

SPORTS AUTHORITY OF INDIA
NETAJI SUBHAS NATIONAL INSTITUTE OF SPORTS: PATIALA
ONLINE COACH EDUCATION PROGRAMME – SYLLABUS
WEIGHT LIFTING

Sl.no	Topics	Syllabus
1	Involvement of muscle and joints at different phases of classical lifts.	<ol style="list-style-type: none"> 1. The snatch and clean and jerk are two competitive lifts <ul style="list-style-type: none"> • Introduction of snatch • Usage of muscles in various phases of snatch <ul style="list-style-type: none"> - Starting position - First pull - Power position - Amortization - Explosion - Unsupported squat under - Supported squat under - Lift up - fixation 2. Biomechanical and myographical parameters of clean <ul style="list-style-type: none"> - Phase I is the preparatory and beginning - Phase II is pull or preliminary acceleration - Phase III is amortisation – movement of the knees Under the bar - Phase IV is full extension - Phase V is pivot less phase – beginning of the second maximum flexion of knees - Phase VI is active interaction of the lifter with the bar in the drop. 3. Biomechanical and myographical parameters of jerk <ul style="list-style-type: none"> • Muscles acting during various phases of jerk 4. Angular (degree) displacement during the first and second pull of snatch,

		<p>understanding the concepts of angles at various phases in joint</p> <ul style="list-style-type: none"> • Ankle • Knee • hip joints
2	Bio mechanical application of classical lifts.	<ol style="list-style-type: none"> 1. Newton's Laws <ul style="list-style-type: none"> - Law of inertia - Law of acceleration - Law of action and reaction 2. Lever action <ul style="list-style-type: none"> - Introduction - Types of lever - Lever action - Types of lever 3. kinematic chain of lifter <ul style="list-style-type: none"> - during the phases of snatch and clean 4. Barbell trajectory <ul style="list-style-type: none"> - Its importance - Trajectory and horizontal displacement 5. Height of the pull in relation to the height of the lifter <ul style="list-style-type: none"> - snatch - clean - during the phases of jerk 6. Clean phases and its elements <ul style="list-style-type: none"> - Type of muscle work in various phases - Motive elements of clean 7. Analysis of Force and velocity in various phases of snatch <ul style="list-style-type: none"> - Concept of velocity - Force
3	Training of youth and multi- year training program	<ol style="list-style-type: none"> 1. Development of child and its phases <ul style="list-style-type: none"> - Growth - Maturation - Adaptation 2. Study of children ability to develop

		<ul style="list-style-type: none"> - Grip strength - Balance - Vertical jumps <ol style="list-style-type: none"> 3. Factors for designing and supervision of youth resistance training program 4. Importance training variables to be developed in youth resistance training 5. The program variables that should be considered when designing a youth resistance training program 6. Models of multi - year training program <ul style="list-style-type: none"> - Canada – LTAD long term athlete development - Russian – Repetition model - Cuba – Performance based
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4	Bio motor abilities and methodology	<ol style="list-style-type: none"> 1. Bio motor ability <ul style="list-style-type: none"> - Introduction - Types of motor abilities 2. Specific motor abilities required for weightlifting <ul style="list-style-type: none"> - Strength - Speed - Endurance - Co-ordination - Flexibility 3. Strength <ul style="list-style-type: none"> - Maximum strength <ul style="list-style-type: none"> • Factors determining strength • Development of strength - Explosive strength - Speed strength <ul style="list-style-type: none"> • Types of speed abilities • Factors affecting speed strength
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		<ul style="list-style-type: none"> • Development of speed ability • Adequate intensity range of strength development in various age group - Strength endurance • Methods of developing strength endurance <p>4. Co-ordination</p> <ul style="list-style-type: none"> - Importance of co-ordination - Development of co-ordination ability <p>5. Flexibility</p> <ul style="list-style-type: none"> - Importance of flexibility - Types of flexibility - Factor determining flexibility - Advantage of flexibility - Improvement in flexibility
5	Essence of planning, short term, long term and periodization	<p>1. Planning and Periodization of weightlifting training</p> <ul style="list-style-type: none"> - Definition - Types of periodization - Types of cycle <ul style="list-style-type: none"> • Macro cycle • Meso cycle • Micro cycle <p>2. Principle of periodization</p> <ul style="list-style-type: none"> - Preparatory period <ul style="list-style-type: none"> • Foundation stage • Shaping up - Competitive period <ul style="list-style-type: none"> • Objects • Main task - Transition period <ul style="list-style-type: none"> • Objects and main task <p>3. Periodization of bio motor abilities</p> <p>4. Applied exercises to develop different strength abilities</p>

		5. Daily training sequence
6	Women weightlifter – menstrual cycle and their training	<ol style="list-style-type: none"> 1. Women weightlifter <ul style="list-style-type: none"> - Introduction - Menstrual cycle - Hormonal changes during the menstrual cycle - Effects on body 2. Women general consideration 3. Role of coaching during the training 4. Technique work and following exercise can be used
7	Application of teaching and coaching methods	<ol style="list-style-type: none"> 1. Teaching and coaching <ul style="list-style-type: none"> - Introduction - Duties of teacher or coach - Teaching consists - Coaching consists 2. Cooperative method 3. Teaching and coaching based on 4. Methods of teaching and coaching applied for success of their sessions 5. Whether it is training session or coaching session it should be based on
8	Concepts of special or competition warmup in weightlifting	<ol style="list-style-type: none"> 1. Competition warmup <ul style="list-style-type: none"> - Introduction - Factors during the competition - Pre plan warmup attempts 2. Designing of competition warmup plan 3. Plan for 2nd and 3rd attempt of snatch 4. Plan for 2nd and 3rd attempt of clean and jerk 5. Factors to be considered for the 2nd and 3rd attempt of clean and jerk
9	Role of specific warm up and exercises designed for the specific warm up	<ol style="list-style-type: none"> 1. Specific warmup <ul style="list-style-type: none"> - principle of specific warmup - benefits - factors

		<ul style="list-style-type: none"> - advantages <ol style="list-style-type: none"> 2. Designing of specific warm up for a session 3. Means of specific warmup 4. Specific warmup for various exercises like explosive, strength, endurance and for technical training sessions.
10	Philosophy of a weightlifting coach and requirement	<ol style="list-style-type: none"> 1. Philosophy of coaching <ul style="list-style-type: none"> - Introduction - Concepts of coaching philosophy - Develop your coaching philosophy - Styles of coaching 2. Role of coach <ul style="list-style-type: none"> - During training - During competition - During teaching - During selection 3. Practical responsibility of coach
11	Procedures and phases of talent identification in Russia and test during selection	<ol style="list-style-type: none"> 1. Talent identification <ul style="list-style-type: none"> - Introduction - Process of selection - Procedures 2. Medical examination and test during the selection <ul style="list-style-type: none"> - Clinical test 3. Importance of talent identification 4. Practical difficulties during the talent identification 5. Phases and Stages of talent identification in Russia
12	Common injuries in weightlifting, its assessment and prevention	<ol style="list-style-type: none"> 1. Common injuries in sports <ul style="list-style-type: none"> - Introduction - Types of injuries 2. Common injuries in weightlifting <ul style="list-style-type: none"> - injuries during the training - injuries during the competition 3. Assessment of injuries <ul style="list-style-type: none"> - Procedure of assessing

		<ul style="list-style-type: none"> - Benefits <ol style="list-style-type: none"> 4. Prevention of injuries <ul style="list-style-type: none"> - Advantages
13	Pedagogic means of recovery	<ol style="list-style-type: none"> 1. Pedagogic means of recovery <ul style="list-style-type: none"> - Introduction 2. Planning for pedagogic and Methods of application <ul style="list-style-type: none"> - Macro cycle - Meso cycle - Micro cycle - Training sessions - Competition - Examples of program
14	Method of evaluation – training and competition evaluation	<ol style="list-style-type: none"> 1. Evaluation <ul style="list-style-type: none"> - Introduction - Method of evaluation 2. Training evaluation 3. Competition evaluation 4. Analysis of competition (pre-during)
15	Development of specific strength and speed in weightlifting	<ol style="list-style-type: none"> 1. Development of specific strength and speed in weightlifting <ul style="list-style-type: none"> - Introduction - Strength - Speed 2. Means of developing of speed 3. Means of developing of strength
16	Role of physical, motor and coordinative abilities in weightlifter performance	<ol style="list-style-type: none"> 1. Studies related to a weightlifter <ul style="list-style-type: none"> - Introduction 2. Factors of weightlifting performance 3. Role of physical 4. Role of motor 5. Role of coordinative abilities