

August, 2015

**STATE MEDICAL FACULTY OF WEST BENGAL**

**Preliminary Examinations For Diploma in Physiotherapy : DPT Course**

**Paper – I : Anatomy**

**Time : 3 hours.**

**Full Marks : 80**

*Question 1 & 2 are Compulsory and  
Answer any 5 Questions from Question No. 3 To 9*

**1) Answer all (Write only the correct answer): -**

**5 x 1 = 5**

- i) "Rotator cuff" is formed by the following:
  - (a) Deltoid
  - (b) Supraspinatus
  - (c) Subscapularis
  - (d) Teres minor
  - (e) All
  
- ii) All of the following are example of fibrous type of joint, except:
  - (a) Symphysis pubis
  - (b) Suturous
  - (c) Syndesmosis
  - (d) Gomphosis
  
- iii) Oesophagus lies:
  - (a) In front of trachea
  - (b) Behind trachea
  - (c) In front of abdominal aorta
  - (d) None
  
- iv) In extension of knee joint quadriceps femoris muscle, act as:
  - (a) Synergist
  - (b) Fixator
  - (c) Antagonist
  - (d) Prime mover
  
- v) Which of the following is not branch of posterior cord of brachial plexus?
  - (a) Axillary nerve
  - (b) Ulnar nerve
  - (c) Radial nerve
  - (d) Thoraco dorsal nerve

**2) Answer all (True/False):**

**5 x 1 = 5**

- (i) Klumpke's palsy occurs due to the lesion in C<sub>8</sub> – T<sub>1</sub> nerve root.
- (ii) Facial nerve gives motor supply to the muscle of mastication.
- (iii) Shoulder joint is a very stable joint.
- (iv) Hypothalamus is the temperature regulatory centre.
- (v) Peroneus tertius is the plantar flexor at ankle

**Contd. ...2/**

**Paper – I : Anatomy**

**ANSWER ANY 5 (FIVE) QUESTIONS FROM QUESTION NO. 3 TO 9**

**5x14 = 70**

- |    |  |    |
|----|--|----|
| 3) | Classify joints along with example.                              | 14 |
| 4) | Describe shoulder joint with diagram.                            | 14 |
| 5) | Describe with diagram the alimentary system.                     | 14 |
| 6) | Name the cranial nerves and describe briefly the facial nerve.   | 14 |
| 7) | Describe briefly the sciatic nerve & the muscles supplied by it. | 14 |
| 8) | Enumerate the muscles supplied by median and ulnar nerve.        | 14 |
| 9) | Write notes on :-<br>a) Popliteal fossa<br>b) Arch of aorta      |    |

7X2 = 14

\*\*\*\*\*

**STATE MEDICAL FACULTY OF WEST BENGAL**

**Preliminary Examinations For Diploma in Physiotherapy : DPT Course**

**Paper – II: Physiology**

**Time : 3 hours.**

**Full Marks : 80**

*Question 1 & 2 are Compulsory and  
Answer any 5 Questions from Question No. 3 To 9*

**1) Answer all (Write only correct answer):**

**5x1 = 5**

i) The cause of tremor is:

- (a) Anxiety
- (b) Obesity
- (c) Young age
- (d) Trauma

ii) Anisocytes is seen in:

- (a) Iron deficiency anemia
- (b) Macrocytic anemia
- (c) Sickle Cell anemia

iii) Acromegaly occurs due to increased secretion of:

- (a) ACTH
- (b) GH
- (c) TSH
- (d) PRL

iv) Saturday night palsy is:

- (a) Neuropraxia
- (b) Neuretmesis
- (c) Axonetmesis

v) Due to biconcave shapes of erythrocytes there is:

- (a) Rapid gas exchange
- (b) Less gas exchange
- (c) No significance

**2) Answer all (True/False):**

**5 x 1 = 5**

- i) In adult female normal blood volume is 5.5 liter.
- ii) Insulin stimulates the secretion of glucagon.
- iii) Babiniski sign + signifies pyramidal tract lesion.
- iv) Oxyntic cells of stomach secrete HCA.
- v) Scaleni is accessory muscle of respiration.

**Paper – II: Physiology**

**ANSWER ANY 5 (FIVE) QUESTIONS FROM QUESTION NO. 3 TO 9**

**5x14 = 70**

- 3) Describe the process of development of erythrocytes. 14
- 4) What is blood pressure? How blood pressure is regulated? 14
- 5) Describe the structure of nephron with diagram. 14
- 6) Mention the hormones secreted by anterior & posterior pituitary gland. 14
- 7) Describe the structure & function of skin. 14
- 8) Describe visual pathway. 14
- 9) Write notes on :-
- a) Vital capacity
  - b) Hypoxia & its type.

7X2 = 14

\*\*\*\*\*

**STATE MEDICAL FACULTY OF WEST BENGAL**

**Preliminary Examinations For Diploma in Physiotherapy : DPT Course**

**Paper – III : Biomechanics & Kinesiology including Fundamentals of Exercise Therapy**

**Time : 3 hours.**

**Full Marks : 80**

*Question 1 & 2 are Compulsory and  
Answer any 5 Questions from Question No. 3 To 9*

1. Answer all (Write only correct answer):

5 x 1 = 5

- i) Centre of gravity of adult human in the anatomical position is slightly:
  - (a) Ant. To S<sub>1</sub> vertebra
  - (b) Post. To S<sub>1</sub> vertebra
  - (c) Ant to S<sub>2</sub> vertebra
  
- ii) Which is the lever of power?
  - (a) 1<sup>st</sup>
  - (b) 2<sup>nd</sup>
  - (c) 3<sup>rd</sup>
  - (d) 2<sup>nd</sup> & 3<sup>rd</sup>
  
- iii) Newton's 1<sup>st</sup> law of motion is applicable to which phase of gait cycle?
  - (a) Stance phase
  - (b) Swing phase
  - (c) Midstance
  - (d) Push-off
  
- iv) In biaxial joint, bony components move in:
  - (a) 4 plane
  - (b) 3 plane
  - (c) 2 plane
  
- v) Supination takes place in:
  - (a) Transverse plane
  - (b) Vertical plane
  - (c) Coronal plane
  - (d) Sagittal plan

2) Answer all (**True/False**)

5 x 1 = 5

- i) Superior radio ulnar joint has 2° freedom.
- ii) Normal ADL requires about 128° of flexion of hip joint.
- iii) Biceps is not activated when forearm is supinated.
- iv) There are five pulleys in each digit.
- v) Locking of knee joint is done by vastus lateralis.

**Contd.....2/**

**Paper – III : Biomechanics & Kinesiology including Fundamentals of Exercise Therapy**

**ANSWER ANY 5 (FIVE) QUESTIONS FROM QUESTION NO. 3 TO 9**

**5x14 = 70**

- 3) Draw & describe the axis & planes of human body. 14
- 4) Draw the shoulder joint & describe the different motions of shoulder joint 14
- 5) What is force? Describe different types of forces. 14
- 6) What is lever? Discuss the role of different types of lever in physiotherapy. 14
- 7) What is gait? Describe different types of abnormal gait. 14
- 8) Discuss pulleys and equilibrium.
- 9) Write notes on :-  
a) Role of buoyancy in physiotherapy  
b) Carrying angle

7X2 = 14

\*\*\*\*\*

August. 2015

**STATE MEDICAL FACULTY OF WEST BENGAL**

**Preliminary Examinations For Diploma in Physiotherapy : DPT Course**

**Paper – IV – Physics related to Electrotherapy & Actinotherapy,  
Cryotherapy & Hydrotherapy**

Time : 3 hours.

Full Marks : 80

*Question 1 & 2 are Compulsory and  
Answer any 5 Questions from Question No. 3 To 9*

1. Answer all (Write only correct answer): 5 x 1 = 5
- i) Faradic current was produced by:
    - (a) Choke coil
    - (b) Smart Bristow coil
    - (c) Induction coil
  
  - ii) Therapeutic range of Ultrasound is:
    - (a) 1-5 Hz
    - (a) 5-10 Hz
    - (c) 0.5-5 Hz
  
  - iii) Infrared has a strong affection on:
    - (a) Bone
    - (b) Fat
    - (c) Skin
  
  - iv) High frequency current when applied to body produces:
    - (a) Motor stimulation
    - (b) Sensory stimulation
    - (c) Heat
  
  - v) Heat loss by sweating is through:
    - (a) Conduction
    - (b) Convection
    - (c) Radiation
- 2) Answer all (**True/False**) 5 x 1 = 5
- i) IR produces deep heat.
  - ii) MWD produces deep heat.
  - iii) Audiable range sound is 2000 – 20000 Hz.
  - iv) Heat has vasoconstriction effect.
  - v) US is not a deep heating modality.

**Contd.....2/**

**Paper – IV – Physics related to Electrotherapy & Actinotherapy,  
Cryotherapy & Hydrotherapy**

**ANSWER ANY 5 (FIVE) QUESTIONS FROM QUESTION NO. 3 TO 9**

**5x14 = 70**

- 3. What is Piezo-electric effect? Describe how ultrasound is produced. 14
  
- 4. Describe with example, different types of therapeutic heating. Discuss non-thermal effects of ultrasound. 14
  
- 5. Describe properties of water. What are the basic principles of different types of exercises in water? 14
  
- 6) Define low frequency current. Describe different types of low frequency current used therapeutically. 14
  
- 7) What is UVR? Discuss physiological effect of heat & cold. 14
  
- 8) What are the composition & physiological effect of wax bath? 14
  
- 9) Write notes on **(Any Two)**:- 2x7 = 14
  - a) Transistor
  - b) TENS
  - c) IFT

\*\*\*\*\*