



**II Semester  
THEORY**

**BPES201 T Exercise Physiology**

**Unit I: Functional Adaptations to Exercise**

- **1.1:** Hormonal control during exercise
- **1.2:** Exercise and the **neuromuscular system**
- **1.3:** **Metabolic adaptations** to exercise
- **1.4:** **Cardio-respiratory changes** during exercise
- **1.5:** Effects of exercise and training on **health and fitness**

**Unit II: Energy Continuum and Recovery Process**

- **2.1:** **Metabolism** and exercise
- **2.2:** **Recovery from exercise**
- **2.3:** Replenishment of **energy stores** during recovery
- **2.4:** Removal of **excess lactic acid** produced during exercise
- **2.5:** **Restoration of myoglobin oxygen stores**

**Unit III: Exercise in Hot and Cold Environments**

- **3.1:** **Body temperature regulation**
- **3.2:** Physiological responses to exercise in **heat**
- **3.3:** **Acclimatization** to exercise in heat
- **3.4:** Physiological responses to exercise in **cold**
- **3.5:** **Health risks** during exercise in cold environments

**Unit IV: Altitude and Physiology**

- **4.1:** **Exercise performance at altitude**
- **4.2:** Physiological responses to **acute altitude exposure**
- **4.3:** **Chronic altitude exposure** and acclimatization
- **4.4:** **Age-related changes** and exercise
- **4.5:** **Ergogenic aids** and physical activity



## **B PES202 T English**

### **Unit I: Vocabulary**

- **Use of Dictionary**
- **Use of Words:** Diminutives, Homonyms, & Homophones

### **Unit II: Essentials of Grammar – I**

- **2.1:** Articles
- **2.2:** Parts of Speech
- **2.3:** Tenses

### **Unit III: Essentials of Grammar – II**

- **3.1:** Sentence Structure
- **3.2:** Subject-Verb Agreement
- **3.3:** Punctuation

### **Unit IV: Spoken English Communication and Short Stories**

- **4.1:** Speech Drills
- **4.2:** Pronunciation and Accent
- **4.3:** Stress and Intonation
- **4.4:** **The Necklace**, by Guy de Maupassant
- **4.5:** **A Shadow**, by R.K. Narayan
- **4.6:** **The Luncheon**, by Somerset Maugham

## **B PES203 T Environmental Science (EVS)**

### **Unit I: Multidisciplinary Nature of Environmental Studies**

- **1.1:** Introduction to environmental studies and their importance
- **1.2:** Need for public awareness
- **1.3:** Sensitization and participation
- **1.4:** Swachh Bharat Abhiyan

### **Unit II: Natural Resources**

- **2.1:** Types of natural resources and their importance



- **2.2:** Food resources: World food problems and related aspects
- **2.3:** Land resources, Water resources, Forest resources – use and overuse
- **2.4:** Minerals and Energy resources – importance of renewable and sustainable energy
- **2.5:** Equitable use of resources for sustainable lifestyles
- **2.6:** Role of an individual in conservation of natural resources

### **Unit III: Ecosystems**

- **3.1:** Concept of an ecosystem
- **3.2:** Types of ecosystem
- **3.3:** Structure and function of an ecosystem, Producers, consumers, and decomposers
- **3.4:** Energy flow in the ecosystem, Food chains, food webs, and ecological pyramids
- **3.5:** Ecological succession
- **3.6:** Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems (ponds, streams, lakes, rivers, ocean estuaries)

### **Unit IV: Biodiversity**

- **4.1:** Introduction to biodiversity - genetic, species, and ecosystem diversity
- **4.2:** Bio-geographical classification of India
- **4.3:** Value of biodiversity: Consumptive use, productive use, social, ethical, aesthetic, and option values
- **4.4:** Biodiversity at global, national, and local levels, India as a megadiversity nation
- **4.5:** Hot-spots of biodiversity
- **4.6:** Threats to biodiversity: Habitat loss, poaching of wildlife, man-wildlife conflicts
- **4.7:** Endangered and endemic species of India
- **4.8:** Conservation of biodiversity: In-situ and Ex-situ conservation of biodiversity

## **BPES204 T Officiating and Coaching - II**

### **Unit I: Officiating and Coaching in Chosen Ball Game III**



- **1.1:** Dimensions, layouts, and marking of fields for chosen Ball Game III
- **1.2:** Rules and their interpretations in chosen Ball Game III
- **1.3:** Qualification and number of officials in chosen Ball Game III
- **1.4:** Coaching in the chosen Ball Game III

#### **Unit II: Officiating and Coaching in Chosen Ball Game IV**

- **2.1:** Dimensions, layouts, and marking of fields for chosen Ball Game IV
- **2.2:** Rules and their interpretations in chosen Ball Game IV
- **2.3:** Qualification and number of officials in chosen Ball Game IV
- **2.4:** Coaching in the chosen Ball Game IV

#### **Unit III: Officiating and Coaching in Athletics & Yoga**

- **3.1:** Layout, dimensions, and marking in field events of athletics
- **3.2:** Rules and their interpretations in field events of athletics
- **3.3:** Yoga - Pranayama and Meditation
- **3.4:** Coaching in field events of athletics and practice of Pranayama & Meditation

#### **Unit IV: Major Tournaments in Athletics**

- **4.1:** Major tournaments/trophies of chosen Ball Game III
- **4.2:** Major tournaments/trophies of chosen Ball Game IV
- **4.3:** Major tournaments/competitions of athletics
- **4.4:** Yoga and its tournaments.

**PRACTICAL**

**BPES205 P Major Ball Game-II (SGFI/AIU/IOA Recognized Game)**



### **Unit I: History and Development of the Game**

- History of the selected ball game at **international** and **national** levels.
- Development and milestones in the game.
- Dimensions and Marking of the Playing Area
- Dimensions, **layout**, and **marking** of the playing area for the selected ball game.

### **Unit II: Fundamental Skills of the Game**

- **Skills** required for the game (basic and advanced skills).
- Conducting **skill tests** and arranging assessments.
- Rules and Regulations
- Detailed study of the **rules** of the selected ball game.
- Interpretation of the **rules** and **officiating** procedures.

### **Unit III: Officiating and Referee**

- **Officiating roles: Referee, Umpire, Scorer, and Curator** for self-employment.
- Responsibilities and practical application of officiating in real-time games.

### **Unit IV: Sports Simulation Laboratory**

- Use of **animated videos** and digital platforms (**Swayam, E-Yantra, SwayamPrabha, YouTube Streaming**) to practice skills.
- Continuous **error rectification** for skill simulation and mastery.

## **BPES206 P Track & Field: Running and Throwing**

### **Unit I: Basics of Jumping Events in Athletics**

- **Introduction to jumping events** in athletics.



- **Long Jump:** Techniques, jumping pit setup, take-off board, approach run, and skill development.
- **Triple Jump:** Basics, jumping pit, take-off board, approach run, and required skills.
- **High Jump:** Basics of high jump, jumping pit, approach run, and styles.
- **Pole Vault:** Basics of pole vault, jumping pit, equipment setup, approach run, and skills.

### **Unit II: Marking of Jumping Arena**

- Detailed **marking** of the jumping arena for different events.
- **Arrangements** for jumping events and the proper setup of various competition areas.

### **Unit III: Jumping Tests and Their Arrangements**

- Conducting **jumping tests** for athletes.
- Arrangements and **scoring** for jumping tests.

### **Unit IV: Rules, Scoring, and Their Interpretations**

- Study and interpretation of the **rules** for all jumping events in athletics.
- **Scoring systems** for jumping events, including adjustments for different conditions and setups.

### **Unit V: Team Selection and Coaching in Jumping Events**

- Techniques for **team selection** for **jumping events**.
- **Coaching** methods tailored to improving performance in **long jump, triple jump, high jump, and pole vault**.

### **Unit VI: Officiating & Refereeing in Jumping Events**

- The role of the **Referee, Umpire, and Scorer** in jumping events.
  - The basics of **curatorship** and the possibility of **self-employment** in officiating and event management.
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