



All India Institute of Medical Sciences, Kalyani
B.Sc.(Hons) Nursing First Year Examination, August 2024

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:

[1×8=8]

1. Enumerate the factors involved in the coagulation of blood. Describe the mechanism of blood coagulation briefly. Add a note on anticoagulants. (3+3+2)
2. Name thyroid hormones. Describe the functions of thyroid hormones. Add a note on cretinism. (1+5+2)

SECTION-B

Write short notes on any FOUR:

[4×5=20]

3. What are the constituents of lung surfactant? Enlist any two major functions of surfactant. (3+2)
4. Describe any four functions of placenta.
5. Describe the mechanism of formation of urine.
6. Describe the causes of the first (S1) and second (S2) heart sounds and when they occur in the cardiac cycle.
7. Describe the mechanism of skeletal muscle contraction



All India Institute of Medical Sciences, Kalyani
B.Sc.(Hons) Nursing First Year Examination, August 2024
Time: 3 Hrs. ANATOMY & PHYSIOLOGY Marks: 75

INSTRUCTIONS:

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

ANATOMY (37 MARKS)

SECTION A

Answer any ONE of the following

(1 x 7=7)

1. Describe UTERUS under following headings: (3+2+2)
- a. Parts and relations
 - b. Blood supply
 - c. Applied Anatomy

OR

2. Describe the KIDNEY under following headings: (3+2+2)
- a. Position and relation
 - b. Structure
 - c. Blood supply and applied anatomy

SECTION B

Write short notes on any Four:

(4 x 5=20)

3. Posterior relation of Stomach
 4. Lymphatic drainage of breast
 5. HIP joint- type and ligaments
 6. Neuroglial cells of CNS
 7. DELTOID- origin, insertion, nerve supply and applied aspect
 8. Blood supply of stomach
-



B.Sc. (Hons) Nursing First Year Examination, August 2024

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 tick (✓) mark to only one answer that you consider correct for each question.
- Mark your tick (✓) in pen.

Multiple Choice Questions (MCQs):

[10×1=10]

1. If the intent is to replenish total body water in a dehydrated individual, which one of the following should be administered intravenously?
 - a. 0.9% NaCl
 - b. 5% Dextrose solution
 - c. Albumin
 - d. Distilled water
2. Bile acids are synthesized starting from:
 - a. cholesterol
 - b. fatty acids
 - c. lecithin
 - d. bile salts
3. Which of the following types of cells work as scavenger cells in the CNS?
 - a. Microglia
 - b. Oligodendroglia
 - c. Ependymal cells
 - d. Astrocytes
4. What is the amplification provided by the lever action of the auditory ossicles and the large size of the tympanic membrane compared to the oval window?
 - a. 11 times
 - b. 22 times
 - c. 33 times
 - d. 44 times
5. Hypothalamus does **not** play a prominent role in the regulation of:
 - a. food and water intake
 - b. temperature
 - c. respiration
 - d. osmolality
6. At any time, the greatest fraction of blood volume is present in the:
 - a. Heart
 - b. Arteries
 - c. Veins
 - d. Capillaries
7. The major stimulus for spontaneous respiration is:
 - a. CO₂
 - b. O₂
 - c. Lactate
 - d. HCO₃
8. What is the effect of vasodilation on body temperature?
 - a. Increases body temperature
 - b. Decreases body temperature
 - c. No effect on body temperature
 - d. Both increases and decreases body temperature
9. What is the primary function of pancreatic enzymes in digestion?
 - a. Break down carbohydrates
 - b. Emulsify fats
 - c. Neutralize stomach acid
 - d. Break down proteins, fats, and carbohydrates
10. Where does spermatogenesis primarily occur in the male reproductive system?
 - a. Epididymis
 - b. Seminiferous tubules
 - c. Vas deferens
 - d. Prostate gland



B.Sc.(Hons) Nursing First Year Examination, August 2024

Enrollment No. _____

Invigilator sign: _____

SECTION C (ANATOMY)

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

Multiple Choice Questions (MCQs):

(10X1=10)

1. Temporomandibular joint is a type of synovial joint of
 - a. Plane type
 - b. Saddle type
 - c. Ball and socket
 - d. Condylar type
2. Uterus develops from which layer:
 - a. Ectoderm
 - b. Endoderm
 - c. Mesoderm
 - d. Endoderm and mesoderm
3. Which of the following is **NOT** a member of MAMMARY BED?
 - a. Serratus anterior
 - b. Latissimus dorsi
 - c. Pectoralis major
 - d. External oblique
4. Which of the following should be avoided for finger pricking?
 - a. Thumb
 - b. Index finger
 - c. Middle finger
 - d. Ring finger
5. Turner Syndrome is
 - a. XXY
 - b. XY
 - c. XXX
 - d. XO
6. Tongue is supplied by ALL **except**
 - a. Hypoglossal nerve
 - b. Vagus nerve
 - c. Lingual nerve
 - d. Abducens nerve
7. Which of the following vessel should be ligated close to thyroid gland while doing thyroidectomy?
 - a. Superior thyroid artery
 - b. Both the arteries should be ligated close to the gland
 - c. Inferior thyroid artery
 - d. None of the above
8. A young male felt pain radiating from loin to groin. The pain is related to which organ?
 - a. Gall bladder
 - b. Appendix
 - c. Stomach
 - d. Kidney
9. Which of the following is supplied by musculocutaneous nerve?
 - a. Biceps
 - b. Triceps
 - c. Brachioradialis
 - d. None of the above
10. A burn patient came to the emergency and the visiting surgeon advised venous cut down. Which vein is most convenient for this procedure?
 - a. Cephalic vein
 - b. Basilic vein
 - c. Popliteal vein
 - d. Great saphenous vein