



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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REGINA PACIS INSTITUTE OF HEALTH SCIENCES

MAIN EXAMINATION

SEPTEMBER – DECEMBER 2019 TRIMESTER

FACULTY OF SCIENCES

DEPARTMENT OF NURSING

REGULAR PROGRAMME

NUR / UNUR/HBMS 100: HUMAN ANATOMY

Date: DECEMBER 2019

Duration: 3 Hours

INSTRUCTIONS: Answer ALL Questions

PART -I: MULTIPLE CHOICE QUESTIONS (MCQs)

20 MARKS:

- Q1. When structure and function coordinates the body gets a relative stability. This phenomenon is called:
- a) Anatomical integrity
 - b) Physiological stability
 - c) Hemostasis
 - d) Homeostasis
- Q2. QSuccessive flexion, abduction, extension and adduction is known as:
- a) Rotation
 - b) Circumduction
 - c) Angulation
 - d) Eversion
- Q3. An ultrasound of a 35-year-old pregnant woman reveals that she is carrying conjoined twins, a condition caused by incomplete division of embryonic discs. The most common location where conjoined twins (1/200 monozygotic conceptions) connects is:
- a) Thoracopagus
 - b) Dicephalus
 - c) Craniopagus
 - d) Omphalopagus

- Q4. Primordial germ cells migrate to the gonads from the:
- Intermediate mesoderm
 - Wall of the yolk sac
 - Lateral plate mesoderm
 - Endoderm of the bilaminar disc
- Q5. From fertilization to implantation:
- Morula is the immediate product of fertilization.
 - Initial penetration of the endometrium by the developing embryo is by the inner cell mass.
 - Implantation normally starts in the fallopian tube.
 - Fertilization occurs when the spermatozoon penetrates the zona pellucida but not the corona radiata.
- Q6. Under normal circumstances, at what stage of embryonic development will an embryo most likely implant into the endometrium of the uterus?
- Trilaminar embryo
 - Morula
 - Blastocyst
 - Bilaminar embryo
- Q7. The hormone that maintains pregnancy is:
- Oestrogen
 - Luteinising hormone
 - Progesterone
 - Follicle stimulating hormone
- Q8. The commonest site of ectopic implantation is:
- Uterus
 - Ovary
 - Rectouterine pouch
 - Uterine tubes.
- Q9. Concerning embryologic development, which of the following processes give rise to the three primary germ layers?
- Morulation
 - Gastrulation
 - Cranio-caudal folding
 - Cleavage.
- Q10. The following are found attached to the surface of rough endoplasmic reticulum:
- Ribosomes
 - Mitochondria
 - Golgi apparatus
 - Glycogen

- Q11. During meiosis:
- Somatic cells take part.
 - The haploid number of chromosomes is attained.
 - Cleavage never occurs.
 - The chromosomal number in daughter cells is equal to that of the parent cells.
- Q12. DNA is found mainly in the:
- Ribosomes
 - Lysosomes
 - Nucleus
 - Mitochondria
- Q13. The mitochondria:
- Carry out synthesis of protein in the cytoplasm
 - Form the mitotic spindle
 - Contain the cell's hereditary material.
 - Are sites of energy production in the cytoplasm.
- Q14. Which of the following epidermal cells form a protective barrier against Ultra Violet radiation?
- Langerhans
 - Melanocyte
 - Merkel
 - Keratinocyte
- Q15. Damage to the facial nerve at the stylomastoid foramen would affect:
- facial expression
 - salivation
 - taste sensation on the anterior 2/3 of the tongue
 - lacrimation
- Q16. A patient with a brain tumor near the crista galli and cribriform plate of the ethmoid bone most likely experiences which of the following symptoms?
- Paralysis of facial muscles
 - Loss of vision
 - Difficulty swallowing
 - Loss of smell
- Q17. Mary presents at the clinic with a herpes zoster oticus. Upon questioning, she complains that she must hold the phone away from her ear because it sounds too loud. Which cranial nerve is affected by this infection to result in the hyperacusis?
- Hypoglossal
 - Facial
 - Spinal accessory

d) Vagus

Q18. Mwaura 18-year-old female presented with periorbital edema, headache and fever. With a history of squeezing an infected pustule on the nose a diagnosis of cavernous sinus thrombosis was made. Infection from this area was carried by the facial vein to the cavernous sinus through the

- Superior ophthalmic vein
- Retromandibular vein
- Angular vein
- Superficial temporal vein

Q19. Which of the following fontanelles is located at the junction of the sagittal and coronal sutures and at what age does this fontanelle typically close?

- Posterior fontanelle, which closes at about 2 years
- Mastoid fontanelle, which closes at about 16 months
- Lambdoid fontanelle, which closes at 8 months to 1 year
- Anterior fontanelle, which closes at 18 months

Q20. The glossopharyngeal nerve leaves the skull by passing through the:

- carotid foramen
- hypoglossal foramen
- foramen ovale
- jugular foramen

PART-II: SHORT ANSWER QUESTIONS (SAQs)

(40MARKS):

Q1. Define the following terminologies (1 mark each)

- Embryology
- Zygote
- Blastocyst

(3 marks)

Q2. Outline the levels of structural organization in human body

(5 marks)

Q3. Describe the cell cycle

(5 marks)

Q4. Outline 5 characteristic of connective tissue

(5 marks)

Q5. Outline the embryonic development of the lungs

(5 marks)

Q6. Describe the embryonic development of the kidneys

(6 marks)

- Q7. Draw and label a cross-section of spinal nerve diagram showing the ascending and descending tracts **(4 marks)**
- Q8. Name 4 surface lobes of the cerebral hemispheres and describe functions of the cortex in each **(8 marks)**

PRAT III: LONG ANSWER QUESTIONS (LAQs)

40 MARKS:

- Q1. 20-year-old woman conceives and a zygote is formed.
- a) Describe the process of fertilization **(8 marks)**
 - b) Describe the process of gastrulation **(12 marks)**
- Q2. Concerning the nervous system;
- a) Outline the anatomical organization **(4 marks)**
 - b) Describe the development of the brain **(8 marks)**
 - c) Describe developmental anomalies associated with the nervous system **(8 marks)**

END