TOTAL PAGES : 2

**22NDU310N / 22NDU310**

**PSG COLLEGE OF ARTS & SCIENCE**
(AUTONOMOUS)

**BSc DEGREE EXAMINATION DECEMBER 2024**
(Third Semester)

Branch - **NUTRITION, FOOD SERVICE MNAGEMENT AND DIETETICS**

**HUMAN PHYSIOLOGY**

Time: Three Hours Maximum: 75 Marks

**SECTION-A (10 Marks)**
Answer **ALL** questions
**ALL** questions carry **EQUAL** marks (10 × 1 = 10)

| Question No. | Question | K Level | CO |
|---|---|---|---|
| 1 | Choose the "powerhouse" of the cell?<br>a) Nucleus b) Ribosome<br>c) Mitochondria d) Golgi apparatus | K1 | CO1 |
| 2 | Which blood group is known as the universal donor?<br>a) A+ b) AB+<br>c) O+ d) O- | K2 | CO1 |
| 3 | Find the following vessels that carries oxygenated blood away from the heart?<br>a) Pulmonary artery b) Pulmonary vein<br>c) Aorta d) Superior vena cava | K1 | CO2 |
| 4 | Name the part of that heart is responsible for pumping oxygenated blood to the rest of the body?<br>a) Right ventricle b) Left ventricle<br>c) Right atrium d) Left atrium | K2 | CO2 |
| 5 | Which part of the digestive system is primarily responsible for nutrient absorption?<br>a) Stomach b) Small intestine<br>c) Esophagus d) Large intestine | K1 | CO3 |
| 6 | Which structure in the kidney is responsible for filtering blood to form urine?<br>a) Glomerulus b) Nephron<br>c) Ureter d) Bladder | K2 | CO3 |
| 7 | Which part of the brain is responsible for coordinating voluntary movements and balance?<br>a) Cerebrum b) Cerebellum<br>c) Medulla Oblongata d) Hypothalamus | K1 | CO4 |
| 8 | Which structure in the ear is involved in maintaining balance and equilibrium?<br>a) Cochle b) Eardrum<br>c) Semicircular canal d) Auditory nerve | K2 | CO4 |
| 9 | Find the "master gland" of the endocrine system?<br>a) Thyroid b) Pituitary<br>c) Adrenal d) Parathyroid | K1 | CO5 |
| 10 | During ovulation the Graffian follicle releases<br>a) Estrogen b) Progesterone<br>c) Ovum *d*) Follicle-stimulating hormone | K2 | CO5 |

**Cont...**

**SECTION - B (35 Marks)**

Answer **ALL** questions

**ALL** questions carry **EQUAL** Marks (5 × 7 = 35)

| Question No. | Question | K Level | CO |
|---|---|---|---|
| 11.a. | Identify the role of muscle tissue in generating movement. | K3 | CO1 |
| | (OR) | | |
| 11.b. | Choose the significance of plasma proteins in blood. | | |
| 12.a. | Explain how the sinoatrial (SA) node initiates the heart's electrical conduction system. | K3 | CO2 |
| | (OR) | | |
| 12.b. | Describe the mechanism of breathing in terms of pressure changes in the thoracic cavity. | | |
| 13.a. | Analyze the coordination of peristaltic movement contribute to the efficient digestion of food. | K4 | CO3 |
| | (OR) | | |
| 13.b. | Examine the structure of the nephron enables the formation of urine. | | |
| 14.a. | Evaluate the significance of the hypothalamus in maintaining homeostasis within the body. | K5 | CO4 |
| | (OR) | | |
| 14.b. | Assess the significance of the cochlea in the process of hearing. | | |
| 15.a. | Analyse the hormones secreted by adrenal gland that are respond to stress. | K4 | CO5 |
| | (OR) | | |
| 15.b. | Examine the main stages of the menstrual cycle and their hormonal regulation. | | |

**SECTION -C (30 Marks)**

Answer **ANY THREE** questions

**ALL** questions carry **EQUAL** Marks (3 × 10 = 30)

| Question No. | Question | K Level | CO |
|---|---|---|---|
| 16 | Analyze the relationship between the structural variations in different types of epithelial tissues and their specific functions. | K4 | CO1 |
| 17 | Examine the structure of the respiratory tract which supports the efficient exchange of gases. | K4 | CO2 |
| 18 | Evaluate the importance of the pancreas in the overall process of digestion. | K5 | CO3 |
| 19 | Criticize the effectiveness of the reflex arc in protecting the body from harm. | K5 | CO4 |
| 20 | Analyze the contribution of thyroid gland for regulating metabolism and the potential consequences of hypo- and hyperthyroidism. | K4 | CO5 |

Z-Z-Z END