



## BRAINWARE UNIVERSITY

### Term End Examination 2020 - 21

Programme – Bachelor of Science in Medical Radiology & Imaging Technology

Course Name – Human Anatomy and Physiology including Pathology Part-2

Course Code - BMRIT301

Semester / Year - Semester III

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 60=60

1. (Answer any Sixty )

(i) One of the following organs does not have sinusoids

- |                  |                |
|------------------|----------------|
| a) Parotid gland | b) Spleen      |
| c) Liver         | d) Bone marrow |

(ii) Which is the thickest layer in the arteries?

- |                      |                                  |
|----------------------|----------------------------------|
| a) Tunica intima     | b) Tunica media                  |
| c) Tunica adventitia | d) All layers of equal thickness |

(iii) Anemia is diagnosed by

- |                            |                            |
|----------------------------|----------------------------|
| a) Decreased number of RBC | b) Increased number of RBC |
| c) Decreased number of WBC | d) Increased number of WBC |

(iv) Which leucocytes release heparin and histamine in blood?

- |               |              |
|---------------|--------------|
| a) Neutrophil | b) Basophil  |
| c) Eosinophil | d) Monocytes |

(v) During blood coagulation, thromboplastin is released by

- |               |  |
|---------------|--|
| a) RBC        | b) Blood plasma                          |
| c) Leucocytes | d) Clumped platelets and damaged tissues |

(vi) Thymus has following features except:

- a) Lies in superior and anterior mediastinum
- b) T- lymphocytes are cytotoxic, helper and memory cell
- c) Secretes thymosin
- d) Filters blood to get rid of antigens

(vii) QRS wave in ECG represents

- a) Auricular systole
- b) End of ventricular systole
- c) ventricular diastole
- d) ventricular systole

(viii) The first heart sound is produced by

- a) Closure of the aortic and pulmonary valves
- b) Opening of the aortic and pulmonary valves
- c) Closure of the mitral and tricuspid valves
- d) Opening of the mitral and tricuspid valves

(ix) The ventricular repolarisation in ECG is observed in-

- a) P wave
- b) Q wave
- c) R wave
- d) T wave

(x) Cardiac output is measured by

- a) Peripheral resistance\* tissue fluid
- b) Peripheral resistance\* Cardiac rate
- c) Blood pressure\* Cardiac rate
- d) Heart rate\* Stroke volume

(xi) Average Cardiac output is male is-

- a) 2.5 L/min
- b) 4.25 L/min
- c) 5.25 L/min
- d) 9.5 L/min

(xii) If individual has Heart rate of 60, Stroke rate of 150ml Cardiac output is

- a) 900ml
- b) 9000ml
- c) 2.5ml
- d) 25ml

(xiii) Which of the following applies for the thoracic duct?

- a) It drains the blood from the systemic circulation
- b) It arises from the vessels of the lymphatic system
- c) It empties its contents into subclavian vein
- d) It carries blood from the lymphatic system

(xiv) Aggregates of lymphoid nodules located in the wall of the ileum of the small intestine are

- a) Submucosal tonsils
- b) Werner's nodes
- c) Peyer's patches
- d) Ileal tonsils

(xv) What is the pH of the saliva?

- a) 3-5
- b) 7-8
- c) 5.5-6.2
- d) 6.2-7.4

(xvi) Which of the following is NOT the salivary protein?

- a) Lysozyme
- b) Mucus
- c) Phosphatase
- d) Amylase

(xvii) Part of bile juice useful in digestion is \_\_\_\_\_

- a) Bile pigments
- b) Bile salts
- c) Bile matrix
- d) All of the mentioned

(xviii) Colon is divided into \_\_\_\_\_?

- a) 5 segments
- b) 3 segment
- c) 6 segments
- d) 4 segments

(xix) Fat absorption takes place in

- a) Liver
- b) Ileum
- c) Small Intestine
- d) Jejunum

(xx) Presence of Brunner's gland in submucous layer is the character of

- a) Ileum
- b) Duodenum
- c) Jejunum
- d) Stomach

(xxi) Yellow color of urine is due to

- a) Urochrome
- b) Urea
- c) Bilirubin
- d) Uric acid

(xxii) Glucose reabsorption occurs due to

- a) Proximal tubule, cotransport
- b) Distal tubule, passive transport
- c) Proximal tubule, osmosis
- d) Distal tubule, active transport

(xxiii) The normal value of GFR is-

- a) 180 ml/Day
- b) 125 ml/min
- c) 140 ml/min
- d) 100 ml/min

(xxiv) The proximal convoluted tubule is lined by

- a) Simple cuboidal epithelium
- b) Simple cuboidal brush border epithelium
- c) Stratified columnar epithelium
- d) None of these

(xxv) The sperms are temporarily stored in

- a) Vas deferens
- b) Vas eferens
- c) Epididymis
- d) Bladder

(xxvi) The fertilization of human egg by the sperms takes place in

- a) Ovary
- b) Fallopian tube
- c) Vagina
- d) Uterus

(xxvii) The onset of the reproductive age is called \_\_\_\_\_

- a) Menstruation
- b) Menarche

c) Menopause

d) Puberty

(xxviii) Which hormone relates best to changes in sexual functioning during the menopausal transition?

a) Estradiol

b) Testosterone

c) Menopause

d) Puberty

(xxix) Seminiferous tubule in testis is lined with which type of cells?

a) Germinal cells

b) Leydig cells

c) Sertoli cell

d) Both Leydig cells and Sertoli cell

(xxx) Which cells provides nutrition to the sperms ?

a) Germinal cells

b) Epithelial cell

c) Sertoli cell

d) None of them

(xxxii) In which layer of uterus the fertilized egg is implanted ?

a) Endometrium

b) Myometrium

c) Epimetrium

d) None of this

(xxxii) Name the gland that is located at the base of the throat, just inferior to the laryngeal prominence (Adam's apple)

a) Pituitary

b) Pineal gland

c) Hypothalamus

d) Thyroid

(xxxiii) Toxic agents present in food which interfere with thyroxine synthesis lead to the development of \_\_\_\_\_

a) Toxic goitre

b) Cretinism

c) Simple goitre

d) Thyrotoxicosis

(xxxiv) All of the following are hormones of the anterior pituitary except:

a) Human growth hormone (GH)

b) Follicle-stimulating hormone (FSH)

c) Parathyroid hormone (PTH)

d) Thyroid-stimulating hormone (TSH)

(xxxv) The clusters of cells in the pancreas that produce hormones are the

a) Nodules

b) Islets of Langerhans

c) Pancreatic medulla

d) Pancreatic cortex

(xxxvi) Which hormone increases blood calcium level?

a) Thyroxine

b) Thyrocalcitonin

c) PTH

d) All of these

(xxxvii) Which disease occurs due to less secretion of mineralocorticoids?

a) Addison's disease

b) Cretinism

c) Myxedema

d) Cushing diseases

(xxxviii) Color blindness is due to defect in

a) Rods

b) Corneal cell

c) Cones

d) Rods and cons

(xxxix) The purplish red pigment rhodopsin contained in rods type of photoreceptor cell is a derivative of

a) Vitamin B1

b) Vitamin A

c) Vitamin C

d) Vitamin D

(xl) Which is thickened to form organ of Corti?

a) Reissner's membrane

b) Tectorail membrane

c) Basilar membrane

d) Epithelial cells

(xli) Eustachian tube connects

a) Pharynx with middle ear

b) Middle ear with external ear

c) Middle ear with external ear

d) External ear with internal ear

(xlii) Organ of Ruffini is sensitive to

- a) Cold
- b) Pressure
- c) Heat
- d) Touch

(xliii) Sense of smell is perceived by

- a) Pituitary
- b) Olfactory lobe
- c) Hypothalamus
- d) Cerebrum

(xliv) Tympanic membrane is located in

- a) External ear
- b) Middle ear
- c) Inner ear
- d) None of these

(xlv) Parasympathetic nerve arises from which region of the nervous system?

- a) Cranio sacral
- b) Lumbar
- c) Cervical
- d) Thoracolumbar

(xlvi) The supporting and nutritive cells found in brains are

- a) Oligodendrocytes
- b) Astrocytes
- c) Microglia
- d) Ependymal cells

(xlvii) Spinal shock is due to :-

- a) Severe pain felt at the site of the lesion
- b) Severe hypotensive shock
- c) Interruption of the ascending sensory pathways
- d) Interruption of the descending facilitatory tracts

(xlviii) From where does the formation of a neural tube take place?

- a) Ectoderm
- b) Endoderm
- c) Spinal cord
- d) Mesoderm

(xlix) In CNS myelinated fibers form the \_\_\_\_\_ while non myelinated fibers cells form\_\_\_\_\_

- a) Grey matter, white matter
- c) White matter, grey matter

- b) Ependymal cells, neurosecretory cells
- d) Neurosecretory cells, Ependymal cells

(l) What type of process the transmission of nerve impulse is ?

- a) Electromagnetic
- c) only Electrical
- b) only Magnetic
- d) Electro -chemical

(li) That is correct for unstimulated nerve- fibre ?

- a) Resting potential
- c) potential
- b) Depolarization
- d) Repolarization

(lii) Permeability of which of the following increases during depolarization ?

- a) Na<sup>+</sup>
- c) Mg<sup>+</sup>
- b) K<sup>+</sup>
- d) Ag<sup>+</sup>

(liii) Which of the following option is not considered as skin appendage?

- a) Nail
- c) Hair, Hair follicles
- b) Carotene
- d) Sweat gland

(liv) Most of the melanin in the basal layer of the epidermis is located in which cell type?

- a) keratinocytes
- c) langerhans cells
- b) melanocytes
- d) fibroblasts

(lv) The loose, adipose connective tissue layer of skin is

- a) epidermis
- c) dermis
- b) mucosa
- d) hypodermis

(lvi) T1 vertebral cross section is useful for visualization of

- a) Apex of lungs
- c) Body of hyoid bone
- b) Top of arch of Aorta
- d) upper border of liver



(lvii) C3 vertebral cross section is useful for visualization of

- a) Apex of lungs
- b) Top of arch of Aorta
- c) Body of hyoid bone
- d) upper border of liver

(lviii) L1 vertebral cross section is useful for visualization of

- a) Iliac crest
- b) Esophagus
- c) Apex of lungs
- d) Pylorus of Stomach

(lix) C6 vertebral cross section is useful for visualization of

- a) Body of hyoid bone
- b) sternoclavicular joint
- c) Superior border of thyroid cartilage
- d) Laryngotracheal junction

(lx) Brain cross sectional study is best observed by

- a) Standing posture
- b) Feet of the patient in a supine position
- c) Sitting posture
- d) All of these