



BRAINWARE UNIVERSITY
Term End Examination 2020 - 21

Programme – Bachelor of Science in Physician Assistant

Course Name – Human Physiology

Course Code - BPA102

Semester / Year - Semester I

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) The term cell was given by

- | | |
|-----------------|------------|
| a) Robert Hooke | b) Schwann |
| c) Tatum | d) De Bary |

(ii) The articular surface of joints:

- | | |
|-----------------------------------|---------------------------------------|
| a) Is formed of hyaline cartilage | b) Is rich in elastic fibers |
| c) Is rich in collagen type I | d) Gets its nutrition from periosteum |

(iii) Vital stain is used to detect the following cell:

- | | |
|--------------------|-------------------|
| a) Plasma cell | b) Reticular cell |
| c) Macrophage cell | d) Mast cells |

(iv) Vitreous humor of the eye is formed of:

- | | |
|----------------------|-------------------------------|
| a) Yellow elastic CT | b) Reticular CT |
| c) Muroid CT | d) Irregular white fibrous CT |

(v) Goiter is a disease due to

- | | |
|-----------------------|----------------------|
| a) Hyperthyroidism | b) Iodine deficiency |
| c) Insulin deficiency | d) Hb deficiency |

(vi) Basement membrane is made up of-

- a) No cell product of epithelial cell
- b) Endodermal cell
- c) Epidermal cell only
- d) Cylindrical, unbranched, striated, multinucleate and voluntary.

(vii) The term _____ refers to production of blood cells in the _____ of adults

- a) Hemolysis; spleen
- b) Hemostasis; liver
- c) Homeostasis; bone marrow
- d) Hematopoiesis; bone marrow

(viii) Percentage of water in plasma is about

- a) 80-82%
- b) 90-92%
- c) 50-52%,
- d) 60-62%

(ix) Normal pH of blood is

- a) 2.2
- b) 5.2
- c) 7.4
- d) 10.4

(x) Which is the rarest blood group?

- a) AB negative
- b) AB positive
- c) O negative
- d) O positive

(xi) Blood is stained with ____ stain

- a) Methylene blue
- b) Safranin
- c) Leishman stain
- d) Carbol fuchsin

(xii) Process of formation of blood corpuscles is called

- a) Haemolysis
- b) Homeostasis
- c) Haemopoiesis
- d) Hemostasis

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

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

(xiv) Which of the following cells produces HCl?

- a) Beta cells
- b) Oxyntic cells
- c) Chief cells
- d) Alpha cells

(xv) The pancreatic juice which aids digestion is secreted into?

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

(xvi) Name the digestive juice that lacks enzyme but helps in digestion

- a) Bile juice
- b) Pancreatic juice
- c) Ptyalin
- d) Pepsin

(xvii) Which part of pancreas produce and secrete insulin?

- a) Glomerulus
- b) Bowman's capsule
- c) Islets of Langerhans
- d) Loop of Henle

(xviii) Which cells produce insulin?

- a) Alpha cells
- b) Beta cells
- c) Delta cells
- d) F cells

(xix) What is the pH of the saliva?

- a) 3.0-5.0
- b) 7.0-8.0
- c) 5.5-6.2
- d) 6.2-7.4

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

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

(xxi) Yellow color of urine is due to

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

(xxii) Mark the mismatch pair:

- a) Henle's loop – concentration of urine
- b) DCT – Absorption of glucose
- c) PCT – Absorption of sodium and potassium ions
- d) Bowman's capsule – Glomerular filtration

(xxiii) In mammal the formation of Urea takes place by the process of

- a) Lactic acid cycle
- b) Cori cycle
- c) Ornithine cycle
- d) Krebs's cycle

(xxiv) Glomerular filtration rate would be increased by :

- a) constriction of the afferent arteriole
- b) a decrease in afferent arteriolar pressure
- c) compression of the renal capsule
- d) a decrease in the concentration of plasma protein

(xxv) Filtration occurs in the____,most reabsorption occurs in the____, and urine is transported from the kidney to the bladder in the_____.

- a) Proximal tubule, distal tubule, urethra
- b) glomerulus proximal tubule, ureter
- c) Afferent arteriole, loop Henle, collecting tube
- d) Distal tubule, proximal tubule, urethra

(xxvi) The normal value of GFR is-

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

(xxvii) Which of these is a fat soluble hormone?

- a) TSH
- b) ACTH
- c) Insulin
- d) Testosterone

(xxviii) Gastric secretion is stopped by hormone

- a) Prostaglandin
- b) Gastrin
- c) Pancreozymin
- d) Cholecystokinin

(xxix) Hormones thyroxine, adrenaline and the pigment melanin are formed from

- a) Tyrosine
- b) Proline
- c) Tryptophan
- d) Glycine

(xxx) The contraction of gall bladder is due to endocrine System

- a) Cholecystokinin
- b) Enterogastrone
- c) Gastrin
- d) Secretin

(xxxii) Which is not a function of the hypothalamus?

- a) Affect heart rate
- b) Control temperature
- c) Affect water balance
- d) Secrete FSH

(xxxii) Which hormone STARTS the ovulation cycle?

- a) Luteinizing Hormone
- b) Estrogen
- c) Progesterone
- d) FSH

(xxxiii) In postmenopausal women, circulating testosterone is a precursor for which of the following steroids?

- a) Androstenedione
- b) Cortisol
- c) Dehydroepiandrosterone
- d) Estradiol

(xxxiv) Sperms are produced at a temperature that is _____ the body temperature.

- a) Same as
- b) Lower than
- c) Higher than
- d) Immaterial to

(xxxv) Oxygen and hemoglobin bind in a reversible manner to form_____

- a) Carboxyhemoglobin
- b) Oxyhemoglobin
- c) Methoglobin
- d) BPG

(xxxvi) If RQ is 0.6 in a respiratory metabolism it would mean that _____

- a) Carbohydrate is used as respiratory substrate
- b) Organic acids are used as respiratory substrate
- c) Oxidation of respiratory substrate consumed more O₂ than CO₂ produced
- d) Reaction is anaerobic

(xxxvii) Which one of the following statements is incorrect?

- a) Tuberculosis is caused by a rod-shaped bacterium, Mycobacterium tuberculosis
- b) Tuberculosis is highly infectious and can be spread by airborne droplets
- c) Tuberculosis can't be treated by antibiotics.
- d) In Pulmonary Tuberculosis the elasticity of lungs is reduced

(xxxviii) Opening to the trachea is covered by a small flap of tissues termed as the _____.

- a) Glottis
- b) Trachea
- c) Epiglottis
- d) Larynx

(xxxix) Asphyxia occurs due to

- a) Rise in level of CO₂
- b) Fall in level of CO₂
- c) Rise of O₂ level
- d) Fall in O₂ level

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

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

(xli) QRS wave in ECG represents

- a) Auricular systole
- b) End of ventricular systole

c) ventricular diastole

d) ventricular systole

(xlii) Which is called secondary pacemaker of Heart?

a) SA node

b) AV node

c) Purkinje fiber

d) Bundle of His

(xliii) Circle of Willis present in

a) Coronary Circulation

b) Cerebral Circulation

c) Hepatic Circulation

d) Systemic Circulation

(xliv) Integumentary system is made up of

a) Skin, heart, nails, bone

b) Skin, nails, hair, bone

c) Skin, hair, nail

d) Skin, kidney, hair, nail

(xlv) The outermost layer of the skin is called?

a) Stratum lucidum

b) Stratum corneum

c) Stratum germi

d) Stratum spinosum

(xlvi) If a person ascend to high altitude experience the problem

a) HAPE

b) Cyanosis

c) Nitrogen toxicity

d) None of these

(xlvii) Which of the following does not act as a neurotransmitter?

a) Acetylcholine

b) Epinephrine

c) Nor epinephrine

d) Cortisone

(xlviii) Events of reflex actions include all the following, except :-

a) Stimulation of sensory receptors

b) Stimulation of central synapses

c) Inhibition of sensory receptors

d) Inhibition of central synapses

(xlix) 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

(l) Which of the following nerve is purely motor nerve?

- a) Trigeminal
- b) Vagus
- c) Facial
- d) Abducent

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

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

(lii) Which of the following is toughest?

- a) Pia mater
- b) Arachnoid
- c) Dura mater
- d) None of these

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

- a) Na⁺
- b) K⁺
- c) Mg⁺
- d) Ag⁺

(liv) Anosmia, an olfactory disorder is caused by

- a) genetic disorders
- b) head injuries or the aftereffects of nasal cavity inflammation
- c) loss of gustatory epithelial cells
- d) vagus nerve damage

(lv) Rotational movement of the head is monitored by receptors located in the

- a) utricle
- b) Cochlear duct
- c) saccule
- d) Semicircular canals

(lvi) The conjunctival mucous membrane covers

- a) the inner surface of the eyelids only
- b) the inner surface of sclera
- c) both the inner surface of the eyelids and the visible portion of the sclera
- d) the whole outer surface of the sclera

(lvii) The receptors for sound reception and equilibrium are located in the

- a) outer ear cavity
- b) inner ear cavity
- c) middle and inner ear cavities
- d) outer, middle, and inner cavities

(lviii) The optic disc on the retina is

- a) the area of greatest visual acuity
- b) where the optic nerve leaves the eye
- c) the same as the macula lutea
- d) a dense collection of rod cells

(lix) As a rule, the only special sense not fully functional at birth is

- a) taste
- b) smell
- c) vision
- d) audition

(lx) Which of the following would NOT be found in the outer ear?

- a) hair
- b) sebaceous glands
- c) pharyngotympanic tube
- d) modified sweat glands