ABIA STATE UNIVERSITY
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
SECOND SEMESTER EXAMINATIONS
MLS 312: BIOMEDICAL PHYSICS TIME: 2 HOURS
INSTRUCTIONS: ANSWER 1 QUESTION FROM SECTION A AND 3 FROM SECTION B

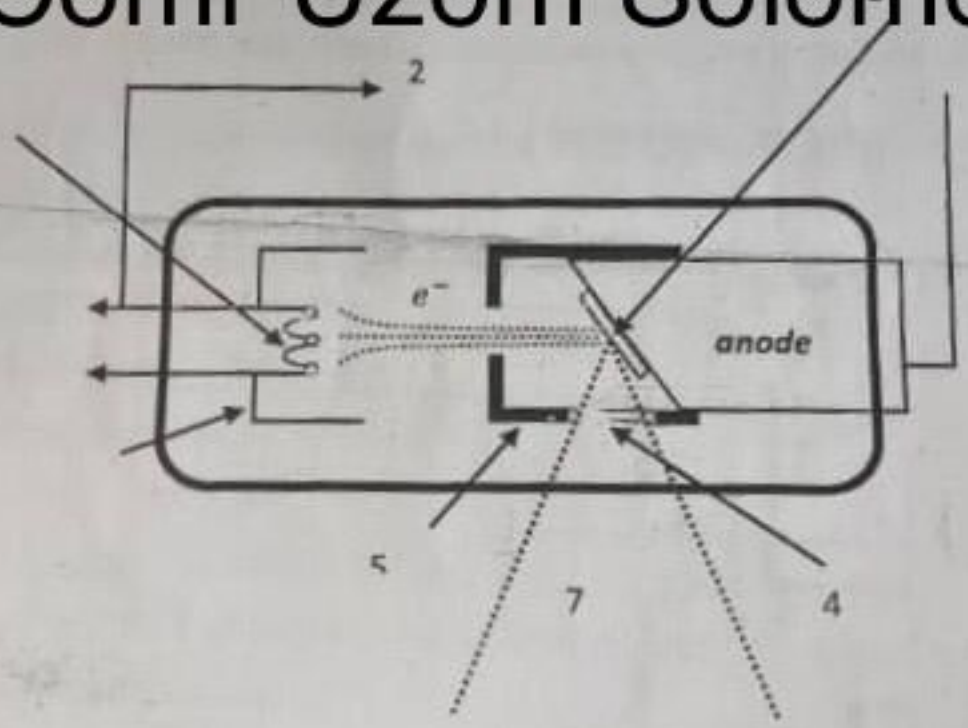
SECTION A

1. A) Draw a well labeled diagram of the electromagnetic spectrum. (4 marks)
   b) Differentiate between the three types of particulate radiation. (6 marks)

2. A) With a diagram, explain the heel effect. (5 marks)
   B) Explain the function of the cathode of an X-ray tube. (5 marks)

SECTION B

3. A) Complete the diagram below for the parts labeled 1-7



(7 marks)

b) Explain the function of the parts labeled 1 – 3 (9 marks)
c) State the inverse square law (4 marks)

4. a) State 4 ways the effect of radiation can be minimized (4 marks)

b) Explain the term Linear-No-Threshold model (4 marks)

c) Draw the diagram for the LNT and explain the 3 fronts on which the Linear-No-Threshold model is challenge (12 marks)

FACAULTY OF MEDICAL LABORATORY SCIENCE

COLLEGE OF MEDICINE & HEALTH SCIENCES,

ABIA STATE UNIVERSITY,

UTURU.

Comr. NWABUESE CHINEDU ITO PEACE
SEC. GEN [RELEC] WISHES YOU EXAM SUCCESS..

COURSE TITLE: PHARMACOLOGY II

COURSE CODE: PHM 352. TIME: 1½ HOURS. SECOND SEMESTER 2017/2018.

INSTRUCTION: ANSWER ALL QUESTIONS.

1 (a). List five classes of antimicrobial agents you know.

(b). Differentiate between Bactricidal and Bacteriostatic antimicrobial agents with one example each.

15 marks

2. Discuss the following:

i) Antimicrobial spectrum.

i) Duration of antimicrobial therapy.

iii) Succeptibility tests.

20 marks

3 (a). What is EMPIRIC THERAPY?

(b). List three classes of Sulphonamides with one example each.

(c). List any three groups of Penicillins you know.

15 marks

4. Explain:

(a). Mechanism of action and two side effects of Aminoglycosides.

(b). Mechanism of action and two side effects of Penicillins.

20 marks

FACULTY OF MEDICAL LABORATORY SCIENCE
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ABIA STATE UNIVERSITY,
UTURU

COURSE TITLE: GENERAL PATHOLOGY
COURSE CODE: . PTH 322. TIME: 2HRS.

INSTRUCTION: ANSWER FOUR QUESTIONS ONLY.

(1) Define neoplasia . With a help of a table show comparisons between benign and malignant tumours

(2) Describe Necrosis

(3) Discuss the causes of cell injury.

(4) What is acute inflammation? List the stimuli for acute inflammation and write briefly on the cellular events of acute inflamation.

ABIA STATE UNIVERSITY, UTURU

FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE AND HEALTH SCIENCES
SECOND SEMESTER 2019/2020 SESSION EXAMINATION
Friday 4th June, 2021.

COURSE: **MLS PROCEDURE (MLS 332)**
TIME ALLOWED: **2 HOURS**
INSTRUCTION: **ANSWER ALL QUESTIONS**

1. (a) What is the full meaning of PCV?

   (b) State the principle of PCV test

   (c) Describe the process of running PCV

2. (a) Describe the formol ether method of examination of faecal parasites in the laboratory.
   (b) State how to make a thin film for microscopy

3. A breast lump sample was brought to the Histopathology Laboratory where you work. Discuss what you will do with the sample to produce a slide for microscopy.

FACULTY OF MEDICAL LABORATORY SCIENCE,
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COURSE TITLE: IMMUNOLOGY
COURSE CODE: M L S 332. TIME: 2HOURS
INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS.

1. Innate immunity to foreign agents may be achieved by some of physical/physiological features of some body sites. Write briefly on any 5, stating how each contributes to immunity to the human body

2. Explain briefly the following terms.
   a. complements
   b. immune system
   c. immunoglobulins
   d. immune response
   e. haptens

3. Explain the factors (Any 5) which contribute to Antibody production.

4. a. Explain the major events that take place in Antigen – Antibody reactions
   b. What is precipitation reaction?
   c. Describe any two simple precipitation reactions, stating in each case where such tests are widely used in medical laboratory practice.

~~Ezuruonye~~ ~~Mirabel~~

ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
FINAL YEAR SECOND SEMESTER EXAMINATION
COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342
DATE: 07/06/2021 TIME ALLOWED: 2 HRS
ANSWER ALL QUESTION

1a. Explain the major characteristics of the Primitive Haematopoietic Stem Cell?

b. Illustrate the production of the Immune cell lines from the Primitive Haematopoietic Stem Cells.

c. Explain the process(es) whereby the Immune Cells ensure the elimination of microbes. 20 marks

2a. Complement participates in the Innate and Acquired Immune responses, Discuss. UZOM SOLOMON

b. Briefly explain the ways whereby Complement removes microbes. 20 marks

3a. Describe the Basic structure of an Antibody molecule and relate it to its function(s).

b. Write short notes on

a. Complementarity determining region

b. Chemoattractants

c. The Joining (J) Chain

d. Germ theory

e. Role of Mast cells inImmune response. 20 marks

4. Briefly explain 5 laboratory methods in the recognition of Antigen/ interaction. 10 marks.

FACULTY OF MEDICAL LABORATORY SCIENCE
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ABIA STATE UNIVERSITY,
UTURU

COURSE TITLE: GENERAL PATHOLOGY
COURSE CODE: . PTH 322. TIME: 2HRS.
2018/2019 2ND SEMESTER
INSTRUCTION: ANSWER ALL QUESTIONS .

NWAFUEZE CHRISTOPHER O.P.
SEC GEN

(1) LIST THE CAUSES OF CELL NJURY..WHAT IS ACUTE INFLAMMATION? WRITE BRIEFLY ON THE CELLULAR EVENTS OF ACUTE INFLAMATION.

(2) DISCUSS CLONING

(3) DEFINE NEOPLASTIC PROLIFERATION [TUMOUR] . WRITE BRIEFLY ON CLASSIFICATION OF NEOPLASMS

(4) WHAT IS A GENETIC DISEASE? WHAT ARE THE DIFFERENT TYPES OF INHERITANCE?

Ezumonye Miracle O

ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
FINAL YEAR SECOND SEMESTER EXAMINATION
COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342
DATE: 07/06/2021
ANSWER ALL QUESTION TIME ALLOWED: 2 HRS

1a. Explain the major characteristics of the Primitive Haematopoietic Stem Cell?

b. Illustrate the production of the Immune cell lines from the Primitive Haematopoietic Stem Cells.

c. Explain the process(es) whereby the Immune Cells ensure the elimination of microbes. 20 marks

2a. Complement participates in the Innate and Acquired Immune responses, Discuss. UZOM SOLOMON

b. *Briefly explain* the ways whereby Complement removes microbes. 20 marks

3a. *Describe the Basic structure of an Antibody molecule and relate it to its function(s).*

b. *Write short notes on*

a. Complementarity determining region

b. Chemoattractants

c. The Joining (J) Chain

d. Germ theory

e. Role of Mast cells inImmune response. 20 marks

4. Briefly explain 5 laboratory methods in the recognition of Antigen/Antibody interaction. 10 marks.

10:30

...a State University, ...

...aculty of Medical Labora... y Science. MLS 322: Biometrics

...econd Semester 2013/2014 Academic Session Examinations.

...structION: ATTEMPT QUESTION NUMBER 1 & ANY OTHER THREE QUESTIONS.

...ime Allowed: 2.5 Hours

1. The table below gives the number of deaths occurring in different age groups from 1998– 2000 as a result of complications during child birth as put together by certain hospital:

Age group	10-15	15–20	20-25	25-30	30-35	35-40	40-45	45-50
Deaths	60	30	3	2	2	8	32	43

Use the information above to answer the following:

I. How many deaths were recorded within the period under review?
II. Obtain the modal class
III. Find the frequency of the 5th class interval.
IV. Calculate the class size of the 7th class interval.
V. Obtain the median class.
VI. What is the relative frequency of the 2nd class interval?
VII. Obtain the cumulative frequency of the 4th class interval.
VIII. How many deaths were recorded for less than 25 years?
IX. Obtain the sum of the percentage frequencies of the first and the last class intervals.
X. What type of class interval is shown in the table.

2. Explain the following terms: (a) Statistics (b) Mathematical Statistics (c) Applied Statistics (d) Descriptive Statistics (e) Inferential Statistics (f) outlier (g) Primary data (h) Discrete data (i) continuous data (j) Qualitative data

b). List and explain four processes that occur when a beam of ionizing radiation encounters matter(tissue, organ etc)

c) Recommend four ways to minimize the effect of ionizing radiation.

d) Calculate the effective dose to the gonads for a health worker who is exposed to radioactive substances that emits X-rays (Assume that the absorbed dose is 20mSv/y).

Marks 20

Time
distance
shield
protective clothing

This is the quantity of risk for ionizing radiation posed to an organ or tissue

Effective dose = Equivalent dose × tissue weighting factor

Equivalent dose This is the quantity of damage that is ionizing radiation deposit on a medium

Equivalent dose = absorbed dose × quality factor

Protozoa
Helminths

FACAULTY OF MEDICAL LABORATORY SCIENCE

COLLEGE OF MEDICINE & HEALTH SCIENCES,

ABIA STATE UNIVERSITY,

UTURU.

COURSE TITLE: PHARMACOLOGY II

COURSE CODE: PHM 352. TIME: $1^1/_2$ HOURS. SECOND SEMESTER 2019/2020.

INSTRUCTION: ANSWER ALL QUESTIONS.

1 (a). List five classes of antimicrobial agents you know.

(b). Differentiate between Bactricidal and Bacteriostatic antimicrobial agents with one example each.

15 marks

2. Discuss the following:

i) Antimicrobial spectrum.

i) Duration of antimicrobial therapy.

iii) Susceptibility tests.

20 marks

3 (a). What is EMPIRIC THERAPY?

(b). List three classes of Sulphonamides with one example each.

(c). List any three groups of Penicillins you know.

15 marks

4. Explain:

(a). Mechanism of action and two side effects of Amphotericin B.

(b). Mechanism of action and two side effects of Sulphonamides.

20 marks

Aminoglycosides

3. If 25% of the people in a community use the emergency room at a hospital in one year, find the probabilities for a sample of 10 people:

(i) Exactly 4 used the emergency room. (ii) At most 4 used the emergency room.

(iii) State at least two conditions under which a binomial distribution can be approximated with a Poisson distribution

4. Using the data in Question 1:

(i) Calculate the Mean

(ii) Construct the corresponding Histogram

(iii) From the Histogram estimate the Mode.

5. If approximately 2% of the people in a hostel of 200 are HIV positive, find the probability that:

(i) Exactly 4 people there are HIV positive

(ii) None of them there is HIV positive

(iii) Less than four there are HIV positive

ABIA STATE UNIVERSITY UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
SECOND SEMESTER EXAMINATIONS 2020/2021 SESSION
MLS 322: BIOMETRY
INSTRUCTION: ATTEMPT 3 QUESTIONS (NO.1 & ANY OTHER 2). TIME: 2 HOURS.
SHOW ALL WORKINGS.

UZOM SOLOMON

1. Below is a frequency distribution of the number of cigarettes smoked by 400 patients as discovered in a certain hospital:

(a) From the data, fill the other columns of the Table.

Cigarette smoked (sticks)	Frequency	Class boundary	Class Mark	Relative Frequency	Cumulative Frequency	Class Width
300-399	14					
400-499	46					
500-599	58					
600-699	76					
700-799	68					
800-899	62					
900-999	48					
1000-1099	22					
1100-1199	6					
	$\sum f=$			$\sum r.f.=$		

(b) From the Table, construct a Frequency Histogram and estimate the modal number there from.

(2a) If 20% of the people in a Community use the emergency room at a hospital in one year, find these probabilities for a sample of 10

(i) No one used the emergency room
(ii) At most 3 used the emergency room
(iii) At least 4 used the emergency room

(2b) Using diagrams only show:

(i) A multi modal distribution
(ii) A unimodal distribution
(iii) A no-mode distribution
(iv) The difference between a bar chart and a frequency histogram .

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ABIA STATE UNIVERSITY
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COURSE TITLE: IMMUNOLOGY
COURSE CODE: M L S 332. TIME: 2HOURS
INSTRUCTION: ANSWER ANY FOUR (4) QUESTIONS.

1. Innate immunity to foreign agents may be achieved by some of physical physiological features of some body sites. Write briefly on any 5, stating how each contributes to immunity to the human body

2. Explain briefly the following terms.
   a. complements
   b. immune system
   c. immunoglobulins
   d. immune response
   e. haptens

3. Write a short note on phagocytosis

4. Explain the factors (Any 5) which contribute to Antibody production

5. a. Explain the major events that take place in Antigen – Antibody reactions
   b. What is precipitation reaction?
   c. Describe any two simple precipitation reactions, stating in each case where such tests are widely used in medical laboratory practice.

ABIA STATE UNIVERSITY UTURU

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF MEDICAL LABORATORY SCIENCE

SECOND SEMESTER EXAMINATION QUESTION FOR 2019/2020 SESSION

COURSE: MLS 312 – BIOMEDICAL PHYSICS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER TWO.

QUESTION 1

a) Define physiological systems and state four tissues that are formed from the collection of similar cells and substances
b) Using clear illustrations define a cell and state the three basic influences which determine the relative ion concentrations inside and outside the membranes of living cells.
c) Sketch a typical action potential for a cell membrane and describe the five processes that occur during action potential.
d) Differentiate between direct and indirect signals.

30 marks

QUESTION 2

a) An accident victim presents muscle twitches and involuntary movement that suggest possible trapped nerve syndrome. As a medical laboratory scientist explain how you will proceed with diagnosing this medical condition using the technique of electromyography.
b) Differentiate between systolic and diastolic blood pressure measurement levels.
c) What is the typical blood pressure level for an adult

20 marks

QUESTION 3

a) As a medical laboratory scientist working in an industry that deals with radioactive materials; recommend four ways to minimize the effect of ionizing radiation to frontline staff.
b) List and explain four processes that occur when a beam of ionizing radiation encounters matter (tissue, organ etc)
c) Define the following terms:
   i) Linear energy transfer (LET)
   ii) Absorbed dose
   iii) KERMA

UZOM SOLOMON

20 marks

QUESTION 4

a) Explain the possibility of measurement of signals in the human body
b) What is the full meaning of ECG, EEG, and EMG?
   ii) With use of a chart, represent the origin, the science of measurements, and the name for the graphical representations of the direct signals above
c) List and explain the common properties of measured signals.

20 marks

5. a) Differentiate between direct and indirect effects of ionizing radiation (4 marks)
b) State 3 importance of the course 'Biomedical Physics' to a Medical Laboratory scientist (4 marks)

c) Draw the depth-dose curve for X-ray photon, protons and electrons. It is known that the position of a tumour volume greatly influences the choice of particle or photon therapy that will be employed for its treatment. With respect to the fig 1, explain the reason(s) why any of this particle or photon will be preferred for

- Deep lying tumour

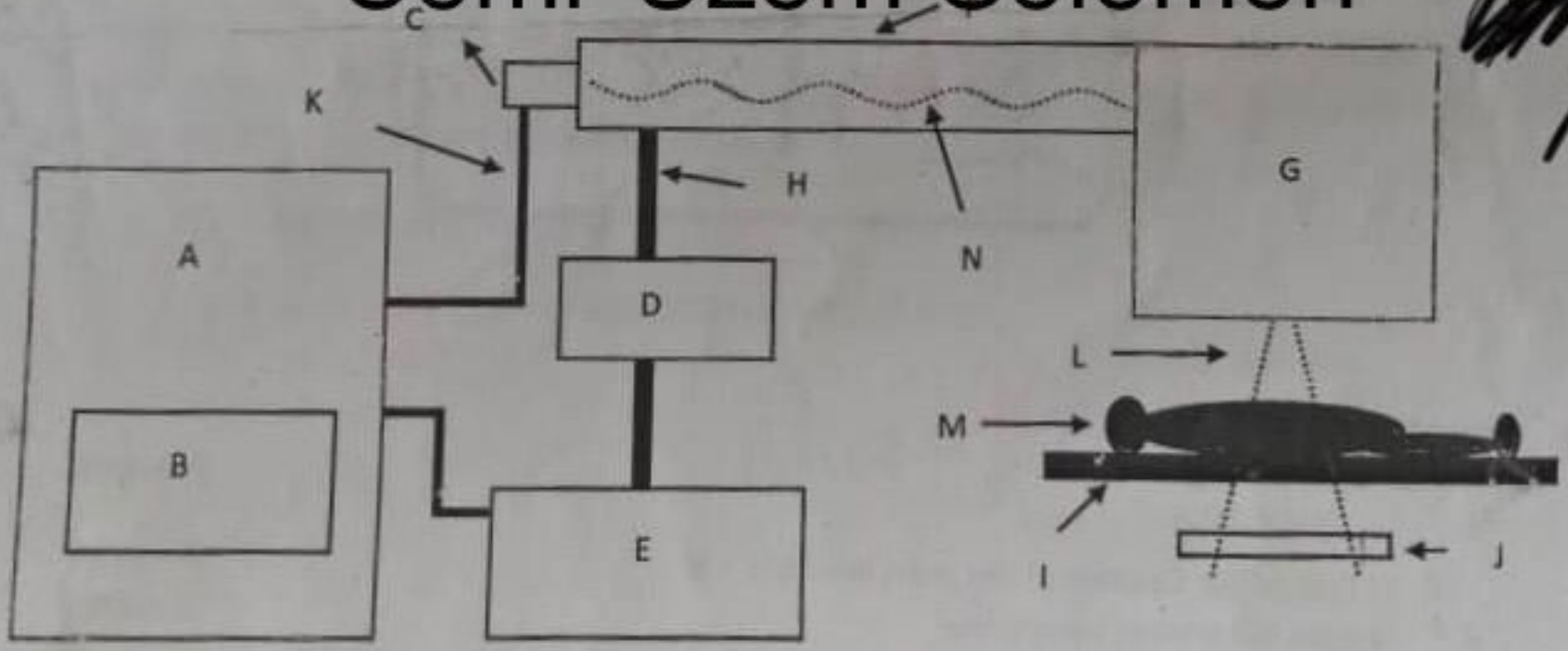
- Tumour close to the surface of the human body (12 marks)

6. a) Differentiate between Brachytherapy and External Beam Radiotherapy (4 marks)

b) Explain the two main differences exploited in radiotherapy (between normal cells and cancer cells) (4 marks)

c) i) The diagram below represents the block diagram of a Medical LINAC which is employed in the therapeutic modalities for cancer treatment. State the parts labeled A-J (4 marks)

ii) State the functions of the parts labeled A-D (8 marks)



DEPARTMENT OF MEDICAL LABORATORY SCIENCE

ABIA STATE UNIVERSITY UTURU

SECOND SEMESTER EXAMINATIONS 2018/2019 SESSION

MLS 322: BIOMETRY **TIME: 3 HOURS**

1. A Laboratory Scientist observed for 50 days the number of patients diagnosed with malaria parasite and obta the following results:

5	19	11	6	18	16	23	14	8	1
27	3	5	16	21	22	26	23	12	16
21	2	17	22	12	28	6	24	12	26
3	16	4	11	16	6	23	9	15	12
11	17	24	13	19	15	21	18	7	10

From the data above:

(a) Construct the Frequency Table (Hint: Use the class intervals: 0-5; 5-10; 10-15 etc.)

(b) With reference to the Table, determine:

(i) Upper limit of the 5th class interval

(ii) Class mark of the 3rd class interval

(iii) Class size of the 4th class interval

(iv) The relative frequency of the 2nd class interval

(v) The cumulative frequency of the 5th class interval

(vi) % of days that had patients with malaria parasites less than 20

(vii) The range of the distribution

(viii) The modal class

(ix) The median class

(x) The sum of the % relative frequencies of the distribution,

2. (a) Briefly explain the following terms:

(i) Outlier (ii) Primary data (iii) Discrete Data (iv) Mutually Exclusive Events

(v) Bimodal Distribution

(b) Which of the primary methods of data collection requires that the identity of the investigator be hidden and w

(c) Explain the limitations of secondary data.

260 - 25

FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE AND HEALTH SCIENCES
ABIA STATE UNIVERSITY, UTURU

COURSE TITLE: BASIC MEDICAL LABORATORY PROCEDURES
COURSE CODE: MLS 332
TIME: 2HRS 04/02/2022

INSTRUCTION: ANSWER ALL QUESTIONS

1a) Mention 10 different methods of haemoglobin estimation.
b) State the principle of the Cynamethaemoglobin estimation.
c) Describe the preparation of 3%and 10%standard blood cells for blood group serology use.

2a) Explain one of the concentration techniques in stool examination.
2b) State the principle of gram staining technique.
2c) list and explain 4 classes of media in the microbiology laboratory and give an example of each.

UZOM SOLOMON

3a) A bony tissue was brought to the Histopathology Laboratory where you work, discuss the procedures you will employ to prepare a histological slide for examination
3b) Distinguish between Progressing Staining and Regressive Staining

Lugol's iodine

What does the alcohol do in gram stain?

Primary

decolorizer

ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
FINAL YEAR SECOND SEMESTER EXAMINATION
COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342
DATE: 07/06/2021
ANSWER ALL QUESTION TIME ALLOWED: 2 HRS

1a. Explain the major characteristics of the Primitive Haematopoietic Stem Cell?

b. Illustrate the production of the Immune cell lines from the Primitive Haematopoietic Stem Cells.

c. Explain the process(es) whereby the Immune Cells ensure the elimination of microbes. 20 marks

2a. Complement participates in the Innate and Acquired Immune responses. Discuss.

b. Briefly explain the ways whereby Complement removes microbes. 20 marks

3a. Describe the Basic structure of an Antibody molecule and relate it to its function(s).

b. Write short notes on

a. Complementarity determining region

b. Chemoattractants

c. The Joining (J) Chain

d. Germ theory

e. Role of Mast cells inImmune response. 20 marks

4. Briefly explain 5 laboratory methods in the recognition of Antigen/Antibody interaction. 10 marks.

ABIA STSTE UNIVERSITY, UTURU

COLLEGE OF MEDICINE AND HEALTH SCIENCES

SECOND SEMESTER 2020/2021 EXAMINATION

COURSE CODE: MLS 342

COUSE TITLE: IMMUNOLOGY

Instruction: Answer all questions.

Time : $2^1/2$ hours **Date: 2/2/2022**

SECTION A

(1) Define the following:

(a) The Innate Immunity

(b) The Acquired Immunity

(c) The Differences between the Innate and Acquired Immunity **15marks**

(2) (a) What are Lymphoid organs

(b) Write briefly on two of the primary and secondary lymphoid organs **15 Marks**

Uzom Solomon

SECTION B

(3) (a) The structure of an antibody molecule is related to its function. Discuss

(b) Explain the mechanism whereby antibodies ensure the elimination of target cells **20marks**

(4) (a) Discuss the pathways of complement activation resulting in the Membrane attack complex as may occur in the innate immune response

(b) Explain the Laboratory methods for complement destruction and anti-complement activity.

(c) State the principle of Complement Fixation Test **20marks**

ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
FINAL YEAR SECOND SEMESTER EXAMINATION
COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342
DATE: 07/06/2021
ANSWER ALL QUESTION TIME ALLOWED: 2 HRS

1a. Explain the major characteristics of the Primitive Haematopoietic Stem Cell?

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FACAULTY OF MEDICAL LABORATORY SCIENCE

COLLEGE OF MEDICINE & HEALTH SCIENCES,

ABIA STATE UNIVERSITY, UTURU.

COURSE TITLE: PHARMACOLOGY II

COURSE CODE: PHM 352. TIME: 1½ HOURS. SECOND SEMESTER 2020/2021.

INSTRUCTIONS: 1. Answer all questions. 2. Phones or electronic gadgets are not allowed into the examination hall.

UZOM H SOLOMON

1 (a). Classify antimicrobial agents of clinical importance.

(b). Explain three classes of Sulphonamides with one example each

20 marks

2. *Discuss the following:*

i) Antimicrobial spectrum.

i) *Duration of antimicrobial therapy.*

iii) *Broth dilution sensitivity tests.*

15 marks

3. *Explain:*

(a). Mechanism of action and two side effects of Griseofulvin.

(b). Mechanism of action and two side effects of Penicillins.

20 marks

4. *Discuss any three targets to which treatment of malaria infections are based.*

15 marks

GOODLUCK

clinical call
Radical Call
Suppress call

3. The distribution of weights (kg) of pregnant women were obtained in a medical laboratory as follows:

Weight (kg)	60-62	63-65	66-68	69-71	72-74	75-77
frequency	3	8	20	15	10	4

Use the information given in the table to:

I. Calculate the mean weight
II. Calculate the variance
III. Estimate the median

4 (a) Use the data in Question Three to construct a frequency histogram.

(b) From the histogram, estimate the modal weight of pregnant women

(c) Superimpose the frequency polygon of the distribution on the histogram

5(i) The probability that an entering college student will graduate is 0.4 Determine the probability that out of 5 students (a) none (b) one (c) at least one will graduate.

5 (ii) If the average salary of a laboratory scientist in a Government Hospital is N250,000.00 and the salaries follow normal distribution with a standard deviation of N10,000.00, find the probability that:

a. The laboratory scientist earns more than N255,000.00
b. The laboratory scientist earns less than N220,000.00

(f) List the melted infiltrating embedding tissue in paraffin wax & write on the principle involved in the end point of decalcification.

(g) Write short notes on the following: (a) Blood group A
" " B
" " AB
" " O
ABO blood grouping method

(h) Write short note on the composition of culture media.

(i) Describe the brine method for identification of faecal parasite.

(j) Discuss fixation.

FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE & HEALTH SCIENCES,
ABIA STATE UNIVERSITY,
UTURU

COURSE TITLE: BASIC MLS PROCEDURE
COURSE CODE: . MLS332. TIME: 2HRS.

INSTRUCTION: ANSWER ALL QUESTIONS.

Q1. DESCRIBE TWO METHODS THAT CAN BE USED FOR THE PREPARATION OF STOOL SAMPLES FOR MICROSCOPIC EXAMINATION

Q2 WRITE A GOOD ESSAY ON COULTER COUNTER

Write SHORT NOTES ON THE COMPOSITION OF CULTURE MEDIA.

B] WHAT IS STERILITY TESTING OF CULTURE MEDIA

Q4. DISCUSS HEMOGLOBIN ELECTROPHORETIC PACK.

Q5. WRITE A BRILLIANT ESSAY ON THE PREPARATION BONY TISSUE

Uche. Physio
08131935293

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ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE & HEALTH SCIENCES
SECOND SEMESTER EXAMINATION 2015/2016 SESSION

COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342 TIME: 2 HRS
INSTRUCTION: ANSWER ALL THE QUESTIONS

1. Using a graphical representation, describe how primary and secondary antibodies are produced, noting the type of immunoglobulins that appear first in the primary response and events that take place in both primary and secondary immune responses

2. Antigen-antibody reaction in Vitro can be studied using five or more phenomena. Describe two of such phenomena.

3. Write an essay on immunoglobulins and their roles in immunity

4. Write short notes on the followings
   a. Phagocytosis
   b. Complement fixation Test

SEC GEN

ABIA STATE UNIVERSITY, UTURU
FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE AND HEALTH SCIENCES
SECOND SEMESTER 2019/2020 SESSION EXAMINATION
Thursday 27th May, 2021.

COURSE: GENERAL PATHOLOGY (PTH 322)
TIME ALLOWED: 2 HOURS
INSTRUCTION: ANSWER ALL QUESTIONS

1. (a) Define pathology.

   (b) Discuss the core aspects of disease in pathology

UZOM SOLOMON

2. (a) What are Genetic Diseases?
   (b) Discuss the Types of Inheritance.

3. (a) What is Cellular Injury?
   (b) Write on the main causes of cellular injury.

4. Write short note on the following terms
   (a) Apoptosis
   (b) Hyperplasia
   (c) Hypertrophy
   (d) Atrophy
   (e) Metaplasia

ABIA STATE UNIVERSITY UTURU
COLLEGE OF MEDICINE AND HEALTH SCIENCES
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
SECOND SEMESTER EXAMINATION QUESTIONS FOR 2020/2021 SESSION.

COURSE: MLS 312- BIOMEDICAL PHYSICS

INSTRUCTION: ANSWER QUESTION 1 AND ANY OTHER TWO.

1(a). Draw an elaborate diagram of the Electrocardiography

b). Explain the diagram completely

c). Explain completely, the origin, science and difference between direct and indirect signals.

d). Using clear illustrations, define action potential for a cell membrane and state the five (5) processes that occur during action potential.

30marks

2a) An accident victim presents muscle twitches and involuntary limbs movements that suggests possible "TRAPPED NERVE SYNDROME; Explain how a medical physicist can proceed with diagnosing this medical condition using the technique of Electromyography.

b) Define physiological systems and state three(3) basic influences that determine the relative ion concentration inside and outside the membranes of living cells. UZOM SOLOMON

c) Write an expression of the Nernst Equation.

d) Explain how to measure blood pressure and differentiate between systolic and diastolic blood pressure measurement levels.

20marks

3a). Define the term Linear Energy Transfer and give two examples of High LET particles

b) State three(3) distinct differences between normal cells and cancer cells

c) State and explain four ways by which cancer can be treated

d) Differentiate between Effective dose and Equivalent dose.

20 marks

4a) using a diagram, explain the use of X-ray produced in the laboratory for diagnostic and therapeutic purposes.

ABIA STATE UNIVERSITY, UTURU
DEPARTMENT OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE & HEALTH SCIENCES
SECOND SEMESTER EXAMINATION 2015/2016 SESSION

COURSE TITLE: IMMUNOLOGY
COURSE CODE: MLS 342 TIME: 2 HRS
INSTRUCTION: ANSWER ALL THE QUESTIONS

1. Using a graphical representation, describe how primary and secondary antibodies are produced, noting the type of immunoglobulins that appear first in the primary response and events that take place in both primary and secondary immune responses

2. Antigen-antibody reaction in Vitro can be studied using five or more phenomena. Describe two of such phenomena.

3. Write an essay on immunoglobulins and their roles in immunity

4. Write short notes on the followings
   a. Phagocytosis
   b. Complement fixation Test

(3a) If the probability that an individual suffers a bad reaction from injection of chloroquine is 0.002, determine the probability that out of 3000 individuals injected:

(i) Exactly 3 will suffer a bad reaction
(ii) More than 2 individuals will suffer a bad reaction

(3b) Describe an outlier with your own example.

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4. (a) From the frequency distribution of Question 1, calculate the mean.
(b) Distinguish between Primary data and Secondary data
(c) What are the Limitations of Secondary data?

90
82
77
57
80
79
95

FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE & HEALTH SCIENCES,
ABIA STATE UNIVERSITY,
UTURU

COURSE TITLE: BASIC MLS PROCEDURE
COURSE CODE: . MLS332. TIME: 2HRS.

INSTRUCTION: ANSWER THREE QUESTIONS ONLY.

Q1.[A] List the stages for processing soft tissue in parafin wax.

[B]write a good essay on the second and third stages of processing soft tissue.

Q2. [A] Describe how you will prepare one Romanskey stain you know and discuss how you will use it to stain a thin blood film

[B] Discuss how you will prepare haemoglobin chart for use in haematology laboratory using cymethaemoglobin method

Q3 A] Write short notes on the composition of culture media.

B] Describe the 33% zinc sulphate floatation procedure for the concentration of feacal parasite.

ABIA STATE UNIVERSITY, UTURU
FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE AND HEALTH SCIENCES
SECOND SEMESTER 2019/2020 SESSION EXAMINATION
Friday 4th June, 2021.

COURSE: MLS PROCEDURE (MLS 332)
TIME ALLOWED: 2 HOURS
INSTRUCTION: ANSWER ALL QUESTIONS

1. (a) What is the full meaning of PCV?
   (b) State the principle of PCV test
   (c) Describe the process of running PCV

UZOM SOLOMON

2. (a) Describe the formol ether method of examination of faecal parasites in the laboratory.
   (b) State how to make a thin film for microscopy

3. A breast lump sample was brought to the Histopathology Laboratory where you work. Discuss what you will do with the sample to produce a slide for microscopy.

ABIA STATE UNIVERSITY, UTURU
FACULTY OF MEDICAL LABORATORY SCIENCE
COLLEGE OF MEDICINE AND HEALTH SCIENCES
SECOND SEMESTER 2019/2020 SESSION EXAMINATION
Thursday 27th May, 2021.

COURSE: GENERAL PATHOLOGY (PTH 322)
TIME ALLOWED: 2 HOURS
INSTRUCTION: ANSWER ALL QUESTIONS

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SEC GEN

1. (a) Define pathology.
   (b) Discuss the core aspects of disease in pathology

2. (a) What are Genetic Diseases?
   (b) Discuss the Types of Inheritance.

3. (a) What is Cellular Injury?
   (b) Write on the main causes of cellular injury.

4. Write short note on the following terms
   (a) Apoptosis
   (b) Hyperplasia
   (c) Hypertrophy
   (d) Atrophy
   (e) Metaplasia