

M.P.T SECOND PROFESSION YEAR

SPORTS

Course Code	Subject
MPT 01	Assessment and diagnosis in sports injuries

Instruction for Paper Setters

There will be Eight Questions of Fifteen Marks each. Candidates will have to answer any Six questions.

1. Orthopedic Assessment

- i) Patient History
- ii) Observation
- iii) Examination- Active and Passive Movements, functional Assessment, Special Tests, Reflexes and Cutaneous Distribution, Joint Play Movements Palpation.
- iv) Assessment, special test, reflexes and cutaneous distribution, joint play movements, palpation.
- v) Immediately after injury.
- vi) Acute stage.
- vii) Chronic Stage.
- viii) Rehabilitation stage.
- ix) Emergency sports evaluation
- x) Biomechanics of running and jumping

2. Regional examination with special emphasis on special tests

- i) Head and face
- ii) Cervical spine
- iii) Shoulder
- iv) Elbow
- v) Forearm, wrist and hand
- vi) Thoracic spine.
- vii) Lumbar spine
- viii) Pelvis
- ix) Hip
- x) Knee
- xi) Lower leg, ankle and foot.

3. Sports medicines diagnosis (for practical purpose only)

- i) Bio mechanical measurement- limbs and spine
- ii) Serology
- iii) Biopsy
- iv) Plain radiography
- v) Contrast radiography
- vi) Myelography
- vii) Radioactive scanning
- viii) Discography
- ix) Tomography

- x) MRI
- xi) Arthroscopy
- xii) EMG, NCV and SD curve
- xiii) BMO – Bone Densitometry, ultrasound densitometry and DEXA

4. Differential diagnosis of common sports injuries

Reference Books:

Orthotics in rehabilitation – splining the hand and body MCKEE, PAT
 Physiotherapy in orthopedics – a problem solving approach, Atkinson, Karem
 Examination of Musculo skeletal injuries. Shultz SJ
 Clinical orthopedic rehabilitation. Brotzman. S. Brent
 Orthopedic physical therapy- Donatelli. RA and Wooden. MJ
 Joint Structure and function- a comprehensive analysis. Levengie PK and Norkin. CC.
 Essential of orthopedics and applied physiotherapy. Joshi J and Kotwal

Course Code	Subject
MPT 02	Medical and surgical Management of Sports Injuries

Instruction for Paper Setters

There will be Eight Questions of Fifteen Marks each. Candidate will have to answer any six questions. This course provides the study of the definition, terminologies, epidemiology, pathomechanics, clinical features and prevention, medical and surgical management of all sports injuries but not limited to the following. It will also enable the students to use this information in planning and tailoring effective, specific, safe physiotherapy treatment programmes.

Medical Problem

Definition and terminology.

Medical problems of athletes – fungal infections, viral infections, common cold, diarrhea, dysentery. T.B., amoebiasis etc.

Special considerations:

1. Female athletes – sports amenorrhea, injury to female reproductive tract., menstrual asynchrony
2. Adolescent athlete
3. Disabled athlete

Doping amongst athletes

Protective equipment consideration

Emergency care, athletes first aid and cardiopulmonary resuscitation

Weight management

- Sports injuries:** 1. Frequency and site of injury
2. Etiological factors.

Prevention of injury

Mechanism of injury

Role of teachers and coaches in prevention of injury

Physiology of sports rehabilitation

Sports specific injury pattern

Acute, overuse and traumatic injuries related to cricket

Acute, overuse and traumatic injuries related to judo

Acute, overuse and traumatic injuries related to throw ball

Acute, overuse and traumatic injuries related to basket ball

Acute, overuse and traumatic injuries related to discuss throw

Acute, overuse and traumatic injuries related to football

Acute, overuse and traumatic injuries related to baseball

Acute, overuse and traumatic injuries related to badminton

Acute, overuse and traumatic injuries related to tennis

Acute, overuse and traumatic injuries related to gymnastics

Acute, overuse and traumatic injuries related to javelin

Acute, overuse and traumatic injuries related to judo

Sports injuries of lower limb

Sports injuries of spine

Sports injuries of head and neck

Stroke management

Internal and external bleeding

Reference books

Sports injuries diagnosis and mgmt. Norris. CM

Physical aspects of sports training and performance. Hoffman. Jay

Sports psychology. Yadvindra singh

Sports medicine. Jain. R

Evidence based sports medicine Macaulay D and Best

Sports medicine in primary care. Johnson R

Sports medicine of the lower extremity. Subotnick S

Surgical atlas of sports medicine. Mark D Miller. Richard F Howard and Kevin D Plancher. Mark D Miller.

Course Code	Subject
MPT 03	Physiotherapy Management in Sports Injuries

Instruction for Paper Setters

There will be eight questions of Fifteen Marks each. Candidates will have to answer any six questions.
This course provides the students with information on the sports psychology, sports injuries related

miscellaneous issues. This will enable the students to use this information in planning and tailoring effective, specific, safe physiotherapy treatment program.

Sports psychology

1. Definition and Terminologies
2. Role of Sports Psychology in Sports performance
3. Instincts – Killer instincts and motivation
4. Attention, interests and motivation.
5. Personality of sports person-type, dynamic nature, factors affecting personality development, characteristics.
6. Role of sports in personality development
7. Learning relation to Sports:
 - i) Nature and meaning of learning and maturation.
 - ii) Characteristics of learning
 - iii) Laws of learning maturation
 - iv) Transfer of Training
8. Emotions in Sports
 - i) Characteristics of emotions
 - ii) Controlling and training of emotions
 - iii) Sentiments - types, importance and formations
9. Mental Health
 - i) Concepts, Meaning and Importance
 - ii) Characteristic of mentally healthy person/ athlete
10. Role of Physical Education in promotion of mental health
11. Factor affecting growth and development
 - i) Role of heredity
 - ii) Character of growth
 - iii) Heredity on relation to Environment
12. Group Behaviors and leadership in Sports
 - i) Nature of Group Behavior.
 - ii) Type, quality, Training and Functioning of Leader performance
13. Anxiety, Model Stress and its Functioning of Leader performance
 - i) Isolate training
 - ii) Sudden Change in Opponent

- iii) Audience Stress.
- iv) Strategy change
- v) Cognitive Stress Modeling

14. Contemporary Stress Reduction Strategies

- i) Bio Feedback
- ii) Mental Coping Strategies
- iii) Visual Imagery
- iv) Meditation and Yoga

15. Performance Factors

- i) Stress and Performance
- ii) Motivation and performance

16. Anthropometry

17. Protective Equipment Consideration

18. Emergency Care

19. Sports Techniques

- i) Sports Massage and soft tissue manipulation
- ii) Splinting, Taping and Bandaging-techniques, indications and contra indications
- iii) Balance, co-ordination and PNF Techniques
- iv) Hydrotherapy
- v) Jacuzzi
- vi) Sauna Bath and Spas
- vii) Moist Heat Chambers
- viii) Hot Showers

20. Health Club and fitness centers – Use and Misuse of Equipment's

21. Instrumentation in sports training and rehabilitation

- i) Iso Kinetic Exerciser.
- ii) Treadmill
- iii) Ergometer – Upper and Lower Limb
- iv) Body Fate Platfrom
- v) Motion Analyser
- vi) Cardio-respiratory evaluation apparatus

22. Prevention and Rehabilitation of heart attack

23. Role of Physiotherapy Exercise in high blood pressure athlete

24. Role of Physiotherapy exercise in diabetic athlete

25. Role of Physiotherapy in different medical conditions

26. Physiotherapy of sports rehabilitation

27. Special Exercise programme for sports person

28. Bio mechanical principals for all sports injuries:

- i) Bio mechanics and injuries related to cricket
- ii) Bio mechanics and injuries related to Judo
- iii) Bio mechanics and injuries related to Throw Ball
- iv) Bio mechanics and injuries related to Basket Ball
- v) Bio mechanics and injuries related to Discus Throw
- vi) Bio mechanics and injuries related to Football
- vii) Bio mechanics and injuries related to Base Ball
- viii) Bio mechanics and injuries related to Badminton
- ix) Bio mechanics and injuries related to Tennis
- x) Bio mechanics and injuries related to Gymnastics
- xi) Bio mechanics and injuries related to Javelin
- xii) Bio mechanics and injuries related to Swimming
- xiii) Bio mechanics and injuries related to Jumping Sports
- xiv) Bio mechanics and injuries related to Track and Field Sports (Atheletics, Soccer, Hockey etc.)
- xv) Sports injuries of Upper Limb
- xvi) Sports injuries of Lower Limb
- xvii) Sports injuries of Lower limb
- xviii) Sports injuries of Thorax, Spine
- xix) Sports injuries of Head and Neck

29. Advanced Manual Therapy:

- i) Manual Therapy – History, Basic Classification, Assessment for manipulation, discussion in brief about the concepts of mobilization and special techniques like cyriax, Maitland, Mulligan, Butler, Kalternborn, Meckenzie.
- ii) Muscle energy techniques and positional stretch – Basic concepts and application of techniques.
- iii) Positional release therapy – Basic concepts and application of techniques
- iv) Myofascial techniques – Basic concepts and application of techniques
- v) Nerve conduction studies and electromyography – normal , abnormal, action potential , its recording protocols analysis, applications.
- vi) Bio feedback

Reference:

Sports injuries diagnosis and management. Norris, CM.
Physical aspects of sports training and performance. Hoffman. Jay
Evidence based sports medicines. Macaulay, D and Best
Sports medicine in primary care. Johnson. R
Sports medicine in primary care. Johnson R.
Sports atlas if sports medicine. Mark D Miller. Richard F Howard and Kevin D Plancher. Mark D Miller
Positional Release Techniques Deig. D
Muscle energy techniques. Chaitow. L.