

Second B.P.Th. (2012) Examination, Winter - 2020

KINESIOLOGY



Total Duration : Section A+B = 3 Hours

Total Marks : 80

SECTION - A & SECTION - B

- Instructions :*
- 1) Use **blue/black** ball point pen only.
  - 2) Do not write anything on the **blank portion of the question paper**. If written anything, such type of act will be considered as an attempt to resort to unfair means.
  - 3) All questions are **compulsory**.
  - 4) The number to the **right** indicates **full marks**.
  - 5) Draw diagrams **wherever** necessary.
  - 6) Distribution of syllabus in Question Paper is only meant to cover entire syllabus within the stipulated frame. The Question paper pattern is a mere guideline. Questions can be asked from any paper's syllabus into any question paper. Students cannot claim that the Question is out of syllabus. As it is only for the placement sake, the distribution has been done.
  - 7) Use a common answerbook for **all** sections.

SECTION - A (SAQ) (50 Marks)

1. Short answer question (any five out of six) : [5 × 3 = 15]
- a) Give open pack and close pack position for shoulder joint.
  - b) Define osteokinematics and arthrokinematics.
  - c) State concave - convex rule.
  - d) Define torque and state its relation with moment arm.
  - e) State what types of motions are available at pivot joints. Give two examples of pivot joint.
  - f) Write the role of anatomic pulleys and give one example.

2. Short answer question (any five out of six) :

- a) Describe organization and recruitment of motor unit.
- b) Differentiate between open kinematic chain and closed kinematic chain with example.
- c) Describe types of muscle contraction.
- d) Describe classification of muscle.
- e) Describe stress - strain curve.
- f) Compare the structure and function of synarthroses with diarthroses.

SECTION - B(LAQ) (30 Marks)

3. Long answer question (any one out of two) :

[1 × 15 = 15]

- a) Describe determinants of gait. Describe kinetics and kinematics of gait in sagittal plane.
- b) Describe plantar arches. Write its functions. Add a note on muscles contributing to the arches.

4. Long answer question (any one out of two) :

[1 × 15 = 15]

- a) Describe static and dynamic stabilization of glenohumeral joint. Write a note on scapulohumeral rhythm.
- b) Describe kinetics and kinematics of sacroiliac joint. Add a note on pelvic floor muscle and their functions.



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Second B.P.TH. (2012) Examination, (Phase - III) Winter - 2021  
KINESIOLOGY



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Total Marks : 80

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  - 7) Use a common answer book for all sections.

**SECTION - "A" SAQ (50 Marks)**

1. Short answer question (any five out of six) : [5 × 3 = 15]
  - a) Define Kinetics and Kinematics.
  - b) What is Q-angle?
  - c) Enumerate factors affecting muscle function.
  - d) Define Stride length, Step length and Degree of toe-out.
  - e) Creep.
  - f) Describe Angle of Inclination of Femur.
  
2. Short answer question (any five out of six) : [5 × 7 = 35]
  - a) Describe Temporal & Distance variables of Gait.
  - b) Arthrokinematics of wrist joint, add a note on wrist instability.

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- c) Describe kinetics & kinematics of Temporomandibular joint.
- d) Describe in detail classification of synovial joint.
- e) Describe in detail Arthrokinematics of knee joint.
- f) Discuss Intervertebral disc in detail

SECTION - "B" LAQ (30 Marks)

3. Long answer question (any one out of two) : [1 × 15 = 15]
- a) Define Gait and write about phases of Gait cycle. Describe Sagittal plane analysis of Gait. Add note on any 2 pathological Gait. [5 + 7 + 3 = 15]
  - b) Describe in detail mechanism of Respiration and muscles of Ventilation. [7 + 8 = 15]
4. Long answer question (any one out of two) : [1 × 15 = 15]
- a) Explain structures of Subtalar joint. Describe about Subtalar axis, Subtalar joint function. Add a note on supinated and pronated foot. [5 + 8 + 2 = 15]
  - b) Explain Glenohumeral motion. Describe static and dynamic stabilization of Glenohumeral joint. Add a note on Scapulo-humeral rhythm. [3 + 7 + 5 = 15]



Second B.P.Th. (2012) Examination, Winter - 2022  
KINESIOLOGY



Total Duration : Section A+B = 3 Hours

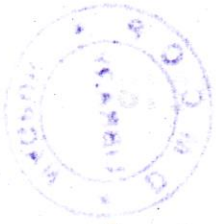
Total Marks : 80

SECTION - A & SECTION - B

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SECTION-A SAQ (50 Marks)

1. Short answer question (**any five** out of **six**): [5×3=15]
  - a) Pump handle motions.
  - b) Discuss classification of muscles.
  - c) Discuss spherical grip.
  - d) Define motor unit.
  - e) Write three difference between type 1 and type 2 muscle fiber.
  - f) Concave convex rule.
  
2. Short answer question (**any five** out of **six**): [5×7=35]
  - a) Explain factors affecting muscle function.
  - b) Kinematics of Temporomandibular joint.
  - c) Explain Scapulohumeral rhythm.
  - d) Note on ligament of wrist joint.
  - e) Discuss kinematics of hand complex.
  - f) Kinematics of elbow joint.



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SECTION-B LAQ (30 Marks)

3. Long answer question (**any one** out of two): [1×15=15]

- a) Explain structures and function of subtalar joint. Describe about subtalar axis, . Add a note on supinated and pronated foot. [5+5+5]
- b) Discuss Gait cycle. Discuss it's phases. Discuss kinematics of Gait cycle. [3+5+7]

4. Long answer question (**any one** out of two): [1×15=15]

- a) Discuss shoulder joint complex in detail under following headings. [5+5+5]
  - Articulations
  - Kinematics
  - Kinetics
- b) Discuss knee joint in detail under following headings. [5+5+5]
  - Articulations
  - Kinematics
  - Kinetics



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Second B.P.T.H. (2012) Examination, Winter - 2023 (Phase - II)  
KINESIOLOGY

Total Duration : 3 Hours

Total Marks : 80

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**SECTION - "A" (SAQ) (50 Marks)**

1. Short answer question (**any five** out of six) :

[5 × 3 = 15]

- a) Describe contractile unit of muscle
- b) Define Young's modulus
- c) Differentiate Type-1 and Type-2 muscle fibre
- d) Q angle
- e) Write about Creep
- f) open kinematic chain

2. Short answer question (**any five** out of six) :

[5 × 7 = 35]

- a) Discuss Arches of Foot.
- b) ~~Discuss Dynamic Posture.~~ Explain Anatomical pulleys in hand complex in detail
- c) Describe in brief Extensor mechanism of finger.
- d) ~~Discuss Breathing mechanism.~~ Define Osteokinematics of Air motion with examples
- e) Scapulo - Humeral Rhythm.
- f) Define coxavara and coxavalga. Explain its effect on hip abductor muscle.

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SECTION - "B" (LAQ) (30 Marks)

3. Long answer question (**any one** out of two) : [1 × 15 = 15]

- a) Discuss in detail kinetics and kinematics of cervical spine.
- b) Define Gait Describe gait variables and gait determinants in detail.

4. Long answer question (**any one** out of two) : [1 × 15 = 15]

- a) Discuss wrist complex in detail.
- b) Define Scoliosis. Discuss in detail kinetic and kinematic analysis of posture.

Discuss Hip joint under  
kinematics & kinetics .  
□□□

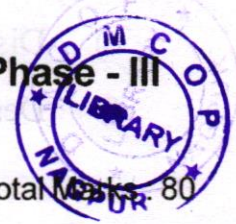
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**Second B.P.TH. (2012) Examination, Winter - 2024 Phase - III**  
**KINESIOLOGY**

Total Duration : 3 Hours

Total Marks : 80



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  - 7) Use a common answerbook for all sections.

**SECTION - A (SAQ) (50 Marks)**

1. Short answer questions (any five out of six) : [5 × 3 = 15]

- a) Difference between open & close kinematic chain.
- b) Explain Anatomical pulley with a suitable example.
- c) Write concave-convex rule
- d) Define synergist by giving an example.
- e) Define Gait Cycle and its Phases.
- f) Enumerate different types of grip.

2. Short answer questions (any five out of six) : [5 × 7 = 35]

- a) Discuss moment arm.
- b) Write in detail Determinants of gait.
- c) Define Creep and Hysteresis. Add a note on Stress-Strain curve.
- d) Describe the Arches of foot.

- e) Discuss the kinematics of cervical spine.  
 f) Describe types of muscle contraction with example.

**SECTION - B (LAQ) (30 Marks)**

**3. Long answer questions (solve any 1 out of 2) : [1 × 15 = 15]**

- a) Describe kinetics and kinematics of sitting to standing and vice-versa. Explain Nutation and counter nutation with diagram.
- b) Describe Shoulder complex under following headings [7+8=15]
- Dynamic stabilization of shoulder
  - Kinematics of shoulder complex. Add a note on scapulo-humeral rhythm.

**4. Long answer questions (any one out of two) : [1 × 15 = 15]**

- a) Discuss the kinetics and kinematics of tibio-femoral joint. Describe Q angle along with its importance. [10 + 5 = 15]
- b) Discuss the kinematics and kinetics of elbow joint. Add a note on carrying angle. [7 + 5 + 3 = 15]

