Subject: Human Anatomy and Physiology II **F.Y.B.Pharm, Sem II**
Duration: 3 Hours **Total marks: 80M**
N.B: 1. All questions are compulsory
2. Figures to right indicate full marks

Q1. Choose appropriate option for following multiple choice based questions. 20

1. Neurons secreting dopamine are present in _____.
a. Substantia nigra
b. Arbor vitae
c. Cerebellar peduncles
d. Pontine nucleus

2. _____cells of stomach secrete pepsinogen and gastric lipase.
a. G Cells
b. Chief cells
c Parietal cells
d. Mucous neck cells

3. Each bronchopulmonary segment of the lung has many small compartments called as _____.
a. Lobules
b. Alveoli
c. Respiratory bronchioles
d. Terminal bronchioles

4. _____ is the middle and the thickest layer of tissue surrounding each kidney.
a. Renal Capsule
b. Renal Fascia
c. Adipose Capsule
d. Renal Medulla

5. If you drank a litre of water, what effect would this have on the osmotic pressure of your blood?
a. Increase in osmotic pressure
b. Decrease in osmotic pressure
c. No change in osmotic pressure
d. Slight increase in osmotic pressure

6. _____is a large, fluid filled follicle that is ready to rupture and expel its secondary oocyte.
a. Corpus luteum
b. Graafian follicle
c. Corpus albicans
d. Ovarian follicles

7. _____ of hypothalamus serves as relay centre for reflexes related to sense of smell.

a. Supraoptic region
b. Tuberal region
c. Mammillary region
d. Preoptic region

8. _____ is the organ that stores, concentrates, and delivers bile into duodenum via common bile duct.

a. Liver
b. Gall bladder
c. Pancreas
d. Large intestine

9. _____ functions in warming, moistening, and filtering air; receives olfactory stimuli; is a resonating chamber for sound.
a. Nose
b. Pharynx
c. Larynx
d. Epiglottis

10. Which of the following is the correct sequence in which urine flows through the kidney toward the urinary bladder?
a. Renal pelvis, major calyx, minor calyx, papillary duct, ureter
b. Papillary duct, minor calyx, major calyx, renal pelvis, ureter
c. Minor calyx, major calyx, papillary duct, renal pelvis, ureter.
d. Papillary duct, major calyx, minor calyx, ureter, renal pelvis.

11. _____ are involved in formation of blood testis barrier.
a. Spermatogenic cells
b. Sertoli cells
c. Primordial cells
d. Germinal epithelial cells

12. Which cells produce parathyroid hormone (PTH).
a. Chief cells
b. Oxyphil cells
c. Follicular cells
d. Parafollicular cells

13. During the _____ phase, the negative membrane potential becomes less negative, reaches zero, and then becomes positive.
a. Repolarizing
b. Depolarizing
c. Threshold
d. Hyperpolarizing

14. _____ contribute to sperm motility and viability and may stimulate smooth muscle contractions in the female reproductive tract.
a. Fructose
b. Prostaglandins
c. Clotting proteins
d. Prostate-specific antigen

15. How much is Inspiratory reserve volume in an average adult male?
a. 3100 mL
b. 2100 mL
c. 1100 mL
d. 1500 mL

16. _____ are the largest and most numerous neuroglia in the CNS.
a. Oligodendrocytes
b. Astrocytes
c. Ependymal cells
d. Microglia

17. The anterior pituitary (anterior lobe), is also called as _____.
a. Adenohypophysis
b. Neurohypophysis
c. Pars nervosa
d. Pars intermedia

18. Secretion of Human growth hormone is inhibited by_____.
a. FSH
b. TRH
c. GHRH
d. Somatostatin

19. _____ is the small molecule inhibitory neurotransmitter in the CNS.
a. Glutamate
b. Aspartate
c. GABA
d. Substance P

20. A portal triad is composed of _____.
a. bile canaliculi, branch of the hepatic artery and branch of the hepatic vein
b. bile duct, branch of the hepatic artery and branch of the hepatic vein
c. bile duct, hepatic sinusoid and branch of the hepatic vein
d. central vein, branch of the hepatic artery and branch of the hepatic vein

Q2 A. Answer any ONE question. 12

a. Explain the formation, composition, and functions of Cerebrospinal fluid, add a note on spinal meninges.
b. Define Pulmonary ventilation, explain in detail inhalation and exhalation and factors affecting pulmonary ventilation

Q2 B. Answer any FOUR questions. 48

a. Explain generation of action potential, and describe circulation of Cerebrospinal fluid.
b. With the help of neat labelled diagram explain the anatomy and histology of small intestine.
c. i. Write a note on regulation of respiratory centres.
ii. Explain in detail the blood supply to the kidney and write a short note on ureters.
d. Draw a neat labelled diagram of pituitary gland. Write a note on anterior pituitary cells and their hormones.
e. Draw a neat labelled diagram of histology of ovary. Explain the process of oogenesis.