

॥ अंतरी पेटवू ज्ञानज्योत ॥



**North Maharashtra University,  
Jalgaon.**

**Syllabus for**

**B.P.E.D.**

**(ONE YEAR COURSE)**

**W.E. From June, 2003**

॥ अंबरी देवू ज्ञानज्योत ॥

**NORTH MAHARASHTRA UNIVERSITY, JALGAON**  
**B. P. Ed. CURRICULLUM**  
**STRUCTURE**  
**(In Force From Academic Year 2003-2004)**

		Total Marks 1200	Total Clock Hours 1200	
Subject Heads	Course	Marks	Clock Hour	
Theory	<b>Part I</b>			
	I	Teacher of Physical Education and Physical Education in Emerging Indian Society	100	80
	II	Management of Physical Education, Officiating and Coaching of Games and Sports	100	80
	III	Kinesiology, Physiology of Exercises, Anatomy, Physiology and Health Education	100	80
	IV	Psychology, Guidance, Counselling and Evaluation in Physical Education	100	80
	V	History, Recent Development in Physical Education & Yogic Education	100	80
Practical	VI	Methodology of Physical Education and one School Subject (Marathi, Hindi, English, History, Geography, Math, Science)	100	80
		<b>Part II</b>		
	VII	Term End Examination and Tutorials (12 Tutorials)	50	--
	VIII	Computer Literacy Programme (Each College must Arrange Computer Literacy Programme for Training Students)	50	-
	IX	Training Programme A) Micro Lesson : 16 B) Integration Lesson : 04 C) School Practice Lesson : 20 a) 10 School Subject Lessons b) 10 Physical Education Lesson	50	120
			20	80
80			250	
X	Practical Ground Activities	250	270	
XI	Annual Lesson (University Examination)	100	---	
	<b>Total</b>	1200	1200	

**NORTH MAHARASTRA UNIVERSITY**  
**FACULTY OF EDUCATION**  
**Examination leading to the degree of**  
**(Bachelor of Physical Education ) B.P.Ed. (One Year Course )**  
**(In force from the academic Year 2003-2004)**

**Title-**

Title of the degree shall be Bachelor of Physical Education. (B. P. Ed.)

**Eligibility for Admission -**

Candidate should have passed the Bachelor's Degree of any recognin University in any faculty with at least 45 % marks and should have offered at least one school subject at the first and /or second degree level as principal or subsidiary or allied or optionals subject

**Selection Procedure -**

Admission to the eligible candidates will be given as per the selection procedure laid down by the state government from time to time.

**Norms for appearing at B. Ed. Examination -**

Student teachers should have kept two terms with at least 80 % attendance in College. He should have completed all the practical work to the satisfaction of the principal. He should have obtained such certificate from the principal of the college. Unless & until he obtains such a certificate he will not be allowed to appear for university examination.

**Structure of B. P. Ed. Course**

Part	External Assessment	Internal Assessment	Total
Part I (Theory)	600	-----	600
Part II (Practical )			
* Term End Examination & Tutorials		50	50
* Computer Literacy Programme		50	50
* Traning Programme		150	150
* Practical Ground Activities	250		250
* Annual Lesson	100		100
	Grand Total		1200

**PART I ( THEORY)**

◆ External Assessment 600 Marks ( University Examination )

Course - I	Teacher of Physical Education and Physical Education in Emerging Indian Society	100 Marks
Course - II	Management of Physical Education, Officiating and Coaching Of Games & Sports	100 Marks
Course - III	Kinesiology, Physiology Of Exercises, Anatomy, Physiology and Health Education	100 Marks
course - IV	Psychology , Guidance Counselling and Evaluation in Physical Education	100 Marks
Course - V	History, Recent development in Physical Education & Yogic Education	100 Marks
Course - vi	Methodology of Physical Education and one School Subject	100 Marks

**PART II (Practical )**

◆ Subject head V II

Total Marks 50

Term end Examination and Tutorials (12 Tutorial) (Internal Assessment )

- 1) First Term and Examination of 50 marks each paper will be held at first term end It will consist at 300 marks
- 2) Second term end examination of 100 marks each paper will be held before second terms end it will consist of 600 marks.
- 3) Test Tutorials During the year 12 Tutorials each of 25 marks will be taken i.e. total 300 marks. Out of above 1200 marks one should get minimum 600 marks i.e 50 % marks.

◆ **Subject head VIII ( Internal Assessment ) Total Marks 50**

**Computer Literacy Programme:-**

During the training programme each college must arrange computer literacy programme for student Every year during the month of february practical examination will be held for 50 marks.

◆ **Subject head IX ( Internal Assessment ) Total Marks 150**

**Training programme**

for each lesson 20 marks

- a) Micro lesson Academic 8  
Physical Education 8
- b) Integration Lesson (i) Academic 2  
ii) Physical Education 2

For each Integr lesson 20 Marks weightage will be given

- c) School Practice teaching lesson 20
- a) 10 Lessons of School subject.
- b) 10 Lessons of Physical Education

for each lesson 20 marks weightage will be given Total training programme will consist of 800 marks and will be calculated out of 150 marks.

◆ **Subject Head X ( External Assessment ) Total Marks 250**

Practical skill test of ground activities of 250 marks will be Considered as an external assesment. The external assesmen will be conducted by appointing one external & one internal examiners The external examiners for skill test past II will be appointed by B.O.S. in Physical education of North Maharashtra University Jalgaon. while appointing the external examiners 30 % weightabe should be given to out of the university area for each batch of 20 students one pair of external and interna examiners will be appointed.

One of the examiner from internal examiners will act as sr. Examiner of examination

◆ **Subject Head XI ( External Assessment ) Total Marks 100**

**Annual Lesson ( Each lesson is 50 marks )**

One Lesson Physical Education

One Lesson School Subject

**Practical work ( Ground Activites )**

Syllabus for skill tests will be divided in to the follwing events.

- i) **Atheletic Events :- 60 Marks**
  - 1) **Running ( any two ) 20 Marks.**
    - 1) Sprints
    - 2) Longrun
    - 3) Hurdle run
    - 4) Relay
  - 2) **Jumping ( any two ) 20 Marks.**
    - 1) R. Broad Jump 2) High Jump 3) Hop-step Jump 4) Pole Vault :



- 3] **Throwing ( any two )** **20 Marks**  
1] Shot Puot 2] Hammer Throw 3] Discuss Throw 4] Javelin Throw.
- ii) **Gymnastics (Men & Women)** **30 Marks**
- | <b>Men ( Any Three )</b> | <b>Women( Any Three )</b> |
|--------------------------|---------------------------|
| 1] Mat exarcies          | 1] Mat Exercies           |
| 2] Roman ring            | 2] Balancing Beam         |
| 3] Horizontal Bar        | 3] Unven Parallel Bar     |
| 4] Parallel Bar          | 4] Gymnastics Position    |
| 5] Vaulting Horse        |                           |
| 6] Pyramids              |                           |
| 7] Malkhams.             |                           |
| 8] Pommelled Horse.      |                           |
- Each activity carries 10 Marks.
- iii) **Combative** **10 Marks**  
1] Wtestling (Men) or Dance (Women)
- iv) **Calisthenics :-** **10 marks**  
(Any two Per 5 mark )  
1] Mass P.T.      2] Dumbells      3] Ring Drill      4] Ghungar Khathi
- v) **Drill & Marching** **10 marks**
- vi) **Lezim** **10 marks**
- vii) **Yogasana and kriyas** **30 marks**
- viii) **Danda Baithakas Or Squats & Flower Deeps** **10 Marks**  
(Men) (Women)
- ix) **Mejor games ( Any Six )** **60 Marks**
1. Kabaddi    2. Kho-Kho    3. Volley Ball    4. Foot Ball    5. Basket Ball    6. Hand Ball  
7. Saft Ball    8. Hockey    9. Bad Minton    10. Ball Badminton    11. Tennis  
12. Table Tennis    13. Cricket    14. Tenicoff    15. Swimming
- each game carries 10 Marks.
- x) **To mentain a Record book of one game** **10 Marks**
- xi) **First aid training & camping** **10 Marks**

**Total Marks 250 Marks**

**B. P. Ed. Programme is intended to prepare the teacher of Physical Education for the Secondary Schools.**

**Objectives :-**

The Programme aims at realising the following objectives -

- \* to enable teachers to understand the nature, purpose and philosophy of physical education at the secondary stage.
- \* to prepare teachers of physical education with broader educational perspectives.
- \* to develop potentialities for planning and organising physical education programme & activities.
- \* to develop capacity to organize leisure and recreational activities.
- \* to empower them to inspire their students to actively participate in physical and yogic exercise, games and sports.
- \* to enable teachers to develop personality, character, will-power, democratic values and positive attitude towards life among their students,
- \* to make teacher capable of imparting basic knowledge about health, hygiene & nutrition.
- \* to develop skills and competencies to organise school and community games and sports
- \* to cultivate the spirit of sportsmanship, mental & physical alertness, scientific temper & optimism,
- \* to promote mental health, power of self- decision and self control, correct judgement and action, emotional stability and equanimity, respect for others and appreciation & interest for indigenous games, sports and yogic exercises and
- \* to create awareness about health and hygiene in the community.

**Course I**  
**TEACHER OF PHYSICAL EDUCATION AND PHYSICAL EDUCATION IN**  
**EMERGING INDIAN SOCIETY'**

**Objectives :-**

- 1) To Understand the meaning of physical Education & Education
- 2) To Understand different interpretation of physical Education.
- 3) To Understand the philosophical base of physical Education.
- 4) To Understand the aims and objects of physical Education.
- 5) To Understand the sociological base of physical Education.
- 6) To Understand the value of leadership in physical Education.
- 7) To Understand how values of media are inculcated through physical Education.
- 8) To Understand the role of a physical Education Teacher in emerging Indian society.
- 9) To Understand inter relationship between a school & a society.
- 10) To Understand the role of family in child Education
- 11) To Understand the changing role of P.E. Teacher in emerging Indian society.
- 12) To Understand the professional ethics of P.E. Teacher in emerging Indian society.
- 13) To Understand the concept of social & national integration.
- 14) To Understand the value of professional development of a P.E. Teacher
- 15) To Understand the value of international understanding.

- Unit I-**
- a) Education - Defination, Meaning, Aims and Objectives
  - b) Need to Understand and study the educational Philosophy by teacher.
  - c) Education for social and national solidarity.  
The role of Schools in fostering the spirit of Social and national integration among the students in adolescent age.

- Unit II-**
- a) Physical Education - Modern Defination, Meaning, Aims, & Objectives of Sec. School.
  - b) Meaning of the terms, Physical Culture, Physical training, Physical Exercise, Drill and Marching, Sports and Games, Gymnastics, Movement Education.
  - c) Relation between physical Education and General Education.
  - d) Place of Physical Education in General Education.

- Unit III-      Philosophy of Physical Education**
- a) Need for Philosophy in Physical Education.
  - b) Physical Education and Nationalism.
  - c) Modern Additions in Sports & Games on International Level ( Adventures Sports)

- Unit IV-      Leadership**
- a) Qualities & Qualification of a Leader in Physical Education.
  - b) Types & Development of Leadership.
  - c) The Physical Education as a Profession.
  - d) Physical Education Teacher & Fitness Movement.

- Unit V-      Sociological Influnce & Physical Eudcation**
- a) Social Inheritatuce Traditions & their influnce on behaviour pattern (Games & Dances)
  - b) Social Values & Development of Difference Trials & Ideas.
  - c) Physical Education as a socializing agency.

- d) Public relation through physical education - demonstration, Physical Education Day, Play Day, Krida Din.

**Unit VI - Various Channels or Media of Physical Education**

- a) Formal, Informal, & Other Mass Media.
- b) The functions of School as formal Educational Institution.
- c) Interrelationship between a school & a society,.
- d) School - i) a means of behavior change. ii) a centre of community development iii) an informal educational institution,
- e) The role of family in child education, function of family as a social unit.
- f) The changing structure & role of family in Indian Society, the other educational media or channels - newspaper, film, T. V., Charity Institution & culture & sports association.

**Unit VII - The role of a Physical Education Teacher in emerging Indian Society.**

- a) The concept of learning process.
- b) The teachers teaching profession,
- c) Changing role of a Physical Education Teacher in emerging Indian Society,
- d) Physical Education Teachers Social Status of Past & present.
- e) Professional development of a Physical Education Teacher, Professional problem of a Physical Education Teacher.
- f) Pre-service & Inservice Physical Education Teachers Education,
- g) The various functions of Physical Education Teachers organisation,
- h) A Physical Education Teacher & his professional ethics in emerging Indian Society,

**Unit VIII- Physical Education for achieving social & national integration.**

- a) Concept of social & national integration.
- b) The hurdles in achieving national integration,
- c) Physical education for developing sence of social & national integration,
- d) Physical Education for international understanding.

**Course I**

**Books Recommended**

1. Philosophical foundations for Physical Health and recreation education - Ziegler
2. Foundation of Physical Education - C.A.Bucher
3. Meanud of Physical Education in India - D.G.Wakharkar
4. Foundation of Physical Education - Satish sonkar
५. शारीरिक शिक्षणाचे आधुनिक स्वरूप - डी. जी. वाखारकर
६. शारीरिक शिक्षक सिध्दांत तथा इतिहास - डॉ. कमलेश
७. शारीरिक शिक्षणाचा विकास भाग - २ - द.ब. कोठीवाले
८. शारीरिक शिक्षणाची अध्यापन पध्दती व मुलतत्वे - डॉ. वि. कृ. कानडे
९. शारीरिक शिक्षणशास्त्र व परिचय - पा. श्री. वि. गंधे
१०. शैक्षणित तत्वज्ञान व शैक्षणिक समाजशास्त्र - म. वा. कुडले
११. उदयोन्मुख भारतीय समाजातील शिक्षण - प्रा. विद्याधर
१२. शारीरिक शिक्षण तत्वे व स्वरूप - प्रा. श्रीपाल जर्दे / सुनिता जर्दे
१३. शारीरिक शिक्षणाची तत्वे व मनोरंजन - दि. गो. वाखारकर



१४. शारीरिक शिक्षण की सौध्दातिका - डॉ. मदन कमलेश
१५. शारीरिक शिक्षा के मुलाधार - एम. चौधे / पाठक / व्दिवेदी
१६. शारीरिक शिक्षणाचे ऐतिहासिक स्वरुप - वाखारकर / आलेगावकर
१७. शारीरिक शिक्षणाची तत्वे, इतिहास, आरोग्य शिक्षण आणि प्रशिक्षण पध्दती - प्रा. जे. पी. शेळके
१८. शारीरिक शिक्षा के सिध्दांत - डॉ. कमलेश / सहगल
१९. शैक्षणिक तत्वज्ञानाची रुपरेषा - ग. वि. अकोलकर
२०. शारीरिक शिक्षणाचे संघटन व प्रशासन - प्रा. शंकर तिवारी
२१. क्रीडा ज्ञानकोष - प्रा. सुरेशचंद्र माडकणी
२२. खेळ संचालन व क्रीडा मार्गदर्शन - प्रा. सिलेदार, प्रा. परिहार

**Course - II**  
**MANAGEMENT OF PHYSICAL EDUCATION, OFFICIATING AND COACHING OF GAMES AND SPORTS**

**Objectives - To help the students -**

1. To understand the general Principle of management of Physical Education.
2. To understand heirachy of administration.
3. To understand the scheme of Management.
4. To understand the facilities needed for Physical Education.
5. To understand the principles of Time-Table framing.
6. To understand the need of keeping records and registers.
7. To understand the importance and type of Tournaments and Competitions.
8. To understand the concept and importance of supervision.
9. To understand the rules of officiating and principles of coaching.
10. To understand the value of Camp & Picnic.
11. To understand the value of Coaching in Sports & Games.
12. To understand the value of relationship of Official with Management.

- Unit I-**
- i) Introduction & need of Management of Physical Education in Sec. School.
  - ii) The educational structure from Primary to University stages.
  - iii) Governments Structure of Sports & Youth Services & for non School going population special reference to Maharashtra state.

- Unit II-** **Administrative elements in Schools and Colleges.**
- i) Programme Planning - Principles and factors affecting the Time-table, preparing time - table, scheduling school sports, problems of school sports Intramurals and Extramurals .
  - ii) Facilities construction and care of school building Gymnasium, Swimming Pool, Play fields, Play grounds.
  - iii) Equipments : Needs, Purchase, Maintenance, Issue and Disposal .

- Unit III-**
- a) **Maintenance of Records and Registers.**
    - i) Meaning of Record and Importance of Keeping Records.
    - ii) Types of Records.
  - b) **Financial Management**
    - i) Preparation of Budget, Budget of Physical Education Programme of School.
    - ii) Rules for expenditure forms and Routing for payments and entries, Accounting and Auditing.

- Unit IV-** **Tournament - Management of Competition**
- a)
    - i) Importance of Tournament
    - ii) Types of Tournament - Knock - Out Tournament, League or Round Robin Tournaments, Combination Tournament, Challenge tournament
  - b) Awards and Incentives.
  - c) Meaning & Importance of Officiating.
  - d) Qualities & Duties of an official & relation with the management.

- Unit V -** **Camp & Picnic**
- i) Methods of organisation camps and picnic
  - ii) Organisation and conduct of camp.
  - iii) Hikes and Varied programmes for different age groups.
  - iv) Organisation of National Days Programme ( Republic Day & Independent Day )

- Unit VI-
- a) i) The History, values and present status of the game.
  - ii) The fundamental skills of the game.
  - iii) Importance of positional play and formation of play in team games.
  - b) i) Rules in their interpretation of various individuals team games and sports as Athletics, Gymnastics, wrestling, swimming, etc.
  - ii) Preparation and furnishing the score sheets of games and sports.
  - iii) Marking of track & various play fields.
  - iv) Signals of officiating of various games.

- Unit VII-a)
- i) Coaching : Aims, objectives and specifications of coaching, skills, techniques, and philosophy & straty of coaching.
  - ii) Teaching : Coaching and training learning Definiation and Purpose.
  - iii) Qualities and Qualification of a Coach.
  - iv) Duties & Relations of a coach with players and others.
- b)
- i) Principles of Coaching.
  - ii) Principles of Training
  - iii) Methods of Coaching
  - iv) Stages of Teaching games and sports skill and techniques.
  - v) Warming up and Conditioning of Players and teams.

- Unit VIII-
- i) Selection of team players and team.
  - ii) Analysis of players.
  - iii) Requisites of a champion, Ability, interest, fitness, Pride, Determination.
  - iv) Promoting and maintaining interest in coaching.

#### BOOKS RECOMMENDED

1. The Administration of Physical Education - J. B. NASH
2. Mannual of Athletics Competition - Jal D. Pardiwala
3. Role Books of various Sports & Games by different national fedration of India -
4. Organisation & Administration of Physical Education - Dr. J. P. Thomas
5. Encyclopedia of Sports & Games - R. g. Goyal/Mehra
6. International Encyclopedia of Sports & Games - Ashok Kumar
7. Teaching Technology officials Rules of Sports & Games - R. Varma / S. Varma
8. Organisation, Administration & Recreation in Physical Education - P. K. Aroda
9. Organisation and Administration in Physical Education and sports -
10. Sports Management - S. K. Pachuri
११. विविध क्रीडा स्पर्धा आयोजन व स्वरूप - प्रा. नानासाहेब फडले, प्रा. कुशादा पिंगळे
१२. कोचिंग अॅन्ड ऑफीशिएटींग मेम्स अॅन्ड स्पोर्टस - प्रा. व्यंकटेश वांगवाड
१३. क्रीडा स्पर्धांचे संयोजन - विजय रा. गोरे
१४. शारीरिक शिक्षणाचे आयोजन, नियोजन व निरीक्षण - दि. गो. वाखाकर / आलेगावकर
१५. शारीरिक शिक्षा मे संघटन, संचालन एवं मनोरंजन - पी. के. अरोडा
१६. शारीरिक शिक्षा संघटन, प्रशासन, पर्यवेक्षण एवं शिबीर - करमरकर / श्रीवास्तव
१७. शारीरिक शिक्षण अध्यापन पध्दती - प्रा. स. के. शिंदे
१८. ऑफीशिएटींग अॅन्ड कोचिंग - जैन / अग्रवाल
१९. मैदानी स्पर्धा नियम व आयोजन - रमेश तावडे / राम भागवत
२०. क्रीडा स्पर्धा आणि समाने पूर्वतयारी - प्रा. भा. स. गोडबोले

**Course III**  
**ANATOMY, PHYSIOLOGY, PHYSIOLOGY OF EXERCISES,**  
**KINESIOLOGY, & HEALTH EDUCATION**

**Objectives -**

1. To understand the structure and functions of the human body.
2. To understand the effect of exercise on the different systems of the human body.
3. To understand the basic principles underlying human nature.
4. To know the dietary requirements of children, athletes and sportsmen.
5. To understand the need of Health Education with reference to an individual, family and the community.
6. To understand the aspects of correct posture and remedial measures.
7. To understand the school health service programme.
8. To understand the value & importance of First Aid in Physical Education.
9. To understand the value & importance of Physiotherapy & rehabilitation in Sports Injuries.
10. To understand the technique of Massage & its importance in Sports Field.

**Unit - I**

- i) Introduction to the Human Body, Basic constituents of the living body- cell Tissues Organs and Systems.
- ii) The Skeleton Systems, Bones of the Skeleton, Structure and types, Development & function of bone in Human body.
- iii) Posture - Causes of Posture defects knock knees, flat, foot, corrective exercises.
- iv) Effect of Exercise on Muscle Structure & Function. Muscle Fatigue, Muscle Pool.

**Unit II**

**Different System**

**a) Muscular System**

- i) Muscular type - voluntary, involuntary and cardiac,
- ii) Gross structure of the skeleton muscle.
- iii) Physical changes during muscle construction.

**b) Circulatory Systems :**

- i) Structure & function of the Heart
- ii) Blood constituents and function. Blood pressure.
- iii) Major blood vessels and the arrangements.
- iv) Lymphatic System, general information, changes during exercise in heart beat
- v) Minute volume blood pressure and blood circulation.
- vi) Effect of exercise on circulatory systems.

**Unit III a) Respiratory System**

- i) Organs of respiration - structure and function.
- ii) Mechanism of respiration, vital capacity, Exchanges of gases. Oxygen debt, indurance
- iii) Aerobic and anaerobic capacity. second wind changes in respiratory systems during exercises.
- iv) Effect of training on respiratory system.

**b) Digestive system :-**

- i) Organs of digestion.
- ii) Structure and function of Digestion.
- iii) Absorption and assimilation of food, Metabolism.
- iv) Effect of Exercise on Digestion

**Unit IV**

**a) Excretory systems :-**

- i) Organs of structure and functions of excretion.
- ii) Composition of normal Urine Fluid balance.
- iii) Acid base Balance - skin structure and functions - sweat glands.
- iv) Temperature regulation, Effects of exercise on the excretory organs.

**b) Nervous System :-**

- i) Organs Location and Functions.
  - ii) Brain and its parts
  - iii) centres of Localization Spinal cord Reflex action.
  - iv) Autonomous nervous system.
  - v) Neuromuscular co-ordination.
- c) Endocrine -**
- i) Important Endocrine glands location and functions.
  - ii) Role in growth health development and emotional make up of an individual.
  - iii) Special senses - Ear, Nose, Eyes, Tongue, skin, and Their functions.

**Unit V**

**a) Health Education :-**

- i) Definition of Health Education, Health Instruction, Health Supervision, Health service and guidance, Intruction in personal hygiene, Defection of defects of common ailments. Medical Examination - follow up work.
  - ii) Schools Hygiene - Schools building - ventilation light and seating arrangements, water supply facilities, play ground.
- (b) Dietics -**
- i) Food - its constituents - caloric value of food Balance diet, special diets for children athlet - Under weight, over weight.
  - ii) Dope - History, Classification & Definiation.

**Unit VI**

- i) Basic concepts of planes and axes of body, Centre of gravity line of gravity terminology of various types of movement of joints.
- ii) Types of Joints - Classification of Joints
- iii) General Idea of Muscle action in the -
- i) Trunk Joint ii) Sholder Joint iii) Elbo Joint iv) Heap Joint v) Knee Joints
- vi) Ankle Joint

**Unit VII**

- (i) Laws of motion and their implication in sports activity.
- ii) Application of Kensiology to the teaching of Sports Movement.
- iii) Basic Principles and safety in sports.
- iv) Firts Aid - Importance of Firts Aid in Sports Activity.

**Unit VIII -**

- Physiotherapy & rehavilitation in Sports Injuries.
- i) Exercise Theoropy
  - ii) Massage - Types & Technique of Massage.
  - iii) Heat Theoropy - i) Hot Water, ii) Ice Cold Treatment.

**Course III-**

**BOOKS RECOMMENDED**

1. Anatomy and Physiology - J. F. Williams
2. Anatomy and Physiology - Dr. L. K. Govidarajulu.
3. Physiology of Exercise - Dr. P. A. Achmidt.
4. Good Health personal and community - Miller and Miller
5. School health education - Kalander.
6. Diatetics and Nutrition - A. Z. Brakar
7. Health in India - Grant
8. Kinesiology - K. Wells
9. Anatomy & Physiology of Yogic Practice - M. M. Gore
10. Sports Injuries & Athletic Problem - Morij B. Moleniun
11. Physiology in Physical Educationin Sports -Dr. M. L. Kamlesh
12. Drugs (Addiction Privention) Iswar Modi /Shalini Modi
१३. शरीरशास्त्र - व्ही. एन. भावे
१४. सुगम शरीरशास्त्र - एम. एन. देशपांडे
१५. शरीर व व्यायाम - एच. व्ही. पटवर्धन
१६. व्यायामाचे शरीरक्रियाशास्त्र - डॉ. सौ. विजया द. जोशी

१७. शरीररचना और क्रियाविज्ञान - डॉ. विवेक साठे
१८. शरीर रचना तथा शरीर क्रिया विज्ञान - के. के. वर्मा
१९. मानव क्रीडाविज्ञान - सु. ह. देशपांडे
२०. शरीर विज्ञान व आरोग्यशास्त्र - दि. गो. वाखारकर
२१. गतिविज्ञान आणि आरोग्यशिक्षण - डॉ. विवेक साठे
२२. व्यायाम क्रीडा विज्ञान एवं खेल - राजकुमार वर्मा
२३. शरीरक्रीडा विज्ञान एवं स्वास्थ्य विज्ञान - जे. एस. विनायक
२४. शरीरशास्त्र रचना व कार्य - प्रा. लक्ष्मण
२५. प्रथमोपचार - डॉ. किशोर सुरेंद्र
२६. आधुनिक प्रथमोपचार - डॉ. वि. ना. भावे
२७. योगासने आणि मसाज - स्वामी विद्वानंद
२८. योगासने, मसाज - टी. जी. मिडे

#### Course IV

### PSYCHOLOGY, GUIDANCE, COUNSELLING AND EVALUATION IN PHYSICAL EDUCATION

#### OBJECTIVES - To help the students -

1. To understand the meaning and usefulness of Psychology of Physical Education.
2. To understand concept of human growth and development.
3. To understand the effect of Heridity and environment on human growth and development.
4. To understand Phycho physical unity of behaviour.
5. To understand the concept of personality.
6. To understand process of development of personality.
7. To understand emotional growth and development.
8. To understand the concept and theories of play.
9. To understand the modern concept of evaluation
10. To understand the value & importance of different tests in physical education.
11. To understand the importance of transfer of training in sport activities.

- Unit - I**
- (a) (i) Psychology as a Sports Science. Its meaning & bearing on Education and Physical Education .  
(ii) Sports Psychology - Its Meaning and Importance to Physical Education, Physical Education Teacher and coaches.
  - (b) General innate Tendencies Motives : Needs, Drives, sympathy, Initiation, suggestion : Play, Play way in Education and sublimation of innate Tendencies

- Unit - II**
- (a) (i) Stages in Development, The Nature of growth and Development, Characteristics at various stages of development.  
(ii) Products of Developments Habits, Complexes , Sentiments and character.
  - (b) i) Heridity and Environment.  
ii) Individual Differences.

- Unit - III**
- (a) (i) The larning Process - Natures, Laws of learning, types of learning, motivation in learning, Attention and Interest Learning Curves. Transfer of Training with special reference to sports.  
ii) Intelligence - its nature and development.

- Unit - IV**
- (i) Mental Hygiene Meaning its Importance Handling of exceptional children :
  - ii) Role of Physical Education in preventing mal adjustment and promotion of proper mental health .
  - iii) Fatigue - Physiological and Psychological aspects of fatigue

- Unit V**
- (a) Personality , its meaing Development of personality Adjustement throug physical Education.
  - (b) Discipline and Behaviour.
  - (c) The Psychology of the Groups.
  - d) Group Dynamics & Sports

**Unit VI** **Test, & Measurement, Evaluation in Physical Education**

- i) Types & Classification of Test.
- ii) Test Evaluation.
- iii) Criteria of Good Test.
- iv) Modern Concept of Evaluation.
- v) Principle of Evaluation.
- vi) Importance of Test.
- vii) Place of Measurement & Evaluation in Physical Education & Sports.

- Unit VII** Applied to Physical Education , Knee, Mode, Median, Frequency Curve and Normal probablility curve.

**Unit VIII General Motar Ability Tests .**

- i) Newton Motar Ability Tests.
- ii) Mc'Cloy Motar Ability Tests.
- iii) Larsan's Test.
- iv) Cozen Test.
- v) Barrow Motar Ability Tests.

**Unit IX Counselling & Guidance**

- i) Basic Concept & Counselling & Guidance
- ii) Psychological basis of Guidance & Counselling. Individual differences, psychological testing.
- iii) Objectives of Guidance.
- iv) Qualities & Qualifications of a counsellor.

**BOOKS RECOMMENDED -**

1. Educational Psychology - B. C. Ray
2. Psychology aspects of physical education and sports - Kane
3. Psychology in physical education and sports - Dr. M. L. Kamlesh
4. Method in Physical Education - Tirunorayanana & H. Hariharan
5. Physical Education lesson - J. P. Thomas
6. Manual of Physical Education in India - D. G. Wakharkar.
7. A World History of Physical Education - Van Dalen Micher.
8. History of Physical Education - C.W. Hyensmith, Bennett.
9. A Brief History of Physical Education - Emmel A Rice and John. Hutchingson.
१०. क्रीडा मानसशास्त्र - डॉ. प. म. आलेगावकर
११. शिक्षणाचे मानसशास्त्रीय अभिष्टान - आफळे, बापट
१२. शैक्षणिक व प्रायोगिक मानसशास्त्र - वा. ना. दांडेकर
१३. शैक्षणिक मानसशास्त्र - के. वी. कुलकर्णी
१४. प्रगत क्रीडा मानसशास्त्र - डॉ. प. म. आलेगावकर
१५. शारीरिक शिक्षण मापन व मूल्यमापन - प्रा. शंकर तिवारी
१६. शैक्षणिक मूल्यमापन व संख्याशास्त्र - प्रा. वा. ना. दांडेकर
१७. मूल्यमापन आणि संख्याशास्त्र - भा. गो. बापट
१८. शारीरिक शिक्षण अध्यापन पध्दती - स. के. शिंदे



## Course V

### HISTORY, RECENT DEVELOPMENT IN PHYSICAL EDUCATION & YOGIC EDUCATION.

#### OBJECTIVE -

1. To understand the historical development in Physical Education.
2. To understand the international sports events and their influence.
3. To understand the modern trends in Physical education in India & Maharashtra.
4. To understand the various agencies in Physical education. e.g. Youth welfare and Youth services.
5. To understand the value & importance of Yoga in Physical Education.
6. To understand & introduce the Physical Education in India during 20th Century.
7. To understand the nature of Educational System in Ancient India & Mediaeval India.
8. To understand the scope of recreation in providing Leisure time activities for youth.

- Unit - I** (a) Nature of educational systems in Ancient India and Mediaeval India.  
(b) Nature of educational systems in Modern India, Educational Policy, Modern Educationists Gandhi, Tagore.
- Unit - II** Physical Education in Ancient Civilisation in  
(i) India (ii) Greece (iii) Rome (iv) Egypt
- Unit - III** (a) Development of Physical Education and Sports during 20th Century with special reference to  
(i) U.S.A. (ii) Sweden (iii) Germany (iv) Olympics (v) Asian Games
- Unit - IV** Physical Education in India during 20th Century  
i) Physical Training for Teacher working in school & Colleges.  
ii) Movement of Akhadas and Vyayam shalas.  
iii) Central Advisory Board of Physical Education.  
iv) All India Council Of Sports.  
v) N.P.E.D.  
vi) SNIPES  
vii) NSNIS  
viii) L.N.I.P.E.  
ix) Sports Authority of India (Sai)  
x) Nehru Yuwak Kendra  
xi) Awards National and state Level
- Unit - V** (a) A study of the development of physical Education sports and games in Maharashtra with reference to :-  
i) The present Organisation set up in state.  
ii) Important schemes and activities, including indigenous activities  
iii) Role of voluntary Physical Education and sports bodies in state.
- Unit VI** **Youth welfare and youth services -**  
a) Concept of youth welfare and youth work  
b) Youth organisation in India.  
c) Programmes under youth development .  
d) Youth services such as securing and guiding - N.C.C., N.S.S., Civil defence and Scout and Guide Movement.
- Unit VII** i) Yoga - Meaning , Concept Mis- conceptions about yoga Relationship with Physical Education .  
ii) Yoga and Diet.  
iii) Historical Background of Yoga- Yogic Test.  
iv) Astang Yoga with special reference to yama ,Niyama ,Asan,Pranayama.  
v) Type of asans and pranayamas & their effect on Human body.

### Unit VIII Recreation -

- i) Meaning and scope of recreation
- ii) Principles of recreation programme planing according to age groups.
- iii) Agencies Promoting recreation.
- iv) Leadership in recreation.
- v) Rural, Urban, industrial recreation.

### BOOKS RECONNENDED -

1. Manual of Physical Education of India - D. G. Wakaharkar
2. A world history of physical education - Van Ten Micher
3. History of Physical Eduction - C. W. Hyensmith, Bennett
4. A Brief History of Physical Education - Emmel A Rice and John L. Hutchingson.
5. International Encyclopidia of Sports and Games - Ashok kumar
6. Physical Education in Ancient India - Dr. S. H. Deshpande
७. शारीरिक शिक्षणाचे ऐतिहासिक स्वरूप - वाखारकर, आलेगांवकर
८. शारीरिक शिक्षणाचा इतिहास भाग १,२ - श्रीपाल जर्डे
९. शारीरिक शिक्षणाचा इतिहास भाग १,२ - द. ब. कोठीवाले
१०. शारीरिक शिक्षण अध्यापन पध्दती - स. क. शिंदे
११. शारीरिक शिक्षणाचे ऐतिहासिक स्वरूप व आधुनिक प्रवाह - प्रा. जे. पी. शेळके
१२. शारीरिक शिक्षणाचा इतिहास - गो. मा. पुरंदरे
१३. शारीरिक शिक्षणाचा इतिहास - द. ब. कोठीवाले /नाईक
१४. शारीरिक शिक्षण संघटन, प्रशासन आणि मनोरंजन - प्रा. शंकर तिवाशी
१५. शारीरिक शिक्षणाची तत्वे व मनोरंजन - दि. गो. वाखारकर
१६. शारीरिक शिक्षणाचे सौद्धातीक ऐतिहासिक आणि सामाजिक पैलु - सरपाते, खडकीकर
१७. महाराष्ट्रातील शारीरिक शिक्षणाची वाटचाल - दि. गो. वाखारकर
१८. शारीरिक शिक्षणशास्त्र व परिचय - प्रा. श्री. गंधे

**Course VI**  
**Methodology of Physical Education and One School Subject**  
**( Marathi ,Hindi, English , History, Geography, Math, Science )**

**OBJECTIVES -**

1. To understand the place of Physical Education in curriculum.
2. To understand the objectives of Teaching Physical Education.
3. To understand and to use the methods of teaching of Physical Education.
4. To understand the Physical movements involved in different activities.
5. To plan different types of lessons and Micro-teaching for different physical activities and sports / games
6. To understand the procedure of teaching presentation techniques.
7. To understand the importance of class management.

**Section A- Methodology of Physical Education**

- Unit -I**
- i) Aims and Objectives of Physical Education.
  - ii) Place of Physical Education in Curriculum.
  - iii) Principles of Learning Process.
  - iv) Principles of Teaching Process.

- Unit -II** Methods and importance of Teaching  
Orientation, Demonstration, Imitation, Command, Exploration, Set Drill, Progressive Part, Observation, Verbal Explanation, Whole- Part- Whole, Formal informal.

- Unit III** Procedure of Teaching Presentation Technique -
- i) Personal Preparation
  - ii) Technical Preparation.
  - iii) Steps and characteristics of Presentation.
  - iv) Principle of class Management.
  - v) Factors affecting class management.

- Unit IV - Lesson Planning -**
- i) Micro Teaching - importance and skills.
  - ii) Types of lesson - General & Specific
  - iii) Planning and importance of lesson.
  - iv) Teaching Aids- Important Types and uses.

- Unit V - Teaching of Physical activities -**
- i) Game of high organisation (Major Games)
  - ii) Game of low organisation (Minor Games)
  - iii) Track and field events and individual games.
  - iv) Calisthenics
  - v) Gymnastics
  - vi) Rhythmic
  - vii) Competitive and Defensive activities
  - viii) Malkhamb

**BOOKS RECOMMENDED**

1. Method in Physical Education - Kamlesh And Sangral
2. Physical Education Lesson - J. P. Thomas
3. Method in Physical Education - Tirnanarayanan and H. Hariharan
4. Modern Methods of Teaching Physical Education - Vijayandre Kumar
५. शिक्षण तथा शारीरिक शिक्षण अध्यापन पध्दती - प्रा. मुकुंद असनारे
६. शारीरिक शिक्षणाची अध्यापन पध्दती आणि मुलतत्वे - डॉ. वि. कृ. कानडे
७. शारीरिक शिक्षण अध्ययन व अध्यापन - सौ. विमल बी. माने
८. शारीरिक शिक्षण अध्यापन पध्दती - प्रा. स. के. शिंदे
९. शारीरिक शिक्षण शास्त्र व परिचय - प्रा. श्री. वि. गंधे
१०. शारीरिक शिक्षणाचे अध्यापन - दि. गो. वाखारकर
११. व्याख्या शारीरिक शिक्षणाची पध्दती - विद्या व पध्दती - प्रा. भा. बा. मोहोदये

मराठी  
विशेष अध्यापन पध्दती

१) मराठीचे मातृभाषा म्हणून महत्त्व व स्थान

मातृभाषा व्यक्तिविकास, मातृभाषा व सामाजिक विकास, मातृभाषा व इतर शालेय विषयांशी संबंध मातृभाषेचे वैयक्तिक, सामाजिक, राष्ट्रीय व सांस्कृतिक जीवनातील स्थान, शिक्षणाचे माध्यम म्हणून मराठीचे महत्त्व.

२) मातृभाषेच्या अध्यापनाची उद्दिष्टे

माध्यमिक शाळातून मातृभाषेच्या अध्यापनाची सामान्य ध्येय उद्दिष्टे व स्पष्टीकरण शिक्षणाच्या राष्ट्रीय उद्दिष्टांशी व माध्यमिक स्तरावरील उद्दिष्टांशी त्याचा संबंध.

३) मातृभाषेच्या अभ्यासक्रम

माध्यमिक शाळातील मातृभाषेच्या अभ्यासक्रमाचा परिषद अभ्यासक्रमाचे मुख्य घटक, उपघटक व पाठ्य घटक निश्चित करण्याची तसे, भाषा अभ्यासक्रमाच्या दोन श्रेणी सामान्य व प्रगल्भ, अभ्यासक्रम रचनेतील नवीन प्रवाह, मातृभाषेच्या अभ्यासक्रम रचनेसाठी त्याचा उपयोग, अभ्यासक्रमा स्तर व दर्जा उच्चशिक्षणासाठी अभ्यासक्रम करतक्याच्या तसे.

अध्यापन व तंत्रे.

पद्य, पद्य लेखन व व्याकरण यांचे उद्दिष्टाधिष्ठित अध्यापन अध्ययन, अनुभव प्रसंगाची निर्माती त्यातील कृती व त्याचे टप्पे व्याख्यान कथन, सर्वा प्रश्नोत्तरे, समन्वय स्वाध्याय प्रकल्प, नियोजित अभ्यास या विशेष अध्यापन तंत्राचा मातृभाषेसाठी उपयोग, व्यक्तिगत व सामुदायिक तंत्राचा समन्वय, अध्यापन साहित्य निर्माती संग्रह व उपयोग, अध्यापन साहित्याचे प्रकार, त्याचा मातृभाषेच्या उपयोग, ग्रामोफोन रेडिओ टेपरेकॉर्ड, तक्तें, आराखडे, फलक इत्यादीचा उपयोग मातृभाषेची क्रमिक पुस्तके, प्रचलित पुस्तकांचे परीक्षण पुरवणी वाचन पुस्तके. सर्व ग्रंथाले व शालेय वाचनालय, हस्तलिखित व शालेय निवतकालिके, संग्रह पुस्तिका, अवातर वाचन साहित्य विद्यार्थी वाडमय.

अभ्यासान्तर्गत उपक्रम :

अभ्यासान्तर्गत उपक्रम व सार्वभौम भाषा विकास माध्यमिक शाळात उपयुक्त असणारे भाषिक व वाडमयीन उपक्रम विविध मंडळ व त्याचे वाडमयीन उपक्रम व प्रकल्प, व्यक्तिगत व सामुहिक अभ्यास सवयीसाठी उपक्रमाचे आयोजन.

मातृभाषेच्या शिक्षकांचे व्यक्तिमत्व

प्रगती मुल्यमापन :-

मुल्यमापन तंत्रानुसार चाचण्या तयार करणे.

संदर्भ ग्रंथ

- |                     |  |                                     |
|---------------------|--|-------------------------------------|
| 1 Ryburn W.M.       | Suggestion for the Teaching Of Mother Tongue | Oxford University Press             |
| २. अकोलकर पाटणकर    | मराठी अध्यापन                                | व्हीनस प्रकाशन पुणे - २             |
| ३. फाटक व पाटणकर    | मराठी कवितेचे अध्यापन                        | मॉडर्न बुकडेपो पुणे - २             |
| ४. डांगे चंद्रकुमार | मातृभाषेचे अध्यापन                           | प्रतिभा मुद्रणालय, टिळक रस्ता पुणे. |

हिन्दी

विशेष अध्यापन पध्दती

१. भारतीय जीवन में हिन्दी का स्थान :-

भारतीय संघराज्य की विविध भाषाये ! संविधान मे हिन्दी को दिया हुआ स्थान ! हिन्दी का सांस्कृतिक महत्व !

भाषा और संस्कृती !

२ हिन्दी शिक्षा का उद्देश :-

( अ ) व्यापक उद्देश सांस्कृतिक, साहित्यिक और व्यावहारिक उद्देश

( आ ) विशिष्ट उद्देश

३ . भाषा शिक्षा का मनोविज्ञान :-

बालक भाषा कैसे सिखते है ? श्रवण का महत्व अनुकरण और उच्चारण अभ्यास मे वातावरण का स्थान

४ पाठ्य पुस्तकों मे संपादन -

पाठ्यक्रम मा स्वरूप और शिक्षा के उद्देशोकी पूर्ति अच्छे पाठ्य पुस्तको के लक्षण

५ शिक्षा प्रणाली

संभाषणात्मक प्रणाली, व्याकरण अनुवाद प्रणाली, संवाद प्रणाली पठण प्रणाली प्रणालीयो का समन्वय

६ पाठ्य पुस्तकों का संपादन :

शिक्षाविक्षयक साहित्य का उपयोग और प्रकार

७. पाठ प्रकार और पाठ नियोजन

प्रारंभिक पाठ वातचित के पाठ साहित्य, गद्य, पद्य पाठ रचना और व्याकरण पाठ रचना या अविष्काराके विविध प्रकार तथा उनसे संबंधित पाठ

८. साहाय्यक उपक्रम

संभाषण सभा, वक्तृत्य सभा, हस्तलिखित पत्रिका, वाचनालय, नाटक, खेलना, पुस्तक प्रदर्शन प्रकल्प.

९. हिन्दी शिक्षा में वक्तृत्य साधनों का स्थान और उपयोग.

मुल्यमापन - मुल्यमापन तंत्र के अनुसार कसीटीयां तयार करना

१० हिन्दी अध्यापक का व्यक्तित्व

सदर्भ सुची

१. लज्जाशंकर झा. भाषाशिक्षण पध्दती मिश्रबंध कार्यालय, जबलपुर
२. साठे ग.न. राष्ट्रभाषा का अध्ययन महाराष्ट्र राष्ट्रभाषा पुणे.
३. सिताराम चर्तुवेदी अध्यापन कला नंदकिशोर अँन्ड सन्स बीक वाराणशी
४. सिताराम चर्तुवेदी भाषा की शिक्षा हिन्दी साहित्य कुटीर वाराणशी
५. भाई योगेन्द्रजित हिन्दी भाषा शिक्षण, विनोद पुस्तक
६. रजनीकान्त लहरो : हिन्दी शिक्षण रामचंद्र अँन्ड सन्स आगरा .

## **Content - Cum - Methodology - English** **(Communicative Language Teaching)**

Objective - To enable the Pupil - Teacher.

- 1) To understand the role and importance of English language in India.
- 2) To Understand the concept, nature and importance of content- cum- methodology in the teaching of English.
- 3) To understand the objectives of teaching and learning of English as a second language of High School and Higher Secondary State.
- 4) To be well conversant with the prescribed syllabus in English for Std. V to XII.
- 5) To understand the appreciate the concept, need and importance of Communicative approach to the teaching and learning of English.
- 6) To acquaint himself / herself with the methodology and techniques of communicative language teaching.
- 7) To acquaint them with planning and testing in CLT.

### **Area - A**

#### **Unit - 1 Concept of Content - Cum Methodology**

- 1.1 Concept and nature.
- 1.2 Need and importance of content - cum - methodology.

#### **Unit -2 Nature of language**

- 2.1 Definition
- 2.2 Language as a 'Structure' and language as a means of communication.
- 2.3 Seven basic functions of language by Halliday
  - a) Instrumental Function : using language to get things
  - b) Regulatory Function : Using language to control the behaviour of others.
  - c) International Function : using language to create interaction with others.
  - d) Personal Function : using language to express personal feeling and meaning.
  - e) Heuristic Function : using language to learn and to discover.
  - f) Imaginative function : using language to create a world of imagination.
  - g) Representational Function : using language to communicative information.
- 2.4 Role & English
  - 2.4.1 Importance of English in India.
  - 2.4.2 Place of English in India and present school Curriculum.
  - 2.4.3 Objectives of teaching and learning of English at Primary and Secondary and Higher Secondary stage.

#### **Unit -3 Approacher and methods of teaching and learning of English in its historical perspective with reference to**

- |                         |                            |
|-------------------------|----------------------------|
| 3.1 GTM                 | 3.2 Direct Methods         |
| 3.3 Structural Approach | 3.4 Communicative Approach |

#### **Unit -4 Communicative approach to the teaching and learning in English.**

- 4.1 Concept of Communicative language Teaching.
- 4.2 Main features of CLT.

#### **Unit -5 Skills in CLT.**

- 5.1 Listening Skill.  
Nature, Types of listening, objectives of listening skill, procedure to develop listening skill.
- 5.2 Speaking Skill  
Nature, objectives of speaking, procedure to develop speaking skill.
- 5.3 Reading Skill  
Objectives of reading, Styles of reading - skimming, scanning, receptive, responsive

Procedure to develop reading skill.

5.4 Writing skill

Nature, objective of writing skill

Types of writing - copying, dictation, guided, free

Procedure to develop writing skill

Unit - 6 Classroom material, procedure and techniques

6.1 Audio- Visual aids

6.2 Language laboratory

6.3 Pair work and group work

6.4 Role play, Games

Unit -7 Planning and Evaluation

a) Planning - Year Plan, Unit Plan

b) Communicative testing

c) Diagnostics testing and remedial teaching.

Recommended Books -

1. Littlewood W. 1983.  
Communicative language Teaching Cup.
2. Approaches and Methods in language teaching - Richards & Radger
3. Communicative language in English - Prof. Pandit B. B., Principal D. A> Suryavanshi,  
Prof. M. P. Kute, Nutan Prakashan.
4. Teaching of English - Dr. P. S. Chaudhari Vyentesh Prakashan, Jalgaon.

## MATHEMATICS

1. Importance and place of Mathematics in the school curriculum.
2. Aims, objective and specifications of instructions in Mathematics.
3. Criteria of text books in Mathematics
4. Lessons planning in Mathematics.
5. Methods of teaching Mathematics.  
Inductive Deductive, Analytical synthetical
7. Special problems and method of teaching Arithmetics Algebra Geometry and Trigonometry including concepts in modern Mathematics.
  - a) Importance of concepts in Mathematics. How to build concepts
  - b) Correlation of different branches of Mathematics. with one another and with other schools subjects. (Science, Geography, History)
8. Oral work class work Home work and Drill work Correction of work in Mathematics
9. Aids to teaching Mathematics, Models and Charts Blackboard work in Mathematics.
10. Qualities of Mathematics teacher.
11. Evaluation Procedure, Examination.

### Book Recommended :

1. Dharmveer and Agrawal : Teaching of Mathematics. papsu publication Nabha.
2. Potter F.P. The Teaching of Arithmetics Sir issac pitman and sons Ltd. London.
3. Derell : The teaching of Algebra Macmillan and co.
4. Mathematics. Association Report: The teaching of Arithmetics, Algebra and Geometry in school. C.Beli and sons Ltd. London.
5. Siddhu . Teaching of Mathematics. Arya Book Depot, Delhi.
६. गणिताचे अध्यापन : ह. ना.जगताप



## SCIENCE

1. Importance and place of Science in the school curriculum.
2. Aims objectives and specifications of teaching Science
3. Criteria of and text book in Science
4. Lesson planning Science
5. Method of teaching Science  
Demonstration , Laboratory and problem method, Project Method.
6. Correlation of various braches of science with one another and with other school subjects.(Maths, Geography, History)
7. Laboratory and its equipments Improvises apparaturs
8. Co. curricular Activities :
  - a ) Visits to workshops, factories and other places of scientific interest.
  - b) School Measum
  - c) Science clubs and science fairs.
9. Aids of teaching Science charts, Models, Specimens Film Projector, Epidiascope, Radio, and tape Recorder.
10. Qualities and qualifiction of the Science teacher.
11. Evaluation Procedure, Examinations.

### Book Recommended :

1. H.N.Sunders(UNESCO) : Teaching of General Science in Tropical Secondary Schools Oxfors University press London.
2. Ghanshamdas. The teaching of physics and chemistry In india Oxfords University press London
3. T.S.Nagpal. The teaching of Science Krishna Brothters, Amrisar Ludhiyana.
4. D.R. Dawing Introduction of teaching of Science Halt Richnant and wisston terouts.
5. Sharma and shрма Teaching of Science s. chand New Delhi.
६. शास्त्र अध्यापन - कन्दम बोर्दार.

## HISTORY

1. Meaning of scope of History, The place of History in the school curriculum.
2. Aims, Objectives and specification of teaching History
3. Criteria of a good text book in History.
4. Different methods of teaching History.
  - a) Story telling method.
  - b) Discussion method.
  - c) Text Book Method.
  - d) Lecture Method
  - e) Project Method.
  - f) Source method.
5. Teaching aids and devices charts Maps Graphs, Models Discussions, Questions, Poems, Novels, Ballads, Picture, inscription, Historical documents and time line.
6. CO-curricular activities Visit of places of historical importance Lectures note making, note taking and parallel reading Dramatisation.
7. Correlation History with other school subjects. (i. e. Geog. Science, Languages)
8. Evaluation in History Examination.
9. Qualities and qualification of the History Teacher.

### Book Recommended:

1. V.D.Ghate The Teaching of History Oxford University Press.
2. Johnson The teaching of History Macmillan Co, Bombay
3. Ghosh K.D. creative teaching of History Oxford University Press.
4. Kochhar Teaching of History sterling Publishers Jallunder.
5. धारपकर पारसनीस इतिहासाचे अध्यापन व्हीनस प्रकाशन, पुणे -३
6. व. भा. निरतर इतिहासाचे अध्यापन मॉडर्न बुक डेपो.
7. धितळे वि. इतिहास कसा शिकवावा, अनाथ विद्यार्थी गृह प्रकाशन, पुणे
8. वि.पा. बोकील इतिहासाचे अध्यापन चित्रशाळा प्रकाशन, पुणे.
9. Miss Majreshwari Teaching Of History Allied Publishers Bombay -1

## 7. GEOGRAPHY

1. Meaning and scope of Geography. The place of Geography in school curriculum.
2. Aims and objectives and specification of teaching Geography
3. Criteria of a text book in Geography
4. Different methods of teaching Geography.  
a) Journey Method b) Laboratory Method c) Regional method d) Project method.
5. Teaching aids and devices maps charts, Diagrams Models Globe Epida Scope Films, Pictures Specimens Atlases and Schools Broadcast.
6. Co-curricular activities Excursions geography clubs.
7. Correlation of Geography with other school subjects. (ie. Science, Maths, History)
8. Evaluation in Geography Examination.
9. Qualities and Qualification of the Geography Teacher.

### Book Recommended :

1. Barnard Principles and Practice of Geography Teaching University Tutorial Press Ltd London
2. Gospel Teaching of Geography, University press London.
3. Varma Teaching of Geography in India University Publication Jallunder.
4. Maonee suggestions of teaching Geography Oxford university press.
5. Unesco source book of teaching Geography
६. भुगोलाचे अध्यापन - द. बा. पोंक्षे
७. भुगोलाचे अध्यापन - उषा पाटील
८. भुगोलाचे अध्यापन - भा. गो. बापट

## CONTENTS OF SKILLS EXAMINATION

External Assessment (University Examination of marks 250)  
 Activities of the Examination are grouped into the following the contents of each activity of examination

### Athletics Events

60 Marks.

The performance of the examinee will be taken and converted into marks as per the conversion table attached in.

- |             |   |
|-------------|---|
| Running --- | <ul style="list-style-type: none"> <li>i) Fundamental skills and technique of Running of sprints middle &amp; long distance races.</li> <li>ii) Types of Starts Standing &amp; Crouch starts.</li> <li>iii) Types of finish of races.</li> <li>iv) Hurdle starts clearance &amp; landing techniques relays baton exchange &amp; its types</li> <li>v) Use of starting block techniques of operation of stop watches &amp; gun operation.</li> </ul>   |
| Jumps -     | <ul style="list-style-type: none"> <li>a) High Jump:               <ul style="list-style-type: none"> <li>i) Straddle technique</li> <li>ii) Fosbury flop</li> <li>iii) Scissor technique</li> </ul> </li> <li>b) Long Jump :               <ul style="list-style-type: none"> <li>i) Hang Techniques</li> <li>ii) Hitch kick</li> </ul> </li> <li>c) Hop step &amp; Jump               <ul style="list-style-type: none"> <li>Techniques of hop</li> <li>Techniques of step</li> <li>Techniques of jump Hang &amp; hitch kick technique</li> </ul> </li> <li>d) Pole Vault :               <ul style="list-style-type: none"> <li>i) Pole grip</li> <li>ii) Pole Carry ( Run with Pole )</li> <li>iii) Planting the pole</li> <li>iv) Take off</li> <li>v) Pull style</li> <li>vi) Clearance of Bar</li> <li>vii) Landing Technique</li> </ul> </li> </ul> |
| Throws      | <ul style="list-style-type: none"> <li>a) Shot put Techniques               <ul style="list-style-type: none"> <li>i) Perry O'Brien Techniques</li> <li>ii) Discopot Technique</li> <li>iii) Orthodox put</li> </ul> </li> <li>b) Discuss :-               <ul style="list-style-type: none"> <li>Techniques of holding , swing , turn, Release of disc, Turning Techniques</li> </ul> </li> <li>c) Javaline :-               <ul style="list-style-type: none"> <li>Technique of Grips, Carry, Approach release reverse.</li> </ul> </li> <li>d) Hammer :-               <ul style="list-style-type: none"> <li>1) Grip, Stance Preliminary swings.</li> <li>Transition 1) Cycle Phase ii) Non Cycle Phase Turn, Delivery &amp; Recovery.</li> </ul> </li> </ul>   |

**30 MARKS**

### GYMNASTICS ( MEN & WOMEN )

#### A) Mat Exercises :- ( Rolls )

- i) From sitting Position : Forward & Backward Roll
- ii) From kneeling position : Forward & Backward Roll
- iii) Straddle position : Forward & Backward Roll
- iv) From stooping Position: Forward & Backward Roll
- v) Cartwheel
- vi) Hand stand & Hand stand d & forward roll
- vii) Balances v. Balance Frog Balance, airplan balance, T Balance
- viii) Head stand (Balance)
- ix) Dive and Roll
- x) Back Bend

## B) Apparatus Gymnastics :

- i) **Balancing Beam -**
  - a) Walk on toe
  - b) Novelty walk
  - c) V Balance
  - d) Saggori Jump
  - e) 180 Turn
  - f) Simple Jump
  - g) Knee Balance
  - f) Aeroplance Balance
  - i) Forward Roll
  - j) T Balance
- ii) **UN Even Bar :-**
  - a) Swings
  - b) Mounts
  - c) Hip circle
  - d) One Leg Circle
  - e) Simple dismount
- iii) **Parallel Bar**
  - a) Straugt Arm Rest
  - b) Bend Arm Rest
  - c) Bend Arm single March
  - d) Bend Arm Double march
  - e) Stright Arm single March
  - f) Stright Arm Double March
  - g) Shoulder Balance
  - h) Side Rest on the bar
  - i) 'L' Balance
  - j) Change over
  - k) Forward Roll
  - i) House riding
  - m) Front dismount
  - n) Straddle sit
  - o) Swings
  - p) Back Dismount
- iv) **Vaulting House :**
  - a) Jump on Jump off
  - b) Knee on Jump off
  - c) Through vault
  - d) Split on Astride vault
  - e) Side vault
  - f) Hand springs
- v) **Roman Rings**
  - a) Steight arm hang
  - b) Inverted hand
  - c) Reverse hang
  - d) Pull ups / push ups
  - e) Forward circle
  - f) Up start
  - g) Dislocation
  - h) Split disamount
  - i) Half / Full nest
  - j) Short arm balance
  - k) 'L' Balance
  - l) Reverse Plane
- vi) **Horizontal Bar :-**
  - a) Simple seing
  - b) Bely roll to spright positlon
  - c) Short circles
  - d) up start
  - e) Up start to down swing
  - f) Frin swing to reverse split disamount
- vii) **Pommelled House :-**
  - a) Position over the horse
  - b) One leg half circle from both sides.
  - c) One leg full circle
  - d) Scissors
  - e) Back sissors
  - f) Both legs circles
  - g) Dismount
  - h) Combination of exercises

viii) **Malkhamb**

- a) Salami, Sadi udi, Kandha Udi, Seena udi, Kamani, Bagal Udi, Bandar Udi, Do hati, Bagali Tedhi, Ghana chakkar, Sadha Dastang

The Distribution of mark and Examination system is given below .

2 stunts as told by examiner	8 Marks
1 stunts of candidate choice	2 Marks

Total 10 Mark

iii) **Combative**

10 marks

i) **Wrestling (men) & Dance (Woman)**

The examination will be conducted in wrestling for men and folk Dance for Woman

i) **Stance :**

- a) Aqure Stance  
b) Cross Stance  
i) Right cross Stance  
ii) Left cross Stance

ii) **Grip**

**Techniques**

- a) Dasti  
b) sar Zir A bagal Dub  
c) Khu Zin taken  
d) Arm Bar  
e) Fane Kamar (Dhak)  
f) One Arm Throw (Dhobi)  
g) Banagadi  
h) OJ band (Nelson)  
i) Fittle  
j) Ek Dast Ek Pa (Kalajang)  
k) Gav tab  
i) Kunde

**Dance : (Women)**

- i) Folk Dance ,Tipari, Various Lok Nritya, Bhangda.

The Distribution of marks and examination system is given below .

i) **Wrestling**

2 Holds as told by examiner	8 Marks
1 Hold candidate's choice	2 Marks

Total 10 Marks

ii) **Dance**

Any one dance of candidate choice in a group of upto 10 candidate	10 Marks
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iv) **Calisthenics :- ( Any two )**

10 Marks

- 1) **Mass P.T**  
a) N.F.C.M.P.T.Table No.1 (Ex. 1 to 10 )  
b) N.F.C.M.P.T.Table No.2 (Ex. 1 to 5 )  
c) N.F.C.M.P.T.(In sitting position) (Ex. 1 to 5 )  
d) N.F.C. Exercise Table 1 to 8  
2) **Dumbells**  
3) **Ring Drill**  
4) **Ghungar khathi**

A group of 20 Candidate with demonstrate the following activities  
Mass P.T , Dumbells , Ring Drill, Ghungar Khathi each activity each for 5 marks

vii) **Yogasana & Kriyas**

**30 Marks**

a) **Asanas :-**

- |                      |                         |                      |                             |
|----------------------|-------------------------|----------------------|-----------------------------|
| 1) Tadasana          | 2) Vrikshasana          | 3) Garudasana        | 4) Chakrasana               |
| 5) Trikonasana       | 6) Uttakatasana         | 7) Vajrasana         | 8) Ganumukhasana            |
| 9) Padmasana         | 10) Yoga Mudra          | Vajrasana            | 11) yoga Mudra in Padmasana |
| 12) Tolasana         | 13) Paschimottanasana   | 14) Akamadhanurasana |                             |
| 15) Vakrasana        | 16) Ardhamatshendrasana | 17) Supta Vajrasana  |                             |
| 18) Matsyasana       | 19) Shavasana           | 20) Viprit Karni     |                             |
| 21) Sarvangasana     | 22) Hallasana           | 23) Kamapidasana     | 24) Makarasana              |
| 25) Ardha salbhasana | 26) Saibhasana          | 27) Dhanurasana      | 28) Naukasana               |
| 29) Mayurasana       | 30) Bhujangasana        | 31) Bakasana         |                             |
| 32) Shirashasana     | 33) Suriya Naraskar     |                      |                             |

b) **Kriyas :-**

1) Non Instrumental Kriyas.

1) Uddayan 2) Aganisar 3) Nauli 4) Kapalbhati

5) Tratak 6) Ujjaya Pranayama

ii) Instrumental Kriya

1) Jala Neti 2) sutra Neti 3) Vaman 4) danda dhouti 5) Vastra Dhouti

**System Of Examination :**

Distribution of Marks & the examination systems is given below.

i) Asan a) 3 Asanas as told by Examiners for 4 marks each = 12 marks

b) 2 Asanas of candidate choice 4 marks each = 8 marks

ii) Kriyas Any two kriyas of candidate choice 5 marks each = 10 marks

i) One Instrumental Kriya 5 marks.

ii) One Non Instrumental Kriya 5 Marks.

**VIII) Danda Baithakas (Men)**

**10 Marks**

**OR**

**Squats & Flower Deeps (Women)**

**System of Examination**

2 Baithakas/ Deeps as told by examinaras for 4 marks each 8 Marks

1 Baithak/ Deeps of Candidate choise for 2 marks 2 Marks

**10 Marks**

**ix) Mejour games (Any six)**

**60 Marks**

The examination will be conducted in any six games Selected by the examinee

The examinee has to select any six games for the examination The Examinee should select one games for prepration of record books.

- |                  |             |                |                    |                |              |
|------------------|-------------|----------------|--------------------|----------------|--------------|
| 1. Kabaddi       | 2. Kho-Kho  | 3. Volley Ball | 4. Foot Ball       | 5. Basket Ball | 6. Hand Ball |
| 7. Saft Ball     | 8. Hockey   | 9. Bad Minton  | 10. Ball Badminton | 11. Tennis     |              |
| 12. Table Tennis | 13. Cricket | 14. Tenicoit   | 15. Swimming       |                |              |

Distribution of marks for each game examination is given belows

- |  |          |
|--|----------|
| i) Fundamental skill                                     | 5 Marks. |
| ii) Playing efficiently & Oral                           | 5Marks   |
| iii) Maintaning Record Books<br>(10 marks for each game) | 10 Marks |

The content of Teaching for each game are as follows

- |        |   |
|--------|---|
| a) i). | Histroy of the game                                   |
| ii).   | Measurement of the field & Preparation of the field   |
| iii).  | Equipment and Material of the game                    |
| iv).   | Fundamental skills & Lead up[ games                   |
| v).    | Teachniques, stratigies & System of play              |
| vi)    | Rules and regulation of the game                      |
| vii)   | Tournaments played at National & International Level. |
| viii)  | Records (World,Olympics, Asian, and National games )  |
| ix)    | Award in the game                                     |

- x) Books and Magzines
  - xi) Methods of coaching
  - xii) **Officiating** a) Duties of Officials b) Knowledge of score sheet  
c) signals of officiating d) Technical equipment for officiating  
above points should be taken into consideration while preparing record book.  
The record book should be submitted to the the university after practical  
examination within 15 days.
- i) Kabaddi -**
- i) **Skills of Raider -**  
a) Cent b) Stance & Foot work c) Mule kick , Side Kick, Back Kick,  
d) Pursuits e) Toe Touch
  - ii) **Skills of anti Raider -**  
a) Chain Formation b) Stance & Movement c) Knee Hold , Thigh's Hold ,  
Trunk hold, Wrist hold.
  - iii) **Release from holds**
- Kho-Kho -**
- i) **Chaser's Skill**  
a) Sitting Position , Bullet, Parallel, b) Pole Turn  
c) Kinds of Kho- simple, running , Judgement.  
d) Covering Position Monkey, Standing combination.  
e) Tapping - Tapping below waist Tapping over waist pole Tapping  
f) Dive- Front, Side Running.
  - ii) **Runnr's skill**  
a) Chain - Single , Triple  
b) Oval - Short, Long, Middle Distance  
c) Dodge Front Backs  
d) Entry
  - iii) **Playing**
- Volley Ball -**
- a) **Individual Skills**
    - i) **Service -** Under hand, side arm , Round arm , Tennis Float & spine  
services.
    - ii) **Receiving -** Under hand Over hand
    - iii) **Passing**
      - a) As per height low medium & High
      - b) As per Direction Forward, Overhead & back
    - iv) **Smashing**
      - a) Straight arm smash
      - b) Wrist smash
      - c) Trun & smash
      - d) Round arm smash
      - e) Tapping
    - v) **Blocking**
      - a) Individual Block
      - b) Group block
    - vi) **Diffence**
      - a) Drive, Dive & Role (Forward back - Word & side word ) Dig & Role.
  - B) Team Skills -**
    - a) Systems of play 5-1,4-2,6-0
    - b) Attacking - Single, Double & Triple
    - c) Diffence Grading - Forward Angle & Backward angle diffence
    - d) Rotation-



## Foot Ball

- i) Kicking
  - a) With inside of the foot
  - b) Full instep
  - c) Inside of the instep
  - d) Outside of the instep
- ii) Receiving
  - a) Inside of the foot, thigh chest, sole
- iii) Dribbling :
  - a) Inside of the foot
  - b) Outside of the foot
  - c) Combination of inside and outside of the foot
- iv) Heading :

Forward, Backward, sideward
- v) Tackling
  - a) Front Block
  - b) Should to shoulder charge
  - c) Sliding tackle
- vi) Feinting with ball
- vii) Throwing in
- viii) Goal Keeper's techniques.
  - a) Defensive : Stopping methods kneeling method, half kneeling method, with draw method 'M' & Nest Method.
  - b) Attacking - attack, through hand and leg, leg, Punt, side volley front volley.
- ix) System of play . 4-2-4, 4-3-3, 3-1-3, 1-3-3, 4-4-2

## Basket Ball

- i) Player's stance and ball handling.
- ii) Passing and receiving.
  - a) Two hand passes : Overhead pass, base pass, chest pass, Bounce Pass, Side pass
  - b) One Hand passes : Overhead pass, base pass, , Bounce Pass, Side pass, Cross step & pass, under arm pass, Round arm pass, Back pass, Hook pass, Role Pass,
- iii) Dribbling
  - a) Low dribble
  - b) High Dribble
- iv) Shooting
  - a) Two hand shots - over head shot base shot, set shot, jump shot.
  - b) One hand shots - over head shot base shot set shot jump shot hook shot
  - c) One hand lay up shot
  - d) Running one hand and two hand shots and variations of shots.
- v) Rebounds
  - a) Offensive rebounds
  - b) Defensive rebound
- vi) Offence - Fast break, Criss Cross, Screening give and go.
- vii) Foot work - fakes & feints, Pivots.

## Handball

- i) Ball Holding
- ii) Passing - Overhead pass, chest pass / side arm pass, a cross body pass, under arm pass, bounce pass, back pass
- iii) Catching - variation of catch.
- iv) Dribbling - Low dribble & High Dribble.
- v) Shooting - Jump shoot, standing shot, Three step shot, dive shot.
- vi) Goal Keeping High, Medium & Low
- vii) Landing - Goal Keepe's diving, Player's diving
- viii) Defending & offending
- ix) Systems of the game.

**Hockey :**

- i) Grips body position placement of the ball and execution follow through
- ii) Hitting - Straight hit, Hit on wrong foot, Reverse stick hit, Turn around hit.
- iii) Stopping : Straight Push, Reverse stick push, push on wrong foot.
- iv) Pushing:
  - a) Push - Straight push, Reverse stick push, Push on wrong foot.
  - b) Flick : Straight flick, Reverse flick.
  - c) Scoop - Push Scoop, Straight Scoop
- v) Dribbling
- vi) Passing - Parallel pass Through pass, Return pass.
- vii) Trackling - shadow Teackling Lung & Teckle from left side.
- viii) Bulling
- ix) Goal Keeping - stoping with legs, ped and cleamace air stoping & cleamance with stick & pad.
- x) System of play 5-3-2-1, 4-4-2-1, 4-3-3-1

**Badminton -**

- a) Types of Grips
- b) Types of services - Toss Sevice , Toss Play High service, Low serve, Back Hand serve.
- c) Strokes - Forhand drive, back hand under arm clear, drop shot, back hand over head clear, Back hand smash, Back hand drop.
- d) Single game & double game.

**Table - Tennis :**

- i) Grip of the racket- pen grip, shakehand grip,
- ii) Body position and action.
  - a) Back hand push
  - b) Back hand Drive.
  - c) Fore hand drive
  - d) Fore Hand push
  - e) Top spin style
  - f) Back spin style
- iii) Service - Simple , Spin - Top , Back & side spine
- iv) Smash
- v) Single & Double play.

**Cricket :-**

- i) Fundamental skills of bastmen-
  - a) Grip b) Stance c) Back life d) Placement of foot d) Placement of foot
  - e) Contact of the ball f) Drive : Forward Square low and High drive
- ii) Diffence : Forward & back foot diffence
- iii) Fundamental skills of Bowling;
  - a) correct grip b) smooth run up c) a balanced delivery and follow through
- iv) Fundamental skills of Bowling
  - a) stopping & through the ball b) Low and high catch
- v) Wicket kepping
  - a) stanca b ) The Feet c) The hand d) gathering the ball

**Swimming -**

- a) Teaching Contents -
  - i) Techniques of swimming
  - ii) Free style
  - iii) Breast stroke
  - iv) Butter Fly
  - ii) Size & Types of swimming
  - iii) Maintenance of swimming pool
  - iv) Rules and regulation of competitions

**Soft Ball**

- i) Running ii) Throwing iii) Pitching iv) Batting v) Catching

**Tenicoit**

- i) Holding the ring ii) Service iii) Catching iv) Throwing the ring

**Ball Badminton**

- i) Types of Grips ii) Types of Service - simple , spine , high,
- iii) Strokes - Forhand drive ,back hand drop, back hand over head clear
- iv) Singale game & Double game

10. **To Maintain a Record Book of One Game** 10 Marks.  
The Note book contains (i) History (ii) Warm up (iii) Fundamental skill  
(iv) Leadup games (v) Records (vi) Score Sheets (vii) Names of International &  
National Players (viii) List of books & Journals

11. **First aid Training & Camping** 10 Marks.

Total Marks 250

# COMPUTER LETERACE PROGRAMY

## Unit I Essential of Computers.

- 1.1 History of Computer, generations of comuputers, block diagram, types of computers (Micro , mini,mainframe and super ) application areas of computer.
- 1.2 Terminology used in computer Hardware, Software, types of software Networks
- 1.3 Use of Peripherals floppy drive CD-drive, scanner modem, webcom, printer.
- 1.4 Need of operating system : Various operating system, like Dos use of GUI , Windows 95,98 ,Wendows server family 2000
- 1.5 Essentials of ICT related to internet.  
ICT. LAN. WAN INTERNET,BROWSER, E-MAIL WEB-SURFING

## Unit II ESSENTIALS OF SOFTWARE TOOLS.

- 2.1 Use of Windows 98 through start button and various icons on desktop Concepts use in various windows based software  
Creating New File  
Opening a file  
Saving a file (save & save as )  
cut and paste  
Redo and Undo  
Print a file
- 2.2. Microsoft Word ( Word-2000 )  
General fatures of M.S. Word  
Special features of M.S.Word (Auto - Correct Auto-Format Mail Merge
- 2.3 M.S. Excell (Excell-2000 )  
General features of M.S.Excell  
Cell formating & Manipulation, Drawing charts, data entry from wizard Special features of M.S.Excell  
(Use of formula, functions- like Mean, Standard Deviation and creating a chart .
- 2.4 M.S.POWER POINT  
General features of Power Point  
Special features of Power Point  
Slide wizard, character animation in side used of multimedia in slide

## Unit -3 USE OF VARIOUS SOFTWARES FOR EFFECTIVE TEACHING

- use of paint drawing various diagrams.
- Preparing a lesson note using M.S. Word
- Preparing a lecure note using Power Point.

## Unit 4 USE OF OFFLINE AND ONLINE EDUCATION RESOURCES

- Use of resources generated using power point in classroom offline resources :-
- use of various C.A.Learning and teaching Package.

- Reference Books**
1. **Advanced Microsoft Office 2000**  
FLYNN, Meredith & RUTKOSKY, Nita H. (2000)  
New Delhi : BPB Publications.
  2. **Excel for Windows'95 - Instant Reference**  
HERGERT, Douglas . (1992)  
SYBEX INCORPORATED.
  3. **Multimedia Technology and Applications.**  
HYLLMAN, David (1998)  
New York : Delmar Publishers
  4. **Windows 98 for Dummies**  
RATHBONE, Andy, IDG Books Worldwide
  5. **Computer Fundamentals**  
NAGPAL D. P. (2001)  
New Delhi, Wheeler Publishing
  6. **Computer Primer**  
RAJARAMAN, eD. 2  
New Delhi : Prentice-Hall of India Pvt. Ltd.
  7. **Windows for Dummies**  
RATHBONE, Andy  
Delhi : Pustak Mahal
  8. **Computer Today**  
SANDERS Donald H. (1998)  
New York : McGraw Hill Book Co.
  9. **Computer Fundamentals :**  
**Concepts, Systems, and Applications**  
SINHA, P. K. (1992)  
New Delhi, BPB Publications
  10. **Internet with Web Page / Web Site Design Bible**  
UNDERDHAL, Brian & UNDERDAHL, Keith (2000)  
New Delhi: IDG Books India (p) Ltd.

1. Best J. W. & Kahan - " Research in Education " Percentile Hall New Delhi.
2. Sukhin, Maharotra - ' Elements of Education'
3. Corely - Action Resead Reseadh
४. मुळे उमाठे - शै. संशोधन
५. पास्सनीस - शै. संशोधन
६. वं. वि. पंढीत - कृती संशोधन
७. महा. राज्य शै. अनु. परिषद - कृती संशोधन
८. पापु मंडब पुणे - कृती संशोधन
९. S. S. Kulkarni - Educational Technology
१०. सीमा येवले - शै. तंत्रविज्ञान
११. ठं. ना. जगताप - शै. तंत्रविज्ञान

**SCORING TABLE FOR MEN**

**Atheletics Practical Examination of B. P. Ed.  
NORTH MAHARASHTRA UNIVERSITY, JALGAON**

Marks	100 Mts Time in Second	200 Mts Time in Second	400 Mts Time in Second	800 Mts Time in Second	Shot Put distance in Mts/Cm	Discus throw distance Mts/Cm	Javeling throw distance in Mts/Cm	High jump hight in Mts/Cm	Broad jump distance Mts/Cm	floor dips 2 Min.	Sit- up 3 Min.
0.00	19.5	35.0	86.0	3.10	5.00	10.00	12.00	1.02	3.40	8	11
0.5	18.5	34.0	84.0	3.05	5.40	11.00	13.00	1.08	3.58	10	16
1.00	18.0	33.0	82.0	3.00	5.00	12.00	14.00	1.17	3.70	12	21
1.50	17.5	32.0	80.00	2.55	6.20	13.00	16.00	1.26	3.88	14	26
2.00	16.5	31.5	79.00	2.50	6.60	14.00	19.00	1.32	4.00	16	31
2.50	15.5	31.0	78.00	2.45	7.00	15.00	21.00	1.35	4.60	20	46
3.00	14.5	30.0	76.00	2.40	7.40	16.5	24.00	1.38	4.90	26	56
3.50	13.5	29.0	74.00	2.35	7.80	19.5	27.00	1.41	5.38	30	61
4.00	13.0	28.0	72.00	2.30	8.20	22.50	30.00	1.44	5.68	32	66
4.50	12.5	27.0	70.00	2.25	8.60	25.50	32.00	1.47	5.70	34	68
5.00	12.0	26.0	68.00	2.20	9.50	28.50	35.00	1.50	5.80	36	70

(38)

**SCORING TABLE FOR WOMEN**

**Athletics Practical Examination of B. P. Ed.  
NORTH MAHARASHTRA UNIVERSITY, JALGAON**

Marks	100 Mts Time in Second	200 Mts Time in Second	400 Mts Time in Second	Shot Put distance in M/CM	Discus Throw distance in Mts / cm.	Javeline throw distance in M/CM.	High Jump hight in MTs/CM	Broad Jump distance in M/CM	Floor dips <sup>2</sup> Minitus	Sit Ups 3 Min.
0-0	20-05	43.00	94.00	3.42	3.60	5.40	0.78	2.40	4	5
0.5	19.5	42.0	92.00	3.54	5.70	5.70	0.84	2.58	6	10
1.00	19.0	41.0	90.00	3.60	6.60	6.60	0.90	2.70	8	15
1.50	18.5	40.00	88.00	3.72	7.50	7.50	0.96	2.88	10	20
2.00	17.5	39.5	86.00	3.84	9.00	9.00	1.02	3.00	12	25
2.50	16.5	39.0	84.00	3.90	10.50	10.50	1.08	3.60	18	40
3.00	15.5	38.0	82.00	4.88	13.50	15.00	1.17	3.90	22	50
3.50	14.5	37.0	80.00	6.00	16.50	21.00	1.26	4.30	26	55
4.00	14.0	36.0	78.00	7.20	19.50	27.00	1.32	4.60	28	60
4.50	13.5	35.0	76.00	8.40	22.50	30.00	1.35	4.70	30	62
5.00	13.0	34.0	74.00	9.00	25.50	33.00	1.38	4.80	32	64



उत्तर महाराष्ट्र विद्यापीठ, जळगांव  
बी. पी. एड. अभ्यासक्रम  
वार्षिक क्रीडा कौशल्य चाचणी गुणपत्रक

महाविद्यालयाचे नांव	क्रीडा प्रकार ↓	श्रीट नं.	अ. नं.	विद्यार्थ्याचे नांव
	कबड्डी	१	१	
	फूटबॉल	२	२	
	क्रीकेट	३	३	
	बास्केट बॉल	४	४	
	हॅन्ड बॉल	५	५	
	खो-खो	६	६	
	रफांडबूक ( मजर गम)	७	७	
	लांब उडी	८	८	
	उंच उडी	९	९	
	१०० मी. धावणे	१०	१०	
	४०० मी. धावणे/ ८०० मी. धावणे	११	११	
	थाळी फेक	१२	१२	
	गोळा फेक	१३	१३	
	मॅट एक्सरसाईज	१४	१४	
	पिरॅमिड	१५	१५	
	सिंगल/ डबल बार (पु.) जिम्नेस्टिक्स पोझीशन (म.)	१६	१६	
	व्हॉल्टींग हॉर्स (पु.) बॅलन्सिंग बीम (म.)	१७	१७	
	संचलन	१८	१८	
	लेझीम	१९	१९	
	योगासन आणि क्रीया	२०	२०	
	प्रथमोपचार	२१	२१	
	दंड बैठका (पु.) स्कॅट, फ्लोअर डिप्स (म.)	२२	२२	
	मास पी. टी.	२३	२३	
	उंबेल्स	२४	२४	
	कुस्ती (पु.) डान्स (म.)	२५	२५	
	एकूण	२६	२६	