

NATIONAL UNIVERSITY



Syllabus

Subject: B. Sports

Three Years B.Sc. Pass Course
Effective from the Session: 2013–2014

National University
Syllabus for Three Year B.Sc. Pass Course
Subject: B. Sports
Session: 2013-2014
Course content and marks distribution

B. Sports (Arts):

Paper Code	Paper	Paper Title	Marks	Credits
First Year				
114601	Paper-I	Science of Sports Training	100	4
114603	Paper-II	Exercise Physiology & Sports Biomechanics	100	4
Second Year				
124601	Paper-III	Sports Psychology	100	4
124603	Paper-IV	Sports Nutrition, Care & Prevention of Sports Injuries & Sports Management	100	4
Third Year				
Any Two Paper (One Theory and One Practical)				
134601	Paper-V	Sport/Game (Hokey) (Theory)	100	4
134602	Paper-VI	Sport/Game (Hokey) (Practical)	100	4
134603	Paper-V	Sport/Game (Cricket) (Theory)	100	4
134604	Paper-VI	Sport/Game (Cricket) (Practical)	100	4
134605	Paper-V	Sport/Game (Football) (Theory)	100	4
134606	Paper-VI	Sport/Game (Football) (Practical)	100	4
134607	Paper-V	Sport/Game (Basketball) (Theory)	100	4
134608	Paper-VI	Sport/Game (Basketball) (Practical)	100	4
134609	Paper-V	Sport/Game (Tennis) (Theory)	100	4
134610	Paper-VI	Sport/Game (Tennis) (Practical)	100	4
134611	Paper-V	Sport/Game (Boxing) (Theory)	100	4
134612	Paper-VI	Sport/Game (Boxing) (Practical)	100	4
134613	Paper-V	Sport/Game (Shooting) (Theory)	100	4
134614	Paper-VI	Sport/Game (Shooting) (Practical)	100	4
134615	Paper-V	Sport/Game (Gymnastics) (Theory)	100	4

134616	Paper-VI	Sport/Game (Gymnastics) (Practical)	100	4
134617	Paper-V	Sport/Game (Swimming) (Theory)	100	4
134618	Paper-VI	Sport/Game (Swimming) (Practical)	100	4
134619	Paper-V	Sport/Game (Track and Field) (Theory)	100	4
134620	Paper-VI	Sport/Game (Track and Field) (Practical)	100	4
		Total=	600	24

Detailed Syllabus First Year

Paper Code	Paper	Paper Title	Marks	Credits
114601	Paper-I	Science of Sports Training	100	4

1. Introduction:

- Basic concept of sport training;
- Principle of sport training;
- Training means.

2. Training load:

- Definition of training load, Inner load and outer load;
- Factors of training load;
- Overload – symptoms, causes and remedies.

3. Training methods:

- Methods based on continuous principle;
- Methods based on interval principle;
- Circuit training, Weight training.

4. Fitness:

- Concept of a) Total fitness, b) Physical fitness c) Motor fitness.
- Components of motor fitness: (Strength, Speed, Endurance, Agility, Flexibility)
- Coordinative components of fitness: (Orientation, Adaptation, Reaction ability, Differentiation, Coupling, Balance, Rhythm).

5. Technique:

- Concept of Technique, Skill and Style;
- Stages of Technique learning (First phase of rough coordination, Second phase of fine coordination and Third phase of automatic execution).
- Principles of technique training.

6. Planning:

- Basic concept of planning of training;
- Principles of planning;

- Planning of Micro-, Meso- and Macro cycles.

Reference:

1. Frank Dick : Sports Training Principles
2. Hardayal Singh : Science of Sports Training
3. A. K Uppal : Principle of Sports Training
4. V. L. Garry Kumar,
Mamta Manjari Panda : Modern Principles of Athletic Training.

Paper Code	Paper	Paper Title	Marks	Credits
114603	Paper-II	Exercise Physiology & Sports Biomechanics	100	4

Part A: Exercise Physiology

1. Introduction: Historical background of exercise physiology: Importance of exercise physiology in sports.

2. a) Cells; Tissues and Organ:

- Cell structure of living organism;
- Chemical composition;

b) Tissue: Aggregation of cells and their derivatives of performing specific function;

c) Organ: Aggregation of various types of tissues for specific function of organ.

3. Introduction of different systems of human body: Skeleton system; Muscular system; Respiratory system; Cardiovascular system; Nervous system; Endocrine system; Digestive system.

4. Muscle contraction:

- Types of muscle contraction: Isometric, Isotonic, Eccentric and Concentric.
- Slow twitch and fast twitch fibers; Distribution of slow and fast twitch fibers.

Characteristics and importance of slow and fast twitch fibers; Adaptational changes due to different fitness training; Muscle hypertrophy.

5. Respiratory system: Introduction and overview of the system; Respiratory muscles; Mechanism and function of the respiratory muscles.

Pulmonary capacities; Tidal volume; Vital capacity; Residual volume; Forced expiratory volume; Lung volume; Volume of maximum oxygen uptake; Adaptational changes due to exercise.

Pulmonary ventilation; Exchange of gases in lung and transport of oxygen in blood;
Transport of Carbon di oxide; Exchange of gases at he tissue level.

Reference:

1. C.C. Chatterjee : Human Physiology
2. Jack H. Williams : Physiology of Sport and Exercise
3. Jack H. Wilmore : Physiology of Sports
4. Mathew & Fox : Physiology of Exercise
5. McArdle, Catch, Catch : Exercise Physiology

Part B: Sport Biomechanics

1. Introduction:

- Basic concept;
- Historical background;
- Importance in games and sports.

2. Kinesiology:

- Meaning and relation with sport biomechanics;
- Planes and axes for human motion;
- Fundamental movements around the joints.

3. Kinematics:

- Motion: definition and type;
- Kinematic parameters of linear and angular motion: Displacement, Speed; Velocity; Acceleration.
- Relation between linear and angular motion parameters.

4. Kinetics:

- Newton's laws of motion and their application in sports.

5. Machine function of human body:

- Lever: Definition; components, types, mechanical functions, skeletal levers.
- Wheel & axle: Definition, type, mechanical function, Wheel & Axle arrangements in human body.

6. Equilibrium:

- Definition, type and conditions of equilibrium;
- Factors affecting degree of stability.

Reference:

1. M. Gladys Scott : Analysis of Human Motion
2. Luttgens and Wells : Kinesiology
3. J. Dyson : Mechanics of Athletics

4. Petter McGinnis : Biomechanics of Sport and Exercise

Second Year

Paper Code	Paper	Paper Title	Marks	Credits
124601	Paper-III	Sports Psychology	100	4

1. Introduction:

- Meaning of Psychology and Sport Psychology;
- Importance of sport psychology;
- Meaning of growth and development;
- Psychological characteristics of growth and development.

2. Motor learning:

- Definition of learning and motor learning;
- Factors affecting motor learning;
- Selected theories of motor learning: Conditioned response; Insight; Trial and Error.

3. Emotion and sport performance:

- Anxiety: meaning and type: effect of anxiety on sport performance

4. Personality and sport performance:

- Definition of personality.
- Nature of personality.
- Sport participation and personality.

5. Motivation in sport:

- Meaning of motivation
- Types of motivation (Extrinsic and Intrinsic)
- Goal setting – and effective technique of motivation.

Reference:

1. M. L. Kaamlesh : Psychology in Physical Education and Sports
2. Agyajit Singh : Sports Psychology
3. R. May and Michel J. Asken : Sports Psychology
4. Jhelma S. Horn : Advance Sport Psychology

Paper Code	Paper	Paper Title	Marks	Credits
124603	Paper-IV	Sports Nutrition, Care & Prevention of Sports Injuries & Sports Management	100	4

Part A: Sports Nutrition, Care & Prevention of Sports Injuries

1. **Introduction:** Basic concept and importance in sports;

2. **Nutrition:**
 - Concept of nutrition, Diet, Calorie, Energy balance.
 - Components of nutrition – Carbohydrate, Fat Protein, Mineral, Vitamins, Water Fibers.
3. **Nutrient balance:** Weight control; Balance diet; Pre competition and competition and post competition. Meals, Diets for athletes of different age, sex and activity.
4. **First Aid:** Definition and Principles of First Aid.
5. **Injury management:** Soft tissue injuries of knee and ankle; rehabilitation of injuries; Injury Management program: Water training; Weight training; cycling; walking; Relaxation. Prevention of injuries through fitness; Warm up and treatment.

Reference:

- | | |
|-------------------------|--|
| 1. Sue Rodwell Williams | : Essentials of Nutrition and Diet Therapy |
| 2. Nancy Clark | : Sports Nutrition Guidebook |
| 3. Malinda J. Flegel | : Sport First Aid. |

Part B: Sports Management

1. **Concept of Sports Management**
 - Introduction to Sports Management
 - What is Sports Management
 - Function of Sports Management
 - Competency based approach and implements in Sports and Physical Education
2. **Organization and Management in Sports**
 - Organization in sports
 - Management of Sports in School. Colleges and Universities, Inter-University, District, Intramural extra mural, National and International level.
 - Roles and responsibilities of efficient managers.
3. **Leadership in Sports Management**
 - Definition of Leadership
 - Types and Importance of leadership in Sports
 - Quality of good leader - Creativity, Innovation and Motivation
 - Difference between Democratic and Autocratic leadership
 - Communications
 - Importance of communications in leadership
4. **Ethics in Sports Management**
 - Decision making in Sports
 - Types of Decision
 - Decision makers
 - Effective decision making

- Smart choices

5. Preparation of Planning and Budget

- Planning and Budget
- Types of Planning and Budget
- Qualities of Feature of good plan
- Nature of General characteristics of Planning
- Various steps in Planning
- Advantage and disadvantage of Planning
- Preparation of budget, Collection fund, Purchase of Sports goods and their Preservation.

Reference:

1. Dr. Abdul Awal Khan and Abu Bokkor Siddikey : Management
2. Cerfo (10th Edition) : Modern Management
3. S. S. Roy. : Sports Management
4. Harold J. Vanclerzwaag : Sports Management in School & College
5. Mcgrow Hill : Management & Organization

Third Year

Paper Code	Paper	Paper Title	Marks	Credits
134601	Paper-V	Sport/Game (Hokey) (Theory)	100	4

1. Historical Development

- History of the game Hockey from ancient times to the present.
- History of Hockey in Bangladesh.

2. Rules and regulations of the game Hockey.

3. Fundamental techniques of the game Hockey: definition, types and methods of execution of (i) Hitting, (ii) Receiving, (iii) Pushing, (iv) Scooping, (v) Flicking, (vi) Passing, (vii) Tackling, (viii) Dribbling and Dodging, (ix) Goal keeping.

4. Warming up: (i) Definition, (ii) Types, (iii) Need and importance, (iv) Advantage and disadvantages, (v) Important factors to be noted during warming up.

5. Systems of play

- Definition
- Different formation : 3-3-4-1/4-2-4/3-3-3-1-1
- Qualities and responsibilities of players in each formation.

6. Qualities of players

- Personal qualities.
- Qualities and efficiencies of players as per position.

7. **Defensive and attacking principles**

- Attacking principles : (i) Width in attack; (ii) Penetration in attack; (iii) Mobility in attack; (iv) Improvisation in attack.
- Principles for defense : (i) Delay in defense; (ii) Cover in defense; (iii) Concentration in defense; (iv) Control in defense.

Reference :

1. Mike Craig : *Modern Hockey for Juniors*
2. Deepak Jain : *Teaching and Coaching Hockey*
3. Md. Kaosar Ali : *Hockey Khelar Pratham Path*

Paper Code	Paper	Paper Title	Marks	Credits
134602	Paper-VI	Sport/Game (Hokey) (Practical)	100	4

1. **Physical Fitness**

- (i) Strength;
- (ii) Speed;
- (iii) Endurance;
- (iv) Agility;
- (v) Flexibility

2. **Basic Techniques of the game:**

- (i) Hitting, (ii) Receiving, (iii) Pushing, (iv) Scooping, (v) Flicking, (vi) Passing, (vii) Tackling, (viii) Dribbling and Dodging, (ix) Goal keeping.

3. Overall performance;
4. Application of the systems and formation of play;
5. Principles of attack and defense;
6. Match analysis;
7. Practical notebook and viva.

Marks Distribution :

1. Test for Physical fitness - 15
2. Test for basic techniques - 30

3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134603	Paper-V	Sport/Game (Cricket) (Theory)	100	4

1. Historical Development

- History of the game Cricket from ancient times to the present.
- History of Cricket in Bangladesh.
- International tournaments in cricket.

2. Terminologies of cricket.

3. Warm up (Definition, Importance, Types, Advantages, Factors to be noted during warming up).

4. Fundamental techniques of the Cricket :

- Bowling : (Basic bowling action-Grip, run up, delivery, follow through, swing, cutter, definition importance and types of spin)
- Batting : (Grip, Stance, Forward and backward defense, Off drive, Square Cut, Pull).
- Wicket keeping.
- Fielding (Defensive and attacking : Catching and Throwing).

5. Rules of the game Cricket and their application.

6. Captaincy.

Reference :

- Keith Andrew : *Coaching Cricket*
- Keith Andrew : *The Handbook of Cricket*
- Mahinder : *Learn to Play Good Cricket*

Paper Code	Paper	Paper Title	Marks	Credits
134604	Paper-VI	Sport/Game (Cricket) (Practical)	100	4

1. **Physical fitness :** (Students will be tested in any two)
 - (i) Strength;
 - (ii) Speed;
 - (iii) Endurance;
 - (iv) Agility;
 - (v) Flexibility.
2. **Individual skill :**
 - (i) Batting; (ii) Grip, (iii) Stance, (iv) Forward and Backward defense, (v) Off drive, (vi) Square cut, (vii) Pull.
3. **Bowling :**
 - (i) In swing, (ii) Out swing, (iii) Off break, (iv) Googly.
4. Fielding and Wicket keeping.
5. Running between the wickets.
6. Captaincy.
7. Team tactics.
8. Practical note books and Viva.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134605	Paper-V	Sport/Game (Football) (Theory)	100	4

1. History of Football from ancient times to the present
2. History of Football in Bangladesh.
3. National and International football tournaments.
4. Organizational set up of Football in Bangladesh.

5. Rules of Football game (FIFA).
6. **Warming up** : (i) Definition, (ii) Importance, (iii) Types, (iv) Advantages, (v) Factors to be noted during warming up.
7. Fundamental techniques (Definition, importance, types and methods of execution) of (i) Kicking, (ii) Receiving, (iii) Dribbling, (iv) Feinting, (v) Passing, (vi) Heading, (vii) Tackling, (viii) Goal keeping.
8. **Systems of play**
 Basic concept of systems/formations of play;
 Types of formation : (2-4-4-1/4-2-4-1/2-4-3-1)
 Duties and responsibilities of the players for implementing the formations of play.
 Advantages and disadvantages of each type of formation.
9. **Qualities of the players** :
 (i) Qualities according to the position;
 (ii) Individual specific qualities of the players.
10. **Attacking and defensive principles**
Attacking principles : (i) Width in attack, (ii) Penetration in attack, (iii) Depth in attack, (iv) Mobility in attack, (v) Improvisation in attack.
Defensive principles : (i) Delay in defense, (ii) Cover in defense, (iii) Concentration in defense (iv) Control in defense.
11. **Match analysis** : Definition; Importance; Match analysis of different level.

Reference :

1. Nick Whitehead & Malcolm Cork : *Soccer Training*
2. Nelson McAvoy : *Teaching Soccer Fundamentals*
3. Deepak Jain : *Teaching and Coaching Football*
4. Peter Treadmill : *Skillful Soccer*

Paper Code	Paper	Paper Title	Marks	Credits
134606	Paper-VI	Sport/Game (Football) (Practical)	100	4

1. **Physical fitness** : (Students will be tested in any two)
 - (i) Strength;
 - (ii) Speed;

(iii) Endurance;

(iv) Agility;

(v) Flexibility.

2. **Individual skill :** (Students will be tested in any five)

(i) Kicking; (ii) Receiving, (iii) Dribbling, (iv) Feinting, (v) Heading, (vi) Passing, (vii) Tackling, (viii) Throw in, (ix) Goal keeping.

3. Overall performance (During match between two teams);

4. Application of the systems/formation of play;

5. Defensive and attacking principles;

6. Match analysis;

7. Practical note books and Viva.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134607	Paper-V	Sport/Game (Basketball) (Theory)	100	4

1. **History of Basketball game :**

i) Basketball in Bangladesh;

ii) World Basketball;

iii) Structure of Basketball administration;

2. Rules of Basketball (FIBA).

3. **Warming up and cool down :**

i) Definition;

ii) Use of warming up and cool down;

iii) Advantages and disadvantages of warming up and cool down;.

4. **Techniques of Basketball game :**

- i) Passing and receiving;
 - ii) Dribbling;
 - iii) Rebound;
 - iv) First break;
 - v) Screening;
 - vi) Shooting.
5. Qualities of a basketball player : a) Physical; b) Tactical
 6. Formation of games or set play.

Reference :

1. Douchant : *College Basketball*
2. Bunn : *Basketball Teaching and Play*
3. O.P. Sharma : *Coaching Basketball*

Paper Code	Paper	Paper Title	Marks	Credits
134608	Paper-VI	Sport/Game (Basketball) (Practical)	100	4

1. Physical fitness (Strength; Endurance; Speed; Agility; Flexibility; Reaction time).
 - (i) Strength;
2. Individual defense.
3. Team defense : (a) Zone defense; (b) Man to man defense; (c) Combine defense
4. Individual attack.
5. Team attack (Formation game or set play).
6. Practical note book.

Marks Distribution :

- | | | |
|--|---|----|
| 1. Test for Physical fitness | - | 15 |
| 2. Test for basic techniques | - | 30 |
| 3. Test for Overall performance from the match between two teams (in any one aspect) | - | 25 |
| 4. Application of rules of the game | - | 10 |

5. Practical note book and viva-voce

- 20
Total = 100

Paper Code	Paper	Paper Title	Marks	Credits
134609	Paper-V	Sport/Game (Tennis) (Theory)	100	4

1. **History of Tennis:** (a) Bangladesh; (b) International.
2. Organizational set up of Bangladesh Tennis Federation.
3. Rules of Tennis (ITF)
4. **Warming up and cooling down :** (a) Definition; (b) Advantage; (c) Disadvantage.
5. **Techniques and tactics of Tennis :**
(a) Service; (b) Fore hand stroke; (c) Back hand stroke; (d) Volley; (e) Smash.
6. **Systems of Tennis game :** (a) Definition; (b) Different systems of tennis.
7. Attacking techniques.
8. Defensive techniques.
9. **Tactics of Tennis :**
(a) Approach shot; (b) Service and volley; (c) Counter attack; (d) Back-line game; (e) Play at the net; (f) Puffing shot.

Reference :

1. Deepak Jain : *Teaching and Coaching Tennis*
2. M. Barrie Richmond : *Total Tennis*
3. Paul Metzler : *Advanced Tennis*
4. Bill. Murphy. Chet Murphy : *Tennis Hand Book*

Paper Code	Paper	Paper Title	Marks	Credits
134610	Paper-VI	Sport/Game (Tennis) (Practical)	100	4

1. Physical fitness :
(a) Strength;
(b) Endurance;

- (c) Speed;
- (d) Flexibility;
- (e) Agility;
- (f) Reaction time.
- 2. Individual skills.
- 3. Tactics and strategy of tennis game.
- 4. Game.
- 5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134611	Paper-V	Sport/Game (Boxing) (Theory)	100	4

- 1. **History of Boxing :** (a) Bangladesh; (b) Olympic; (c) International.
- 2. Organizational set up of Boxing :
(a) Bangladesh; (b) Olympic; (c) International.
- 3. Rules of Boxing (Olympic and International).
- 4. **Techniques and skills of Boxing :**
(a) Punch; (b) Jab; (c) Hook; (d) Cut; (i) Definition (ii) Importance; (iii) Types.
- 5. **Warm up and Cool down :**
(a) Definition; (b) Requirement; (c) Importance; (d) Advantage; (e) Disadvantage.
- 6. **Boxing attacking system :**
a) Different types of attack; (b) Advantage and disadvantage of different systems.

7. Different types of defense.
8. Physical fitness of a boxer.
9. Quality of a good boxer.

Reference :

1. Bob Mee : *Boxing*

Paper Code	Paper	Paper Title	Marks	Credits
134612	Paper-VI	Sport/Game (Boxing) (Practical)	100	4

1. Physical fitness :
 - (a) Strength;
 - (b) Speed;
 - (c) Flexibility;
 - (d) Agility;
 - (e) Endurance;
 - (f) Coordination.
2. **Basic Techniques:** Individual defense; Peace; Slip; Step back; Ducking; Lay back; Block.
3. Attacking techniques and tactics.
4. Defensive techniques and tactics.
5. Application if rules during ring fight.
6. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134613	Paper-V	Sport/Game (Shooting) (Theory)	100	4

1. Historical development of Shooting as a sport;
2. Description of a shooting range of International standard (including all events);
3. Description of all the events of shooting for International level of competition;
4. Description of the dress, materials and equipments for shooting;
5. Influence of psychological aspects, balance and readiness in shooting;
6. (i) Description of the events for men and women in 10m range. Total number of points in this event;
(ii) Description of the events for men and women in 50m range. Total number of points in this event;
(iii) Description of the events for men and women in 25m range. Total number of points in this event;
7. Description of the most effective techniques for standing, kneeling and prone positions;
8. Description of the safety rules imposed by World Shooting Federation for the safety of the shooting ranger;
9. Difference between the conventional arms and the arms used in shooting;
10. Description the organizational and function of the International Shooting Federation;
11. Detailed explanation of the reality for achieving highest level of success and the importance of shooting at the target.

Reference :

Official Status, Rules and regulations - *International Shooting Sport Federation*

Paper Code	Paper	Paper Title	Marks	Credits
134614	Paper-VI	Sport/Game (Shooting) (Practical)	100	4

Marks Distribution :

- | | | |
|------------------------------|---|----|
| 1. Test for Physical fitness | - | 15 |
|------------------------------|---|----|

2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134615	Paper-V	Sport/Game (Gymnastics) (Theory)	100	4

- History of Gymnastics :** (a) Bangladesh; (b) International; (c) Olympic.
- Organizational set up of gymnastics.
- Code of points of gymnastics (Rules).
- Physical fitness for gymnastics :**
 - Strength, Endurance, agility, flexibility, speed, coordination.
 - Qualities of a good gymnast.
- Techniques of different skills of gymnastics**
 - Floor; (b) Parallel bar; (c) Horizontal bar; (d) Roman ring; (e) Vaulting horse; (f) Pummelled horse; (g) Balance beam; (h) Uneven bar (Girls); (i) Side horse.
- Warm up and cool down :** (a) Reasons of warming up; (b) Advantages.
- Safety measures during gymnastics practice.

Reference :

- Gurdial Singh Bawa : *Fundamentals of Men's Gymnastics*
- Samiran Chakraborty : *Women's Gymnastics*
- Pintu Modak : *Coaching Gymnastics*

Paper Code	Paper	Paper Title	Marks	Credits
134616	Paper-VI	Sport/Game (Gymnastics) (Practical)	100	4

- Physical fitness : (a) Strength; (b) Speed; (c) Flexibility; (d) Agility; (e) Endurance; (f) Coordination.

2. Warming up and cool down- (i) General; (ii) Specific for gymnasts.
3. Technique-
 - (i) a) Floor, b) Side horse, c) Uneven bar, d) Pommel horse, e) Balance beam, f) Roman ring.
 - (ii) a) Vaulting horse, b) Parallel bar, c) Side horse, d) Horizontal bar.
4. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134617	Paper-V	Sport/Game (Swimming) (Theory)	100	4

1. Introduction :

- i) Historical background of swimming;
- ii) History of swimming in Bangladesh;
- iii) History of swimming in Olympic games; Asian games; SAF games; National swimming competition.
- iv) History of Water Polo.

2. Organization and administration of swimming :

- i) Definition;
- ii) Need and importance of organization and administration;
- iii) Principles of organization;
- iv) Organizational set up;
- v) Qualities of a good administrator;
- vi) Organizing swimming competitions.

3. Lay out of swimming pool and diving pool.

4. **Rules of International competition in swimming :** (a) Arranging swimming competition; (b) Officials; (c) Stroke mechanism-Free style, Breaststroke, Back stroke, Butterfly.
5. **Training theory :** (i) Principles and purpose of training; (ii) Types of training-Continuous training; Interval training; Repetition training; Sprint training; Set training; Pace training.
6. **Additional methods :** (i) Weight training; (ii) Strength training – (a) with ones own body weight and (b) with additional weight (c) Circuit training; Training for flexibility.
7. Physique of swimmers; selection of talents.
8. **Health and nutrition of swimmers :**
 - i) Diet one week before the competition;
 - ii) Diet just before the competition;
 - iii) Diet during competition;
 - iv) Medical check up.
9. **Drill training :** (i) Free style; (ii) Breaststroke; (iii) Backstroke; (iv) Butter fly.
10. Warming up for swimming.
11. **Water Polo :** (i) Water polo pool; (ii) Goal; (iii) Ball; (iv) Cap, (v) Official; (vi) Timer; (vii) Start of play; (viii) Corner throw; (ix) Ordinary fouls; (x) Major fouls; (xi) Penalty throw; (xii) Extra time; (xiii) Referee.
12. **Rules of diving :** (i) Diving competition; (ii) Referee; (iii) Marking; (iv) Age specific diving; (v) Score sheet for diving.

Reference :

1. Torney : *Swimming*
2. James E. Counsilman : *The Science of Swimming*
3. Billingeley : *Diving Illustrated*

Paper Code	Paper	Paper Title	Marks	Credits
134618	Paper-VI	Sport/Game (Swimming) (Practical)	100	4

1. Physical fitness :
 - (a) Strength;
 - (b) Agility;

- (c) Flexibility;
 - (d) Endurance;
 - (e) Speed.
2. Individual skill for the techniques in :
 - Free style.
 - Brest stroke.
 - Back stroke.
 - Butterfly.
 3. Individual skill for water polo : Ball throw; Overall performance; Spring; Passing; Dribbling; Attacking; Defense.
 4. Officiating for water Polo and Diving.
 5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134619	Paper-V	Sport/Game (Track and Field) (Theory)	100	4

1. Introduction :

- Definition;
- Historical background of Track and Field Athletics;
- Role of Athletics in ancient and modern Olympics :
- History of Women Athletics;
- History of Athletics in Bangladesh;
- Olympic games, Asian games, SAF games, National Championship.

2. Organization and Administration of Track and Field :

- Concept and definition;

- Principles of organization;
 - Organizational set up;
 - Need for organization and administration;
 - Qualities of good administrator;
 - Administrative set up;
 - Organizing Track and Field Athletic Meet.
3. Lay out of Athletic track.
 4. General rules of International Athletic competitions.
 5. Training theory : (a) Principles and purpose of training; (b) Types of training for running – Continuous methods (i) Continuous running; (ii) Fartlek; (iii) Hill running.
 6. (i) Interval method; (ii) Repetition method; (iii) Pace work; (iv) Competitive pace.
 7. **Helping methods** : (i) Weight training; (ii) Gymnastic exercise; (iii) Different types of jumping; (iv) Circuit training; (v) Total training.
 8. Additional aspects : (i) Health; (ii) Diet; (iii) Medical check up.
 9. Theory of Athletic events : (i) Track events; (ii) Field events.
 10. **Running events, types and characteristics** :
 (i) Sprint; (ii) Middle distance; (iii) Long middle distance; (iv) Long distance;
 (vi) Factors influencing running events- Stride frequency, power, stride length, endurance, technique, physique of the sprinters, evaluation tests Rules.
 11. **Jumping events** :
 (i) Basic Characteristic and types of jumps; (ii) Important factors; (iii) Approach; (iv) Take-off; (v) Hight and Landing; (vi) Physique of the jumpers; (vii) Technique and style (viii) Evaluation test; (ix) Rules.
 12. **Throwing events**
 (i) Basic characteristics and types of jumps; (ii) Important factors; (iii) Technical features; (iv) Physique of the throwers; (v) Techniques and style; (vi) Evaluation test ; (vii) Rules.

Reference :

- | | | |
|----|-----------------|---|
| 1. | Kleff & Arnheim | : <i>Modern Principles of Athletic Training</i> |
| 2. | G. Dyson | : <i>Mechanics of Athletics</i> |
| 3. | Deepak Jain | : <i>Coaching Track & Field</i> |

Paper Code	Paper	Paper Title	Marks	Credits
134620	Paper-VI	Sport/Game (Track and Field) (Practical)	100	4

1. **Physical fitness :** (a) Strength; (b) Speed; (c) Endurance; (d) Agility; (e) Flexibility.
2. Basic techniques.
3. Overall efficiency.
4. Rules of Track and Field Athletics .
5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

B. Sports (Science):

Paper Code	Paper	Paper Title	Marks	Credits
First Year				
114601	Paper-I	Science of Sports Training	100	4
114603	Paper-II	Exercise Physiology & Sports Biomechanics	100	4
Second Year				
124601	Paper-III	Sports Psychology	100	4
124603	Paper-IV	Sports Nutrition, Care & Prevention of Sports Injuries & Sports Management	100	4
Third Year				
Any Two Paper (One Theory and One Practical)				
134601	Paper-V	Sport/Game (Hokey) (Theory)	100	4
134602	Paper-VI	Sport/Game (Hokey) (Practical)	100	4
134603	Paper-V	Sport/Game (Cricket) (Theory)	100	4
134604	Paper-VI	Sport/Game (Cricket) (Practical)	100	4
134605	Paper-V	Sport/Game (Football) (Theory)	100	4
134606	Paper-VI	Sport/Game (Football) (Practical)	100	4
134607	Paper-V	Sport/Game (Basketball) (Theory)	100	4
134608	Paper-VI	Sport/Game (Basketball) (Practical)	100	4
134609	Paper-V	Sport/Game (Tennis) (Theory)	100	4
134610	Paper-VI	Sport/Game (Tennis) (Practical)	100	4
134611	Paper-V	Sport/Game (Boxing) (Theory)	100	4
134612	Paper-VI	Sport/Game (Boxing) (Practical)	100	4
134613	Paper-V	Sport/Game (Shooting) (Theory)	100	4
134614	Paper-VI	Sport/Game (Shooting) (Practical)	100	4
134615	Paper-V	Sport/Game (Gymnastics) (Theory)	100	4
134616	Paper-VI	Sport/Game (Gymnastics) (Practical)	100	4
134617	Paper-V	Sport/Game (Swimming) (Theory)	100	4
134618	Paper-VI	Sport/Game (Swimming) (Practical)	100	4
134619	Paper-V	Sport/Game (Track and Field) (Theory)	100	4

134620	Paper-VI	Sport/Game (Track and Field) (Practical)	100	4
134622	Paper- VII	Sport Science (Practical)	100	4
		Total=	700	28

**Detailed Syllabus
First Year**

Paper Code	Paper	Paper Title	Marks	Credits
114601	Paper-I	Science of Sports Training	100	4

1. Introduction:

- Basic concept of sport training;
- Principle of sport training;
- Training means.

2. Training load:

- Definition of training load, Inner load and outer load;
- Factors of training load;
- Overload – symptoms, causes and remedies.

3. Training methods:

- Methods based on continuous principle;
- Methods based on interval principle;
- Circuit training, Weight training.

4. Fitness:

- Concept of a) Total fitness, b) Physical fitness c) Motor fitness.
- Components of motor fitness: (Strength, Speed, Endurance, Agility, Flexibility)
- Coordinative components of fitness: (Orientation, Adaptation, Reaction ability, Differentiation, Coupling, Balance, Rhythm).

5. Technique:

- Concept of Technique, Skill and Style;
- Stages of Technique learning (First phase of rough coordination, Second phase of fine coordination and Third phase of automatic execution).
- Principles of technique training.

6. Planning:

- Basic concept of planning of training;
- Principles of planning;
- Planning of Micro-, Meso- and Macro cycles.

Reference:

1. Frank Dick : Sports Training Principles
2. Hardayal Singh : Science of Sports Training
3. A. K Uppal : Principle of Sports Training
4. V. L. Garry Kumar,
Mamta Manjari Panda : Modern Principles of Athletic Training.

Paper Code	Paper	Paper Title	Marks	Credits
114603	Paper-II	Exercise Physiology & Sports Biomechanics	100	4

Part A: Exercise Physiology

1. Introduction: Historical background of exercise physiology: Importance of exercise physiology in sports.

2. a) Cells; Tissues and Organ:

- Cell structure of living organism;
- Chemical composition;

b) Tissue: Aggregation of cells and their derivatives of performing specific function;

c) Organ: Aggregation of various types of tissues for specific function of organ.

3. Introduction of different systems of human body: Skeleton system; Muscular system; Respiratory system; Cardiovascular system; Nervous system; Endocrine system; Digestive system.

4. Muscle contraction:

- Types of muscle contraction: Isometric, Isotonic, Eccentric and Concentric.
- Slow twitch and fast twitch fibers; Distribution of slow and fast twitch fibers.

Characteristics and importance of slow and fast twitch fibers; Adaptational changes due to different fitness training; Muscle hypertrophy.

5. Respiratory system: Introduction and overview of the system; Respiratory muscles; Mechanism and function of the respiratory muscles.

Pulmonary capacities; Tidal volume; Vital capacity; Residual volume; Forced expiratory volume; Lung volume; Volume of maximum oxygen uptake; Adaptational changes due to exercise.

Pulmonary ventilation; Exchange of gases in lung and transport of oxygen in blood; Transport of Carbon di oxide; Exchange of gases at he tissue level.

Reference:

- | | |
|---------------------------|------------------------------------|
| 6. C.C. Chatterjee | : Human Physiology |
| 7. Jack H. Williams | : Physiology of Sport and Exercise |
| 8. Jack H. Wilmore | : Physiology of Sports |
| 9. Mathew & Fox | : Physiology of Exercise |
| 10. McArdle, Catch, Catch | : Exercise Physiology |

Part B: Sport Biomechanics

1. Introduction:

- Basic concept;
- Historical background;
- Importance in games and sports.

2. Kinesiology:

- Meaning and relation with sport biomechanics;
- Planes and axes for human motion;
- Fundamental movements around the joints.

3. Kinematics:

- Motion: definition and type;
- Kinematic parameters of linear and angular motion: Displacement, Speed; Velocity; Acceleration.
- Relation between linear and angular motion parameters.

4. Kinetics:

- Newton's laws of motion and their application in sports.

5. Machine function of human body:

- Lever: Definition; components, types, mechanical functions, skeletal levers.
- Wheel & axle: Definition, type, mechanical function, Wheel & Axle arrangements in human body.

6. Equilibrium:

- Definition, type and conditions of equilibrium;
- Factors affecting degree of stability.

Reference:

5. M. Gladys Scott : Analysis of Human Motion
6. Luttgens and Wells : Kinesiology
7. J. Dyson : Mechanics of Athletics
8. Petter McGinnis : Biomechanics of Sport and Exercise

Second Year

Paper Code	Paper	Paper Title	Marks	Credits
124601	Paper-III	Sports Psychology	100	4

1. Introduction:

- Meaning of Psychology and Sport Psychology;
- Importance of sport psychology;
- Meaning of growth and development;
- Psychological characteristics of growth and development.

2. Motor learning:

- Definition of learning and motor learning;
- Factors affecting motor learning;
- Selected theories of motor learning: Conditioned response; Insight; Trial and Error.

3. Emotion and sport performance:

- Anxiety: meaning and type: effect of anxiety on sport performance

4. Personality and sport performance:

- Definition of personality.
- Nature of personality.
- Sport participation and personality.

5. Motivation in sport:

- Meaning of motivation
- Types of motivation (Extrinsic and Intrinsic)
- Goal setting – and effective technique of motivation.

Reference:

5. M. L. Kaamlesh : Psychology in Physical Education and Sports
6. Agyajit Singh : Sports Psychology
7. R. May and Michel J. Asken : Sports Psychology
8. Jhelma S. Horn : Advance Sport Psychology

Paper Code	Paper	Paper Title	Marks	Credits
124603	Paper-IV	Sports Nutrition, Care & Prevention of Sports Injuries & Sports Management	100	4

Part A: Sports Nutrition, Care & Prevention of Sports Injuries

6. Introduction: Basic concept and importance in sports;

7. Nutrition:

- Concept of nutrition, Diet, Calorie, Energy balance.
- Components of nutrition – Carbohydrate, Fat Protein, Mineral, Vitamins, Water Fibers.

8. Nutrient balance: Weight control; Balance diet; Pre competition and competition and post competition. Meals, Diets for athletes of different age, sex and activity.

9. First Aid: Definition and Principles of First Aid.

10. Injury management: Soft tissue injuries of knee and ankle; rehabilitation of injuries; Injury Management program: Water training; Weight training; cycling; walking; Relaxation. Prevention of injuries through fitness; Warm up and treatment.

Reference:

- | | |
|-------------------------|--|
| 4. Sue Rodwell Williams | : Essentials of Nutrition and Diet Therapy |
| 5. Nancy Clark | : Sports Nutrition Guidebook |
| 6. Malinda J. Flegel | : Sprot First Aid. |

Part B: Sports Management**1. Concept of Sports Management**

- Introduction to Sports Management
- What is Sports Management
- Function of Sports Management
- Competency based approach and impements in Sports and Physical Education

2. Organization and Management in Sports

- Organization in sports
- Management of Sports in School. Colleges and Universites, Inter-University, District, Intra mural extra mural, National and International level.
- Roles and responsibilities of efficient managers.

3. Leadership in Sports Management

- Defination of Leadership
- Types and Importance of leadership in Sports
- Quality of good leader - Creativity, Innovation and Motivation
- Difference between Democratic and Autocratic leadership
- Communications
- Importance of communications in leadership

4. Ethics in Sports Management

- Decision making in Sports
- Types of Decision
- Decision makers
- Effective decision making
- Smart choices

5. Preparation of Planning and Budget

- Planning and Budget
- Types of Planning and Budget
- Qualities of Ferature of good plan
- Nature of General characteristics of Planning
- Various steps in Planning
- Advantage and disadvantage of Planning
- Preparation of budget, Collection fund, Purchase of Sports goods and their Preservation.

Reference:

6. Dr. Abdul Awal Khan and Abu Bokkor Siddikey : Management
7. Cerfo (10th Edition) : Mordern Management
8. S. S. Roy. : Sports Management
9. Harold J. Vancierzwaag : Sports Management in School & College
10. Mcgrow Hill : Management & Organization

Third Year

Paper Code	Paper	Paper Title	Marks	Credits
134601	Paper-V	Sport/Game (Hokey) (Theory)	100	4

1. Historical Development

- History of the game Hockey from ancient times to the present.
- History of Hockey in Bangladesh.

2. Rules and regulations of the game Hockey.**3. Fundamental techniques of the game Hockey:** definition, types and methods of execution of (i) Hitting, (ii) Receiving, (iii) Pushing, (iv) Scooping, (v) Flicking, (vi) Passing, (vii) Tackling, (viii) Dribbling and Dodging, (ix) Goal keeping.**4. Warming up:** (i) Definition, (ii) Types, (iii) Need and importance, (iv) Advantage and disadvantages, (v) Important factors to be noted during warming up.**5. Systems of play**

- Definition
- Different formation : 3-3-4-1/4-2-4/3-3-3-1-1
- Qualities and responsibilities of players in each formation.

6. Qualities of players

- Personal qualities.
- Qualities and efficiencies of players as per position.

7. Defensive and attacking principles

- Attacking principles : (i) Width in attack; (ii) Penetration in attach; (iii) Mobility in attack; (iv) Improvisation in attack.
- Principles for defense : (i) Delay in defense; (ii) Cover in defense; (iii) Concentration in defense; (iv) Control in defense.

Reference :

1. Mike Craig : *Modern Hockey for Juniors*
2. Deepak Jain : *Teaching and Coaching Hockey*
3. Md. Kaosar Ali : *Hockey Khelar Pratham Path*

Paper Code	Paper	Paper Title	Marks	Credits
134602	Paper-VI	Sport/Game (Hokey) (Practical)	100	4

1. Physical Fitness

- (i) Strength;
- (ii) Speed;
- (iii) Endurance;
- (iv) Agility;
- (v) Flexibility

2. Basic Techniques of the game:

- (i) Hitting, (ii) Receiving, (iii) Pushing, (iv) Scooping, (v) Flicking, (vi) Passing, (vii) Tackling, (viii) Dribbling and Dodging, (ix) Goal keeping.

3. Overall performance;
4. Application of the systems and formation of play;
5. Principles of attack and defense;
6. Match analysis;
7. Practical notebook and viva.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134603	Paper-V	Sport/Game (Cricket) (Theory)	100	4

1. Historical Development

- History of the game Cricket from ancient times to the present.
- History of Cricket in Bangladesh.
- International tournaments in cricket.

2. Terminologies of cricket.

3. Warm up (Definition, Importance, Types, Advantages, Factors to be noted during warming up).

4. Fundamental techniques of the Cricket :

- Bowling : (Basic bowling action-Grip, run up, delivery, follow through, swing, cutter, definition importance and types of spin)
- Batting : (Grip, Stance, Forward and backward defense, Off drive, Square Cut, Pull).
- Wicket keeping.
- Fielding (Defensive and attacking : Catching and Throwing).

5. Rules of the game Cricket and their application.

6. Captaincy.

Reference :

- Keith Andrew : *Coaching Cricket*
- Keith Andrew : *The Handbook of Cricket*
- Mahinder : *Learn to Play Good Cricket*

Paper Code	Paper	Paper Title	Marks	Credits
134604	Paper-VI	Sport/Game (Cricket) (Practical)	100	4

1. Physical fitness : (Students will be tested in any two)

- Strength;
- Speed;
- Endurance;
- Agility;
- Flexibility.

2. **Individual skill :**

(i) Batting; (ii) Grip, (iii) Stance, (iv) Forward and Backward defense, (v) Off drive, (vi) Square cut, (vii) Pull.

3. **Bowling :**

(i) In swing, (ii) Out swing, (iii) Off break, (iv) Googly.

4. Fielding and Wicket keeping.

5. Running between the wickets.

6. Captaincy.

7. Team tactics.

8. Practical note books and Viva.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134605	Paper-V	Sport/Game (Football) (Theory)	100	4

1. History of Football from ancient times to the present

2. History of Football in Bangladesh.

3. National and International football tournaments.

4. Organizational set up of Football in Bangladesh.

5. Rules of Football game (FIFA).

6. **Warming up :** (i) Definition, (ii) Importance, (iii) Types, (iv) Advantages, (v) Factors to be noted during warming up.

7. Fundamental techniques (Definition, importance, types and methods of execution) of (i) Kicking, (ii) Receiving, (iii) Dribbling, (iv) Feinting, (v) Passing, (vi) Heading, (vii) Tackling, (viii) Goal keeping.

8. **Systems of play**

Basic concept of systems/formations of play;

Types of formation : (2-4-4-1/4-2-4-1/2-4-3-1)

Duties and responsibilities of the players for implementing the formations of play.

Advantages and disadvantages of each type of formation.

9. Qualities of the players :

- (i) Qualities according to the position;
- (ii) Individual specific qualities of the players.

10. Attacking and defensive principles

Attacking principles : (i) Width in attack, (ii) Penetration in attack, (iii) Depth in attack, (iv) Mobility in attack, (v) Improvisation in attack.

Defensive principles : (i) Delay in defense, (ii) Cover in defense, (iii) Concentration in defense (iv) Control in defense.

11. Match analysis : Definition; Importance; Match analysis of different level.

Reference :

- 1. Nick Whitehead & Malcolm Cork : *Soccer Training*
- 2. Nelson McAvoy : *Teaching Soccer Fundamentals*
- 3. Deepak Jain : *Teaching and Coaching Football*
- 4. Peter Treadmill : *Skillful Soccer*

Paper Code	Paper	Paper Title	Marks	Credits
134606	Paper-VI	Sport/Game (Football) (Practical)	100	4

1. Physical fitness : (Students will be tested in any two)

- (i) Strength;
- (ii) Speed;
- (iii) Endurance;
- (iv) Agility;
- (v) Flexibility.

2. Individual skill : (Students will be tested in any five)

- (i) Kicking; (ii) Receiving, (iii) Dribbling, (iv) Feinting, (v) Heading, (vi) Passing, (vii) Tackling, (viii) Throw in, (ix) Goal keeping.

3. Overall performance (During match between two teams);

4. Application of the systems/formation of play;
5. Defensive and attacking principles;
6. Match analysis;
7. Practical note books and Viva.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134607	Paper-V	Sport/Game (Basketball) (Theory)	100	4

1. History of Basketball game :

- i) Basketball in Bangladesh;
- ii) World Basketball;
- iii) Structure of Basketball administration;

2. Rules of Basketball (FIBA).

3. Warming up and cool down :

- i) Definition;
- ii) Use of warming up and cool down;
- iii) Advantages and disadvantages of warming up and cool down;

4. Techniques of Basketball game :

- i) Passing and receiving;
- ii) Dribbling;
- iii) Rebound;
- iv) First break;
- v) Screening;
- vi) Shooting.

5. Qualities of a basketball player : a) Physical; b) Tactical

6. Formation of games or set play.

Reference :

1. Douchant : *College Basketball*
2. Bunn : *Basketball Teaching and Play*
3. O.P. Sharma : *Coaching Basketball*

Paper Code	Paper	Paper Title	Marks	Credits
134608	Paper-VI	Sport/Game (Basketball) (Practical)	100	4

1. Physical fitness (Strength; Endurance; Speed; Agility; Flexibility; Reaction time).
(i) Strength;
2. Individual defense.
3. Team defense : (a) Zone defense; (b) Man to man defense; (c) Combine defense
4. Individual attack.
5. Team attack (Formation game or set play).
6. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134609	Paper-V	Sport/Game (Tennis) (Theory)	100	4

1. **History of Tennis:** (a) Bangladesh; (b) International.
2. Organizational set up of Bangladesh Tennis Federation.
3. Rules of Tennis (ITF)
4. **Warming up and cooling down :** (a) Definition; (b) Advantage; (c) Disadvantage.
5. **Techniques and tactics of Tennis :**
(a) Service; (b) Fore hand stroke; (c) Back hand stroke; (d) Volley; (e) Smash.
6. **Systems of Tennis game :** (a) Definition; (b) Different systems of tennis.
7. Attacking techniques.
8. Defensive techniques.
9. **Tactics of Tennis :**
(a) Approach shot; (b) Service and volley; (c) Counter attack; (d) Back-line game; (e) Play at the net; (f) Puffing shot.

Reference :

1. Deepak Jain : *Teaching and Coaching Tennis*
2. M. Barrie Richmond : *Total Tennis*
3. Paul Metzler : *Advanced Tennis*
4. Bill. Murphy. Chet Murphy : *Tennis Hand Book*

Paper Code	Paper	Paper Title	Marks	Credits
134610	Paper-VI	Sport/Game (Tennis) (Practical)	100	4

1. Physical fitness :
(a) Strength;
(b) Endurance;
(c) Speed;
(d) Flexibility;
(e) Agility;
(f) Reaction time.
2. Individual skills.
3. Tactics and strategy of tennis game.
4. Game.

5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134611	Paper-V	Sport/Game (Boxing) (Theory)	100	4

1. **History of Boxing :** (a) Bangladesh; (b) Olympic; (c) International.
2. Organizational set up of Boxing :
(a) Bangladesh; (b) Olympic; (c) International.
3. Rules of Boxing (Olympic and International).
4. **Techniques and skills of Boxing :**
(a) Punch; (b) Jab; (c) Hook; (d) Cut; (i) Definition (ii) Importance; (iii) Types.
5. **Warm up and Cool down :**
(a) Definition; (b) Requirement; (c) Importance; (d) Advantage; (e) Disadvantage.
6. **Boxing attacking system :**
a) Different types of attack; (b) Advantage and disadvantage of different systems.
7. Different types of defense.
8. Physical fitness of a boxer.
9. Quality of a good boxer.

Reference :

1. Bob Mee : *Boxing*

Paper Code	Paper	Paper Title	Marks	Credits
134612	Paper-VI	Sport/Game (Boxing) (Practical)	100	4

1. Physical fitness :

(a) Strength;

(b) Speed;

(c) Flexibility;

(d) Agility;

(e) Endurance;

(f) Coordination.

2. **Basic Techniques:** Individual defense; Peace; Slip; Step back; Ducking; Lay back; Block.

3. Attacking techniques and tactics.

4. Defensive techniques and tactics.

5. Application of rules during ring fight.

6. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134613	Paper-V	Sport/Game (Shooting) (Theory)	100	4

1. Historical development of Shooting as a sport;

2. Description of a shooting range of International standard (including all events);

3. Description of all the events of shooting for International level of competition;

4. Description of the dress, materials and equipments for shooting;

5. Influence of psychological aspects, balance and readiness in shooting;
6. (i) Description of the events for men and women in 10m range. Total number of points in this event;
 (ii) Description of the events for men and women in 50m range. Total number of points in this event;
 (iii) Description of the events for men and women in 25m range. Total number of points in this event;
7. Description of the most effective techniques for standing, kneeling and prone positions;
8. Description of the safety rules imposed by World Shooting Federation for the safety of the shooting ranger;
9. Difference between the conventional arms and the arms used in shooting;
10. Description the organizational and function of the International Shooting Federation;
11. Detailed explanation of the reality for achieving highest level of success and the importance of shooting at the target.

Reference :

Official Status, Rules and regulations - *International Shooting Sport Federation*

Paper Code	Paper	Paper Title	Marks	Credits
134614	Paper-VI	Sport/Game (Shooting) (Practical)	100	4

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134615	Paper-V	Sport/Game (Gymnastics) (Theory)	100	4

- History of Gymnastics :** (a) Bangladesh; (b) International; (c) Olympic.
- Organizational set up of gymnastics.
- Code of points of gymnastics (Rules).
- Physical fitness for gymnastics :**
 - Strength, Endurance, agility, flexibility, speed, coordination.
 - Qualities of a good gymnast.
- Techniques of different skills of gymnastics**
 - Floor; (b) Parallel bar; (c) Horizontal bar; (d) Roman ring; (e) Vaulting horse; (f) Pummel horse; (g) Balance beam; (h) Uneven bar (Girls); (i) Side horse.
- Warm up and cool down :** (a) Reasons of warming up; (b) Advantages.
- Safety measures during gymnastics practice.

Reference :

- Gurdial Singh Bawa : *Fundamentals of Men's Gymnastics*
- Samiran Chakraborty : *Women's Gymnastics*
- Pintu Modak : *Coaching Gymnastics*

Paper Code	Paper	Paper Title	Marks	Credits
134616	Paper-VI	Sport/Game (Gymnastics) (Practical)	100	4

- Physical fitness : (a) Strength; (b) Speed; (c) Flexibility; (d) Agility; (e) Endurance; (f) Coordination.
- Warming up and cool down- (i) General; (ii) Specific for gymnasts.
- Technique-
 - a) Floor, b) Side horse, c) Uneven bar, d) Pummel horse, e) Balance beam, f) Roman ring.
 - a) Vaulting horse, b) Parallel bar, c) Side horse, d) Horizontal bar.
- Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134617	Paper-V	Sport/Game (Swimming) (Theory)	100	4

1. Introduction :

- i) Historical background of swimming;
- ii) History of swimming in Bangladesh;
- iii) History of swimming in Olympic games; Asian games; SAF games; National swimming competition.
- iv) History of Water Polo.

2. Organization and administration of swimming :

- i) Definition;
- ii) Need and importance of organization and administration;
- iii) Principles of organization;
- iv) Organizational set up;
- v) Qualities of a good administrator;
- vi) Organizing swimming competitions.

3. Lay out of swimming pool and diving pool.

4. Rules of International competition in swimming : (a) Arranging swimming competition; (b) Officials; (c) Stroke mechanism-Free style, Breaststroke, Back stroke, Butterfly.

5. Training theory : (i) Principles and purpose of training; (ii) Types of training-Continuous training; Interval training; Repetition training; Sprint training; Set training; Pace training.

6. **Additional methods :** (i) Weight training; (ii) Strength training – (a) with ones own body weight and (b) with additional weight (c) Circuit training; Training for flexibility.
7. Physique of swimmers; selection of talents.
8. **Health and nutrition of swimmers :**
 - i) Diet one week before the competition;
 - ii) Diet just before the competition;
 - iii) Diet during competition;
 - iv) Medical check up.
9. **Drill training :** (i) Free style; (ii) Breaststroke; (iii) Backstroke; (iv) Butter fly.
10. Warming up for swimming.
11. **Water Polo :** (i) Water polo pool; (ii) Goal; (iii) Ball; (iv) Cap, (v) Official; (vi) Timer; (vii) Start of play; (viii) Corner throw; (ix) Ordinary fouls; (x) Major fouls; (xi) Penalty throw; (xii) Extra time; (xiii) Referee.
12. **Rules of diving :** (i) Diving competition; (ii) Referee; (iii) Marking; (iv) Age specific diving; (v) Score sheet for diving.

Reference :

1. Torney : *Swimming*
2. James E. Counsilman : *The Science of Swimming*
3. Billingley : *Diving Illustrated*

Paper Code	Paper	Paper Title	Marks	Credits
134618	Paper-VI	Sport/Game (Swimming) (Practical)	100	4

1. Physical fitness :
 - (a) Strength;
 - (b) Agility;
 - (c) Flexibility;
 - (d) Endurance;
 - (e) Speed.
2. Individual skill for the techniques in :
 - Free style.

- Breast stroke.
 - Back stroke.
 - Butterfly.
3. Individual skill for water polo : Ball throw; Overall performance; Spring; Passing; Dribbling; Attacking; Defense.
 4. Officiating for water Polo and Diving.
 5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134619	Paper-V	Sport/Game (Track and Field) (Theory)	100	4

1. Introduction :

- Definition;
- Historical background of Track and Field Athletics;
- Role of Athletics in ancient and modern Olympics :
- History of Women Athletics;
- History of Athletics in Bangladesh;
- Olympic games, Asian games, SAF games, National Championship.

2. Organization and Administration of Track and Field :

- Concept and definition;
- Principles of organization;
- Organizational set up;
- Need for organization and administration;
- Qualities of good administrator;
- Administrative set up;

- Organizing Track and Field Athletic Meet.
- 3. Lay out of Athletic track.
- 4. General rules of International Athletic competitions.
- 5. Training theory : (a) Principles and purpose of training; (b) Types of training for running – Continuous methods (i) Continuous running; (ii) Fartlek; (iii) Hill running.
- 6. (i) Interval method; (ii) Repetition method; (iii) Pace work; (iv) Competitive pace.
- 7. **Helping methods** : (i) Weight training; (ii) Gymnastic exercise; (iii) Different types of jumping; (iv) Circuit training; (v) Total training.
- 8. Additional aspects : (i) Health; (ii) Diet; (iii) Medical check up.
- 9. Theory of Athletic events : (i) Track events; (ii) Field events.
- 10. **Running events, types and characteristics** :
 - (i) Sprint; (ii) Middle distance; (iii) Long middle distance; (iv) Long distance; (vi) Factors influencing running events- Stride frequency, power, stride length, endurance, technique, physique of the sprinters, evaluation tests Rules.
- 11. **Jumping events** :
 - (i) Basic Characteristic and types of jumps; (ii) Important factors; (iii) Approach; (iv) Take-off; (v) Height and Landing; (vi) Physique of the jumpers; (vii) Technique and style (viii) Evaluation test; (ix) Rules.
- 12. **Throwing events**
 - (i) Basic characteristics and types of jumps; (ii) Important factors; (iii) Technical features; (iv) Physique of the throwers; (v) Techniques and style; (vi) Evaluation test ; (vii) Rules.

Reference :

- 1. Kleff & Arnheim : *Modern Principles of Athletic Training*
- 2. G. Dyson : *Mechanics of Athletics*
- 3. Deepak Jain : *Coaching Track & Field*

Paper Code	Paper	Paper Title	Marks	Credits
134620	Paper-VI	Sport/Game (Track and Field) (Practical)	100	4

- 1. **Physical fitness** : (a) Strength; (b) Speed; (c) Endurance; (d) Agility; (e) Flexibility.

2. Basic techniques.
3. Overall efficiency.
4. Rules of Track and Field Athletics .
5. Practical note book.

Marks Distribution :

1.	Test for Physical fitness	-	15
2.	Test for basic techniques	-	30
3.	Test for Overall performance from the match between two teams (in any one aspect)	-	25
4.	Application of rules of the game	-	10
5.	Practical note book and viva-voce	-	20
Total =			100

Paper Code	Paper	Paper Title	Marks	Credits
134622	Paper- VII	Sport Science (Practical)	100	4

Sport Science (Practical):

- I) Science of Sport Training. (5X15) = 75
- II) Exercise Physiology.
- III) Sport Biomechanics.
- IV) Sport Psychology.
- V) Sport Injuries.

Note Book- 10
Viva-voce -15

Total = 100