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I Semester Examination – December 2016

BACHELOR of PHYSIOTHERAPY

Anatomy
(BPT - 101)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours*
- *Answer questions from all sections as directed*

SECTION - A

1. a) Fill in the blanks. (Compulsory questions) (1 × 5 = 5)

   i) The first bone in the body to ossify is _____.

   ii) _____ musele prevents prolapse of anterior and posterior cusps of mitral valve during systole.

   iii) _____ generates an impulse at the rate of 70 / min. and initiates the heartbeat.

   iv) Coracobrachialis is innervated by _____ nerve.

   v) _____ nerve is also called laborer's nerve.

P.T.O.

b) Define (Compulsory questions) (1 × 5 = 5)

i) Haversian Canals

ii) Nucleus Pulposus

iii) Clavipectoral Fascia

iv) Palmar Aponeurosis

v) Anatomical Snuff Box

c) Write Origin and Insertion of following. (Compulsory questions) (2 × 5 = 10)

i) External Intercostal

ii) Rectus Abdominus

iii) Flexor Pollicis Brevis

iv) Biceps

v) Anconeus

SECTION - B

2. Write short notes. Answer any *six*. (5 × 6 = 30)

a) Muscalo Tendinous Cuff of Shoulder and associated clinical anatomy.

b) Surface marking of the borders of Heart. (Diagram only)

c) Principles of respiratory movements

d) Cubital Fossa and associated clinical anatomy

e) Types of vertebral joints and explain the importance of intervertebral disc

f) Describe course, relations, branches and distribution of Axillary nerve.

g) Write origin, insertion, nerve supply of diaphragm.

h) i) Name intrinsic muscles of hand.

ii) Origin, insertion and function of (1) Lumbricals, (2) Palmar Interossei and (3) Dorsal Interrossei.

SECTION - C

Answer any two questions. (15 × 2 = 30)

3. a) Explain lymphatic drainage of breast with diagram. (10)

b) Explain axillary lymph nodes. (5)

4. Explain shoulder joint in terms of :

a) Its type, articular structures, ligaments and bursae. (10)

b) Muscles producing movements with origin, insertion, nerve supply and action. (5)

5. a) Explain the muscles of pectoral region along with its origin, insertion, nerve supply and action. (5)

b) Explain the brachial plexus along with its clinical anatomy. (10)

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1st Semester Examination–December 2016

BACHELOR of PHYSIOTHERAPY

Physiology

(BPT - 102)

Time Three Hours *Maximum Marks 80*

(Write your Roll No at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours*
- *Draw a diagram wherever necessary*

SECTION-A

1 Fill in the blanks (Compulsory questions) (2 × 5 = 10)

a) Synovial, intraocular and pericardial fluids are examples of fluid

b) QRS wave of ECG signifies ventricular

c) is the sensory tract that carries sensation of pain and temperature

d) Contraction of muscle in which length remains same but tension changes is

e) The contractile unit of muscle is

P I O

2. Define (Compulsory questions) (2 × 5 = 10)

a) Motor unit

b) Wallerian degeneration

c) PR interval and its significance.

d) Denervation Hypersensitivity

e) Active transport.

SECTION-B

3. Write short notes on any *six* (5 × 6 = 30)

a) Differentiate between white muscle fiber and red muscle fibre.

b) Describe Excitation - Contraction coupling.

c) Enumerate phases of cardiac cycle.

d) Describe the conducting system of the heart.

e) Describe the various Heart sounds

f) Ionic basis of Action Potential

g) Enumerate functions of Hypothalamus

h) Describe ABO system of Blood grouping.

SECTION-C

Attempt any *two* (15 × 2 = 30)

4 Define Blood pressure. What is its normal value ? Describe the short term regulation of blood pressure.

5. Define Homeostasis. Describe negative and positive feedback control mechanisms with examples.

6. Describe the steps of neuromuscular transmission. What is Myasthenia Gravis ?

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1st Semester Examination–December 2016

BACHELOR of PHYSIOTHERAPY

Sociology

(BPT - 103)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Draw a diagram wherever necessary.*

SECTION-A

1. Fill in the blanks (Compulsory questions) (2 × 5 =10)

   a) ..... is most important cause of Alcoholism.

   b) ..... is the most important agency of socialization.

   c) Main function of family is ..... .

   d) ..... is a psychosomatic disease.

   e) Main cause of population explosion is ..... .

P.T.O.

2. Define the following concepts. (Compulsory questions). (2 × 5 = 10)

a) Scope of Sociology.

b) Social survey.

c) Family functions.

d) Juvenile delinquency.

e) Beggary.

SECTION-B

3. Attempt any *six* questions. (5 × 6 = 30)

Write short notes on following:

a) Briefly discuss the scope of Sociology.

b) Explain the agencies of socialization.

c) Explian the role of medical social worker.

d) Suggest remedies to prevent population explosion.

e) Effect of sickness of psychosomatic diseases.

f) Explain the concept of social groups. Mention the influence of formal and informal groups on health and sickness.

g) Define and explain Sociology with special reference to health care professionals.

h) Explain social legislation in relation to the disabled.

SECTION-C

Attempt any *two* questions out of three questions.

$(15 \times 2 = 30)$

4. What is Socialisation ? Why it is studied in health care profession ? Explain the social factors in health and disease.

5. Explain the concept of Family. Mention the changing family patterns and influence of family on individual health and nutrition.

6. Explain the concept of alcoholism, poverty and unemployment & prostitution. Also mention the consequence of these social problems along with suggesting suitable remedies.

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I Semester Examination – December 2016

BACHELOR of PHYSIOTHERAPY

Fundamentals of Biomechanics and Exercise Therapy

(BPT - 104)

Time Three Hours Maximum Marks 80

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- *No student is allowed to leave the Hall before Two hours*
- *Answer questions from all sections as directed*

SECTION - A

1 Fill in the blanks. (2 × 5 = 10)

a) Active lengthening of muscle is called as ___ .

b) Mechanical advantage in third class lever is ___

c) Location of CoM in anatomic position is ___

d) Lifting of weight on head in standing posture will move the CoM in ___ direction.

e) Flexion of elbow is in ___ plane.

PTO

2. Give definition. (2 × 5 = 10)

a) LoG

b) Concentric Contraction

c) Strain

d) Friction

e) Elasticity

SECTION - B

3. Answer any *six* questions. (5 × 6 = 30)

a) What is Equilibrium ? How it changes with BoS ? Give appropriate example.

b) Explain three point bending principle. How it is used in making orthosis ?

c) Explain patella as an anatomical pulley along with its associated biomechanics.

d) Explain closed chain kinematic with an appropriate example.

e) Explain shear and friction forces with appropriate example.

f) Define Stress and Strain. Explain HOOK's law with appropriate example.

g) Explain the principle on which shoulder pulley works and what is the aim of using shoulder pulley.

h) Explain the law of conservation of momentum and explain its application in physiotherapy.

SECTION - C

Answer any *two* questions. (15 × 2 = 30)

4. Define force and classify it with appropriate diagram and example from body movement system.

5. a) Explain properties of spring and how they behave when used in series and parallel ?

   b) Discuss the principle and properties of theraband and its use in physiotherapy with appropriate example.

6. Explain order of levers with example of lever in human body. Also explain application of each order of lever in physiotherapy.

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I Semester Examination – December 2016

BACHELOR of PHYSIOTHERAPY

Principles of Bioelectrical Modalities

(BPT - 105)

Time : Three Hours *Maximum Marks : 80*

(Write your Roll No. at the top immediately on receipt of this question paper.)

- *No student is allowed to leave the Hall before Two hours.*
- *Answer questions from all sections as directed.*

SECTION - A

1. Fill in the blanks. (Compulsory questions). Write entire statement in the answer book. (2 × 5 = 10)

   a) Smoothing circuits are used for _____.

   b) Pain gate works at the level of _____.

   c) SWD is a _____ heating modality.

   d) UVR is divided into _____ bands.

   e) LASER stands for _____.

P.T.O.

2. Define. (Compulsory questions). $(2 \times 5 = 10)$

a) Capacitance

b) Charge

c) Thermionic emission

d) Earth Shock

e) Inductance

SECTION - B

3. Write short notes on any *six*. $(5 \times 6 = 30)$

a) DC current and its application.

b) Shunt rheostat and explain its application.

c) Magnet and explain its properties.

d) Self-induction and its importance in physiotherapy.

e) Laws of electromagnetic radiation.

f) What is Mutual induction ? Write its use in bioelectric modalities.

g) Discuss oscillating circuits and their use in bioelectrical modalities.

h) What are thermal, chemical and magnetic effects of electric current ?

SECTION - C

Answer any *two* questions. (15 × 2 = 30)

4. Discuss diode and triode valves with diagrams and write explanation on thier uses in bioelectrical modalities.

5. Discuss extrinsic and intrinsic semiconductors with diagrams and write explanation on working of a transistor.

6. Discuss the charging and discharging of a capacitor and explain the types of capacitors used in physiotherapy department.