

Second Year Bachelor in Prosthetics & Orthotics Examination**Pathology****Date : 23-07-2019, Tuesday]****[Max. Marks : 100****[Time : 3 Hours**

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

Section 1**Q.1 FULL QUESTIONS.****[20 marks]****TUBERCULOSIS****Or****Define acute inflammation. Describe cellular events in acute inflammation.****Q.2 WRITE SHORT NOTES ON: (TWO OUT OF THREE)****[16 marks]**

- 1) Congestion
- 2) Causes of chronic inflammation
- 3) Metastasis

Q.3 WRITE SHORT NOTES ON: (TWO OUT OF THREE)**[14 marks]**

- 1) Dry gangrene
- 2) Sarcoidosis
- 3) Difference between thrombosis and embolism

Section 2**Q.4 FULL QUESTIONS.****[20 marks]****Discuss Autoimmune diseases.****OR****Brief view of genetic diseases.****Q.5 WRITE SHORT NOTES ON: (TWO OUT OF THREE)****[16 marks]**

- 1) Causes of trauma to spinal cord.
- 2) Hypersensitivity reaction type 2.
- 3) Hemophilia.

Q.6 WRITE SHORT NOTES ON: (TWO OUT OF THREE)**[14 marks]**

- 1) RBC
 - 2) Diabetic foot
 - 3) Parkinson's disease
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Second Year Bachelor in Prosthetics & Orthotics Examination**Orthopaedics and Amputation Surgery****Date : 25-07-2019, Thursday]****[Max. Marks : 100****[Time : 3 Hours**

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

Section 1

Q-1 Define sequestrum , Describe etiology and management of chronic osteomyelitis. 20 marks

Or

Q-1 define fracture. Describe types of fracture write on classification, management of open fracture. 20 marks

Q-2 Write note in short (2 out of 3) 16 marks

- (a) Describe aetiopathogenesis, clinical features and management of osteoarthritis of knee.
(b) Describe classification of nerve injury and write note on clinical features and management of radial nerve palsy .
(c) Describe causes, clinical features and management of scurvy.

Q-3 Write short note (2 out of 3) 14 marks

- (a) Planter fascitis
(b) Tennis elbow.
(c) Genu valgus.

Section - 2

Q-4 Describe aetiology, clinical features & management of tuberculosis of hip . 20 marks

Or

Q-4 Enumerates aetiology and types of amputation. Describe about above knee amputation and rehabilitation. 20 marks

Q-5 write notes in short (2 out of 3). 16 marks

- (a) Cubitus varus.
(b) Osteoclastoma
(c) Dislocation of patella.

Q-6 Write short note (2 out of 3). 14 marks

- (a) Torticollis.
(b) gout
(c) prolapse intervertebral disc of lumber spine.

Second Year Bachelor in Prosthetics & Orthotics Examination

Bio-Mechanics-II

Date : 31-07-2019, Wednesday]

[Max. Marks : 100

[Time : 3 Hours

- Instructions :
- (1) Figure to the right indicates marks.
 - (2) Draw diagram wherever necessary.
 - (3) Write legibly.
 - (4) Use separate answer books for each section.

Section – I

Q.1. Describe mechanical characteristics and function of bones (20)

OR

Q.1. Explain normal gait in details

Q.2 Write short notes on (Any two) (16)

- (A) Describe gait analysis of HKAFO with various types of Orthosis
- (B) Describe energy requirements
- (C) write gait deviations

Q.3 Write short note (Any two) (14)

- (A) Describe gait repeatability
- (B) Explain FO & its gait deviation
- (C) Describe gait deviation while using AFO

Section –II

Q.4. Describe kinematics and kinetics of gait (20)

OR

Q.4. Explain pathological gait & write EMG studies its recording EMG

Q.5 Write short notes on (Any two) (16)

- (A) Explain through knee prosthesis prescription principles
- (B) write & draw trans femoral prosthetic components in details
- (C) Write gait deviation while using trans-tibial prostheses

Q.6 Write short note (Any two) (14)

- (A) Describe gait analysis of KAFO
- (B) Describe trans femoral socket biomechanics
- (C) Floor reaction orthosis

Second Year Bachelor in Prosthetics & Orthotics Examination
Pharmacology

Date : 29-07-2019, Monday]

[Time : 3 Hours

[Max. Marks : 100

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

SECTION I

- Q.1. Describe ANY TWO of the following:** (20)
a) Routes of drug administration
b) Classify anti-cholinergic drugs. Describe pharmacological actions and therapeutic uses of atropine and its substitutes.
c) Factors modifying drug actions.
- Q.2. Write short notes (ANY TWO)** (16)
a) Skeletal muscle relaxants
b) Benzodiazepines
c) Tricyclic antidepressants
- Q.3. Attempt ANY TWO of the following:** (14)
a) Drugs used in treatment of Parkinson's disease
b) Anti-epileptic drugs
c) Adrenergic blocking drugs

SECTION II

- Q.4. Describe ANY TWO of the following:** (20)
a) Describe types of insulin preparations. Describe adverse reactions to insulin.
b) Classify NSAIDs. Describe pharmacological actions and therapeutic uses of aspirin.
c) Uses and adverse effects of glucocorticoids
- Q.5. Write short notes (ANY TWO)** (16)
a) Drugs used in treatment of chronic gout
b) Drugs used in treatment of peptic ulcer disease
c) Oral hypoglycaemics
- Q.6. Attempt ANY TWO of the following:** (14)
a) Drugs used in treatment of myasthenia gravis
b) Drug therapy of allergic rhinitis
c) Dementia in the elderly.
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Second Year Bachelor in Prosthetics & Orthotics Examination

Community Rehabilitation & Disability Prevention

Date : 02-08-2019, Friday]

[Max. Marks : 100

[Time : 3 Hours

- Instructions :
- (1) Figure to the right indicates marks.
 - (2) Draw diagram wherever necessary.
 - (3) Write legibly.
 - (4) Use separate answer books for each section.

SECTION -1

Q.1 Describe in detail about the role of P&O professionals in C.B.R & IRR (20 Marks)

OR

Describe in detail about rehabilitation of geriatric population

Q.2. Write short notes on (Any two) (16 Marks)

- a) MMT
- b) Exercise therapy
- c) Role of P&O in CTEV

Q.3. Write notes in short (any two) (14 Marks)

- a) Describe Impairment, disability and handicapped with examples.
- b) Activities of daily living
- c) Rehabilitation of mental retardation

SECTION - II

Q.4 Discuss in detail about role of P&O in rehabilitation of hemiplegic patient (20 Marks)

OR

Role of P&O in rehabilitation of leprosy patients.

Q.5 Write short notes on (Any two) (16 Marks)

- a) Spina Bifida
- b) Government schemes & initiatives for disability
- c) Stump bandaging application

Q.6 Write notes in short (any two) (14 Marks)

- a) Muscular dystrophy
- b) Role of other professionals in CBR
- c) Pre prosthetic management.

Second Year Bachelor in Prosthetics & Orthotics Examination

Orthotics Science-II

Date : 05-08-2019, Monday]

[Max. Marks : 100

[Time : 3 Hours

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

SECTION I

Q.1 Define "Cerebral Palsy" and discuss the orthotic management of spastic diplegic cerebral palsy child. (20 Marks)

Or

Q.1 Explain with examples different conditions of biomechanical control in orthotic joints. (20 Marks)

Q.2 Write a note (any two) (16 Marks)

- a) Discuss the design, materials and indications for bilateral HKAF0.
- b) Describe Craig-Scott KAFO.
- c) Explain parapodium and its indications.

Q.3 Write a note (any two) (14 Marks)

- a) Briefly explain a concept of Weight relieving orthosis.
- b) Explain "Tone reducing ankle foot orthosis" (TRAFO).
- c) Draw a neat labeled diagram and explain Toronto Orthosis used in LCPD.

Section - II

Q.4 Prescription criteria for HKAF0, Explain its material selection, measurements and fabrication process. (20 Marks)

Or

Q.4 What is osteoarthritis (OA)?
Discuss the role of knee orthosis in the treatment of OA. (20 Marks)

Q.5 Write a note (any two) (16 Marks)

- a) Prescription criteria for various types of knee joints.
- b) Explain trilateral hip abduction orthosis.
- c) Explain floor reaction orthosis (FRO) design and its biomechanical principles.

Q.6 Write a note (any two) (14 Marks)

- a) Write in detail about Orthosis for CTEV.
- b) Explain in brief Ischial bearing above knee orthosis.
- c) Draw a diagram showing Coronal plane force system applied by KAFO, in the correction of Genu Varum.

Second Year Bachelor in Prosthetics & Orthotics Examination

Prosthetics Science-II

Date : 07-08-2019, Wednesday]

[Time : 3 Hours

[Max. Marks : 100

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

SECTION -I

1. Explain the Trans-femoral endoskeleton prosthesis in details. (20 marks)

Or

1. Explain the Types of Knee joint. (20 marks)
2. Write Short notes of any two: (16marks)
(a) Write a note on KD prosthesis.
(b) Define the Trans femoral Check-out procedure.
(c) Write a note on types of Hip joint.
3. Write Short notes on any two of the following: (14marks)
(a) Differentiate quadrilateral and IC socket .
(b) Suspension system of Trans-femoral prosthesis .
(c) Describe Clinical assessment of Trans-femoral prosthesis.

SECTION -II

4. Explain the gait deviations of the Trans Femoral amputee. (20 marks)

Or

4. Explain the Hemi-pelvicotomy in details. (20 marks)
5. Write Short notes of any two: (16marks)
(a) Write a note on care of prosthesis.
(b) Difference between Endo and Exo-skeleton Prosthesis.
(c) Write a note on Hydraulic knee joint.
6. Write Short notes on any two of the following: (14marks)
(a) Write a note TKA Alignment.
(b) Fabrication Technique for conventional Trans-Femoral prosthesis.
(c) Write a note on plug-fit socket.

Second Year Bachelor in Prosthetics & Orthotics Examination**Psychology & Sociology****Date : 09-08-2019, Friday]****[Max. Marks : 100****[Time : 3 Hours**

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

Section-I**(20 marks)****Q-1** Explain psychology aspect of disability and Role of the Family.**OR**

Structure and Functions of Social Institutions and describe village as a community and Social Changes.

Q-2 Write short notes (any two)**(16 marks)**

- a) Self Employment and Job analysis.
- b) Types of organization.
- c) Outline of Intelligence, Abilities and learning.

Q-3 Write Short Note (any two)**(14 marks)**

- a) PWD act.
- b) Recreation of the Disabled community welfare organizations.
- c) Practical and environmental difficulties of p & O Patients.

Section-II**(20 marks)****Q-4** Explain Professional and Social work in medical & rehabilitation set up.**OR**

Introduction to community based rehabilitation as compared to the existing medical model and its function.

Q-5 Write short notes (any two)**(16 marks)**

- a) Explain the different approaches to rehabilitation.
- b) Describe and discuss the theoretical Principles of rehabilitation.
- c) Practical and environmental difficulties of patients in use of appliances.

Q-6 Write Short Note (any two)**(14 marks)**

- a) Job placement and vocational rehabilitation in P & O patients.
 - b) Disability and women.
 - c) Application of income generation Schemes for p & O patients.
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Second Year Bachelor in Prosthetics & Orthotics Examination
Fundamentals of Electricity & Electronics

Date : 13-08-2019, Tuesday]

[Max. Marks : 100

[Time : 3 Hours

- Instructions :** (1) Figure to the right indicates marks.
(2) Draw diagram wherever necessary.
(3) Write legibly.
(4) Use separate answer books for each section.

Section A

1

- a. Define the following terms: (10)
- (1) Resistance
 - (2) Feedback
 - (3) Diode
 - (4) Capacitance
 - (5) OP-AMP

- b. Explain about Thevenin's theorem with necessary equations and diagrams. (10)

OR

- a. Explain about forward and reverse bias of PN junction diode in details. (08)
- b. Provide the color codes for following value of resistors.(any four) (08)
- 1. 100K Ω
 - 2. 100 Ω
 - 3. 2.2K Ω
 - 4. 47 Ω
 - 5. 1K Ω
- c. Provide the values of capacitors in micro faraday for following numeric codes in ceramic capacitors. (04)
- 1. 106
 - 2. 470
 - 3. 505

- 2 Write short notes(Any Two) (16)

- 1. CRO
- 2. Zener diode
- 3. M.C.B

- 3 Attempt any two (14)

- 1. Different types of transistors with symbols
- 2. V-I characteristics of PN junction diode
- 3. Block diagram of OP-AMP

Section B

4

- a. Explain Ohm's law with its equation. (10)
- b. Define feedback and different types of feedbacks. (10)

OR

- a. Convert the following (10)
 - 1. $(356)_{10} \rightarrow (?)_8$
 - 2. $(10101111110001)_2 \rightarrow (?)_{10}$
 - 3. $(440)_{10} \rightarrow (?)_{16}$
 - 4. $(22)_8 \rightarrow (?)_{10}$
 - 5. $(1100110011001)_2 \rightarrow (?)_8$
 - b. Give values of resistors for following value of color code (10)
 - 1. Brown black Yellow
 - 2. Red red red
 - 3. Yellow Violet Orange Gold
 - 4. Yellow Violet Red
 - 5. Brown Black Red
- 5 Write short notes (any two) (16)
- 1. E.C.G
 - 2. Body surface electrodes
 - 3. Inverting and Non- inverting OP-AMP
- 6 Attempt any two (14)
- 1. Sources of bio-electric potentials
 - 2. Myo electricity
 - 3. Positive and negative feedback
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