



All India Institute of Medical Sciences, Kalyani

B.Sc.(Hons) Nursing First Year Supplementary Examination (Batch-2021-22)

Time: 3 Hrs.

ANATOMY & PHYSIOLOGY

Marks: 75

INSTRUCTIONS:

- Answer Anatomy & Physiology Section in separate answer booklets.
- Draw diagram wherever necessary

PHYSIOLOGY (38 MARKS)

SECTION-A

Answer any ONE of the following:

[1X8=8]

1. Name any four hormones secreted from anterior pituitary. Briefly describe the actions of any one of them. Add a note on dwarfism. (2+4+2)
2. Draw a neat labelled diagram of neuromuscular junction. With the help of a flow chart, illustrate the steps of neuromuscular transmission. (3+5)

SECTION-B

Write short notes on any FOUR:

[4X5=20]

3. Describe the factors affecting the glomerular filtration rate. (5)
 4. Describe the mechanisms of temperature regulation in a cold environment. (5)
 5. Describe the oxygen-haemoglobin dissociation curve and factors affecting it. (3+2)
 6. What is anemia? Describe the signs and symptoms of anemia and discuss the different nutritional factors which cause anemia. (1+2+2)
 7. With a neat diagram, describe how the baroreceptors regulate the systemic arterial blood pressure. (2+3)
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Enrollment No. _____ **Invigilator sign:** _____

SECTION C (PHYSIOLOGY)

INSTRUCTIONS:

- Section C (Anatomy & Physiology) should be answered in first 20 minutes of the Exam duration and handed over to the invigilators.
- Put one ✓ mark to only one answer that you consider correct for each question.
- Mark your ✓ in pen.

Multiple Choice Questions (MCQs):

[10X1=10]

1. Which of the following is not a function of the stomach?

- a) Reservoir for the food ingested
- b) Provide HCL for the initial digestion of proteins
- c) Release of food at a controlled rate into the duodenum
- d) Absorbs vitamin B₁₂

2. Milk ejection reflex is mediated by hormone:

- a) Oxytocin
- b) Vasopressin
- c) Prolactin
- d) Oestrogen

3. Ejection fraction of the ventricle refers to the ratio of:

- a) Amount of blood received/amount of blood ejected
- b) Stroke volume/end-diastolic volume
- c) End-systolic volume/end-diastolic volume
- d) Stroke volume/end-systolic volume

4. The heart gets its blood supply through the:

- a) Superior vena cava
- b) Circle of Willis
- c) Carotid arteries
- d) Coronary arteries

5. The inability to smell or perceive odours is:

- a) Astereognosis
- b) Amblyopia
- c) Anosmia
- d) Dysgeusia

6. In the lungs, gas exchange takes place by:

- a) Simple diffusion
- b) Active transport
- c) Receptor mediated transport
- d) Carrier protein

7. The major control centre for Autonomic Nervous System is the:

- a) Thalamus
- b) Limbic system
- c) Hypothalamus
- d) Motor cortex

8. Extrusion of waste material through the plasma membrane of a cell is known as _____

- a) Pinocytosis
- b) Phagocytosis
- c) Exocytosis
- d) Leucocytosis

9. Colour perception is a function of _____

- a) Rods
- b) Cones
- c) Primary auditory cortex
- d) Visual association area

10. Juxta glomerular cells of the nephron are located in _____

- a) Afferent arteriole
 - b) Efferent arteriole
 - c) Distal convoluted tubule
 - d) Glomerular tuft
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