in Beri beri heart disease

3. The following are true in regards to BETA (β) adrenoceptor blockers
 - a) They sub serve cardiac excitation
 - b) Are primarily located in the heart, arteries and arterials?
 - c) Atenolol is water soluble
 - d) Atenolol is in the 3rd generation
 - e) Overdose causes bradycardia and heart block

4. Second line anti TB drugs includes;
 - a) Levofloxacin
 - b) Ethionamide
 - c) Rifampicin
 - d) Nitrofurantoin
 - e) Cycloserine

5. Loperamide has been in the market for some time now
 - a) Used in acute diarrhoea in both adults and children over 4 years
 - b) Associated with abdominal pain
 - c) It works better even in children of 1 year
 - d) It comes in tablet preparation only
 - e) All the above are true

6. About cimetidine
 - a) Is associated with gynecomastia
 - b) Can be prescribed in Zollinger-Ellison syndrome
 - c) Increases libido among men

- d) It is also called ranitidine
- e) All the above are true

7. Dicyclomine

- a) Used in morning sickness
- b) Causes drowsiness
- c) Available in tablet forms
- d) Kept under DDA
- e) Not allowed to be sold over the counter

8. Respond to the following

- a) Osmotic laxatives include sorbitol
- b) Lubricants (emolites) are taken orally
- c) Dietary fibres can also be used to control diarrhoea
- d) Antibiotics not indicated in bloody diarrhoea
- e) All above are true

9. Respond to the following in fluids management

- a) Colloids are useful in rapid blood expander
- b) 5% dextrose is the best in managing dehydration due to diarrhoea
- c) Ringers lactate is isotonic fluid
- d) Ringers lactate is contraindicated in children with dehydration
- e) All the above are false

10. Verapamil

- a) Is given TDS tablets and O.D as sustained release formulation
- b) Indicated in hypertension
- c) Contraindicated in sick sinus syndrome
- d) Also called isoptin
- e) Causes gingival hypertrophy

11. indications of laxatives

- a) undiagnosed abdominal pains
- b) hepatic encephalopathy
- ✓ c) intestinal obstruction
- ✓ d) functional constipation
- e) all are true

12. desirable properties of diuretics as antihypertensive includes

- a) no fluid retention
- b) effective in isolated systolic hypertension

- c) once daily dosing
- d) high incidence of tolerance to the drugs
- e) low incidence of postural hypertension

13. The following are ACE inhibitors

- a) Lisinopril
- b) Captopril
- c) Enalapril
- d) Lorsatan
- e) Telmisartan

14. The following classes of drugs decreases gastric acid secretion

- a) Systemic antacids
- b) Proton pump inhibitors
- c) H₂ antihistamines
- d) Anticholinergic drugs
- e) Prostaglandin analogues

15. The following are contraindication of emetic drugs

- a) Unconscious patients
- b) Acid poisoning
- c) Organophosphate poisoning
- d) Acid poisoning
- e) Hydrocarbon poisoning

16. The following drugs are indicated in management of peptic ulcers

- a) Omeprazole
- b) Ranitidine
- c) Diclofenac for pains
- d) Aspirin
- e) Misoprostal

17. The following are proton pump inhibitors

- a) Cimetidine
- b) Omeprazole
- c) Esomeprazole
- d) Ranitidine
- e) Lesomeprazole

18. The following antimicrobials are effective against Helicobacter Pylori

- a) Tinidazole
- b) Amoxicillin

- c) Clarythromycin
 - d) Metronidazole
 - e) Tetracycline
19. Beta 2 selective drugs used in management of asthma includes
- a) Salmenteral
 - b) Salbutamol
 - c) Terbutaline
 - d) Adrenaline
 - e) Isoprenaline
20. Adverse effects of loop diuretics are
- a) Hypervolelaemia
 - b) Hyperkalaemia
 - c) Hypokalaemia
 - d) Hypovolaemia
 - e) Hyperuraecaemia

SECTION B: (SHORT ESSAY QUESTIONS)

1. Regarding drugs for peptic ulcers
- a) Classify peptic ulcer drugs **(4 marks)**
 - b) Briefly outline general measures employed to promote anti-ulcer activity among patients **(6 marks)**
2. A 40-year-old man was diagnosed with Duodenal ulcers and was prescribed a six week course of a Proton Pump Inhibitors by a Clinical Officer at Cheptais sub county Hospital.
- a) List any four Proton pump inhibitors that could have been prescribed for him **(4 marks)**
 - b) Outline the mechanism of action of Proton Pump Inhibitors **(2 marks)**
 - c) Enumerate four therapeutic uses of Proton Pump Inhibitors **(4 marks)**
3. Regarding Anti - diarrhoeal agents
- a) Define the term diarrhoea **(2 marks)**

*duodenal ulcers
Lozinger Ellison dx
Gastric
P
GERD*

- b) List the pharmacological agents used in treatment of nonspecific diarrhoea
(2 marks)
- c) Briefly describe the principles of management of a patient with diarrhoea
(6 marks)

SECTION C: (LONG ESSAY QUESTIONS)

1. A 73-year-old woman has episodes of constipation with no abdominal pain nor distension. Stool test reveals no ova or cyst. A Clinical Officer decides to administer laxatives and advises her to use plenty of oral fluids
- a) Classify Laxatives based on their mechanism of action (5 marks)
- b) Outline the general therapeutic uses of Laxatives (5 marks)
2. Regarding Cardiac Antiarrhythmic drugs:
- a) Define a cardiac arrhythmia (2 marks)
- b) Classify Antiarrhythmic drugs according to Vaughan Williams classification (5 marks)
- c) State how beta – adrenergic blockers work to achieve antiarrhythmic effect (3 marks)

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

PHARMACOLOGY 11

YEAR 1 SEMESTER 11 CAT EXAMINATION

Time: 9.00 am -11.00am

Date: 20th December 2019

Class: March 2019

College No.

Instructions to Candidate

1. Any cancellation must be complete and clear.
2. Write college numbers on all pages.
3. Answer all questions

SECTION A BEST ANSWER

1. The following drug is not classified as beta lactam compound
 - a. Penicillins
 - b. Cephalosporins
 - c. Monobactams
 - d. Carbapenemes
 - e. Sulphonamides
2. The following drug is an extended spectrum penicillin?
 - a. Nafcillin
 - b. Oxacillin
 - c. Amoxicillin
 - d. Tazobactam
 - e. Cephalexin
3. Second generation cephalosporins include?
 - a. Cephalexin
 - b. Ceftriaxone
 - c. Cefipime
 - d. Cefuroxime
 - e. Cefpodoxime
4. The following drug is a topical aminoglycoside
 - a. Gentamicin
 - b. Streptomycin
 - c. Neomycin
 - d. Vancomycin
 - e. Piperacillin
5. The following drug is classified as a triazole
 - a. Ketoconazole
 - b. Clotrimazole
 - c. Miconazole
 - d. Fluconazole
 - e. Terbinafine
6. The main adverse effect of sulphonamides is?
 - a. Exfoliative dermatitis
 - b. Photosensitivity
 - c. Urticaria
 - d. Nausea, vomiting, diarrhea
 - e. Stevens-johnson syndrome
7. Which is the current clinical use of oral sulfamethoxazole trimethoprim?
 - a. Non tuberculus TB
 - b. Shigellosis
 - c. Salmonellosis
 - d. Pneumocystis jiroveci pneumonia
 - e. Urinary tract infection

8. The following is a long acting tetracycline?
 - a. Chlotetracycline
 - b. Oxytetracycline
 - c. Tetracycline
 - d. Methecycline
 - e. Doxycycline
9. Regarding clorhexidine antiseptic?
 - a. It is bacteriacidal
 - b. It is non sporicidal
 - c. It has no residual action
 - d. It is resistant to neutralization
 - e. It is bacteriastatic
10. The following drugs cause staining of teeth and bones?
 - a. Macrolides
 - b. Salfonamides
 - c. Aminoglycosides
 - d. Tetracyclines
 - e. Penicillins

SECTION B ANSWER TRUE/FALSE

1. Regarding aminoglycosidess
 - a. They inhibit protein synthesis
 - b. Have synergistic action when combined with penicillins
 - c. Are poorly absorbed in the git if given orally
 - d. Are exreted via the kidney in urine
 - e. Excretion is proportional to creatinine clearance
2. The following adverse effects are common is aminoglycoside use
 - a. Ototoxicity
 - b. Gray baby syndrome
 - c. Vestibulotoxicity
 - d. Nephrotoxicity
 - e. Hepatototoxicity
3. Clinical uses of sulphonamides include?
 - a. Pneumicystis jeroveci pneumonia
 - b. Toxoplasmosis
 - c. Malaria
 - d. Diarrhea diseases
 - e. Tuberculosis

4. The following quinolones are used in second line treatment of tb
 - a. Ciprofloxacin
 - b. Moxifloxacin
 - c. Levofloxacin
 - d. Ofloxacin
 - e. Gemifloxacin
5. Contraindications of tetracycline include?
 - a. Children below the age of 18 years
 - b. Lactation
 - c. Dairy products use
 - d. Pregnancy
 - e. Anticonvulsant use
6. The following sulphonamides are classified as orally absorbable?
 - a. Sulfamethoxazole
 - b. Sulfadiazine
 - c. Sulfadoxine
 - d. Sulfasalazine
 - e. Sulfacetamide
7. Hematopoietic disturbances caused by sulphonamide use presents with?
 - a. Hemolytic anemia
 - b. Aplastic anemia
 - c. Granulocytopenia
 - d. Thrombocytopenia
 - e. Pancytopenia
8. Grey baby syndrome?
 - a. Is seen in neonates on chloramphenicol
 - b. It is due to diminished renal elimination
 - c. It is due to diminished infant hepatic capacity to detoxify
 - d. Is due to immature glucuronyl transferase activity
 - e. Acidosis, hypothermia and cyanosis are responsible for the grey colour
9. Regarding steven johson syndrome?
 - a. It is a type I hypersensitivity reaction
 - b. Is a form of Toxic epidermal necrolysis
 - c. It is a type IV hypersensitivity reaction
 - d. Involves the skin and mucus membranes
 - e. Treatment involves stopping the causative agent
10. Regarding alcohol antiseptic?
 - a. It is bacteriacidal
 - b. It is sporicidal
 - c. It penetrates protein containing organic material
 - d. It denatures proteins
 - e. It is active against mycobacterial tuberculosis

SECTION C Short Answer Questions: 10 marks each

1. Regarding drugs used in treatment of mycobacterium tuberculosis?
 - a. List the four (4) drugs used in first line treatment of tuberculosis (TB) 5 marks
 - b. List one MAIN side effect of each drug listed in PART A above? 5 marks
2. Regarding fluoroquinolones?
 - a. List five (5) examples of quinolones? 5 mks
 - b. List five (5) clinical uses 5 mks
3. Regarding tetracyclines?
 - a. Describe five (5) adverse effects? 5 mks
 - b. Why are tetracyclines contraindicated in pregnancy? 5 mks
4. Mr M.N, 24 year old male is diagnosed with community acquired pneumonia?
 - a. Giving two examples; List three (3) classes of antimicrobial drugs that you can prescribe to Mr M.N? 6 mks
 - b. Write a prescription for Mr. M.N? 4 mks
5. Patient V.A is 1 day old and has been diagnosed with meningitis?
 - a. Giving two examples; list three classes of antimicrobial drugs that you can prescribe to baby V.A? 6 mks
 - b. List two drugs that are contraindicated in neonates and describe why they are contraindicated? 4 mks
6. Describe the mode of action of two antiseptics you know? 10 mks

SECTION D LAQ 20 Marks

1. Discuss penicillins under the following? 5 marks each
 - A. Mode of action
 - B. Pharmacokinetics
 - C. Clinical uses
 - D. Side effects



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FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

JULY 2018 - END OF SEMESTER II COMMON EXAMINATION

PROGRAM: DIPLOMA

CLASS: SEPTEMBER 2017

Module: GENERAL PATHOLOGY

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE: 27th, July, 2018

GENERAL INSTRUCTIONS

- 1) Write your admission number answer sheet provided
- 2) Read instructions on the question paper carefully
- 3) Number all questions correctly
- 4) Begin each essay question on a new page
- 5) Use legible writings
- 6) All cancellations must be clean and complete
- 7) Do not use a pencil except for drawings and illustrations
- 8) Ensure any extra paper(s) used is/are firmly fastened within the booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ)

- This section contains ten (10) questions
- Each question has four options
- There is no penalty for wrong responses
- Answer the questions on the answer sheet provided by marking "x" against the most correct response

QUESTIONS

1. Which of the following statement is true about antibody
 - a. It's a non-protein substance which has no antigenic properties
 - b. Activated on combining with a protein
 - c. It's a protein substance which when introduced into the tissues stimulates antibody production.
 - d. It's a protein substance produced as a result of antigenic stimulation
2. Which of the following statement is true about hapten
 - a) it's a non-protein substance which has no antigenic properties, but on combinin with a protein can form a new antigen capable of forming antibodies
 - b) It's a protein substance produced as a result of antigenic stimulation.
 - c) Its produced as a result of antigenic stimulation
 - d) Circulating haptens are immunoglobulins
3. Which of the choices represents secondary lymphoid organs
 - a) Thymus
 - b) Bone marrow
 - c) Spleen
 - d) liver
4. Identify the cells involved in immune system
 - a) Lymphocytes
 - b) Red blood cells
 - c) Platelets
 - d) None of the above
5. Which of following statements is true about malignant tumours?
 - a) Malignant tumours remain localized at their site of origin.
 - b) They grow by expansion, pushing the normal tissues away, often with the formation of a capsule of compressed fibrous tissue.
 - c) Malignant tumors usually grow slowly
 - d) grow by infiltrating into the surrounding normal tissues and have the ability to spread to distant sites
6. Virchows triad comprises the following except
 - a) Endothelial injury
 - b) Fibrinolysis
 - c) Stasis
 - d) Hypercoagulability
7. The following arise from mineral deficiency
 - a) Infection
 - b) Arteriosclerosis
 - c) Rickets
 - d) Lipoma
8. Regarding malignant tumors
 - a) It is usually encapsulated

- b) Has a rapid growth rate
 - c) Distant spread is absent
 - d) It is rarely fatal
9. Point mutation include the following except
- a) Deletion and insertion
 - b) Silent mutations
 - c) missense mutations
 - d) Nonsense mutation
10. One of the following is a local effect of chronic inflammation
- a) Tissue destruction
 - b) Splenomegaly
 - c) Anemia
 - d) Hepatomegaly

SEGMENT B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

1. The following are true about cardiogenic shock
 - a. May be caused by massive myocardial infarction.
 - b. Cardiac tamponade is a cause.
 - c. Is associated with severe haemorrhage.
 - d. Massive pulmonary embolism is a cause.
 - e. Usually caused by hypersensitivity type I.
2. Factors which maintain water homeostasis in the body includes
 - a. Metabolic diseases such as diabetes mellitus.
 - b. High levels of ADH.
 - c. Compulsive water drinking.
 - d. Renal failure.
 - e. Renin angiotensin aldosterone mechanism.
3. Causes of hypernatraemia includes
 - a. Hyperaldosteronism.
 - b. Cushings syndrome.
 - c. Hypoaldosteronism.
 - d. Loss of water in excess of sodium.

- e. Addison's disease.
4. Hyperkalaemia presents with the following
 - a. Muscular weakness.
 - b. Irregular pulse.
 - c. Abdominal distension.
 - d. Tetany.
 - e. Low serum chloride.
5. Respond to the following
 - a. Genome is the complete set of genes in a particular organism.
 - b. Mutation is an event that changes the sequence of DNA in a gene.
 - c. Chromosome is a genetic material.
 - d. Alleles are different types of chromosomes.
 - e. Developmental defects are abnormalities occurring during foetal life due to errors of morphogenesis.
6. Traumatic etiological causes of Fat Embolism include
 - a. Trauma to bones
 - b. Trauma to soft tissue
 - c. Diabetes mellitus
 - d. Fatty liver
 - e. Pancreatitis
7. The following are causes of Hyponatraemia
 - a. Excessive use of diuretics
 - b. Hypotonic irrigating fluid administration
 - c. Excessive IV infusion of 5% dextrose
 - d. IV infusion of hypertonic solution
 - e. Excessive sweating (in deserts, heat stroke)
8. Metabolic Acidosis occurs in the following situation
 - a. Production of large amounts of lactic acid
 - b. Uncontrolled diabetes mellitus
 - c. Starvation.
 - d. Chronic renal failure.
 - e. Therapeutic administration of ammonium chloride or acetazolamide (diamox).
9. Pathogenesis of compensated shock include the following
 - a. Widespread vasoconstriction
 - b. Fluid conservation by the kidney
 - c. Stimulation of adrenal medulla
 - d. Hypercoagulability
 - e. Anoxic damage

10. Hypercoagulability of blood may occur in the following condition
- Nephrotic syndrome
 - Advanced cancers
 - Extensive burns
 - During puerperium
 - Mild trauma

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

- Outline any 5 differences between innate and adaptive immunity (10mks)
- Explain any 5 factors that determine the magnitude of ischaemia (10mks)
- Outline the macroscopic changes that arise from chronic congestive cardiac failure in the following organs (10mks)
- Outline the classification of genetic disorders (10mks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

- List any 5 routes of infections (5mks)
 - List any 5 Factors that affect spread of infections (5mks)
 - List any 5 vehicles of Transmission of Infection (5mks)
 - List any 5 classes of microbes that you know (5mks)
- Explain blood transfusion complications (20mks)

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

GENERAL PATHOLOGY

YEAR 1 SEMESTER 11 CAT EXAMINATION

Time: 2.00 pm - 4.00 pm

Date: 16th December 2019

Class: March 2019

College No.

Instructions to Candidate

1. Any cancellation must be complete and clear.
2. Write college numbers on all pages.
3. Answer all questions

MCQ

1. Which one of the following does not constitute extracellular fluid components:-
 - a) Interstitial fluid
 - b) Blood plasma
 - c) Mesenchymal tissue
 - d) Tissue factors

2. Which one of the following doesn't constitute osmotic pressure:-
 - a) Crystalloid osmotic pressure
 - b) Tissue tension pressure
 - c) Effective oncotic pressure
 - d) Colloid osmotic pressure

3. Which one of the following is a cause of hyponatraemia:-
 - a) Psychogenic polydipsia
 - b) Excessive sweating
 - c) Sea drowning
 - d) Diabetes mellitus

4. The effects of thrombosis depends on the following except:-
 - a) Site of thrombus formation
 - b) Rapidity of formation
 - c) Size of the thrombus
 - d) Ischaemia

5. Which one of the following is not a sign of hypovolaemic shock?-
 - a) Low blood pressure
 - b) Tachycardia
 - c) Oedema
 - d) Cold clammy skin

6. Which one of the following is not a regulator of blood PH and acid base balance?
 - a) Buffer system
 - b) Pulmonary mechanism
 - c) Hepatic mechanism
 - d) Renal mechanism

7. Which one of the following mechanism does not lead to oedema?
- a) Decreased plasma oncotic pressure
 - b) Increased capillary hydrostatic pressure
 - c) Sodium and water excretion
 - d) Tissue factors
8. Which one of the following is not effect of arterial emboli:-
- a) Infarction
 - b) Gangrene
 - c) Oedema of the area drained
 - d) Myocardial infarction
9. The following are effects of hypokalaemia except: -
- a) Muscular weakness
 - b) Liver failure
 - c) Gastric distension
 - d) Paralysis
10. Regarding hyperaemia the following is true:-
- a) Also called passive
 - b) Occurs as a result of anterior constriction
 - c) Increased lymph flow to a tissue or organ
 - d) Sympathetic stimulation is the main effector

Part 11 True/False

1. The following are causes of hyperkalaemia
- a) Large volume of transfusion of stored blood
 - b) Addison's disease
 - c) Enalapril
 - d) Diarrhoea and vomiting
 - e) Excessive insulin therapy
2. Causes of dehydration includes: -
- a) Severe burns
 - b) Diabetic Keto acidosis
 - c) Chronic renal failure
 - d) Food poisoning
 - e) Cushing's syndrome

3. A white thrombus:-
 - a) Forms in stagnant blood
 - b) Forms in rapidly flowing blood
 - c) Appears firm and pale
 - d) Occurs in veins commonly
 - e) Consists of many aggregated

4. Concerning the pathogenesis of thrombosis:-
 - a) Injury to the blood vessel plays a role
 - b) Artherosclerosis is a risk factor
 - c) Platelets have no role at all
 - d) Coagulation system is a main factor in the virchows triad
 - e) Hypercoagulability of blood is favoured in polycythemia

5. Respond to the following statements as either true or false?
 - a) Hyperaemia is described as reduction in volume of blood in an organ
 - b) Increased metabolic demand is physiological cause of hyperaemia
 - c) Cyanosis is a sign of venous congestion
 - d) Right sided heart failure will lead to venous congestion in the lungs
 - e) Hyperaemia also known as venous congestion

6. Regarding pathogenesis of shock the following derangement occurs:-
 - a) Reduced effective circulating blood volume
 - b) Decreased cardiac output without actual blood loss
 - c) Impaired tissue oxygenation
 - d) Increased venous return
 - e) Release of inflammatory mediators

7. The following terms are use to describe haemorrhage sites:-
 - a) Ecchymosis
 - b) Epistaxis
 - c) Haemodilution
 - d) Purpura
 - e) Haematoma

8. Immediate physiological response to haemorrhage includes:-
 - a) Decreased heart rate
 - b) Wide spread vasoconstriction in the skin, alimentary canal and kidneys
 - c) Fluid retention
 - d) Increased bone marrow activity
 - e) Increased peripheral resistance by hormonal mechanism



KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE
END OF SEMESTER EXAMINATIONS TIME TABLE

Class: March 2019

Year of study: 1st

Semester: II

Academic Year: 2019/2020

Day/Date	Morning		Afternoon
	9:00 – 11:00 AM		2:00 – 4:00 PM
Monday 10 th /2/2020	Clinical Methods 11		Community Health II
Tuesday 11 th 2/2020	Anatomy 11	First Aid	Parasitology II
Wednesday 12 th /2/2020	General Pathology 11		Microbiology II
Thursday 13 th /2/2020	General Physiology 11		General Pharmacology II
Friday 14 th /2/2020	Biochemistry 11		Behavioral Sciences

Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 20/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

JULY 2018 - END OF SEMESTER II COMMON EXAMINATION

PROGRAM: DIPLOMA

CLASS: SEPTEMBER 2017

Module: CLINICAL METHODS

Time: 2 Hours

Session: Morning (09.00 – 12.00 hours)

DATE:

GENERAL INSTRUCTIONS

- 1) Write your admission number answer sheet provided
- 2) Read instructions on the question paper carefully
- 3) Number all questions correctly
- 4) Begin each essay question on a new page
- 5) Use legible writings
- 6) All cancellations must be clean and complete
- 7) Do not use a pencil except for drawings and illustrations
- 8) Ensure any extra paper(s) used is/are firmly fastened within the booklet

SECTION A: MULTIPLE CHOICE QUESTIONS (MCQ)

- This section contains ten (10) questions
- Each question has four options
- There is no penalty for wrong responses
- Answer the questions on the answer sheet provided by marking "x" against the most correct response

QUESTIONS

1. The following is used on animate skin and mucus membrane as a chemical agent to remove or kill micro-organisms
 - a. Antiseptics
 - b. High level solution
 - c. Chlorine solution
 - d. None of the above
2. Oxygen administration is done on patients;
 - a. Compromised respiratory system
 - b. Oxygen saturation of 95% with pulse oximetry
 - c. Septic burns on the lower limbs
 - d. Uncompromised gastrointestinal system
3. Injection safety involves
 - a. Washing hands, use of antiseptic and replacing needle guard after use
 - b. Sterelization, decontamination, warshing
 - c. Decontamination, insiniration, use of antiseptic
 - d. Use of sharps reciever, hand warshing, use of alchohol swabs
4. An ultrasound is can be used to
 - a. Vissualize visceral organs
 - b. Check for skull fractures
 - c. Asses for nerve damage
 - d. Investigate for malaria
5. The following is true about DRE
 - a. Is not done to females.
 - b. Is useful in urine retention.
 - c. Is indicated in assessment of prostate.
 - d. Is not indicated in labour.
6. Incision and drainage
 - a. Is useful for evacuation of pus in an abscess.
 - b. Do not require aseptic technique.
 - c. Usually done in main theatre.
 - d. Antibiotics are not required
7. In basic life support
 - a) Head tilt- chin lift is a maneuver to close airways
 - b) Jaw thrust is for opening up the airways
 - c) Mouth to mouth artificial ventilation is applied in circulation assessment
 - d) Chest compression is not necessary in suspected cardiac arrest

8. Administration of injections
- Septic technique applies when using intra-dermal route always
 - A clinician can invent any site of the body for injection
 - Drugs given through this route are absorbed more quickly than by mouth.
 - All of the above is true.
9. Which of the following statement best describe coma
- A state of extreme psychiatric disturbance and the patients withdraws mentally from their surroundings.
 - Impaired cognitive function in the setting of a normal conscious level.
 - Implies disorientation.
 - A state in which the patient's response to external stimuli or inner needs is grossly impaired.
10. The following area may not be ideal site in eliciting jaundice
- Skin
 - Conjunctiva
 - Sclera
 - Mucosa

SECTION B: MULTIPLE TRUE-FALSE QUESTIONS (M- T/F)

- This section contains ten (10) questions
- Each question has five options
- There is a penalty of one mark for every wrong response
- Answer the questions on the answer sheet provided by marking "x" against the appropriate responses (either true or false)

QUESTIONS

- Regarding naso-gastric tube for feeding;
 - On insertion, measurement is done from xiphisternum, to the tip of the nose to the ear lobe
 - Confirmation is done by aspirating stomach contents
 - Can be used to provide nourishment-
 - ~~Cannot be used for oral medication administration~~
 - Is indicated to patients with functional digestive system
- During post-operative care on patient after abdominal surgery, ensure;
 - The consent is signed by the patient
 - Laboratory results ordered are ready
 - Operation site is observed for bleeding ,gapping and discharge

- d) Wound cleaning and dressing is done daily
 - e) It starts from the time the surgical condition is diagnosed till patient is taken to theatre
3. Indwelling catheters on urinary catheterization;
- a) Clean or heavy duty gloves must be worn
 - b) Is indicated during pre and post abdominal surgery
 - c) Used for intermitted urine withdrawals
 - d) Is retained for continuous drainage of urine
 - e) Patient privacy is not important during insertion
4. The following are indications for performing an enema
- a) To stimulate progress of labour
 - b) In patients with constipation
 - c) To give patient comfort
 - d) Pre-operatively for patients going for pelvic surgery
 - e) To obtain urine specimen
5. Aseptic procedures are quite common in the hospital as part of daily patient care. Which of the following are contraindications of carrying out aseptic procedures?
- a) Assisting in sterile procedures
 - b) When the clinician have a cold
 - c) Cut wounds in the fingers of the clinician
 - d) When the clinician is dressing a wound
 - e) When the clinician has gastro-entritis
6. Injection site of choice in infants are?
- a) Rectus femoris muscles
 - b) Vastus lateralis muscles
 - c) Deltoid muscle
 - d) Gluteus maximus muscle
 - e) Biceps femoris muscle
7. In asphyxiated newborn resuscitation
- a. You don't require stethoscope.
 - b. Artificial ventilation is important.
 - c. Ambu-bag is a necessity.
 - d. Urethral catheterization is needed.
 - e. NG tube must be inserted.
8. Safety precautions in workplace includes
- a. Proper hand washing after every procedure.
 - b. Proper disposal of wastes.
 - c. Indiscriminate waste collection and disposal.
 - d. Discourage dirty patients from entering you clinic.
 - e. Educate the patients in proper hand washing.

9. Requirements during injection are
- Sanitizer to sanitize site of injection.
 - Lignocain.
 - Skill on injection.
 - Admission.
 - Presence of a surgeon.
10. Peripheral cyanosis is best elicited at:
- Hands
 - Feet
 - Nose
 - Lips
 - Frenulum

SECTION C: SHORT ANSWER QUESTIONS

- This section contains four (4) questions
- Attempt all questions

QUESTIONS

1. Concerning pallor
- Define pallor. (1 mark)
 - Write 4 sites for its examination. (5marks)
 - Give the 3 clinical grading of pallor (3 marks)
 - State 1 disease that present with pallor. (1marks)
2. Jaundice
- Define what jaundice is. (2 marks)
 - Write 2 examination sites for jaundice. (2 marks)
 - Give the clinical classification of jaundice (3 marks)
 - State it 3 diseases that may present with Jaundice. (3 marks)
3. Copy and complete the table below concerning vital signs. (10 Marks)

	Vital sign	Lower limit	Upper limit
1.	Radial Pulse		
2.	Axilla Temperature		
3.	Adult Respiratory Rate		
4.	Adult Diastolic Blood pressure		
5.	Adult Body mass index {BMI}		

4. About history taking

- a) Write 4 features that demonstrates active listening (4 marks)
- b) Construct 6 history questions related to reproductive health of a female (6marks)

SECTION D: LONG ANSWER QUESTIONS (LAQ)

- This section contains two (2) questions
- Attempt all questions

QUESTIONS

1. Abdomen

- a) Draw and label the 9 regions of the abdomen. (5 marks)
- b) State one abdominal organ found in each region of the abdomen. (4 marks)
- c) Write 4 symptoms of a patient with GIT diseases. (4 marks)
- d) List 4 disease conditions that may present with abdominal pains. (4 marks)
- e) Write any 6 causes of abdominal distention. (3 mark)

2. Respiratory

- a) A patient comes to you in hospital with a cough productive of sputum; Write 3 questions could you farther ask about this sputum. (3marks)
- b) Write 5 respiratory features that suggest a patient has difficulty in breathing (respiratory distress). (5 marks)
- c) List 5 other examinable features of respiratory system. (5 marks)
- d) Give 3 tests (investigation) done for respiratory system. (3 marks)
- e) Enumerate 4 diseases that directly affect the respiratory system. (4 marks)

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

CLINICAL METHODS

YEAR 1 SEMESTER 11 CAT EXAMINATION

Time: 2.00 pm -4.00 pm

Date: 19th December 2019

Class: March 2019

College No.

Instructions to Candidate

1. Any cancellation must be complete and clear.
2. Write college numbers on all pages.
3. Answer all questions

SECTION 1: MULTIPLE CHOICE QUESTIONS

1. The following percussion notes are arranged according to the conditions that produce them:-

- a) Tympany - pneumothorax
- b) Dullness - pneumonia
- c) Stony dullness – pleural effusion
- d) Resonance – ascites

2. The following are true push factors of trachea and mediastinal structures to the abnormal side:-

- a) Pneumothorax
- b) Atelectasis
- c) Pleural effusion
- d) Lung tumour

3. The following are causes of increased tactile fremitus on chest palpation, except:-

- a) Pneumothorax
- b) Emphysema
- c) Consolidation
- d) Pleural effusion

4. The following are causes of decreased breaths sounds on chest auscultation, except:-

- a) Consolidation
- b) Pleural effusion
- c) Pneumothorax
- d) Lung collapse

5. The following are correctly matched areas of CVS auscultation:-

- a) The 2nd ICS 2cm right from the sternum = Pulmonary area
- b) The 2nd ICS 2cm left from the sternum = Aortic area
- c) The 4th ICS 2cm left from the sternum = Tricuspid area
- d) The 5th ICS 9cm left from the mid clavicular line = Bicuspid area

6. The following people are not at risk of infection in the hospital setup;
- Health workers
 - Farmers
 - Family members visiting the sick
 - Community living around the hospital surroundings
7. Which of these applies to proper hand washing procedures;
- Use only antibacterial soap when washing hands
 - If the soap does not lather, it is important to use longer friction time
 - Use a paper towel to turn off the tap/faucet
 - Use friction for 15 seconds
8. A pulse can be taken in the following areas except;
- Behind the knee
 - The inner wrist
 - The back of the head
 - The side of the neck
9. Which statement is incorrect regarding the Heimlich maneuver?
- If the resident is coughing violently, proceed with the Heimlich maneuver immediately
 - Place your hands around the victim between the xiphoid and umbilicus
 - If you are alone and choking, you can perform the Heimlich maneuver on yourself using the back of a chair
 - To properly apply the Heimlich maneuver, make a fist with your hands
10. Transmission –based precautions are.....;
- Added to standard- based precautions when a patient is known or suspected of having a communicable disease
 - Not as stringent as other precautions
 - Part of the standard based precautions for all patients
 - Only used during times when an epidemic is declared

SECTION 2: TRUE OR FALSE QUESTIONS

1. During abdominal examination, the following sounds are produced by percussion:
 - a) An internal solid organ - tympanic sounds
 - b) Air filled structures - resonance sounds
 - c) Fluid filled structures – stony dullness sounds
 - d) A bony structure - dullness sounds
 - e) A hollow organ – hyper resonance sounds

2. Which statement is TRUE about murmurs:
 - a) Aortic regurgitation murmurs are heard along the para-sternal border 2 cm 2rd ICS left chest
 - b) Systolic murmurs represent aortic regurgitation
 - c) Diastolic murmurs represent mitral regurgitation
 - d) Mitral stenosis murmurs are best heard towards the sternum 2 cm 4rd ICS right chest
 - e) Mid diastolic murmurs represent aortic regurgitation

3. The following percussion notes are arranged according to the conditions that produce them:-
 - a) Tympany – pneunarthorax
 - b) Dullness – pneumonia
 - c) Stony dullness - intestinal obstruction
 - d) Hyper-resonance - bronchial asthma
 - e) Resonance – Pleural effusion

4. The following organs are correctly matched with their true positions in the abdomen:
 - a) Enlarged organ on the left hypochondrium is possibly the liver
 - b) Enlarged organ on the right hypochondrium is possibly the spleen
 - c) Enlarged organ on the epigastrium is possibly the uterus
 - d) Enlarged organ on the right iliac fossa is possibly the appendix
 - e) Enlarged organ on the suprapubic is possibly the stomach

5. The following chest inspection deformities are correctly matched with their pathology:-
 - a) A barrel chest - Chronic obstructive lung disease.
 - b) A funnel chest -Tuberculosis
 - c) A frail chest – Broncho asthma.
 - d) A pigeon chest - Pneumothorax
 - e) A flat chest – Emphysema

6. Respond as either true or false

- a) Poor cleaning of some instruments is a common cause of mechanical malfunction of steam sterilizers
- b) Boiling method of sterilization is the preferred method to process re-usable instruments during a busy service delivery session
- c) Discharged patients should not carry anything home from the ward
- d) Admission means accepting responsibility for specific health care needs of an individual
- e) Alcohols, iodophors(povidone) and hydrogen peroxide are potent chemicals and therefore can be used for high level disinfection

7. Purpose for injection safety is to reduce risk of;

- a) Paralysis
- b) Death
- c) Trauma
- d) Abscess formation
- e) Being sued in court (litigation)

8. Understanding the disease transmission cycle is an essential requirement for all health workers. Indicate either true or false;

- a) Knowledge of disease transmission cycle enables health workers to protect themselves and patients from cross infection
- b) Vector control is not a method of interrupting the disease transmission cycle
- c) The essence of primary disease prevention is to reduce new infection cases
- d) Dry skin is a major body defence organ against microbes infection
- e) Agents of disease can be controlled by proper waste disposal

9. Stages of instrument processing include;

- a) Decontamination
- b) Disposal
- c) Cleaning
- d) Sterilization
- e) Proper storage

10. Infectious agents include;

- a) People
- b) Bacteria
- c) Fungi
- d) Dust mites
- e) Soil

SECTION TWO: SHORT ANSWER QUESTIONS (SAQs) – (30 Marks):

1. On nursing diagnostic and therapeutic procedures:-
 - a) List at least five (5) emergency indications of blood transfusion. (5 Marks)
 - b) State at least five (5) immediate complications of blood transfusion. (5 Marks)

2. On monitoring vital signs in nursing skills:-
 - a) Name two central and four peripheral pulse points. (3 Marks)
 - b) Explain three indications for checking a patient's pulse. (3 Marks)
 - c) Explain four types of information that a pulse measurement may give. (3 Marks)

3. On catheterization concepts:
 - a) Define urinary catheterization. (2 Marks)
 - b) Mention indications of catheterization. (4 Marks)
 - c) Mention complications of catheterization (4 Marks)

4. Waste management:
 - a) What is waste management (2 marks)
 - b) Describe the different types of medical waste (8 marks)

5. Infection control:
 - a) Define infection control (2 marks)
 - b) Hand washing is an important standard precaution in infection control measures. Outline 3 methods of hand washing (6 marks)
 - c) Give 4 scenarios when should observe hand hygiene by hand washing (4 marks)

6. Outline different precautions that should be observed for airborne diseases (10 marks)

SECTION THREE: LONG ANSWER QUESTIONS (LAQs) – (20 Marks):

1. Madam Alice is for Naso – gastric tube (NGT) insertion procedure:
 - a) List six indications for NGT in Alice (3 Marks)
 - b) Explain three methods of confirming correct tube placement in Alice (3 Marks)
 - d) Describe four potential problems that Alice may encounter due to the presence of NGT inside her stomach. (4 Marks)

2. Discuss the importance of proper waste disposal (10 marks)

GOOD LUCK, MERRY CHRISTMAS AND PROSPEROUS NEW YEAR 2020



KENYA MEDICAL TRAINING COLLEGE
FACULTY OF CLINICAL SCIENCES
DEPARTMENT OF CLINICAL MEDICINE
END OF SEMESTER EXAMINATIONS TIME TABLE

Class: March 2019

Year of study: 1st

Semester: II

Academic Year: 2019/2020

Day/Date	Morning		Afternoon
	9:00 – 11:00 AM		2:00 – 4:00 PM
Monday 10 th /2/2020	Clinical Methods 11		Community Health II
Tuesday 11 th 2/2020	Anatomy 11	First Aid	Parasitology II
Wednesday 12 th /2/2020	General Pathology 11		Microbiology II
Thursday 13 th /2/2020	General Physiology 11		General Pharmacology II
Friday 14 th /2/2020	Biochemistry 11		Behavioral Sciences

Prepared by:

D. Kertich
DEPARTMENTAL EXAMINATION OFFICER
FOR: HOD – CLINICAL MEDICINE

Signed:  Date: 26/01/2020

CC:

- i-Principal
- ii -DPA
- iii-All Subject Lecturers
- iv-Students' Notice Board

KENYA MEDICAL TRAINING COLLEGE



FACULTY OF CLINICAL SCIENCES

DEPARTMENT OF CLINICAL MEDICINE

2017/2018 ACADEMIC YEAR

Semester I Examinations (supplementary) for September 2016 class Diploma in Clinical
Medicine and Surgery

MAY 2018

STREAM: BASIC DIPLOMA
MODULE: MICROBIOLOGY
TIME ALLOWED: 2 HOURS
SESSION: MORNING (09:00 AM – 11:00 AM)
DATE: FRIDAY 11TH MAY 2018

GENERAL INSTRUCTIONS

- 1) Write your examination number in all sheets provided
- 2) Read instructions on question paper carefully
- 3) This paper has **THREE** sections;

SECTION A: MULTIPLE TRUE /FALSE QUESTIONS – 20 Marks

SECTION B: SHORT ESSAY/STRUCTURED QUESTIONS – 40 marks

- This section contains **Four** questions (Each carrying 10 Marks)
- ATTEMPT all questions.

SECTION C: LONG ESSAY QUESTIONS – 40 MARKS

- This section contains **TWO** questions
- Attempt the **TWO** questions

SECTION A: MULTIPLE TRUE /FALSE QUESTIONS

1. The protozoa cells
 - a. Have no cell wall
 - b. Are made of cellulose
 - c. Have a cell wall
 - d. Are made of chitin
 - e. Are eukaryotic

2. The mitochondria of the cell
 - a. Modifies the proteins and lipids
 - b. Transport materials within the cell
 - c. Has double a double membrane
 - d. Contain enzyme peroxidase
 - e. Is the power house of the cell

3. In bacteriology;
 - a. All bacteria have one flagellum
 - b. Iodine is the counter stain in acid fast staining
 - c. The capsule helps the bacteria to attach to surfaces
 - d. All the bacteria are rod-shaped
 - e. The bacteria are either motile or non-motile

4. Streptococcus pyogenes is associated with which of the following diseases?
 - a. Pharyngitis
 - b. Endocarditis
 - c. Pneumonia
 - d. Urinary tract infections
 - e. Adenoviral pharyngitis

5. In Herpes simplex;
 - a. The incubation period is 2 to 20 days
 - b. The causative agent belong to the paramyxovirus family
 - c. Symptoms include fever and severe sore throat
 - d. Is transmitted by close physical contact
 - e. Is a sexually transmitted disease

6. In Hepatitis B;
 - a. The causative agent is an enveloped virus
 - b. Can be spread through the faecal-oral route
 - c. Can be spread through blood and semen contact

- d. Progressive liver damage in 1% to 6% can lead to cirrhosis
 - e. The symptoms are usually mild compared to hepatitis A
7. The campylobacter bacteria;
- a. Are gram negative
 - b. Are microaerophilic
 - c. Are non-fermentative
 - d. Are motile rods
 - e. Are oxidase positive
8. In salmonellosis;
- a. Patients may experience a form of self-limiting food poisoning
 - b. Symptoms include diarrhea and abdominal cramps
 - c. The infection manifests to enteric fevers
 - d. The causative agent is a gram positive bacilli
 - e. The causative organism is usually non-motile
9. The following symptoms are associated with vulvo-vaginal candidiasis;
- a. Thick white vaginal discharge
 - b. Headache and fever
 - c. Yellowish odor vaginal discharge
 - d. Itching and a burning sensation
 - e. On and off headaches
10. Organisms that use chemicals as energy source and carbon dioxide as source of carbon are
- a) Chemo-heterotrophs
 - b) Chemo-autotrophs
 - c) Litho-heterotrophs
 - d) Litho-autotrophs
 - e) Photo-autotrophs
11. An example of an obligate anaerobe is;
- a. Streptococcus pyogenes
 - a. Bacillus psychophilus
 - b. Clostridium tetani
 - c. Salmonella typhi
 - d. Lactobacillus

12. Theof the bacteria provides the rigidity of the bacterial cell

- Capsule
- Fimbriae
- Cell wall
- Plasma membrane
- Periplasmic space

13.is the establishment of microbial growth on or within the host.

- Disease
- Pathogenesis
- Pathogenicity
- Colonization
- Adherence

14. Tinea pedis (athlete's foot) is caused by;

- Trichophyton
- Aspergillus species
- Amanita
- Cryptococcus
- Histoplasma capsulatum

15. Viruses in the family Herpesviridae include;

- Roseolovirus
- Mumps virus
- Hepatitis B virus
- Parainfluenza virus
- Varicello virus

16. Aerotolerant bacteria;

- Don't use oxygen but oxygen doesn't harm them
- Like low oxygen concentrations
- Are killed by oxygen
- Lack of oxygen kills them
- Can grow in presence or absence of oxygen

17. An example of a transport media is;

- Alkaline peptone water

- b. Blood agarile salts
- c. Lysed blood
- d. Cary blair media

18. Gram positive bacteria include;

- a. Staphylococcus aureus
- b. Vibrio cholera
- c. Proteus vulgaris
- d. Escherichia coli
- e. Streptococcus pyogenes

19. The mitochondria of the cell

- a. Modifies the proteins and lipids
- b. Transport materials within the cell
- c. Has double a double membrane
- d. Contain enzyme peroxidase
- e. Is the power house of the cell

20. In bacteriology;

- a. All bacteria have one flagellum
- b. Iodine is the counter stain in acid fast staining
- c. The capsule helps the bacteria to attach to surfaces
- d. All the bacteria are rod-shaped
- e. The bacteria are either motile or non-motile

SECTION B: SHORT ESSAY/STRUCTURED QUESTIONS

1. Describe the four (4) symptoms associated with salmonellosis (10 marks)
2. a) Describe the pathogenesis of Treponemepallidum in syphilis infection (10 marks)
3. state four (4) symptoms associated with syphilis (10 marks)
4. Genital herpes simplex is a common viral sexually transmitted disease. State its four (4) symptoms associated with the infection (10marks)

KENYA MEDICAL TRAINING COLLEGE – MERU

DEPARTMENT OF CLINICAL MEDICINE

CAT EXAM

Virology/ Microbiology

Time: 9.00 am-11.00 am

Date: 19th December 2019

Class: March 2019

College No.

Instructions to Candidate

1. Any cancellation must be complete and clear.
2. Write college numbers on all pages.
3. Answer all questions

Section one MCQ

1. What is a major cause of congenitally acquired infections prior to the introduction of MMRV vaccine?
 - a. Mumps
 - b. Rubella
 - c. Varicella
 - d. Measles
2. Varicella-Zoster Virus (VZV) is transmitted by
 - a. Respiratory droplets
 - b. Oral-fecal route
 - c. Trans mammary
 - d. Sexual transmission
3. A particular virus' genetic material first needs to be copied into positive sense SS-RNA (Single Strand RNA). What type of virus is this?
 - a. SS Positive-Sense RNA
 - b. SS Negative-Sense RNA
 - c. SS RNA recombinant
 - d. SS DNA recombinant
4. Double Stranded, naked RNA viruses that cause infections in humans;-
 - a. Rotavirus
 - b. Poxvirus
 - c. Parvovirus
 - d. Herpesvirus
5. Viruses can replicate in the:
 - a. Cytoplasm or Nucleus
 - b. On the cell membrane
 - c. Mitochondria
 - d. Only in the nuclear
6. The virus' structure is a:
 - a. Dodecahedron.
 - b. Icosahedron.
 - c. Square.
 - d. Tetrakaidecagon.
7. What is the envelope?
 - a. Nucleic acid and surrounding protein shell.
 - b. Major protein component of the shell of the core.
 - c. Single virus particle.
 - d. Phospholipid Membrane surrounding virus capsid
8. Which of the following has the largest genome of all human viruses; -
 - a. Poxvirus
 - b. Herpesvirus
 - c. Hepadnavirus
 - d. Adenovirus
9. HPV types that increase risk for developing cervical cancer; -
 - a. 16,18 and 31
 - b. 21,22
 - c. 12, 7
 - d. 15,16
10. Which virus causes influenza (flu).
 - a. Orthomyxovirus
 - b. Paramyxovirus
 - c. Picornavirus
 - d. Coronavirus

1. The following are properties regarding viruses; -
 - a. Genome may be either DNA, RNA, Single, or Double-stranded
 - b. Viruses are obligate intracellular parasites
 - c. All virus has a protein capsid and envelope
 - d. Viruses are inert.
2. How are viruses different from bacteria?
 - a. Viruses do not replicate by binary fission
 - b. Viruses have same size with bacteria
 - c. Viruses are obligate intercellularly
 - d. Viruses have cell wall
3. Viruses are classified according to the following criteria; -
 - a. Type of replication
 - b. Morphology of unicellular microorganism
 - c. Type of nucleic acid
 - d. Structure of virus
4. The following viruses belong to a Herpesviridae family; -
 - a. Herpes simplex 1
 - b. Herpes simplex 2
 - c. Adenovirus
 - d. Varicella zoster virus
5. The following are true regarding capsids; -
 - a. Give shape and protection to genome
 - b. Most DNA viruses are icosahedral except poxvirus
 - c. It is also called viral membrane
 - d. Provide attachment sites for naked viruses
6. Adenoviridae, Poxviridae, and Herpesviridae are:
 - a. Single-stranded DNA virus
 - b. Single-stranded RNA virus
 - c. Double-stranded DNA
 - d. Double-stranded RNA
7. Which of the following are unique viral enzymes that are targeted for treatment?
 - a. Interferons.
 - b. Reverse transcriptases.
 - c. Protease
 - d. Integrase
8. Hepatitis A, B and C are
 - a. All RNA viruses.
 - b. All DNA virus
 - c. Hepatitis B is a DNA virus
 - d. Hepatitis C and A are all RNA
9. Examples of arthropod vectors viruses; -
 - a. Yellow Fever
 - b. Rift Valley Fever
 - c. Measles
 - d. Dengue Virus
10. The viruses that causes common cold in young children are;-
 - a. Rhinoviruses
 - b. Rotaviruses
 - c. Herpes simplex viruses
 - d. Influenza virus

Short Answer Question

1. What is the pathogenesis and clinical findings of chromoblastomycosis -10mks
2. Answer the following questions:-
 - a) Give five fungi that cause superficial mycoses and the infection they cause 5mks
 - b) Sporotrichosis is an infection caused by sporothrix schenckii. Explain how the infection is treated 5 mks
3. A 2-year-old boy presents with a 1 week history of weight loss, diarrhea, vomiting and fever.
 - a) Name two virus that may be causative agent 2 mks
 - b) Discuss four (4) preventive measures for mentioned virus 6 mks
4. Discuss steps involved in diagnosis of fungal diseases in the lab 20 mks

Long Answer Question

1. Discuss the classification of mycoses 20mks

KENYA MEDICAL TRAINING COLLEGE - MERU

DEPARTMENT OF CLINICAL MEDICINE

II
SEMESTER IV CAT
MICROBIOLOGY

Time: 1 HR 30MINS
Date: 30th May 2018
Class: September 2017
College No.

INSTRUCTIONS

1. ATTEMPT ALL QUESTIONS.

MCQ

1. Culture of a urine specimen:
 - a. Is helpful in looking for candidiasis of the urinary tract.
 - b. May yield *C. neoformans*.
 - c. Is helpful in looking for disseminated candidiasis.
 - d. All of the above.
2. Direct examination of smears for fungal morphology is done using:
 - a. A monocular microscope.
 - b. Phase-contrast microscopy.
 - c. Smears made from culture growth.
 - d. Gram stain.
3. The most commonly found fungal infection is:
 - a. Candidiasis.
 - b. Histoplasmosis.
 - c. Tuberculosis.
 - d. Botryomycosis.
4. Opportunistic infections caused by saprophytic fungi are:
 - a. Of little concern to the laboratory specialist.
 - b. Rarely capable of causing disease.
 - c. Of increasing importance due to increased instrumentation.
 - d. Of increasing importance because new strains are being identified.
5. Which of the following would be considered at high risk of yeast infections?
 - a. Newborns.
 - b. Burn victims.
 - c. Lab personnel.

d. Hospital patient

TRUE/FALSE

1. All viruses

a. Contain DNA

b. Contain RNA

c. Contain

d.

TRUE/FALSE

1. All viruses
 - a. Contain DNA
 - b. Contain RNA
 - c. Contain protein
 - d. Are susceptible to lipid solvents
 - e. Are intracellular parasites

2. The following viruses are associated with human cancers
 - a. HSV-2
 - b. EBV
 - c. HCV
 - d. Adenoviruses
 - e. HHV-8

3. The following viruses may cause congenital infection
 - a. HSV-2
 - b. Rubella
 - c. HIV
 - d. HBV
 - e. CMV

4. The following viruses have reverse transcriptase
 - a. HIV
 - b. Parvovirus
 - c. HBV
 - d. CMV
 - e. HTLV-1

5. The following are viral zoonoses

- a. Rubella
- b. Rabies
- c. Hantaviruses
- d. Lassa Fever
- e. Japanese Encephalitis

SHORT ANSWER QUESTIONS

1. List four disease processes that can be caused by subcutaneous fungi.
2. Describe the differences between bacteria and viruses.

LONG ANSWER QUESTION

Give stepwise detailed description of viral replication.



MCQ

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