

# THE UNIVERSITY OF CHENAB



Department of Allied Health Sciences

**Doctor of Physical Therapy**

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Programs Offered by the Department of Allied Health Sciences	
Degree Name	Degree Details/Eligibility Criteria
MS Physical Therapy	<p>MS Physical Therapy is of 2-years duration, spread over 4 regular semesters, after completing 16 years of Education, 5 years Doctor of Physical Therapy (DPT) or BS Physical Therapy (4 year) from HEC recognized institute with minimum 2.5/4.00 CGPA.</p> <p>Moreover, also must have to meet following criteria for admission in MS Physical Therapy</p> <ul style="list-style-type: none"> <li>• University Entry Test (60% marks) or</li> <li>• GAT/NTS General Test with minimum 50% marks</li> <li>• Interview is mandatory</li> </ul>



Sample - Entry Test for MS Physical Therapy

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Multiple Choice Questions

**ANATOMY & PHYSIOLOGY MCQs**

1. Which of the following bones is part of the axial skeleton?

- A) Femur
- B) Scapula
- C) Sternum
- D) Pelvis

2. The functional unit of the kidney is the:

- A) Nephron
- B) Glomerulus
- C) Loop of Henle
- D) Collecting duct

3. Which cranial nerve is responsible for facial expressions?

- A) Trigeminal (V)
- B) Facial (VII)
- C) Glossopharyngeal (IX)
- D) Hypoglossal (XII)

4. Which type of joint is the shoulder joint?

- A) Hinge
- B) Pivot
- C) Ball and socket
- D) Saddle

5. Which of the following muscles is innervated by the **phrenic nerve**?

- A) Intercostal muscles
- B) Diaphragm
- C) Rectus abdominis
- D) Sternocleidomastoid

6. Which lobe of the brain is primarily responsible for motor control?

- A) Parietal
- B) Temporal



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C) Frontal

D) Occipital

7. The sinoatrial (SA) node is located in the:

A) Left ventricle

B) Right ventricle

C) Left atrium

D) Right atrium

8. Which of the following muscles is a **rotator cuff** muscle?

A) Teres major

B) Latissimus dorsi

C) Supraspinatus

D) Deltoid

9. The primary function of hemoglobin is to:

A) Fight infection

B) Maintain blood pressure

C) Carry oxygen

D) Aid in clotting

10. Which organ is responsible for the **production of insulin**?

A) Liver

B) Pancreas

C) Kidney

D) Spleen

11. Which structure connects muscles to bones?

A) Ligaments

B) Tendons

C) Cartilage

D) Fascia

12. The **tricuspid valve** is located between:

A) Left atrium and left ventricle

B) Right atrium and right ventricle



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C) Right ventricle and pulmonary artery

D) Left ventricle and aorta

**13. The largest organ of the human body is the:**

A) Liver

B) Skin

C) Lungs

D) Heart

**14. Which of the following muscles is the prime mover for elbow flexion?**

A) Triceps brachii

B) Biceps femoris

C) Biceps brachii

D) Deltoid

**15. The menisci in the knee joint are composed of:**

A) Fibrous cartilage

B) Elastic cartilage

C) Hyaline cartilage

D) Adipose tissue

**16. Which hormone regulates the sleep-wake cycle?**

A) Melatonin

B) Cortisol

C) Insulin

D) Estrogen

**17. The sciatic nerve originates from which plexus?**

A) Cervical

B) Lumbar

C) Brachial

D) Sacral

**18. The thyroid gland is located:**

A) On the kidneys

B) Below the diaphragm



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C) In the neck

D) Near the pancreas

**19. The acetabulum articulates with which bone?**

A) Femur

B) Tibia

C) Humerus

D) Fibula

**20. Which part of the neuron receives incoming signals?**

A) Axon

B) Dendrites

C) Synapse

D) Node of Ranvier

**KINESIOLOGY & BIOMECHANICS MCQs**

**21. Kinesiology is the study of:**

A) Muscles only

B) Movement of the body

C) Bones only

D) Nervous system

**22. The axis around which the sagittal plane rotates is the:**

A) Anteroposterior axis

B) Vertical axis

C) Mediolateral axis

D) Longitudinal axis

**23. The center of gravity in a standing human is typically located:**

A) At the level of the umbilicus

B) At the second cervical vertebra

C) At the sacrum

D) At the base of the skull

**24. Which of the following is an example of a third-class lever in the body?**

A) Elbow joint during bicep curl



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B) Calf raising at the ankle

C) Neck extension

D) Knee extension

**25.** The term **kinematics** refers to:

A) Forces causing movement

B) Description of motion without regard to forces

C) Muscle strength

D) Bone density

**26.** The **range of motion (ROM)** of a joint is measured in:

A) Newtons

B) Degrees

C) Meters

D) Seconds

**27.** Which of the following muscles acts as a **prime mover (agonist)** during knee extension?

A) Hamstrings

B) Quadriceps

C) Gastrocnemius

D) Tibialis anterior

**28.** The lever arm is defined as the:

A) Distance between fulcrum and applied force

B) Distance between fulcrum and resistance

C) Angle of joint motion

D) Length of the muscle

**29.** The **moment arm** is the perpendicular distance from:

A) The axis of rotation to the line of force

B) The joint to the muscle

C) The force to the resistance

D) The fulcrum to the lever



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**30.** The muscle length-tension relationship describes:

- A) The force muscle can produce at different lengths
- B) The speed of contraction
- C) The number of muscle fibers
- D) Muscle endurance

**31.** Which plane divides the body into anterior and posterior parts?

- A) Sagittal
- B) Frontal (coronal)
- C) Transverse
- D) Oblique

**32.** Torque is defined as:

- A) Force applied in a straight line
- B) Force multiplied by the moment arm
- C) Velocity of movement
- D) Muscle contraction speed

**33.** Which of the following is NOT a type of synovial joint?

- A) Hinge
- B) Pivot
- C) Suture
- D) Ball and socket

**34.** The **rate of change of velocity** is called:

- A) Speed
- B) Acceleration
- C) Displacement
- D) Momentum

**35.** Which biomechanical principle explains why bending the elbow decreases the torque required by the biceps?

- A) Increased force
- B) Decreased moment arm





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C) Increased moment arm

D) Lever length changes

**36. The base of support is:**

A) The area beneath the body that supports the weight

B) The center of gravity

C) The fulcrum of a lever

D) The point of muscle attachment

**37. Which muscle fiber type is most fatigue-resistant?**

A) Type I (slow twitch)

B) Type IIa (fast twitch oxidative)

C) Type IIb (fast twitch glycolytic)

D) Type III

**38. The force-velocity relationship of muscle indicates:**

A) Force increases with contraction velocity

B) Force decreases as contraction velocity increases

C) Force is unrelated to velocity

D) Force only depends on muscle length

**39. The term kinetics refers to:**

A) The study of motion without forces

B) The study of forces causing motion

C) Muscle structure

D) Joint angles

**40. Which of the following terms describes a muscle that opposes the action of the agonist?**

A) Synergist

B) Antagonist

C) Fixator

D) Prime mover

**41. The axis of rotation for the transverse plane is:**

A) Mediolateral



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B) Anteroposterior

C) Vertical (longitudinal)

D) Oblique

**42.** Ground reaction force acts:

A) Downward on the foot

B) Upward from the ground on the foot

C) Horizontally on the foot

D) In any random direction

**43.** Which of the following is true about **open kinetic chain exercises**?

A) Distal segment is fixed

B) Movement occurs at multiple joints

C) Distal segment moves freely

D) Performed only in weight bearing positions

**44.** The term **eccentric muscle contraction** means:

A) Muscle lengthens while generating force

B) Muscle shortens while generating force

C) Muscle length remains the same

D) Muscle relaxes completely

**45.** In gait analysis, **stance phase** constitutes approximately:

A) 20% of the gait cycle

B) 40% of the gait cycle

C) 60% of the gait cycle

D) 80% of the gait cycle

**46.** The **coefficient of friction** between two surfaces affects:

A) The amount of torque produced

B) The resistance to sliding motion

C) The muscle length

D) The joint angle

**47.** Which connective tissue structure connects bone to bone?

A) Tendon



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B) Ligament

C) Fascia

D) Cartilage

**48. The instant center of rotation in the knee joint changes due to:**

A) Ligament laxity

B) Joint movement

C) Muscle fatigue

D) Bone density

**49. Which of the following best describes Newton's Third Law?**

A) An object at rest stays at rest

B) Force equals mass times acceleration

C) For every action, there is an equal and opposite reaction

D) Acceleration is proportional to force

**50. Which of the following would increase stability?**

A) Narrow base of support

B) Higher center of gravity

C) Larger base of support

D) Standing on one foot

**MANUAL THERAPY, THERAPEUTIC EXERCISES, ELECTROTHERAPY & PHARMACOLOGY**

**51. Which of the following techniques is classified as a grade III mobilization in manual therapy?**

A) Small amplitude movement at the beginning of range

B) Large amplitude movement up to the limit of range

C) Small amplitude movement at the end range

D) High velocity thrust manipulation

**52. The Golgi tendon organ primarily responds to:**

A) Muscle stretch

B) Muscle tension



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C) Joint movement

D) Skin pressure

**53.** Which type of muscle contraction occurs when muscle length remains constant?

A) Concentric

B) Eccentric

C) Isometric

D) Isokinetic

**54.** In electrotherapy, **TENS** stands for:

A) Transcutaneous Electrical Nerve Stimulation

B) Total Electrical Neuromuscular Stimulation

C) Transdermal Electrical Nerve System

D) Temporary Electrical Neural Stimulation

**55.** Which modality is best indicated for **promoting wound healing**?

A) Ultrasound

B) Shortwave diathermy

C) Iontophoresis

D) TENS

**56.** Which of the following is a common side effect of **NSAIDs (Non-Steroidal Anti-Inflammatory Drugs)**?

A) Hypertension

B) Gastrointestinal irritation

C) Bradycardia

D) Sedation

**57.** Which manual therapy technique is primarily used to improve **joint accessory motion**?

A) Soft tissue massage

B) Joint mobilization

C) Passive stretching

D) Muscle energy technique



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**58. Closed kinetic chain exercises** are characterized by:

- A) Distal segment fixed
- B) Distal segment free to move
- C) Movement only at the shoulder
- D) Non-weight bearing activities

**59.** Which parameter is NOT typically adjustable in therapeutic ultrasound?

- A) Frequency
- B) Intensity
- C) Pulse duration
- D) Electrode placement

**60.** Which pharmacological class does **Diazepam** belong to?

- A) Opioid analgesics
- B) Benzodiazepines
- C) Corticosteroids
- D) Muscle relaxants

**61.** Which of the following manual therapy techniques uses the patient's own muscle contraction to produce movement?

- A) Passive stretching
- B) Muscle energy technique
- C) Myofascial release
- D) Joint distraction

**62.** The primary effect of **cold therapy (cryotherapy)** is to:

- A) Increase blood flow
- B) Decrease inflammation and swelling
- C) Promote muscle relaxation
- D) Increase nerve conduction velocity

**63.** Which electrotherapy modality uses **direct current**?

- A) TENS
- B) Iontophoresis



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C) Interferential therapy

D) Ultrasound

**64.** Which pharmacological agent is primarily used as a **muscle relaxant**?

A) Ibuprofen

B) Baclofen

C) Acetaminophen

D) Prednisone

**65.** The **frequency range** of therapeutic ultrasound is typically:

A) 20-40 kHz

B) 0.7-3 MHz

C) 10-15 Hz

D) 50-60 Hz

**66.** Which of the following is an indication for **traction therapy**?

A) Acute fractures

B) Joint hypomobility

C) Spinal disc herniation with nerve root compression

D) Osteoporosis

**67.** Which of the following exercises is best to improve **muscular endurance**?

A) High load, low reps

B) Low load, high reps

C) Isometric holds only

D) Plyometric training

**68.** The **ramp time** in TENS therapy refers to:

A) Duration of stimulation

B) Time taken to increase intensity from zero to target

C) Frequency of the pulses

D) Electrode size

**69.** Which of the following drugs is commonly prescribed for **inflammatory arthritis**?

A) Methotrexate

B) Atenolol



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C) Furosemide

D) Metformin

**70.** Which manual therapy technique involves sustained stretch held at the end range?

A) Grade I mobilization

B) Static stretching

C) Grade IV mobilization

D) Muscle energy technique

**71. Proprioceptive Neuromuscular Facilitation (PNF)** techniques are designed to:

A) Improve joint lubrication

B) Enhance neuromuscular control and flexibility

C) Increase bone density

D) Reduce edema

**72.** Which of the following is NOT a contraindication for **electrotherapy**?

A) Pacemaker

B) Pregnancy (over the abdomen)

C) Acute inflammation

D) Skin intactness

**73.** Which of these medications is a **beta blocker**?

A) Atenolol

B) Diazepam

C) Ibuprofen

D) Omeprazole

**74.** The **duty cycle** in therapeutic ultrasound refers to:

A) The length of treatment time

B) The proportion of time ultrasound is on during a cycle

C) The frequency of the ultrasound waves

D) The intensity of the ultrasound

**75.** The primary goal of **eccentric strengthening** in rehab is to:

A) Increase muscle endurance

B) Improve muscle length



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- C) Enhance control of muscle lengthening under load  
D) Promote muscle hypertrophy only
- 76.** Which manual therapy technique is effective for treating **myofascial trigger points**?
- A) Soft tissue mobilization  
B) Joint distraction  
C) Grade III mobilization  
D) Traction
- 77.** Which electrotherapy modality can be used for **drug delivery through the skin**?
- A) TENS  
B) Iontophoresis  
C) Interferential current  
D) Ultrasound
- 78.** Which of the following drugs is a **corticosteroid**?
- A) Prednisone  
B) Acetaminophen  
C) Ciprofloxacin  
D) Metformin
- 79.** Which of the following is an important parameter to monitor during **therapeutic exercise**?
- A) Joint angle only  
B) Heart rate and exertion level  
C) Electrode placement  
D) Drug dosage
- 80.** The **gate control theory** explains the mechanism of pain relief via:
- A) Muscle relaxation  
B) Electrical stimulation blocking pain signals at the spinal cord level  
C) Reduced inflammation  
D) Endorphin release only

**SURGERY, PEDIATRICS, GERIATRICS, RESEARCH & RADIOLOGY**





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**81.** Which surgical procedure involves removal of the appendix?

- A) Cholecystectomy
- B) Appendectomy
- C) Herniorrhaphy
- D) Gastrectomy

**82.** In pediatric patients, which reflex is typically present at birth but disappears by 6 months?

- A) Moro reflex
- B) Babinski reflex
- C) Ankle jerk reflex
- D) Knee jerk reflex

**83.** Which of the following is a common physiological change seen in aging?

- A) Increased bone density
- B) Decreased muscle mass (sarcopenia)
- C) Increased cardiac output
- D) Enhanced renal clearance

**84.** What type of study design is considered the gold standard for determining causality in clinical research?

- A) Cross-sectional study
- B) Case-control study
- C) Randomized controlled trial
- D) Cohort study

**85.** Which radiological imaging modality is most sensitive for detecting acute hemorrhagic stroke?

- A) X-ray
- B) MRI
- C) CT scan
- D) Ultrasound

**86.** Postoperative physical therapy is most important in which phase after surgery?

- A) Preoperative phase



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B) Acute postoperative phase

C) Chronic phase

D) Maintenance phase

**87. The APGAR score is used to assess the health status of a:**

A) Premature infant

B) Newborn at birth

C) Toddler with developmental delay

D) Pediatric trauma patient

**88. Which drug is commonly used for osteoporosis treatment in elderly patients?**

A) Warfarin

B) Bisphosphonates

C) Beta blockers

D) ACE inhibitors

**89. The p-value in research indicates:**

A) The size of the study sample

B) The probability that the observed result occurred by chance

C) The strength of the intervention effect

D) The confidence interval of the result

**90. Which of the following radiological views is used to visualize the lung apices?**

A) Lateral chest X-ray

B) AP chest X-ray

C) Lordotic view

D) Oblique lumbar spine X-ray

**91. Which surgical complication is characterized by wound opening along the incision line?**

A) Hematoma

B) Dehiscence

C) Seroma

D) Evisceration



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**92.** Which of the following is a key developmental milestone expected by 12 months in infants?

- A) Walking independently
- B) Saying single words
- C) Copying shapes
- D) Riding a tricycle

**93.** Which geriatric syndrome is characterized by unintentional weight loss, weakness, and fatigue?

- A) Dementia
- B) Frailty
- C) Parkinsonism
- D) Osteoarthritis

**94.** The term "**double-blind**" in clinical trials means:

- A) Neither the participant nor the researcher knows the group assignment
- B) Only the researcher knows the group assignment
- C) Only the participant knows the group assignment
- D) Both participant and researcher know the group assignment

**95.** Which imaging modality uses ionizing radiation to create detailed cross-sectional images of the body?

- A) Ultrasound
- B) MRI
- C) CT scan
- D) X-ray

**96.** Which postoperative complication is characterized by excessive fluid accumulation beneath the skin at the surgical site?

- A) Seroma
- B) Hematoma
- C) Infection
- D) Adhesion



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**97.** Which pediatric condition is characterized by persistent neurodevelopmental delays and motor impairments?

- A) Spina bifida
- B) Cerebral palsy
- C) Muscular dystrophy
- D) Duchenne's dystrophy

**98.** Which of the following is the primary goal of **comprehensive geriatric assessment**?

- A) Diagnosing new diseases
- B) Prescribing medications
- C) Evaluating functional ability and optimizing health
- D) Increasing hospital admissions

**99.** The **null hypothesis** in research usually states that:

- A) There is no difference or effect
- B) There is a significant difference
- C) The sample size is adequate
- D) The intervention is effective

**100.** Which radiological sign on chest X-ray indicates **pneumothorax**?

- A) Air bronchogram
- B) Absence of lung markings peripherally
- C) Ground-glass opacity
- D) Consolidation