

B.P.T.[1st Prof.]

BF/2023/03

Anatomy**[NEW REGULATIONS w.e.f. Admission 2021]****Time: 3 Hours****Max Marks: 80**

- Note:** 1.) *Attempt all questions.*
2.) **ATTEMPT BOTH PARTS IN SINGLE ANSWER BOOK ONLY.**
3.) **NO SUPPLEMENTARY SHEET SHALL BE ALLOWED/ PROVIDED**
4.) **The Student must write Q.P. Code in the space provided on the Title page of the Answer Book.**

SECTION - A**[40 Marks]**

1. **Write short Notes up to 5 lines in length.** [5x3=15]
(a) Ellipsoid joint (b) Oculomotor nerve
(c) Ureter (d) Trapezius muscle
(e) Eyeball
2. **Answer the following question upto 3 pages in length.** [10]
Describe Uterus for its borders, surface arterial supply and nerve supply.
3. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.** [15]
(a) Describe Brainstem, its parts, nuclei and blood supply.
- OR
- (b) Describe attachments of Flexor retinaculum of hand along with its relations.

SECTION – B**[40 Marks]**

4. **Write short Notes up to 5 lines in length.** [5x3=15]
(a) Thalamus
(b) Right coronary artery
(c) Integumentary system
(d) Brachialis
(e) Deep peroneal nerve
5. **Answer the following question upto 3 pages in length.** [10]
Describe Hip Joint, its attachments, movements and muscles producing various movements.
6. **Attempt any ONE question out of the following two questions and answer should be upto 5 pages in length.** [15]
(a) Describe Urinary Bladder along with borders, surfaces and blood supply.
- OR**
- (b) Describe Ovary in detail.
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Physiology**[NEW REGULATIONS w.e.f. Admission 2021]****Time: 3 Hours****Max Marks: 80**

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SECTION - A**[40 Marks]****1. Write short Notes on :****[5x3=15]**

- | | |
|--|--------------------|
| (a) Secondary active transport | (b) T lymphocytes |
| (c) Heat exhaustion | (d) Anticoagulants |
| (e) Homeostatic negative feedback control mechanisms | |

2. Answer the following question upto 3 pages in length.**[10]**

Discuss Cardiac output and its regulation.

3. Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.**[15]**

- (a) Describe Regulation of Respiration under following headings – Chemical, Neural and Reflex.

OR

- (b) Describe synthesis, regulation and functions of Growth hormone. Add a note on disorders of growth hormone.

SECTION – B**[40 Marks]****4. Write short Notes up to 5 lines in length.****[5x3=15]**

- (a) Muscle hypertrophy and hyperplasia
- (b) Oxygen debt
- (c) Hypothermia
- (d) Strength duration curve
- (e) Cretinism

5. Answer the following question upto 3 pages in length.**[10]**

Discuss Spinal cord and Brainstem reflexes and its role in maintenance of posture.

6. Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.**[15]**

- (a) Describe Vegetative and Non-vegetative functions of Hypothalamus.

OR

- (b) Describe Hormones secreted from Adrenal gland, its functions and disorders of adrenocortical hormones.

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Biochemistry

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Time: 3 Hours

Max Marks: 80

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SECTION - A**[40 Marks]**1. **Answer the following(up to 5 lines in length):****[5x3=15]**

- (a) Chemical mediators of Nerve activity
- (b) Tertiary structure of proteins.
- (c) Difference between DNA and RNA
- (d) Functions of Mitochondria.
- (e) Cell morphology and function of Cell membrane

2. **Answer the following question upto 3 pages in length.****[2+5+3= 10]**

Define and classify Proteins with suitable examples. Add a note on the biologically important peptides.

3. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.** **[15]**

- (a) Briefly describe the sources, biochemical functions and deficiency manifestations of Vitamin D. **[2+10+3= 15]**

OR

- (b) What are Enzymes? Give an account of the importance of serum enzymes in the diagnosis of diseases. **[5+10= 15]**

SECTION – B**[40 Marks]**4. **Write short Notes up to 5 lines in length.****[5x3=15]**

- (a) Electrolyte balance
- (b) Alkaptonuria
- (c) Composition of nerve tissue
- (d) Biochemical functions of growth hormone
- (e) Applications of radioisotopes in medicine

5. **Answer the following question upto 3 pages in length.****[10]**

What is Basal metabolic rate and what are the factors affecting basal metabolic rate

6. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.** **[15]**

- (a) Define Glycolysis, write its steps and add a note on its energetics. **[2+10+3= 15]**

OR

- (b) Define Beta oxidation. Describe briefly the mechanism of Beta oxidation of fatty acids and add a note on its energetics. **[2+10+3= 15]**

Electrotherapy-I**[NEW REGULATIONS w.e.f. Admission 2021]****Time: 3 Hours****Max Marks: 80**

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SECTION - A**[40 Marks]**

1. **All questions are compulsory. Write short Notes up to 5 lines in length.**

[5x3=15]

- (a) Semi conductor devices
- (b) Ammeter and Voltmeter
- (c) Conductors & Insulators
- (d) Alternating current
- (e) Iontophoresis

2. **Answer the following question upto 3 pages in length.**

[10]

Define Tens. Write on its frequency, indication & contraindication of Tens.

3. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.**

[15]

- (a) Write on production of Direct current and explain their application in various conditions.

OR

- (b) Write a brief note on Rheostat & its uses in physiotherapy.

SECTION – B**[40 Marks]**

4. **All questions are compulsory. Write short Notes up to 5 lines in length.**

[5x3=15]

- (a) SD curve
- (b) Normal behaviour of nerve & muscle tissue
- (c) Wavelength & frequency of IRR
- (d) Electrical heating pads
- (e) Physiological effects of moist heat

5. **Answer the following question upto 3 pages in length.**

[10]

Explain physiological and therapeutic effects of IRR.

6. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.**

[15]

- (a) Write mechanism of Production & Mode of heat transfer of Paraffin wax bath.

OR

- (b) Define UVR. Write on techniques of irradiation of UVR with its indications & contraindications.

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Exercise Therapy – I**[NEW REGULATIONS w.e.f. Admission 2021]****Time: 3 Hours****Max Marks: 80**

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SECTION - A**[40 Marks]**

1. **All questions are compulsory. Answer up to 5 lines in length.** [5x3=15]
(a) 1 RM
(b) Define Mechanical advantage.
(c) Eccentric muscle function
(d) Grade 2 of manual muscle testing
(e) Advantages of hanging
2. **Answer the following question upto 3 pages in length.** [10]
Explain the different orders of levers applicable to human body mechanics with examples.
3. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.** [15]
(a) Explain Suspension therapy, its effects and uses? Describe in detail its technique of application along with various indications, contraindications and related precautions.

OR

- (b) Explain principles, technique and objectives of application of Goniometry. Describe the technique of ROM assessment in Lumbar spine using the Schober's method.

SECTION – B**[40 Marks]**

4. **All questions are compulsory. Answer up to 5 lines in length.** [5x3=15]
(a) Whole Vs. Part Practice
(b) Muscle fatigue
(c) Deep friction massage
(d) Importance of Parallel bar in therapeutic gymnasium
(e) Knowledge of Performance (KP)
5. **Answer the following question upto 3 pages in length.** [10]
Discuss in detail the various (local and general) relaxation techniques for managing the Muscle fatigue and Tension.
6. **Attempt any ONE question out of the following two questions and Answer should be upto 5 pages in length.** [15]
(a) Describe the Motor learning and its stages? Discuss transfer of learning and role of instructions and augmented feedbacks during the performance and learning a motor task.

OR

- (b) Discuss various considerations related to the application of Soft tissue manipulation techniques in terms of patient, therapist and environmental preparations. Explain about any two soft tissue manipulation techniques having their utilities in lung secretions removal.

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English**[NEW REGULATIONS w.e.f. Admission 2021]****Time: 1 ½ Hours****Max Marks: 40****Note: 1.) *Attempt all questions.*****2.) ATTEMPT ALL QUESTIONS IN SINGLE ANSWER BOOK ONLY.****3.) NO SUPPLEMENTARY SHEET SHALL BE ALLOWED/ PROVIDED****4.) The Student must write Q.P. Code in the space provided on the Title page of the Answer Book.****1. a. Correct the following sentences: [5]**

- i. The story was written writer.
- ii. The shirt needs iron.
- iii. To the winner was given a prize.
- iv. Does he plays tennis?
- v. We had been decided to buy our tickets in advance.

b. Fill in the blanks with correct form from the words given in brackets: [5]

- i. Yesterday she _____ to arrive at the station. (fail)
- ii. They _____ some new trees. (plant)
- iii. I am _____ my hair now. (do)
- iv. She _____ address. (may)
- v. The new building _____ awful. (look)

2. Read the passage given below and make notes using suitable short forms: [10]

Soil forms a thin layer on the surface of the earth, a few centimetres to several meters in thickness. It is this thin layer of soil which produces the bulk of man's food supply. This layer upon which agriculture depends; requires hundreds of years for its development, but if it is misused it can be destroyed within a few years.

Soil is the product of two forces: the decomposition of rock and the decay of plant and animal life. The processes of physical and chemical weathering are responsible for breaking down the rock into fragments.

3. Write a letter to your uncle asking him about his guidance on moral values. [10]**4. Write an essay of about 100 words on any one of the following topics: [10]**

- | | |
|-------------------|------------------------|
| a. Unemployment | b. Rising Prices |
| c. Drug Addiction | d. Your Favourite Book |
