

## 26. PHYSICAL EDUCATION

There shall be two theory papers of 60 marks each and a practical examination carrying 80 marks. A candidate must pass in theory and practical exam. separately.

**Paper : I Anatomy and physiology of Exercise**

Time: 3 hours Max. Marks: 60 Min. Pass Marks

*Introduction Unit I : Introduction*

(A) Meaning and concept of Anatomy, Physiology and Exercise

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Physiology, its need and importance in Physical Education and Sports.

(B) Definition of cell, tissue, organ and systems. Microscopic structure of cell.

*Unit II : Skeletal and Muscular System*

(A) Elementary knowledge of skeleton system, terminology of various movements around joints.

(B) Types of muscles (Voluntary, Involuntary and Cardiac) General characteristic (Properties) of Muscles (Elasticity, Contractibility and Irritability).

*Unit III : System*

(A) Brief Introduction and structure of various systems of the body. (Cardio-vascular, Respiratory, Digestive, Nervous System)

(B) i. Pumping action of heart

ii. Mechanism of respiration

iii. Role of Glands in growth, development and body function.

*Unit IV : Physical Fitness and Training*

(A) Physiological Concept of Physical fitness, training warming up, conditioning and fatigue.

(B) Physiological aspects of development of strength enhance, skill, speed and agility.

*Unit V : Physiology of Exercise*

(i) Effect of exercises on respiratory circulatory muscular system.

(ii) Neuro Muscular Co-ordination

(iii) Second wind, Oxygen debt and binesthetic sense.

(iv) Stich and Cramps

(v) Obesity and body weight control.

**Books for Reference :**

1. Morehouse & M Physiology of Exercise : C.V. Mosby Co., St. Louis.
2. Srivastava etc. : Textbook of Practical Physiology, Scientific Book Agency, Calcutta.
3. Cuyton A.C. : Functions of Human Body : W.B. Saunders Co. London.
4. Pearce Evelyn C. : Anatomy and Physiology of Nurses : Faber & Faber Ltd. London.

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5. Karpovich and Sinnesser : Physiology of Muscular Activity : W.B. Saunders Co. London.
6. Pearce J.W. : Anatomy for students and teacher of physical Education. Edward Arnold & Co., London.
7. Duvel Ellen Neill Kinesiology : The Anatomy of Motion.
8. देशपाण्डे सुरेश : मानव क्रिया विज्ञान : अमृतम व्यायाम मण्डल, अमरावती।
9. सिंह टी.के. : शरीर रचना एवं शरीर क्रिया विज्ञान : दीपक प्रकाशन, जोधपुर।
10. आर्मस्ट्रांग व जैकसन : नर्सों के लिए शरीर सम्बन्धी ज्ञान : एन.आर. ब्रदर्स, इंदौर।
11. कंवर रमेश चन्द : शरीर क्रिया विज्ञान व स्वास्थ्य शिक्षा : अमित ब्रदर्स, नागपुर।
12. ध्यानी वी.एस. : शरीर क्रिया विज्ञानीया : चौखम्भा ओरियन्टल, वाराणसी।
13. पाण्डेय के. और वर्मा पी. : शरीर क्रिया विज्ञान, हिन्दी भा.का. विश्वेशालय, दिल्ली।
14. अजमेर सिंह और अन्यः शारीरिक शिक्षा स्वास्थ्य एवं खेलों की आधुनिक पाठ्य पुस्तक (बी.ए. पार्ट II, III) : कल्याणी पब्लिकेशंस, लुधियाना।

**Paper-II : Managements & Methods of Physical Education**  
Time : 3 hours Max. Marks : 60 Min. Pass Marks : 22

### *Unit I : Introduction*

1. Meaning and Importance of "Teaching Methods", Factors to be considered in determining the methods of teaching.
2. Types of Teaching Methods.
3. Principles of Teaching.

### *Unit II : Organisation*

Organisation of Sports and National, State, District and village Level for Educational Institutions, Open tournaments & Annual Sports Meet

### *Unit III : Tournaments*

Meaning, types of Tournaments, Method of drawing fixtures, Merits and Demerit of various types of Tournaments.

### *Unit IV : Facilities and Equipments*

1. Need and importance of equipments for Physical Education.
2. An ideal list of equipments for Physical Education.
3. Realistic approach in purchases, purchases procedures.
4. Development of improvised equipment and storekeeper.

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**Unit V : Office Management and Budget.**

- (a) Maintenance of Records, Filing and Office correspondence.  
 (b) Physical Education Budget and its preparation, Maintenance of Accounts, Income & Expenditure (Sources).

**Books Recommended :**

1. G. Tirunarayanan & S. Hariharan : Methods in Physical Education, Alagappa College of Physical Education, Alagappauram Karaijudi.
2. Hari Shankar Sharma : Physical Education - Organisation, Administration and Supervision (Hindi).
3. Knapp Clyde and Hagman, E.P. : Teaching Methods for Physical Education, New York : Mc Graw Hill Book Co. 1984.
4. Bucher C.A. : Administration of Physical Education and Athletic Programmes. The C.V. Kosby Company, London, 1983.
5. Zeligler, E.F. And Bowiew G.W. : Management Competency Development in sports and physical education, Lea and Febiger, Philadelphia, 1983.
6. कंवर आर.सी. : शारीरिक शिक्षा संगठन एवं प्रशासन, अमित ब्रदर्स, नागपुर।
7. अरोड़ा पी.के. : शारीरिक शिक्षा में संगठन, संचालन एवं मनोरंजन, प्रकाश ब्रदर्स, लुधियाना।
8. कमेंकर ए.के. और श्रीवास्तव ए.के. : शारीरिक शिक्षा संगठन; प्रशासन, पर्यवेक्षण एवं शिविर, सुयोग प्रकाशन, अमरावती।
9. मोहम्मद वाहित और दीक्षित ए.के. : शारीरिक शिक्षा में शिक्षण विधियाँ : इस्लामीज रेलवे क्रॉसिंग, लखनऊ।
10. पाण्डेय लक्ष्मीकान्त : शारीरिक शिक्षा की शिक्षण प्रवृत्ति, मैट्रोपोलिटन बुक कं. प्रा. लि., नई दिल्ली।
11. वैष्णव राजेन्द्र प्रसाद : शारीरिक शिक्षा का संगठन व विधियाँ : श्रीयांश पब्लिकेशन्स, जयपुर।
12. श्रीवास्तव ए.के. : शारीरिक शिक्षा और खेल में संगठन व पर्यवेक्षण, दिल्ली।
13. अजमेर सिंह और अन्य : शारीरिक शिक्षा स्वास्थ्य एवं खेलों की आधुनिक पाठ्यपुस्तक (बी.ए. पार्ट I, II, III) : कल्याणी पब्लिकेशन्स, लुधियाना।
14. सिद्धाना अशोक कुमार : शारीरिक शिक्षा सिद्धांत, मनोविज्ञान एवं इतिहास : श्रीयांश पब्लिकेशन्स, जयपुर।

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*Syllabus B.A. Part-II*

**Practical** Max. Marks 80 Min. Pass Marks 28

The practical examination shall be conducted by a panel of examiners.

A candidate shall be required to show his/her familiarity (Rules & Techniques) and give performance/demonstration in the following:

1. Athletics (Compulsory) 40 Marks

Triple-Jump, Pole Vault, Javelin, Hammer and Walking.

2. Any one game of candidates choice from the following: 40 Marks

(a) Cricket (b) Hockey (c) Kho-kho (d) Yoga

40 Marks  
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