SECOND SEMESTER MBBS EXAMINATION
2018/2019 ACADEMIC SESSION

ANA 242: NEUROANATOMY I
LEVEL: 200 DATE: 15/08/2019. TIME: 2hrs

INSTRUCTIONS: i) ANSWER ALL QUESTIONS

ii) ILLUSTRATIONS AND DIAGRAMS ARE VERY NECESSARY

1 **a) Describe the lamina divisions of the spinal grey columns**
b) Add a note on spinal cord infarction

2) **a. With the aid of a diagram, discuss the spinal cord meninges**

b) Add a note on its applied anatomy.

3. **Write short notes on the following:**
   - **a) Neurons of the Anterior horn of Spinal Cord**
   - **b) Corticospinal tracts**
   - **c) Medial lemniscal pathway of the Posterior Column**

4. **Describe the posterior surfaces of the followings:**
   - **a. Midbrain**
   - **b. Pons**

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SECOND SEMESTER MB.BS EXAMINATION
2018/2019 ACADEMIC SESSION

ANA 222: SYSTEMIC EMBRYOLOGY I
LEVEL: 200 DATE: 15/08/2019. TIME: 2hrs

INSTRUCTIONS: i) ANSWER ALL QUESTIONS

ii) ILLUSTRATIONS AND DIAGRAMS ARE VERY NECESSARY

1. **Describe in detail the development (pathogenesis) of ventricular septal defect**

2. **The folding of the cardiac tube during development is reflected in the adult heart, Discuss.**

3. **a. Discuss in detail the formation of temporal kidney**
   b. List and explain the components of teratology of fallot

4. **a. Describe the embryology of the stomach**
   b. Add a note on rotation of the midgut loop

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Teratology of Fallot — Pulmonary Steenoses
of
fusion of

Overriding Aorta
Ventricular septa defects (for ASD VSD)
Right ventricle hypertrophy.

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SECOND SEMESTER MB.BS EXAMINATION
2018/2019 ACADEMIC SESSION
ANA 202: GROSS ANATOMY OF THE THORAX, ABDOMEN, PELVIS AND PERINEUM
LEVEL: 200 DATE: 14/08/2019. TIME: 2hrs

INSTRUCTIONS: i) ATTEMPT ALL QUESTIONS
ii) DIAGRAMS AND ILLUSTRATIONS ARE NECESSARY

1. **a. Describe the Gross Anatomy of the male and female pelvis (10 marks)**
   b. Write on the Gross Anatomy of the stomach (10 marks)
   c. Write on the Anatomical lobes of the liver (10 marks)

2. **a. Describe the morphology of the Thoracic Diaphragm (10 marks)**
   b. Discuss the Gross Anatomy of the heart under the followings:
   i. Venous drainage of the heart (5 marks)
   ii. Conducting tissues of the heart (5 marks)
   c. Discuss the Gross Anatomy of the followings:
   i. Superior mediastinum (5 marks)
   ii. Inferior mediastinum (5 marks)

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SECOND SEMESTER MB.BS EXAMINATION
2018/2019 ACADEMIC SESSION

ANA 212: SYSTEMIC HISTOLOGY
LEVEL: 200 DATE: 14/08/2019. TIME: 2hrs

INSTRUCTIONS: i) ANSWER ALL QUESTIONS
ii) ILLUSTRATIONS AND DIAGRAMS ARE VERY NECESSARY

1. Describe the Histology of the followings:
   a. Lymph node
   b. Anal Canal

2. Write on the histological construct of the layers of muscular and elastic arteries

3. Write on the histology of the followings:
   a. The Epidermis of the skin
   b. Bronchioles

ALEX EKWUEME FEDERAL UNIVERSITY, NDUFU-ALIKE
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DEPARTMENT OF MEDICAL BIOCHEMISTRY

Second Semester Examination 2018/2019 academic Session **19/08/2019**
COURSE CODE: MBC 222 (Bioenergetics and Enzymology) **2 Credit Units**
Instruction: Answer any two questions **TIME: 1HR**

1a). Primary productivity decreases as we move from tropical region to polar region. Explain!

b) Consider the following interconversion, which occurs in glycolysis:

Fructose 6-phosphate $\rightleftharpoons$ glucose 6-phosphate. $K'eq = 1.97$

(i) What is $\Delta G'^{\circ}$ for the reaction (K'eq measured at 25°C)?

(ii) If the concentration of fructose 6-phosphate is adjusted to 1.5 M and that of glucose 6-phosphate is adjusted to 0.50 M, what is ΔG?

(iii) Why are $\Delta G'^{\circ}$ and ΔG different?

2a). What is an oxidation-reduction reaction?
b). Write short notes on the following enzymes involved in oxidation-reduction reaction:
i) Cytochrome oxidase
ii) Dehydrogenases
ci). Explain how substrate concentration, temperature and hydrogen ion concentration may affect enzyme activity. ii). Explain four clinical uses of enzymes.

3a). Use the conversion of glucose to glucose 6-phosphate, a reaction catalysed by hexokinase, to show the role of ions in reaction mechanisms of enzymes. Show all appropriate structures and reaction conditions.
b). Explain the roles of Creatine kinase (CK)/ creatine phosphokinase (CPK) and α- Amylase in clinical diagnosis of diseases!

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COLLEGE OF MEDICINE

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DEPARTMENT OF PHYSIOLOGY

2018/19 Second Semester Quiz for MBBS Students

Course Title: *Respiratory Physiology*

Course Code: PHS232 **Credit Unit: 2**

Date of Quiz: Wednesday, 21/08/2019 @ Science Auditorium by 9–11am

Paper II: ESSAY

Time allowed: 1 hour

Instructions: Attempt any two (2) questions

1a. The mechanism of pulmonary ventilation obeys the Boyles law. Explain *(10 marks)*

1b. Using a typical spirogram, explain the various lung volumes and capacities *(10 marks)*

1c. The lungs are built with intrinsic mechanism that prevents them from over-inflation. Explain (5 marks)

2a. The directional movement of respiratory gases in the lungs and tissues is mediated by the partial pressure and pressure gradient. Discuss.

2b. Explain the role of hemoglobin as/in:

i. A buffer.

ii. Buffering Tissue PO_2.

3a. Discuss the mechanisms involved in the transport of O_2 and CO_2 in blood.

3b. Two dancers are preparing for performance. Dancer A is sitting on the floor performing static stretching. Dancer B is performing an intense dance routine. Comparatively discuss the changes in respiratory system of Dancer B to Dancer A.

Jane Frances

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DEPARTMENT OF PHYSIOLOGY

2018/19 Second Semester Quiz for MBBS Students
Course Title: ***Kidney, Body Fluids, Skin & Body Temperature***
Course Code: PHS242 **Credit Unit: 3**
Date of Quiz: Tuesday, 20/08/2019 @ Science Auditorium by 9– 11am

Paper II: ESSAY

Time allowed: 1 hour
Instructions: Attempt any two (2) questions

1a. With a well labelled diagram, describe the physiologic anatomy of the nephron.
1b. What are the factors that affect glomerular filtration rate?
1c. Write a short note on the following; (i). Renal Blood Flow (ii). Glomerular Filtration Rate

2a. Discuss the renal mechanisms involved in the in urine concentration.
2b. List the components and secretion of the juxtaglomerular apparatus.
2c. outline the functions of the kidney.

3a. What is normal body temperature? Explain heat balance and regulation of body temperature
3b.There are two main fluid compartments in the human body, but several subdivisions. Discuss.
3c. Identify normal extracellular fluid (plasma) concentrations of Na^+, K^+, Cl^-, HCO_3^-, Ca^{2+}, pH, proteins, glucose, creatinine, and urea, and contrast these values with those for intracellular fluids.

Jane Frances

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Second Semester Examination 2018/2019 academic Session MBBS **16/08/2019**
COURSE CODE: MBC 232 (Metabolism and Biosynthetic Pathways) **3 Credit Units**
TIME: 1HR
Instruction: Answer any two questions

1a Briefly explain the different mechanisms by which heme biosynthesis is regulated!
b. Mr Eze took yam as his lunch, briefly explain how this food is digested.
c. State any four clinical conditions associated with digestion and absorption of food!

2a). Describe in detail, the beta-oxidation of a named saturated fatty acid in a eukaryotic cell, using suitable diagrams and chemical equations!

(b). Discuss the clinical situations associated with structural/functional defects in Na^+ dependent transporter of tryptophan!

3a. Write short note on the salvage of purine nucleotides from purine bases!

bi. A defect in one of the enzymes involved in glycolysis leads to *haemolytic anaemia. True or* false?
bii. Justify your answer.

2018/19 Second Semester Quiz for MBBS Students
Course Title: ***Practical Physiology II***
Course Code: PHS292 **Credit Unit: 1**
Date of Quiz: Tuesday, 20/08/2019 @ PHS & MBC LABs by 12– 2pm

Time allowed: 2 hours
INSTRUCTION: ***ATTEMPT QUESTION NUMBER ONE (1) AND ANY OTHER T QUESTIONS***

1a. Identify the instrument/equipment labeled A, B, C, D and E. State the use of each o identified instrument/equipment in Physiology.

1b. The urine sample marked 'W' is that of a female subject. Carry out a routine urinalysis of sample using the materials provided. Report your findings.

1c. Outline four clinical importance of urinalysis.

2a. Draw and label appropriately the waves of normal ECG.

2b. Using what you have been taught, if R-R interval is 18mm, calculate: i. Cardiac cycle

ii. Heart rate.

3a. In carrying out experiment on expiratory flow rate, outline the laboratory procedure fo experiment.

3bi. List 4 essential materials/apparatus required for the experiment.

3bii. State 2 precautionary measures you are to observe during the experiment.

4a. With the aid of a spirogram, explain the various lung volumes and capacities

4b. Give 4 precautions you will take when measuring visual acuity in a patient.

5a. What is BMI and outline its significance.

5b. Assign the classes of BMI and a BMI of 40 and above indicates.

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DEPARTMENT OF PHYSIOLOGY

2018/19 Second Semester Quiz for MBBS Students
Course Title: ***Cardiovascular System***
Course Code: PHS222 **Credit Unit: 2**
Date of Quiz: Wednesday, 21/08/2019 @ Science Auditorium by 12–2pm

Paper II: ESSAY

Time allowed: 1 hour
Instructions: Attempt any two (2) questions

1a. Write short notes on the following (i) Physiologic anatomy of the cardiac muscle (ii) The refractory period of the cardiac muscle (iii) The circuitry of blood from the heart to the systemic and pulmonary circulation.
1b. Explain two physiologic shock treatment therapies you know
1c. List the drug therapies in hypertension collaborative care. Explain any two.

2a. Outline how Poiseullie-Hagen equation could be derived, state its physiological implications.
2b. Give an account of the fetal circulation.
2c. What are the structural peculiarities of fetal circulation.

3a. Briefly explain the components of a normal electrocardiogram and identify what cardiac function corresponds to each of these components
3b. A healthy man was just informed that his wife gave birth to bouncing baby boy. In excitement, he ran to and fro the hallway screaming and jumping. Discuss the possible cardiovascular changes that occurred and the nervous mechanisms responsible for these changes.
3c. Define the following terms: (i) End diastolic volume (ii) Stroke volume (iii) Ejection fraction (iv) Cardiac output (v) Heart rate

COURSE CODE: MEDICAL BIOCHEMISTRY PRACTICAL II MBC 292

TIME 2HRS

INSTRUCTION: ANSWER THREE QUESTIONS. QUESTION NO.1 IS COMPULSORY. ATTEMPT ANY OTHER TWO

1a. You are provided with samples labelled A, and B. Using the reagent provided, determine the concentration of ~~amino acids~~ proteins present in the samples. The concentration of the standard is 0.5g/dl.

Procedure is as follows:

Dispense 0.5ml of each sample and standard into 3 clean test tubes. Also set up another tube for blank. Into each of the test tubes add 1ml of the test reagent. Use distilled water as blank. Incubate at room temperature for 10mins and measure absorbance at 540nm.

1b. Describe the principle of Biuret reaction!

2 Determine which of the following reagents is most suitable for solubilizing of sample labelled C. Present your result in a tabular form State one reason for the differences in solubility of the sample in the reagents.

3. Sample D is the result of the electrophoresis of haemoglobin of three patients E, F and G. The 2 standards labelled P and Q are for blood group types SS and AA respectively. From the results, determine the haemoglobin variants of the patients and state the biochemical reason for these variations. State the reagent, equipment, apparatus, the principle and procedure for this test.

4. You are given a solution of 10 ml 0.1M glycine and 0.1M sodium hydroxide. Carry out a titration of glycine against NaOH. The pH of glycine-NaOH mixture at different volumes of NaOH has been provided for you as follows:

Volume of NaOH (ml)	0	1.0	2.0	3.0	5.0	6.0	8.0	10.0	12.0	14.0
pH	1.0	2.0	3.0	3.9	4.0	4.0	8.0	9.0	9.0	9.0

From your graph, determine:

i. the Volume of NaOH that must be added to the glycine to obtain optimum buffering capacity within basic and acidic regions.

ii the pKa and pKb of glycine

iii the PI of glycine.

iv. At what pH will glycine exist as a zwitterion.

Jamesfrances

SECTION B

2.(a).Draw a normal distribution curve, a positively skewed curve and a negatively skewed curve

(b). Illustrate the relationship of the measures of central tendency on the curves drawn in (a) above

(c). State two advantages and two disadvantages each of the measures of central tendency

(d). Enumerate the characteristics of a normal distribution curve

3.(a). Define sampling

(b). Discuss the types of sampling methods

(c). Enumerate the advantages of the different sampling methods over each other

(d). State the reasons for sampling

4. Suppose the goals scored at an international football league by clubs are as follows: 2 ,4, 3, 2, 6, 5. Find the:

(a). Mode

(b). Median

(c). Variance

(d). Standard deviation

(Show all workings)

COURSE TITLE: MEDICAL BIOSTATISTICS

COURSE CODE: COM 201

PAPER 11 (THEORY)

INSTRUCTIONS:

1. ANSWER 3 QUESTIONS IN ALL
2. QUESTION 1 OF SECTION A IS COMPULSORY
3. CHOOSE ANY OTHER 2 QUESTIONS FROM SECTION B
4. EXAMINATION MALPRACTICE WILL NOT BE TOLERATED
5. NO NOISE MAKING

ALLOWED TIME: 1:30HRS

SECTION A (COMPULSORY)

1 (a).Construct separate simple bar charts for the following data shown in table 1.1: Monthly production of crude oil in Nigeria in 2008 and 2009.

(b). Calculate the mean crude oil production for each year

(c). What is the range of crude oil production for each year

Table 1.1
(Million barrels)

Month	Monthly Production	
	2008	2009
January	54.3	25.7
February	38.9	18.8
March	28.9	28.2
April	26.9	35.1
May	40.3	50.2
June	49.1	45.7
July	39.1	52.8
August	34.1	39.9
September	34.7	36.1
October	45.8	40.0
November	40.8	37.4
December	37.2	41.3

Source: Nigeria National Petroleum Corporation (NNPC)

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COMMUNITY MEDICINE DEPARTMENT
200LEVEL MEDICAL STUDENTS 2nd SEMESTER EXAMINATION

Course Code: COM 204

Course Title: MEDICAL DEMOGRAPHY

PAPER II (THEORY)

INSTRUCTIONS:

1. ANSWER ALL QUESTIONS
2. EXAMINATION MALPRACTICE WILL NOT BE TOLERATED
3. NO NOISE MAKING

ALLOWED TIME: 1HR 30MINS

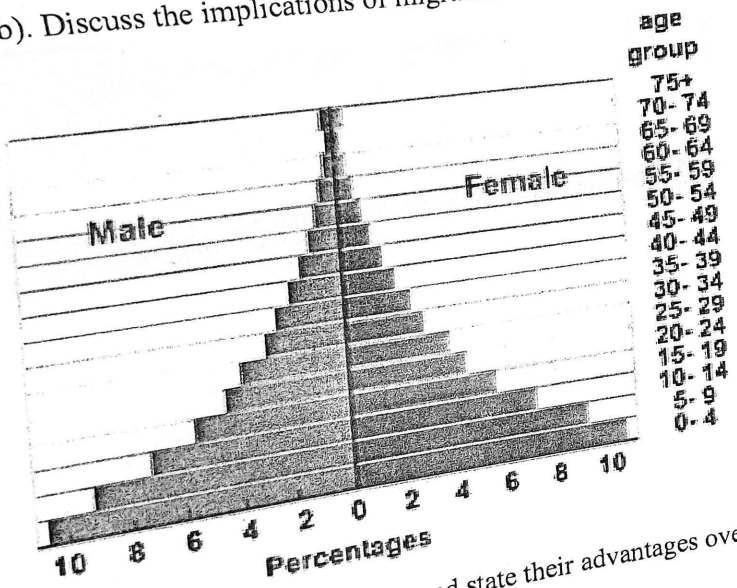
1 (a). Define demographic transition

(b). Describe how fertility has transitioned in sub-Saharan Africa and the factors that have contributed to the observed pattern of transition.

2. The figure given below belongs to a population of a country B.

(a). Interpret fully the figure below for Country B

(b). Discuss the implications of migration on the demographic and economic profile of *Nigeria*



3. Define the following terms and state their advantages over others:
   (a). Maternal mortality ratio
   (b). General fertility rate
   (c). Age-Specific fertility rate
   (d). Total fertility rate
   (e). Net reproduction rate

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COMMUNITY MEDICINE DEPARTMENT

200LEVEL MEDICAL STUDENTS 1ST SEMESTER EXAMINATION

Course Code: COM 203

Course Title: History of Medicine

PAPER II

Answer all questions.

Time allowed 1hr and 30 Minutes

Essay Question

1. Describe the treatment modalities in Traditional Chinese Medicine.

2. Write a short essay on Ancient Egyptian Medical Instruments.

3. Discuss the contributions of the following in the dawn of scientific medicine;
   A. Edward Jenner
   B. John Hunter

4. Write a short note on Universal Health Coverage.

Jane Frances

Course Code: COM 202

Course Title: MEDICAL SOCIOLOGY AND HUMAN ECOLOGY

PAPER II

Answer any four (4) questions.

Time allowed 1hr and 30 Minutes

Essay Questions

1. a) Define Socialisation.
   b) Discuss the types of socialization with examples

2. a) Define the Human Family
   b) Discuss the importance of family to health

3. a) Discuss the types of family
   b) List the advantages and disadvantages of nuclear family
   c) List the advantages and disadvantages of extended family

4. a) Define Social Classification
   b) Discuss the importance of social classification to health

5. a) Define Social class
   b) Discuss the different social classes