

## **B. Ed. (Physical Education)(Revised from June 2008)**

### **General objectives of the B.Ed. (Phy.Edu.) course:**

To enable the student teacher,

- 1. To become competent and committed physical education professionals willing to perform.**
- 2. To use competencies and skills needed for becoming an effective teacher (especially Physical Education).**
- 3. To be sensitive student teacher about emerging issues such as health & fitness, wellness, technology, environment.**
- 4. To inculcate rational thinking and scientific temper among the students.**
- 5. To develop critical awareness about the social realities among the students.**
- 6. To use managerial and organizational skills.**

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### **0.1 Eligibility for Admission:**

A Candidate should have passed the Bachelor's Degree/Master Degree of Pune University or of any other university recognized by this university, 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 optional subject.

(School subject means the subject included in the syllabus of secondary / Higher secondary level in the Maharashtra state.)

Relaxation of 5% marks will be given to the candidates belonging to S.C. & S.T. and other notified categories as per Government Rules.

#### **(I) Selection Procedure:**

Admission to the eligible candidates will be given as per the selection procedure laid down by the State Government of Maharashtra from time to time.

#### **(ii) Eligibility Norms for appearing at B.Ed. (Physical Education) examination:**

Student teachers should have kept two terms with at least 90% attendance at the periods in college for both the terms. He should have completed all the practical and other work expected in all the three parts of the syllabus up to the satisfaction of the principal. He should have obtained such a certificate from the principal of the college. Unless and until he obtains such a certificate, he will not be allowed to appear for university examination.

## Frame Work of B.Ed. (Physical Education) Syllabus

Area	Part	Head	Title	Marks	Clock Hours
Theory	I	1	Foundations of Physical Education & Sports	100	100
		2	Applied sciences in Physical Education & Sports	100	100
		3	Management & Evaluation in Physical Education & Sports	100	100
		4	Emerging trends in Physical Education & Sports	100	100
		5	Methodology of teaching	100	100
				<b>500</b>	<b>500</b>
		6	<b>Term work</b> Tutorials Term Examinations (Terminal & Prelim) Content enrichment programme Knowledge test	30 40 20 10	30 40 20 10
				<b>100</b>	<b>100</b>
Teaching		7	<b>Final Teaching Lesson- Physical Education</b>	50	
		8	<b>Final Teaching Lesson- Optional Subject</b>	50	
				<b>100</b>	100
	9	<b>Practice Teaching</b> <b>Core training programme</b> a) Micro lessons (6 Lessons) b) Integration lessons (4 Lessons) <b>Special training programme</b> a) Practice lesson (12 Lessons) b) Block teaching (4 Lessons) c) CCM d) Teaching module	Grade 20 Marks 120 Marks 20 Marks 20 Marks 20 Marks	10 10 120 20 20 20	
			<b>200</b>	<b>200</b>	

Area	Part	Head	Title	Marks	Clock Hours
<b>Practical</b>	<b>III</b>	<b>10</b>	<b>Sports &amp; Games Level 2</b>	<b>50</b>	<b>50</b>
		<b>11</b>	<b>Sports &amp; Physical Education Activities</b> 1.Track & Field 2.Floor Gymnastics 3.Yoga 4.Drill Marching 5. Self Defense 6. Demonstrative Activities 7. Fitness 8. Modified Games 9. Competencies 10. Sports & Games level 1	60 10 20 20 10 30 40 20 10 60	60 10 20 20 10 30 40 20 10 60
				<b>280</b>	<b>280</b>
		<b>12</b>	<b>Course related practical work</b> a. TBT Practical b. Measurement & Evaluation c. Field Marking & Officiating	25 30 15	25 30 15
				<b>70</b>	<b>70</b>
				<b>1300</b>	<b>1300</b>

The college will complete the internal assessment of the heads no. 6, 9, 11, & 12 mentioned in the syllabus. The internal assessment will be in the form of marks.

For the rationalization of internal marks university will appoint a moderation committee. The Committee will visit each college to take the review of the internal marks given by the college and advice the college if necessary. The college should take the appropriate action as per the advice of the committee & submit the internal marks to the University.

**R-4.3 Norms for passing B.Ed. (Phy.Edu.) Examination**

i)	To pass the examination the candidate must obtain at least 45% marks in each head of passing in both Internal and external evaluation and an aggregate of 50% in each part separately (Part I – Part III) Refer Table 1.
ii)	To pass the examination in “Second class ” candidate must appear at one and the same time in the both Internal and external evaluation and obtain least 50% marks in each head of passing with aggregate 50% marks in each part separately (Part I – Part III). Refer Table 1.
iii)	To pass the examination in “Second class with B+” candidate must appear at one and the same time in the both Internal and external evaluation and obtain least 50% marks in each head of passing with aggregate 55% marks in each part separately (Part I – Part III). Refer Table 1.
iv)	To pass the examination in “First class”, candidate must appear at one and the same time in the both Internal and external evaluation and obtain least 55% marks in each head of passing with aggregate 60% marks in each part separately (Part I – Part III). Refer Table 1.
v)	To pass the examination in “First class with Distinction”, candidate must appear at one and the same time in the both Internal and external evaluation and obtain least 65% marks in each head of passing with aggregate 70% marks in each part separately (Part I – Part III) Refer Table 1.

**Note:** The candidate who has obtained minimum 45% or more marks in any head of passing but failed in the examination shall be eligible to claim exemption in such head/heads. Candidates claiming exemption will not be eligible for first class with Distinction, first class, and higher second class and merit list.

**Note:** The candidate has completed their terms but has not completed internal work are eligible do so in next one academic year only.

**Table 1****R-4.3 Norms for passing B.Ed. (Phy.Edu.) Examination:****Specification of minimum marks to be obtained to secure various classes in the evaluation**

<b>Part</b>	<b>Head</b>	<b>Pass class 45% each head</b>	<b>Second class 50% each head</b>	<b>Second class with B+ 50% each head</b>	<b>First class 55% each head</b>	<b>First class with Dist. 65% each head</b>
<b>I</b>	1 (100 Marks)	45	50	50	55	65
	2 (100 Marks)	45	50	50	55	65
	3 (100 Marks)	45	50	50	55	65
	4 (100 Marks)	45	50	50	55	65
	5 (100 Marks)	45	50	50	55	65
	6 (100 Marks)	45	50	50	55	65
	<b>600 Marks</b>					
	<b>Aggregate Part I</b>	<b>Min. 300 Marks out of 600 Marks (50%)</b>	<b>Min. 300 Marks out of 600 Marks (50%)</b>	<b>Min. 330 Marks out of 600 Marks (55%)</b>	<b>Min. 360 Marks out of 600 Marks (60%)</b>	<b>Min. 420 Marks out of 600 Marks (70%)</b>
<b>II</b>	7 (50 Marks)	22.50	25.00	25.00	27.50	32.50
	8 (50 Marks)	22.50	25.00	25.00	27.50	32.50
	9 (200 Marks)	90.00	100.00	100.00	110.00	130.00
		<b>300 Marks</b>				
	<b>Aggregate Part II</b>	<b>Min. 150 Marks out of 300 Marks (50%)</b>	<b>Min. 150 Marks out of 300 Marks (50%)</b>	<b>Min. 165 Marks out of 300 Marks (55%)</b>	<b>Min. 180 Marks out of 300 Marks (60%)</b>	<b>Min. 210 Marks out of 300 Marks (70%)</b>
<b>III</b>	10 (50 Marks)	22.50	25.00	25.00	27.50	32.50
	11 (280 Marks)	126.00	140.00	140.00	154.00	182.00
	12 (70 Marks)	31.50	35.00	35.00	38.50	45.5
		<b>400 Marks</b>				
	<b>Aggregate Part III</b>	<b>Min. 200 Marks out of 400 Marks (50%)</b>	<b>Min. 200 Marks out of 400 Marks (50%)</b>	<b>Min. 220 Marks out of 400 Marks (55%)</b>	<b>Min. 240 Marks out of 400 Marks (60%)</b>	<b>Min. 280 Marks out of 400 Marks (70%)</b>
	<b>Total Marks 1300</b>	<b>Min. 650 Marks (50%)</b>	<b>Min. 650 Marks (50%)</b>	<b>Min. 715 Marks (55%)</b>	<b>Min. 780 Marks (60%)</b>	<b>Min. 910 Marks (70%)</b>

#### 4.1 Evaluation:

A Candidate appearing for B.Ed. (Phy.Edu.) course will be evaluated for the Degree of “Bachelor of Education (Physical Education)” in the manner given below.

Part	External evaluation – 650 marks		Internal evaluation- 650 marks	
I – Theory (600 marks)	Head 1 to 5	<b>500 marks</b>	Head 6	<b>100 marks</b>
II- Teaching (300 marks)	Head 7	<b>50 marks</b>	Head 9	<b>200 marks</b>
	Head 8	<b>50 marks</b>		
III- Practical (400 marks)	Head 10	<b>50 marks</b>	Head 11	<b>280 marks</b>
			Head 12	<b>70 marks</b>

#### Part I (Head 1 to 6): Theory (Total 650 marks)

##### Head 1 to 5: External assessment of 5 theory papers (Total 500 marks)

University will conduct examination at the end of the year for all the five heads of the theory papers in Part-I and evaluation will be done on the basis of marks obtained by the students.

These 5 heads consist of five separate papers of two sections each as given below.

Paper 1) Foundations of Physical Education & Sports

Paper 2) Applied sciences in Physical Education & Sports

Paper 3) Management & Evaluation in Physical Education & Sports

Paper 4) Emerging trends in Physical Education & Sports

Paper 5) Methodology of teaching

For paper 5 each student will select Physical Education method as one of the compulsory subjects and any one subject from the following list

- 1) Marathi Education
- 2) Hindi Education
- 3) English Education
- 4) History Education
- 5) Geography Education
- 6) General science Education
- 7) Mathematics Education
- 8) Information Technology Education (IT)
- 9) Environmental Science Education

##### Head 6: Term Work (100 Marks)

Internal assessment of term work candidate will be evaluated in the following:

• Tutorials	30 Marks
• Term Examinations (Terminal & Prelim)	40 Marks
• Content enrichment programme	20 Marks
• Knowledge test	10 Marks

This head includes Tutorials, Term Examinations (Terminal & Prelim), Content enrichment programme, and Knowledge test

**Tutorials:** Student should submit 10 tutorials i.e. two tutorials for papers 1 to 5, under examination conditions. Marks calculated out of 30 will be considered for the internal assessment for head 6.

**Term Examinations (Terminal & Prelim) :** Two internal tests in theory papers should be held during the year. Marks calculated out of 40 will be considered for the internal assessment for head 6.

**Content Enrichment programme:** To enrich the content of the optional subject, candidate will carry out the self-study of the content of the subjects offered as the optional method. For the assessment of contents at least two internal tests based on the content of optional subject should be held during the year. The scope of the content should be the content expected in the syllabus of Std. V to X. Marks calculated out of 20 will be considered for internal assessment for head 6.

**Knowledge test:** Objective test should be conducted of physical education & sports activities and the questions should be based on various latest sports awards, National & international competitions, rules & regulation). Marks calculated out of 10 will be considered in the internal assessment for head 6.

## **Part II (Head 7, 8, & 9): Teaching (Total 300 marks)**

### **Head 7: Final Teaching Lesson- Physical Education (50 marks)**

### **Head 8: Final Teaching Lesson- Optional Subject (50 marks)**

University will conduct examination of the final lessons at the end of the year for the Part-II (Head 7 & 8) and evaluation will be done on the basis of marks obtained in the final lessons. Marks out of 50 each will be considered in the external assessment for head 7 & 8 respectively.

### **Head 9: Practice teaching (200 marks)**

Internal assessment of practice teaching Lessons candidate will be evaluated in the following:

<b>Practice teaching</b>			
<b>Core training programme</b>	a) Micro lessons	(6 Lessons)	Grade
	b) Integration lessons	(4 Lessons)	20 Marks
<b>Special training programme</b>	a) Practice lessons	(12 Lessons)	120 Marks
	b) Block teaching	(4 Lessons)	20 Marks
	c) CCM	(2 Lessons)	20 Marks
	d) Teaching module		20 Marks

**Core training programme:****a) Micro teaching lessons: (Grades)**

Student teachers will conduct 6 micro teaching lessons. For these lessons, they will select any six teaching skills from the list given below. They will complete the cycle of two lessons i.e. teach - reteach for each skill. These lessons should be graded.

<b>List of the teaching skills For Physical Education</b>	<b>List of the teaching skills for optional subject.</b>
1) Order & counting	1) Set Induction
2) Warming Up	2) Narration
3) Demonstration	3) Questioning
4) Practice	4) Illustration
5) Class Management	5) Stimulus Variation
	6) Demonstration
	7) Reinforcement
	8) Black board work
	9) Closure.
	10) Lesson Plan
	11) Explanation

**b) Integration Lesson: (20 marks)**

After practicing 6 (3+3) skills in micro-teaching, student teacher will conduct four lessons of minimum 20 minutes duration to integrate the skills which they practiced earlier.

Marks calculated out of 20 will be considered in the internal assessment for the head 9.

**Special Training Programme:****a) Practice Lessons: (120 marks)**

Each student teacher will conduct a total 12 practice lessons on the current school curriculum in school settings. Of these 6 lessons will be in classroom teaching of optional method selected and physical education theory. While the other 6 lessons will be conducted on the ground, 1 lesson each in athletics, yoga, mass activities, and fitness and 2 lessons in games.

Marks calculated out of 120 will be considered in the internal assessment for head 9.

**b) Block teaching programme: (20 marks)**

The block teaching program of 2 weeks will be conducted in school settings. In the Block teaching programme student teacher will perform following activities:

**1.** In this programme, student teacher will select one unit from the Physical Education and optional subject with consultation from teacher. He will prepare the unit plan for that unit. He will teach that unit for at least 4 periods under the guidance and observation of the schoolteacher or Educator. At the end of the teaching he will prepare and conduct a unit tests and will interpret the result.

Same activity will be repeated for the both methods.

Marks calculated out of 20 will be considered in the internal assessment for head 9.

2. Other activities to be completed in the block teaching program are given below:

- i) Observation of lessons of senior teachers & peers.
- ii) Collection of information about Catalogue, Progress Card, Result Sheet, General Register, School Time Table, sports equipment records, sports Competition eligibility form, parent teacher Association etc.
- iii) Conducting physical fitness test of one class.
- iv) Drawing up a question paper of physical education theory & assessing them.
- v) Conduct of Mass Sports activities in school.

**c) Content cum Methodology (CCM) Workshop: (20 marks)**

**Duration** - 10 Hrs. Work shop should be arranged for both the methods.

**Activities in the Work Shop:**

1. Preparation of the structure of the subject.
2. Analysis of the curriculum.
3. Analysis of the syllabus of one standard.
4. Establishing relationship between syllabus and textbook/handbook.
5. Content analysis of one unit.
6. Preparation of two lesson plans for different classes to teach the same teaching unit.
7. Preparation of two plans to teach the same teaching unit in the same standard.
8. Conduct of lessons
9. Four teaching lessons of Content cum Methodology should be conducted in the Workshop.  
Marks out of 20 will be considered in the internal assessment for head 9.

**d) Teaching module: (20 marks)**

Workshops (20 hours) should be conducted on creating database of exercises, variety of modified games & sports, practice drills, formations, developing instructional aids, and teaching pedagogy. Student should maintain the record of activities in the workshop. (5 mark for record, 5 marks for oral examination and 10 marks for written test).

Marks out of 20 will be considered in the internal assessment for head 9.

## **Part III (Head 10, 11, & 12): Practical (Total 400 marks)**

### **Head 10: Sports & Games Level 2 (50 marks)**

The Student must select any 1 game from the games taught at level 1 for sports & games at Level 2. University will conduct this examination at the end of the year for the Part III in head 10 and evaluation will be done on the basis of marks obtained by the students.

#### **Details of this course are as under**

1. Warming- up
  - 1.1 General Warming-up
  - 1.2 Specific Warming-up
2. Training for Motor Abilities
  - 2.1 Free hand exercises for general development
  - 2.2 Strength training (Isometric, Isotonic and Isokinetic Exercises and other strength training methods and means.
  - 2.3 Endurance Training (Continuous method, Interval method & Fartlek)
  - 2.4 Speed Training (Methods and means for developing sprinting speed, speed of movement and reaction time).
  - 2.5 Flexibility Training
3. Technical/Skill Training
  - 3.1 The skills of the sport/game will be taught with the help of following exercises:
    - 3.1.1 Preparatory Exercises
    - 3.1.2 Basic Exercises
    - 3.1.3 Supplementary Exercises
  - 3.2 Progressive Teaching Stages of skills
  - 3.3 Lead-up activities
  - 3.4 Coaching of skills in relation to the game situation.
4. Tactics and Strategy:
  - 4.1 Individual Tactics (Attack, Defense and High Performance)
  - 4.2 Team Tactics (Attack, Defense and High Performance)
5. Officiating and Organization
  - 5.1 Organization of competition
  - 5.2 Rules and their interpretations
  - 5.3 Laying out of play field/arena for competitions
  - 5.4 Maintenance of play fields and equipment
6. Evaluation
  - 6.1 General Tests
  - 6.2 Specific Tests
  - 6.3 Evaluation of performance
7. Game participation

**Evaluation** - Evaluation of the game selected for level 2 shall be evaluated as per the classification of marks mentioned below.

Core skills-10 marks

Skill analysis & correction- 5 marks

Fitness tests- 5marks

Skill tests- 5marks

Officiating- 5marks

Game performance- 5 marks

Record book- 5marks

Viva-Voce- 5marks

Written test- 5marks

A total of 50 marks will be considered in the external assessment of head 10.

**Suggested evaluation scheme for selected sport**

<b>Sports &amp; games</b>	<b>Core skills</b>	<b>Fitness tests</b>	<b>Skill tests</b>
<b>Basketball</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Lay-up shoot</li> <li>3. Basic defense</li> <li>4. Foot work</li> </ol>	<ol style="list-style-type: none"> <li>1. 4*10m Shuttle run</li> <li>2. Vertical Jump</li> </ol>	<ol style="list-style-type: none"> <li>1. Zig-zag dribble</li> <li>2. Shooting test</li> </ol>
<b>Football</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Dribbling</li> <li>3. Basic defense</li> <li>4. Goal keeping</li> </ol>	<ol style="list-style-type: none"> <li>1. 50 m Dash</li> <li>2. 4*10m Shuttle run</li> </ol>	<ol style="list-style-type: none"> <li>1. Accuracy test</li> <li>2. 30 m dash with ball</li> </ol>
<b>Handball</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Jump shoot</li> <li>3. Basic defense</li> <li>4. Goal keeping</li> </ol>	<ol style="list-style-type: none"> <li>1. 4*10m Shuttle run</li> <li>2. Vertical Jump</li> </ol>	<ol style="list-style-type: none"> <li>1. speed pass</li> <li>2. Front shoot</li> </ol>
<b>Kabaddi</b>	<ol style="list-style-type: none"> <li>1. Block &amp; dash</li> <li>2. Escape from holds</li> <li>3. Variations of toe &amp; hand touches, kicks</li> <li>4. Variations in raid footwork</li> </ol>	<ol style="list-style-type: none"> <li>1. Push ups</li> <li>2. 4*10m Shuttle run</li> </ol>	<ol style="list-style-type: none"> <li>1. Accurate hand touch test</li> <li>2. Accurate toe touch test</li> </ol>
<b>Kho-Kho</b>	<ol style="list-style-type: none"> <li>1. Single chain</li> <li>2. Giving kho</li> <li>3. Ring game</li> <li>4. Attack</li> </ol>	<ol style="list-style-type: none"> <li>1. 30 m Dash</li> <li>2. 4*10m Shuttle run</li> </ol>	<ol style="list-style-type: none"> <li>1. Chair kho test</li> <li>2. Ring game</li> </ol>
<b>Volleyball</b>	<ol style="list-style-type: none"> <li>1. Simple service</li> <li>2. Underhand pass</li> <li>3. Blocking</li> <li>4. Tossing</li> </ol>	<ol style="list-style-type: none"> <li>1. Vertical jump</li> <li>2. Push ups</li> </ol>	<ol style="list-style-type: none"> <li>1. Serving test</li> <li>2. Wall volley</li> </ol>

**Head 11: Physical Education & Sports activities (Total 280 Marks)**

Internal assessment of Sports & Physical Education Activities, Candidate will be evaluated in the following:

1.Track & Field	60 Marks
2.Floor Gymnastics	10 Marks
3.Yoga	20 Marks
4.Drill Marching	20 Marks
5. Self Defense	10 Marks
6. Demonstrative Activities	30 Marks
7. Fitness	40 Marks
8. Modified Games	20 Marks
9. Competencies	10 Marks
10. Sports & Games Level 1	60 Marks

The Practical for the course of Physical Education & Sports activities will be based on syllabus upto that of std. XII prescribed by the Maharashtra State Secondary and Higher secondary Board.

**1. Track & Field: (60 marks)**

- (a) Runs: Sprints, Relays, Hurdles & Middle Distance (20 Marks)  
 (b) Jumps: Long Jump & High Jump (20 Marks)  
 (c) Throws: Shot put, Discus, Javelin, (Any two) (20 Marks)

Detailed syllabus and the evaluation scheme are given in the following table.

Sr.No.	Event	Content	Evaluation
1	<b>Sprint</b>		
	<b>100 m, 200 m, 400m</b>	<b>a) Starts-</b> Medium, bullet and elongated starts. <b>b) Running on curve.</b> <b>c) Starts on Curve.</b> <b>d) Finish-</b> Chest, Run through, Lunge finish. <b>d) Officiating at Start and finish.</b>	50% marks For 100 m <b>performance</b> as per norms. 10% marks for Finish demo. 10% marks for Start demo. 10% marks for running on curve demo. 20% marks for officiating.
2	<b>Relays</b>		
	<b>Relay -4X100 and 4X400 m</b>	<b>Baton Exchange</b> <b>a)</b> Down and Up Sweep <b>b)</b> Visual and Non Visual Exchange <b>c) Officiating</b>	<b>Marks for baton exchange skill-</b> incoming and outgoing both.

3	<b>Middle Distance Run</b>		
	<b>800 m 1500 m</b>		<b>Marks for performance as per norms.</b> 800 m for Women 1500 m for Men.
4	<b>Hurdles</b>		
	<b>100 m–Boys and girls</b>	a) <b>Lead leg action.</b> b) <b>Trail leg action.</b> c) <b>3 stride</b> pattern between the hurdles. d) <b>Start and striding</b> to 1 <sup>st</sup> Hurdle.	<b>Skill Performance</b> Combined lead leg and trail leg action. Striding pattern between the hurdles. Striding pattern from start to 1 <sup>st</sup> hurdle.
5	<b>Jumps</b>		
	<b>Long jump</b>	a) <b>Sail style and Hang style.</b> - Approach run, Take off, action in the air, landing. b) <b>Officiating</b>	50% marks For long jump <b>performance</b> as per norms. 30% marks for over all jumping skill. 20% marks for officiating.
	<b>High jump</b>	a) <b>Straddle Roll technique</b> -Approach run Last stride before the take off, Take off, Bar clearance, Landing b) <b>Officiating</b>	50% marks For long jump <b>performance</b> as per norms. 30% marks for over all jumping skill. 20% marks for <b>officiating</b>
6	<b>Throws</b>		
	<b>Discus Throw</b>	a) <b>Standing Throw-</b> Basic Stance, Preliminary swings, Pre delivery action, delivery and reverse. b) <b>Officiating</b>	50% marks For throwing <b>performance</b> as per norms. 30% marks for over all throwing skill. 20% marks for <b>officiating</b>
	<b>Javelin</b>	<b>Hold and approach run, 5 stride patterns before the throw-</b> the withdrawal, the impulse and the power reach stride, <b>Delivery and reverse.</b> <b>d) Officiating</b>	50% marks For throwing <b>performance</b> as per norms. 30% marks for over all throwing skill. 20% marks for <b>officiating</b>
	<b>Shot Put</b>	<b>Gliding Technique</b> -Hold and stance, T-balance, crouch, Kick and glide, support of toe board, power position, delivery and reverse. <b>d) Officiating</b> <b>e) Analysis and correction</b>	50% marks For throwing <b>performance</b> as per norms. 30% marks for over all throwing skill. 20% marks for <b>officiating</b>

### NORMS FOR ATHLETIC EVENTS- MEN

<b>Marks out of 100</b>	<b>100m. Sprint</b>	<b>1500m. Run</b>	<b>Long Jump</b>	<b>High Jump</b>	<b>Discus Throw</b>	<b>Shot Put</b>	<b>Javelin Throw</b>	<b>Marks out of 5</b>
<b>5</b>	19.90	9.46	3.19	1.04	10.88	4.55	14.90	<b>0.25</b>
<b>10</b>	18.07	8.35	3.50	1.10	11.65	4.91	17.13	<b>0.50</b>
<b>15</b>	17.24	8.12	3.69	1.10	12.51	5.15	18.35	<b>0.75</b>
<b>20</b>	16.71	7.42	3.82	1.10	13.24	5.34	20.00	<b>1.00</b>
<b>25</b>	16.28	7.22	3.90	1.15	13.78	5.50	21.06	<b>1.25</b>
<b>30</b>	16.00	7.12	4.01	1.15	14.31	5.66	22.28	<b>1.50</b>
<b>35</b>	15.80	7.03	4.11	1.15	14.72	5.84	23.13	<b>1.75</b>
<b>40</b>	15.52	6.54	4.18	1.18	15.25	5.99	24.13	<b>2.00</b>
<b>45</b>	15.32	6.47	4.25	1.20	15.57	6.10	25.02	<b>2.25</b>
<b>50</b>	15.08	6.39	4.35	1.20	16.08	6.20	25.78	<b>2.50</b>
<b>55</b>	14.96	6.35	4.43	1.25	16.40	6.26	26.37	<b>2.75</b>
<b>60</b>	14.69	6.31	4.50	1.25	16.80	6.30	27.03	<b>3.00</b>
<b>65</b>	14.49	6.24	4.58	1.25	17.17	6.45	27.99	<b>3.25</b>
<b>70</b>	14.40	6.19	4.67	1.30	17.50	6.68	29.17	<b>0.35</b>
<b>75</b>	14.23	6.15	4.80	1.30	18.19	6.76	30.00	<b>3.75</b>
<b>80</b>	14.06	6.11	4.89	1.35	18.80	7.02	31.39	<b>4.00</b>
<b>85</b>	13.90	6.05	5.13	1.35	20.09	7.18	33.12	<b>4.25</b>
<b>90</b>	13.63	5.57	5.54	1.40	21.78	7.47	35.26	<b>4.50</b>
<b>95</b>	13.38	5.38	6.12	1.45	24.03	8.17	37.49	<b>4.75</b>
<b>100</b>	12.76	5.27	7.15	1.59	29.24	9.10	41.79	<b>5.00</b>

<b>NORMS FOR ATHLETIC EVENTS- WOMEN</b>								
<b>Marks out of 100</b>	<b>100m. Sprint</b>	<b>800m. Run</b>	<b>Long Jump</b>	<b>High Jump</b>	<b>Discus Throw</b>	<b>Shot Put</b>	<b>Javelin Throw</b>	<b>Marks out of 5</b>
<b>5</b>	26.17	7.28	2.05	0.78	7.92	3.35	6.47	<b>0.25</b>
<b>10</b>	23.72	5.07	2.27	0.80	8.70	3.69	8.04	<b>0.50</b>
<b>15</b>	22.33	4.57	2.40	0.84	9.25	3.93	9.09	<b>0.75</b>
<b>20</b>	21.11	4.51	2.48	0.85	9.56	4.10	10.00	<b>1.00</b>
<b>25</b>	20.43	4.48	2.55	0.86	9.86	4.28	10.70	<b>1.25</b>
<b>30</b>	20.09	4.30	2.65	0.88	10.26	4.41	11.20	<b>1.50</b>
<b>35</b>	19.74	4.26	2.70	0.90	10.55	4.52	12.00	<b>1.75</b>
<b>40</b>	19.38	4.15	2.79	0.91	10.72	4.66	12.75	<b>2.00</b>
<b>45</b>	19.00	4.11	2.85	0.95	11.14	4.85	13.90	<b>2.25</b>
<b>50</b>	18.70	4.02	2.92	0.95	11.55	4.92	15.20	<b>2.50</b>
<b>55</b>	18.34	3.57	3.05	0.97	11.91	5.02	16.64	<b>2.75</b>
<b>60</b>	18.00	3.54	3.10	1.00	12.16	5.13	18.10	<b>3.00</b>
<b>65</b>	17.73	3.51	3.20	1.00	12.53	5.27	19.21	<b>3.25</b>
<b>70</b>	17.46	3.50	3.30	1.05	13.15	5.48	20.95	<b>0.35</b>
<b>75</b>	17.19	3.44	3.47	1.05	13.66	5.70	22.40	<b>3.75</b>
<b>80</b>	16.96	3.41	3.60	1.10	14.11	5.98	23.85	<b>4.00</b>
<b>85</b>	16.60	3.34	3.90	1.10	15.11	6.33	25.20	<b>4.25</b>
<b>90</b>	16.26	3.27	4.15	1.17	16.18	6.58	27.07	<b>4.50</b>
<b>95</b>	15.84	3.18	4.70	1.23	17.62	7.07	29.80	<b>4.75</b>
<b>100</b>	15.18	3.12	5.71	1.42	21.86	8.80	35.80	<b>5.00</b>

**2. Floor Gymnastics: (10 marks)**

- (a) Rolls: Forward, Backward, Side, Dive (Variations)
- (b) Balances: 'V', 'T', 'Y', 'L', Frog, Headstand, and Handstand
- (c) Turnover movements: Cartwheel, Handspring & Headspring
- (d) Pyramids: Pair, Trio, Quadrates, Penthats

Evaluation of this should be done on the basis of performance in the above skills.

**3. Yoga: (20 marks)**

The syllabus under this activity will be that as prescribed upto std.XII.

Evaluation should be done for.

- (a) Asanas (10 Marks)
- (b) Suryanamaskar (5 Marks)
- (c) Pranayam techniques (5 Marks)

**(a) Asanas (10 Marks): Details as under**

1. Sarvangasana 2. Tolanggulasana 3. Hansasana 4. Badh Padmasana 5. Halasana 6. vipareet Karni 7. Shavasana 8. Ardha Matsyendrasana 9. Paschimotanasana 10. Bhadrasana	11. Ushtransana 12. Akarna Dhanurasana 13. Vipareet Karni 14. uutan Mandukasana 15. Kukkutasana 16. Simhasana 17. Shirshasana 18. Shabhasana 19. Parvatasana with Padmasana 20. Trikonasana
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\*Yogasana program should start with Suryanamaskaras and close with Shavasana and Omkar.

**(c) Pranayam techniques (5 Marks): Details as under**

<b>Pranayam</b> 1. Anulom Vilom 2. Bhramari	<b>Kriya</b> 1. Ujjai 2. Shitali
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**4. Drill Marching: (20 marks)**

The syllabus under this activity will be that as prescribed upto std.XII.

- (a) Drill Marching activities- (15 marks)
- (b) Orders & Counting for special functions (5 marks)  
(National days, Opening & Closing ceremonies)

**(a) Drill Marching activities (15 marks): Details as under**

<p><b>Fundamental commands:</b>  1. Fall in 2. Attention (Savdhan) 3. Stand at ease (Vishram)  4. Standing easy (Aramse) 5. Quick march (Tej chal)  6. Mark time (Qadam tal) 7. Right turn (Dahine mur)  8. Left turn (Baen mur) 9. Back turn (Pichhe mur)  10. Right dress 11. Eyes front 12. From the right-  number 13. Stepping forward, sideward, &amp; backward  14. Left or right or about turn 15. Half left or right turn</p> <p><b>Movements:</b>  1. Marking time 2. Halting from marking time  3. Marching forward (From marking time)  4. Quick marching 5. Halting from marching forward  6. Marching backward 7. Marching sideward  8. Double time marching 9. Halting from double time  10. Changing to Quick time from Double time marching  11. Turning to the left, or right while Marking time or  Marching</p>	12. Turning about while Marching or Marking time 13. Inclining to the left while Marching or Marking time 14. Saluting left while Marching 15. Marching to the rear 16. Changing step 17. Changing direction left or right while Marching 18. Changing direction to left or right about while Marching 19. Forming twos / fours on the left or right 20. Reforming files from column of fours 21. In company front numbered in fours or in a column of fours, to execute, 'fours right' of 'fours left' march etc. 22. Fours left or right wheel march 23. Forming fours / twos by a left or right turn 24. Forming file from fours by a left or right turn 25. Marching the front by rear fours with left or right wheel 26. Changing a single file into columns of four, eight, etc.
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**5. Self Defense: (10 marks)**

- |                      |           |
|----------------------|-----------|
| (a) Offensive skills | (5 Marks) |
| (b) Defensive skills | (5 Marks) |

**6. Demonstrative Activities: (30 marks)**

- |                                   |            |
|-----------------------------------|------------|
| (a) Ghati Lezim                   | (10 Marks) |
| (b) Dance                         | (10 Marks) |
| (c) Light apparatus drill (any 4) | (10 Marks) |

**(a) Ghati Lezim (10 Marks): Details as under**

<p><b>a. Preliminary position:</b>  1. Lazim Skandh and Aram 2. Husshyar</p> <p><b>b. Exercises:</b>  1. Ath Thoke 2. Talse Kadam 3. Pavitra  4. Pao Chakra (Quarter Circle)</p>	5. Ardha Chakra or Firki (Half Circle) 6. Poora Chakra or Firki (Full Circle) 7. Age Chal (Going Forward) 8. Pair Formation 9. Hool o Dodging 10. Change the partner 11. Baithak 12. Palat
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**(b) Dance (10 Marks): Details as under**

Rhythmic Activities	Gymnastic Dances	Calisthenics
1. Tipri 2. Goph 3. Garba	1. Form a circle 2. Paired off in twos	1. Neck 2.Arms 3.Trunk 4. Legs 5. Arms & Neck 6. Arms & Trunk 7. Arms & light legs 8. Arms & heavy legs 9. Arms, Trunk & legs

**(c) Light apparatus drill (10 Marks)  
Details as under**

Apparatus	Exercises
1. Dumbbells Drill <b>Fundamental position:</b> a. Husshyar b. Aram	1.Upper Neeche Thok 2.Kamar Zuk 3.Baye Dahine thok 4.Age Peeche Thok 5.Adanga Age 6.Adanga Baju 7.Chaupher Thok 8.Peth Guthan Thok
2. Wand Drill <b>Fundamental position:</b> a. Kathi lappet. b.Aram c. Edi milao d. Husshyar	1.Kamar Zuk 2.Peeth Hat Baith Jao 3.Kukh Ani 4.Teerchhe Hool Ek 5.Teerchhe Hool do 6.Pao Patak Ek 7.Pao Patak Do- Moach 8.Kamar Kas Ek 9. Kamar Kas Do 10. Shirghum Hath 11. Puch Pher Kukh
1. Indian club or Jodi <b>Fundamental position:</b> a. Jodi lappet b. Husshyar c. A-ram d. Nap-lev e. Jaise-the	1. Zole or Zele Hat 2. Kalai.3. Door Bagal 4. Bagali or Ekeri Bagali 5. Duheri Bagal 6. Bagal Lappet 7. Akeri Bagal Lapet 8. Ekeri Zoledar 9. Duheri Zoledar 10. Duheri Zoledar Kalai Lappet 11.Anidar Ek 12. Anidar Do 13.Shiri 14.Doheri Shiri 15.Rumali Ek 16. Rumali Do 17.Pavitra Dorukh 18.Kalai Lappet 19. Kalai Lappet Do 20.Fhekan Seedhi 21. Fhekan Ulti 22.Sidhi Tarai 23.Ulti Tarai 24.Vajedar Seedhi 25. Vajedar Ulti 26.Seedhi Kalai Moach 27 Vajedar kalai Moach
2. Pole Drill 5.Hoop Drill 3. Flag Drill 7. Cymbal Drill 8. Double Wand Drill	Teacher should design minimum eight exercises using mentioned apparatus on his own.

**7. Fitness: (40 marks)**

- |                                     |            |
|-------------------------------------|------------|
| (a) Aerobics                        | (10 Marks) |
| (b) Conditioning Methods            | (20 Marks) |
| (c) Exercise (Progression 3 levels) | (10 Marks) |

**Aerobics - (10 marks)**

Details are as under

## LOW IMPACT CORE MOVES -

## STEP AEROBICS - CORE MOVES

Name	Lead Leg	Name	Lead Leg
1. MARCH	Single	1. BASIC	S
2. SIDE TO SIDE	Alternate	2. TURN	S/A
3. DOUBLE SIDE TO SIDE	S	3. STEP TOUCH	S
4. GRAPEVINE	S	4. KNEE UP	S
5. KNEE UP	S/A	5. LEG CURL	S
6. LEG CURL	S/A	6. KICK FRONT	S
7. TOE TOUCH	S/A	7. KICK SIDE (LEG LEFT)	S
8. SIDE LUNGE	S/A	8. OVER THE TOP	S/A
9. BACK LUNGE	S/A	9. STRADDLE	S
10. KICK FRONT	S/A	10. TRAVEL	S
11. KICK SIDE	S/A	11. CORNER	S/A
12. HEEL TO REFT	S	12. 'A' SHAPE	S/A
13. 'E' SHAPE	S	13. 'L' SHAPEW	S
14. 'V' SHAPE	S	14. REPEATER LEFT MODE	S

**(a) Conditioning Methods: (20 marks)**

Interval training, Continuous training, Fartlek training, Weight training, Circuit training, Plyometric Training

**(b) Exercise (Progression 3 levels): (10 marks)**

Details are as under

Introduction to basic exercise for the major muscle groups with reference to frequency, intensity, time, and type of exercise (FITT)

Evaluation - Student should perform the following -

- (1) Abdominal exercises (any 2 exercises) - 2 marks
- (2) Upper body exercises (any 4 exercises) - 4 marks
- (3) Lower body exercises (any 4 exercises) - 4 marks

**8. Modified Games (any 4 games): (20 Marks)**

Games for modified games must be other than those taught at Level I. Modified games should be taught such that each student is able to develop modified games of his choice. The students will design 4 modified games & will be evaluated for the practical & submission of written documents. A total of 20 marks will be considered in the assessment.

**9. Competencies: (10 Marks)**

- (a) Locomotor & Non-locomotor: Running, Galloping, Dodging, Fleeing, Chasing, and Jumping
- (b) Manipulative: Striking, Hitting, Throwing, Catching, and Dribbling
- (c) Stability: Pulling, Pushing, Weight Shifting, Balancing (stationary & moving)

The evaluation should be done on the basis of the ability of the candidate to demonstrate the developmental stages of teaching competencies.

A total of 10 marks will be considered in the assessment.

**10. Sports & Games Level 1: (60 marks)**

Sports & Games from the table given below should be selected for teaching at Level 1. Internal assessment will be done for 4 of games taught.

<b>List of the Sports &amp; Games Level 1:</b>	9.Soft ball 10.Cricket 11.Table Tennis
1.Kabaddi 2.Kho-Kho 3.Volley ball	12. Badminton 13. Tennis 14.Wrestling
4.Basket ball 5.Hockey 6.Foot ball	15.Boxing 16.Judo 17.Taekwondo
7.Hand ball 8.Swimming	18.Mallakhamb

**Sports & Games level 1.** Details are as under

**1. INTRODUCTION:**

- 1.1. Introduction of the game/sport and historical development with special reference to India.
- 1.2. Orientation of the students to the play area and equipment used in the game/sport
- 1.3. Important tournaments held at National and International levels.
- 1.4. Distinguished sports awards and personalities related to the game/sport.

**2. WARMING - UP - General free hand exercises using equipment.**

**3. FUNDAMENTAL SKILLS:** The skills (min.5 offensive and 5 defensive) of the game/sport are to be taught under the following heads:

- 2.1 Stance/Approach run
- 2.2 Execution
- 2.3 Follow Through
- 2.4 Movement patterns & positional play
- 2.5 Teaching Stages & drills for the skills taught (for varied situations no. of students, equipments)
- 2.6 Lead-up/modified games
- 2.7 Game performance

**4. GENERAL ORIENTATION REGARDING PLAY PATTERNS.**

- 4.1 General rules and their interpretations.
- 4.2 Duties of officials
- 4.3 Officiating in class competitions and Intramurals.
- 4.4 Marking of the play area.

**Evaluation**

Each game is to be evaluated for 15 marks. The procedure to be adopted is -

- (a) The student selects 2 compulsory skills from the syllabus - 6 marks
- (b) The student performs 2 skills of his choice – 6 marks
- (c) The student participates in the game - 3 marks

<b>Sports &amp; Games</b>	<b>Compulsory skills</b>	<b>Student choice</b>	<b>Game performance</b>
<b>Basketball</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Lay-up shoot</li> <li>3. Basic defense</li> <li>4. Foot work</li> </ol>	<ol style="list-style-type: none"> <li>1. Shooting</li> <li>2. Defense</li> <li>3. Dribbling</li> <li>4. Stops &amp; Rebound</li> </ol>	<ol style="list-style-type: none"> <li>1. Offence</li> <li>2. Defense</li> <li>3. Understanding</li> <li>4. Cooperation/Combination</li> </ol>
<b>Football</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Dribbling</li> <li>3. Basic defense</li> <li>4. Goal keeping</li> </ol>	<ol style="list-style-type: none"> <li>1. Instep kick</li> <li>Heading</li> <li>Chest control</li> <li>Throw in</li> </ol>	<ol style="list-style-type: none"> <li>1. 1 Offence</li> <li>2. Defense</li> <li>3. Understanding</li> <li>4. Cooperation/Combination</li> </ol>
<b>Handball</b>	<ol style="list-style-type: none"> <li>1. Passing &amp; Receiving</li> <li>2. Jump shoot</li> <li>3. Basic defense</li> <li>4. Goal keeping</li> </ol>	<ol style="list-style-type: none"> <li>1. Shooting</li> <li>2. Defense</li> <li>3. Dribbling</li> <li>4. Rotation</li> </ol>	<ol style="list-style-type: none"> <li>1. Offence</li> <li>2. Defense</li> <li>3. Understanding</li> <li>4. Cooperation/Combination</li> </ol>
<b>Kabaddi</b>	<ol style="list-style-type: none"> <li>1. Hand touch</li> <li>2. Toe touch</li> <li>3. Block</li> <li>4. Raid footwork</li> </ol>	<ol style="list-style-type: none"> <li>1. Chain hold</li> <li>1. Ankle hold</li> <li>2. Thigh hold</li> <li>3. Kicks</li> </ol>	<ol style="list-style-type: none"> <li>1. Offence</li> <li>2. Defense</li> <li>3. Understanding</li> <li>4. Cooperation/Combination</li> </ol>
<b>Kho-Kho</b>	<ol style="list-style-type: none"> <li>1. Single chain</li> <li>2. Giving kho</li> <li>3. Ring game</li> <li>4. Attack</li> </ol>	<ol style="list-style-type: none"> <li>1. 1-4-1-1 chain</li> <li>2. 2-3-6 chain</li> <li>3. Pole turn</li> <li>4. Pole dive</li> </ol>	<ol style="list-style-type: none"> <li>2. Attack</li> <li>3. Defense</li> <li>4. Understanding</li> <li>5. Cooperation/Combination</li> </ol>
<b>Volleyball</b>	<ol style="list-style-type: none"> <li>1. Simple service</li> <li>2. Underhand pass</li> <li>3. Blocking</li> <li>4. Tossing</li> </ol>	<ol style="list-style-type: none"> <li>1. Tennis service</li> <li>2. Dive &amp; roll</li> <li>3. Jump &amp; serve</li> <li>4. Smash</li> </ol>	<ol style="list-style-type: none"> <li>1. Offence</li> <li>2. Defense</li> <li>3. Understanding</li> <li>4. Cooperation/Combination</li> </ol>

**Head 12: Course related practical work (Total 70 Marks)**

Candidate will be evaluated in the following:

a. TBT Practical	25 Marks
b. Measurement & Evaluation	30 Marks
c. Field Marking & Officiating	15 Marks

**a) TBT Practical: (25 marks)****Activities to be completed**

- i. Create folders
- ii. Create MS word documents- Resume, Application, Question paper
- iii. Prepare MS power point presentation on topic of own choice
- iv. Create MS excel worksheet – Score sheet, data entry, Graphs, formula for calculating mean, standard deviation, percentage
- v. Downloading and saving information from internet
- vi. Using E-mail for communication

The evaluation of the TBT practical will be done on the basis of completion of the project, a viva voce & activity examination. The project will be evaluated with the help of separate rubrics for word, excel and PowerPoint activities. The rubric should consist at least the factors mentioned ahead: Technical aspects, content, grammar, layout, effects, formulae, graphs/pictures etc.

**b) Measurement & Evaluation: (30 marks)**

1. 9/12 min. run & walk	8. Sitting ball throw
2. 1 min. bent knee sit up	9. Stand broad jump
3. Push up/ modified push up	10. Vertical jump
4. Sit & reach	11. 30m fly
5. 4X10m. shuttle run	12. Step test
6. 50m dash	13. Calculate Target Heart Rate
7. Wall volley	14. Calculate Body Mass Index (BMI)
	15. Waist Hip Ratio (WHR)

Each candidate should complete a practical course in test and measurement practical. Adequate training should be given to the candidates in conducting the tests mentioned above in laboratory & school settings. He/she must keep a record of the activities completed in a practical journal. Each student should be able to conduct the tests and analyze and evaluate the scores of the test items. The candidate will be evaluated with the help of an objective test/viva-voce examination & the conduction & analysis of the test scores.

**c) Field Marking & Officiating: (20 marks)**

- i. Methods of marking a circle, D-area, square, rectangle, triangle
- ii. Lines- width, inside-out sidelines
- iii. Dropping a perpendicular bisector
- iv. Whistling for various situations in games
- v. Using stopwatch & taking readings on tapes

Practical experience of marking a track should be given to students at least twice a year.

The evaluation of this activity will be done on the basis of practical examination of the activities taught and the student's ability to perform the given activities.

**Suggested readings for Part III: Practical (Head 10, 11, & 12)**

1. Carr, G.A. (1995). Fundamentals of track & fields. Mumbai: The marine sports.
2. Bosen, Ken O. (1993). Teaching Athletics skills & technique. Patiala: SAI, NSNIS.
3. Wissel, Hal. (1994). Basketball- Steps to success. IL: Human Kinetics.
4. Brittenham Greg. (1996). Complete conditioning for basketball. IL: Human kinetics
5. Lennox, J., Rayfield, J., Steffen, B. (2006). Soccer skills & drills. IL: Human Kinetics.
6. Ditchfield, M., Walter, B. (1998). Coaching soccer. NJ: Prentice Hall.
7. Werner, P.(2004). Teaching children gymnastics. (2<sup>nd</sup> Ed.). IL: Human Kinetics.
8. Debby, M., Barbara, D., Raim, L. (2002). Teaching fundamental gymnastics skills. IL: Human Kinetics.
9. Cox,R. (1994). Teaching Volleyball. Delhi: Surjeet Publications
10. Gonzansky, S.(1983). Championship Volley ball Techniques & skills. NY: Parkar Publishing.
11. Graham, G. et al. (1998). Children moving. (4<sup>th</sup> Ed.).Toronto: Mayfield Publishing Company.
12. Siendentop, D.et al. (2004). Complete guide to physical education. IL: Human Kinetics.
13. Our Physical Activity.(OPA)
14. Tiwari, O.P. (1991). Asanas why & how? (2<sup>nd</sup> Ed.). India: Kaivalyadham.
15. Chanchani, S., Rajiv, C. (2002). Yoga for children. Delhi,India.
16. Cook, P. & Skyes. (1980). Olympic Handball. London: Stanley Paul CO.ltd.
17. Kangane, S. (2007). Handball. Pune: Diamond publication.
18. Lohar, A. (1998). Handball BasicTechnique. Mumbai: The marine sports.
19. Hopple, C.J. (1995). Teaching for outcomes in elementary physical education. IL: Human Kinetics.
20. Kamlesh, M.L. (2007). Field manual of sports & games. (2<sup>nd</sup>). Meerut: Nageen Prakashan.

**Medium of Instruction:-**

Medium of Instruction at the B.Ed. (Phy.Edu.) course will be Marathi or English. However, the medium of Instruction for the optional paper no. 5 section B Teaching Methodology of Marathi Education, English Education, or Hindi Education will be Marathi, English, and Hindi respectively.

The candidate appearing for B.Ed. (Phy.Edu.) examination will have the option of answering all courses in part I either in English or in Marathi. This option can be exercised paper wise and not section wise or question wise.

**O-4.2** The External Examination for **Part I, II, And III** will be taken after recorded minimum 80% attendance for both the terms at the college and after having completed and passed all the internal practical work prescribed in the syllabus.

**O-4.3** To appear for the examination of part I, II, & III, a candidate must apply to the Registrar on/before the date prescribed by the University each year with the certificates required by O-1 (II) through the Head of the Institution in which he/she has received training.

**Records to be kept by the students:**

- i) **Records of Practice teaching** - Lesson notes of Micro-lessons, integration lessons, class room lessons, block teaching lessons, & reports of teaching module along with remarks of observers, reports of observed lessons, record of the work done in the content cum methodology workshop.
- ii) **Records of Term work**- Tutorials papers, Answer sheets of the internal examination papers
- iii) **Records of course related practical** - Journal of Test & Measurement practical
- iv) **Records of TBT practical** - Soft copies of T.B.T. practical

## Equivalence

### Recommended papers in new syllabus equivalent to the papers in old syllabus (June 2003 & June 2006)

Papers in New Syllabus	Papers in Old Syllabus
1. Foundations of Physical Education & Sports	<p><b>Revised June 2006</b></p> <ol style="list-style-type: none"> <li>1. Foundation of Education and Physical Education &amp; Sports</li> <li>2. Psychology of Learning, Development and Motor Learning in Sports and Physical Education.</li> </ol> <p><b>Revised June 2003</b></p> <ol style="list-style-type: none"> <li>1. Edn. &amp; Phy.Edu. Sports and Recreation in the Emerging Indian Society</li> <li>2. Psychology of Learning, Development and Motor Learning in Sports and Physical Education.</li> </ol>
2. Applied sciences in Physical Education & Sports	<p><b>Revised June 2006</b></p> <ol style="list-style-type: none"> <li>3. Anatomy, Physiology of Exercise and Health Education</li> </ol> <p><b>Revised June 2003</b></p> <ol style="list-style-type: none"> <li>3. Anatomic and Physiologic fundamentals of Human Movement, Health Education, Sports Medicine and Biomechanics</li> </ol>
3. Management & Evaluation in Physical Education & Sports	<p><b>Revised June 2006</b></p> <ol style="list-style-type: none"> <li>4. Management of Phy. Edn. And science of coaching</li> <li>5. Measurement, Evaluation and Statistical Procedure, &amp; ICT in Physical Education</li> </ol> <p><b>Revised June 2003</b></p> <ol style="list-style-type: none"> <li>4. Management of Physical Education &amp; Sports Officiating and Coaching of Sports and Games.</li> <li>5. Information &amp; Communication Technology and Measurement, Evaluation &amp; Statistical Procedure in Physical Education.</li> </ol>
4. Emerging trends in Physical Education & Sports	<b>NA</b>
5. Methodology of teaching	<p><b>Revised June 2006</b></p> <ol style="list-style-type: none"> <li>6. Teaching Methodology of Education and Physical Education</li> </ol> <p><b>Year 2003-04</b></p> <ol style="list-style-type: none"> <li>6. Methods of teaching.</li> </ol>

## **Paper I**

### **FOUNDATIONS OF PHYSICAL EDUCATION AND SPORTS**

#### **Section A: Philosophical, Sociological, Historical and Recreational bases of Physical Education & Sports**

#### **Section B: Psychological bases of Physical Education & Sports**

#### **Paper I: SECTION A**

#### **Philosophical, Sociological, Historical and Recreational bases of Physical Education & Sports**

#### **Objectives**

- 1) To enable him to understand meaning and scope of physical education, sports, recreation, health and their Philosophical, sociological, historical basis
- 2) To acquaint him with historical perspective as influence on physical education, Abroad and in India, effect for the present development of Physical Education.
- 3) To acquaint with modern objectives of physical education, sports & recreation.
- 4) To acquaint the students with different measures of recreation, significance & importance of recreation.

#### **Unit 1 Discipline of Physical Education**

- 1.1 Meaning, Definition and Scope
- 1.2 Aims, Objective and Philosophy of Physical Education
- 1.3 Place of Physical Education in education
- 1.4 Values and Ethics of Sports & Physical Education

#### **Unit 2 Role of Physical Education & sports in Society and Education**

- 2.1 Role of Physical & sports in today's society
  - 2.1.1 Educational domains
- 2.2 Physical Education and its relation to education
- 2.3 Physical education for reforms
  - 2.3.1 Fitness movement
  - 2.3.2 Wellness movement

#### **Unit 3 Historical foundation of Physical Education & Sports**

- 3.1 History of Physical education in India with reference to heritage, Curriculum and Institutions
- 3.2 Trends in Physical education in Greece, China, U.S.A. & Germany
- 3.3 Historical perspectives of the Olympics. Olympic movement-Ancient & Modern Olympic

#### **Unit 4 Recreational bases of Physical education & sports**

- 4.1 Philosophy of recreation & sports
- 4.2 Meaning of recreation & leisure, definition & significance of recreation
- 4.3 Relationship between play, leisure & recreation
- 4.4 Types of recreation

#### **Suggested readings:**

- 1) Bucher, C.A., (1979). Foundation of Physical education (5<sup>th</sup> ed.). Missouri: C.V.Mosby co.
- 2) Barrow, H.M. (1983). Man and Movement: Principles and Physical Education. Phi: Lea and Febiger
- 3) Bucher & Wuest. (1987). Foundations of Phy.Edu & Sports. Missouri: C.V.Mosby co.
- 4) Ziegler, E.F. (2007). An introduction to Sports & Phy.Edu. Philosophy. Delhi: Sp. Educational Tehno.
- 5) William, J.E. (1964). Principles of Physical Education:, Com. Philadelphia: W.B. Saunders
- 6) Kretchmar, R.S. (1994). Practical Philosophy of Sport. IL: Human Kinetics.
- 7) Shekhar, K.C. (2004). Principles & History of P.E. Delhi:Khel Sahitya Kendra.
- 8) Young, D.C. (2004). A brief History of Olympic Games. UK: Blackwell Publishing.
- 9) Frank, A.M. (2003). Sports & education. CA: ABC-CLIO

## Paper I: SECTION B

### Psychological bases of Physical Education & Sports

#### Objectives

To enable the student teacher -

1. To get acquainted with the meaning, nature and scope of sports Psychology.
2. To understand the growth and development of the learner with special reference to adolescent stage, Sport and Physical Education.
3. To understand the concept of personality development of the learner and teacher.
4. To understand the process of learning and higher mental processes involved in learning.
5. To understand motor learning with reference to Sports and Physical Education.
6. To get acquainted with psychological principles of teaching and learning.

#### UNIT 1) Introduction of Sports Psychology

- Definitions of meaning of Sports Psychology.
- Scope/areas of Sports Psychology.
- Need and Importance of Sports Psychology.

#### Importance of Sports Psychology for Physical Education and Coaching in relation to:

- Sports Training
- Talent Identification
- Competition Preparation

#### UNIT 2) Cognitions Process in Physical Activities

- Meaning of Cognitive Process
- Characteristics of phases in Cognitive Process – Knowing, Feeling and Action.

#### Meaning of various cognition Functions.

- Meaning of perception, sensation, Thinking and Attention.
- Role of various cognitive functions in Physical Activities.

#### UNIT 3) Growth and Development

- Motor Development in following periods :
  - Early childhood
  - Late Child hood.
  - Adolescence
- Importance of Motor Development for Skill Learning in Sports.
- Psychological and Training Implications of Motor Development during various period of Growth.
- Factors affecting Motor learning
- **Personality**
  - Meaning & Definitions
  - Personality traits of sportsmen
  - Personality difference among various sports group

**UNIT 4) Motivation in Sports**

- Meaning and definition of Motive, Need Drive, Motivations
- Importance of Motivation in learning Physical Education & Sports
- Techniques of Motivations
- **Emotions and its Role in Sports**
  - Meaning of Emotion
  - Types of Emotion and Associated Instinct
  - Influence of Emotion on cognitive process and motor learning
  - Meaning of Anxiety and Competition Anxiety
- **Psychological Aspects of competition.**
  - Causes of emotional disturbance before competition
  - Characteristics of Pre-competitions, competition and post-competition State (Syndrome)
  - Selected Psycho Regulation Techniques for Relaxation and Activation
  - Psychological Preparation for competition

**Suggested Readings:**

1. Kamlesh, M.L. (2006). Educational Sport Psychology. New Delhi: Friend's publication
2. Cox Richard. (1998) Sports Psychology (W.C.B.)
3. Gill, Diance L. Psychological Dynamics of Sports (Illinois : Human Kinetics Publishers, 1986)
4. Silva, J.M. and Weinberg. (1984). Physiological Foundation of Sports. IL : Kinetics Publishers,
5. Suinn, Richard M. (1982) Psychology in Sports: Methods and Applications. NewDelhi:Sujeet Publication.
6. Martens, Rainer. (1987). Coaches Guide to Sports Psychology. IL: Human Kinetics.
7. Roberts Glyn C. and et al. (1986). Learning Experiences in Sports Psychology. IL: Human Kinetics
8. Alegaonkr, P.M. (1997). Sports Psychology. Pune: Pune Vidyarthi Griha
9. Magill, R.A. (2001). Motor learning concepts & application. (6<sup>th</sup> Ed.). NY:McGraw Hill co.inc
10. Utle, A. & Astill, S.(2008). Motor control, learning- behavioral emphasis. UK: Taylor & Francis.

## Paper II

### APPLIED SCIENCES IN PHYSICAL EDUCATION & SPORTS

#### Section A: The Anatomical and Physiological basis of Exercise and sports

#### Section B: Biomechanics, Athletic Care & Rehabilitation

### Paper II: SECTION A

#### The Anatomical and Physiological basis of Exercise and sports

#### Objectives

1. To enable the students to understand the basic structure and functions of Human body.
2. To enable the student to understand the effect of Exercise on different system or/and on the body as a whole.
3. To enable the students to understand the normal movements of human body.
4. To enable the students to understand the basic physiological and mechanical principles involved in efficient body movement.
5. To enable the students to understand the need and importance of Health Education and its application.
6. To enable the student to understand the energy system

#### UNIT I : MUSCULOSKELETAL CONSIDERATION

##### (A) SKELETAL SYSTEM AND ITS CONSIDERATION

- General classification of bones and function
- Classification of joints
- Structure and functions of joints
- Basic Movements

##### (B) MUSCULAR SYSTEM AND ITS CONSIDERATION

- Types of muscles- cardiac, skeletal and smooth
- Muscle Structure-Gross structure, muscle fiber
- Pale and Red muscles fibers
- Effect of exercise and training on musculoskeletal system.

#### UNIT II: CARDIOVASCULAR SYSTEM AND RESPIRATORY SYSTEM

##### (A) CIRCULATORY SYSTEM

- Organs of circulation and its structure
- Circulation process
- Blood pressure and pulse- Its relevance in sports
- Effect of exercise and training on cardiovascular system

##### (B) RESPIRATORY SYSTEM

- Organs of respiration
- Structure and function of respiratory organs
- Mechanism of respiration
- Types of respiration

- Effect of exercise and training on respiratory system
- Respiratory volume and its importance

### **UNIT III: NERVOUS SYSTEM AND ENDOCRINE SYSTEM**

#### **(A) NERVOUS SYSTEM**

##### **(a) Central nervous system**

- Structure and function of brain
- Structure and function of Spinal Cord

##### **(b) Autonomic nervous system**

- Sympathetic system
- Parasympathetic system

##### **(c) Peripheral nervous system**

- Spinal system
- Cranial system
- Reflex action

##### **(d) Effect of exercise on nervous system**

#### **(B) ENDOCRINE SYSTEM**

- Structure of the endocrine system
- Endocrine activity during exercise

### **UNIT IV: THE ENERGY SYSTEM**

#### **(A) Application of Energy concepts**

- The construction of physical improvement program
- Prevention and delay of fatigue
- Nutrition and performance
- Control of body weight
- Maintenance of body temperature

#### **(B) Definitions**

- Energy, work, power

#### **(C) The energy system**

- Aerobic and anaerobic metabolism
- ATP-PC –the phosphogen depletion
- Lactic acid system
- Oxygen and aerobic system

### **Suggested Readings:**

1. Pearce Evelyn. (1992). Anatomy & Physiology for nurses, Calcutta: Oxford University press.
2. Sedey, Rod R. (1992). Anatomy & Physiology. St.louis: Mosby
3. Tortora G.J.(1996). Introduction to Human Body. (4<sup>th</sup> Ed.) California: Addison Wesley.
4. Marieb Elaine N. (1984). Human Anatomy and Physiology (3<sup>rd</sup> Ed.). Cal:The Benjamin Cumming
5. Fox Edward - Sports Physiology, W B Soundrs Co. 1984

6. Benardot Dan (1992). Sports Nutrition. The American Dietetic Association.
8. Ram Prameshwaran N. Science of Kinesiology Vishakhapattanam: Aruna Book Centre
9. Wells K.F. & Luttgens K. Kinesiology: Scientific basis of Human motion. Phi: SoundersPublishing
10. जागिळकिर वा.ह. – शरीरेवज्ञान, आपिरएंट लॉगमन, मुँई
११. डॉ. जाशीी वजया – व्यायामाचि शरीरे क्रयाशास्त्र, सुयागि प्रकाशन, अमरावती
१२. डॉ. जाशीी वजया ओणु रि उमा – शरीरे क्रयाशास्त्र व शरीर रचनाशास्त्र, वारिुँक सेंटर, मुँई
१३. गाडगीळ स्वाती – शालयि आराग्यिे शक्षण, सेवचार प्रकाशन, पुणि
१४. ऋणीीं रळव करपव लेज्ञ. डलीीं । सीळवश । त्शवलीी

## Paper II: SECTION B

### Biomechanics, Athletic Care & Rehabilitation

#### Objectives

1. To understand the basic concepts underlining Biomechanics, Sports Medicine & Health Education
2. To develop insight into the application of biomechanic in various sports
3. To acquaint the student with school Health Programme.
4. To acquaint the student with the principles of nutrition.
5. To afford students the opportunity to understand the basics of Sports Medicine, Diets of Sportsman.

#### UNIT I: BIOMECHANICS

- Definition, Meaning and application of Knowledge of Bio-Mechanics.
- Force- understanding and application in sports movements.
- Understanding Basic concepts of Scalar and Vector quantities- Speed-velocity, Distance-displacement, Mass-weight.
- Application of Newton's Laws of motion in Sports Movements.
- Forms of motion and factors affecting motion.

#### UNIT II: BIOMECHANICS

- Stability, Equilibrium and principles of Equilibrium and application in sports movement
- Concept of Energy-Potential and Kinetic Energy.
- Lever – Types and principles applied in sports movements
- Projectile- meaning and principles applied in sport movements.
- Centripetal and Centrifugal force and its application in sports movements.

#### UNIT III: ATHLETIC CARE

- Sports Medicine- Definition, application and areas of sports medicine.
- Sports injuries – Types, Causes, Prevention of Classification of injuries
- First aid & management-
  - Soft Tissue Injuries
  - Fractures & Dislocation
- Therapeutic Modalities-Cryotherapy, massage and heat

#### UNIT IV: HEALTH AND NUTRITION

- School Health Program
- Concept of Nutrition -components of food and their function.
- Posture and Postural deformities-kyphosis, Lordosis, Scoliosis, knock knee, bow legs, Flat foot.
- Fuels for exercise- Pre competition and during competition. Principles of Diet
- Dehydration – Role of water

**Suggested Readings:**

1. Hay James -The Bio mechanics of Sports Techniques New Jersey, Prentic Hall Inc.
2. Sunderajan G.S. Bio-mechanics of Sports and Games Ludhiyana, Tondon Publications.
3. Bunn J.W. -Scientific Principles of Coaching Englewood Cliffs, prentice Hall
4. Dr. Wangwad V S, *Officiating and Coaching and Sports and Games*. 3<sup>rd</sup>.edition.Parvati Prakashan, Pune 1991. (Marathi)
5. Dr. D Rajlakshmi. *Biomechanics for Games and sports*. Published by Sports Educational Technologies. Aug, 2007 (English)
6. Susan, J. Hall, *Basic Biomechanics*. 4<sup>th</sup> edition. McGraw Hill Publication. (English)
7. Roger Bartlett. *Introduction to Sports Biomechanics*. E & FN SPON Publication. (English)
8. Pande P.K. & Gupta L.C. - Outline of Sports Medicine, New Delhi, Jaypee Bros. 1996.

## **Paper III**

### **MANAGEMENT & EVALUATION IN PHYSICAL EDUCATION & SPORTS**

#### **Section A: Management of physical education & sports**

#### **Section B: Information & communication technology & Evaluation in physical education & sports**

### **Paper III: SECTION A**

#### **Management of physical education & sports**

##### **Objectives**

1. To acquaint the students with the concept of management.
2. To acquaint the students with the duties and responsibilities of a leader for the management of Phy.Edu. and Sports at various level.
3. To acquaint the students with the with the budget management personal management and Resource management for the programme of Phy. Edu. and sports.
4. To acquaint the students with basic concept and principles of officiating and coaching of different games and sports.
5. To acquaint the students with duties and responsibilities of officials and coaches.

##### **Unit 1 Management process**

- 1.1 What is management? What is a manager?
- 1.2 Importance of management
- 1.3 Managerial framework, functions & tasks. Other management functions
- 1.4 Functional, effective & efficient management, decision making

##### **Unit 2 Management organization to achieve objectives of Physical Education**

- 2.1 Objectives of P.E & sports to be achieved
- 2.2 Developing a management structure for P.E. & sports
- 2.3 Principles for management & effective organization & structure
- 2.4 Formal & informal organization structure

##### **Unit 3 Management of P.E., sports & recreational program**

- 3.1 Management guidelines for school P.E. program
- 3.2 Management matters related to P.E. instructional program
- 3.3 Selected management problems in instructional program
- 3.4 Policies & procedures for organization & management
- 3.5 Management concerns – organizational considerations, patterns of organization, recreational consideration
- 3.6 Program planning

**Unit 4 HR, Facility, Fiscal management**

- 4.1 Human resource management- principles of HR & supervisory management, supervision- Working relationship between supervisors & staff, leadership – types & roles
- 4.2 Facility management – planning, implementing & maintenance
- 4.3 Fiscal management – Importance & functions, budgeting – types of budget, preparation, organization and management of budget
- 4.4 Purchase & care of supplies & equipments, determining supplies & equipments, guidelines for selecting & purchasing equipments, guidelines for equipment room, guidelines for checking, storing & maintaining supplies & equipments

**Suggested readings:**

1. Bucher & Krotee. (2002). Management of Physical Education & Sports. NY:McGrawHill Co.
2. Park, Zanger, Quarterman. (1998). Contemporary Sports Management. IL: Human Kinetics
3. Lussier & Kimball. (2004). Sports management- Principles, application & skill development. Ohio:Thomson South Western.
4. Jerry Solomon. (2002). An insider's guide to managing sporting events. IL:Human Kinetics.
5. Ammon & Southall. (2004). Sports facility management: Organizing events & mitigating risks. USA:Fitness information technology.
6. Lavay, French & Anderson. (1997). Positive behavior management strategies for Physical Educators. IL: Human Kinetics
7. Dr. M.L. Kamlesh. Management Concepts in Physical. Education and Sports
8. Edward F. Voltmer. The organization and administration of Phy.Edn.
9. S.S. Roy. Sports Management
१०. देवेन्द्र सिंह ब्रह्म शारीरिक शिक्षा में संघटन एवं प्रशासन
११. भा.स.गोडबोले क्रीडा स्पर्धा आणि सामने पूर्वतयारी
१२. दि.गौ. वाखारकर व डॉ.प.म.आलेगावकर शारीरिक शिक्षणाचे आयोजन नियोजन व निरीक्षण

## Paper III: SECTION B

### Information & communication technology & Evaluation in physical education & sports

#### Objectives

1. To understand the concept of Test, Measurement, Evaluation and Assessment Procedure in Physical Education
2. To Administer different test in Physical Education.
3. To understand and Application of simple statistical Procedure for analysis.
4. To Create awareness about information technology and its use in teaching learning

#### Unit: 1

- 1.1 Meaning of Test, Measurement, Evaluation & Assessment in Physical Education
- 1.2 Need and importance of Test, Measurement, Evaluation & Assessment in Physical Education
- 1.3 Classification of test –Written Test, Psychomotor test.

#### Unit: 2

- 2.1 Introduction of Test selection criteria- Technical &Administrative.
- 2.2 Administration of psychomotor Test.
- 2.3 Tests for Health Related Physical fitness. Sit ups, Push ups, Run walk test, Sit & reach test
- 2.4 Tests for Skill Related Fitness: - 50 m. Dash, Shuttle Run, Standing broad Jump, 1 Min. skipping.
- 2.5 Concept of Test batteries: - AAHPERD Youth fitness Test, JCR Test.

#### Unit 3

- 3.1 Measures of Central Tendency.
- 3.2 Standard scores – Z -scores, T- Scores and Percentile.
- 3.3 Normal Probability curve- Skewed position & characteristics.
- 3.4 Measures of Variability.
- 3.5 Correlation, Rank rule method

#### Unit 4

- 4.1 Use of Information Technology in Teaching & Learning.
- 4.2 Use of facilities of MS Office.
- 4.3 Communication – Meaning & Types.
- 4.4 Internet, E mail.

**Suggested Readings:**

- Computer Fundamentals - Nagpal, D.P. (2001)
- Computers Today - Sanders, Donald H.(1988)
- Educational Evaluation - Dr.W.N.Dandekar
- Measurement in Educational Psychology - Garrett
- Hand Book of Dr. Bloom's Taxonomy
- Grading in School -NCERT 2000
- John & Nelson, Practical Measurements for Evaluation in Phy.Edu. Ed.3rd Surjit Publication, Delhi 1988
- Barrow H.M. Practical Approach to Measurement in Phy.Edu. Ed.3rd Lee & Febigeer,Philadelphia 1979
- Clarke H. Application of Measurement in Health & Phy.Edu. Ed.6th Prentice Hall,Inc New Jersey 1987.
- Kansal D.K., Test & Measurement in Sports & Phy.Edu. D.V.S.Publications, New Delhi,1996.
- Miller, D.K.(2002). Measurement by the Physical Educator. 4th ed. (p. 117) NY: the McGraw-Hill co.
- शैक्षणक मूल्यमानि तंत्र ओण मंत्र – डॉ.ना.क.जिसनी, जाशी व वझाि
- शैक्षणक मूल्यमानिसाठ सुँधि संख्याशास्त्र – डॉ.जिसनी,
- डॉ.कुलकर्णी
- शैक्षणक संख्याशास्त्र – मराठ, जाशी
- शैक्षणक मूल्यमानि – डॉ. वा.ना. दांडकिर, श्रीवद्या प्रकाशन, पुणि १९९४
- शैक्षणक संख्याशास्त्र – गाजर, लवणाि नानकर, सुरीणक
  - शालयिे शक्षणाचि अेधष्ठान – वीरकर, वीरकर
  - शैक्षणक संख्याशास्त्र, – चा.ि. कदम, नूतन प्रकाशन, पुणि १९९४
  - शारीपरके शक्षण मानि व मूल्यमानि , डॉ. वांगवाड वे तवाडी,
- प्रकोशका–दिजा सांगलीकर, काल्हिरि, १९९५
  - शैक्षणक संख्याशास्त्र, म्हस्की टी.ए. प्रजाा प्रकाशन, पुणि १९८८

## **Paper IV**

### **EMERGING TRENDS IN PHYSICAL EDUCATION & SPORTS**

#### **Section A: Yoga & Fitness**

#### **Section B: Essentials of physical & sports**

### **Paper IV: SECTION A**

#### **Yoga & Fitness**

#### **Objectives**

1. To understand the basic concept of HRPF & SRPF.
2. To create awareness about fitness & its importance in life.
3. To choose appropriate activities for development of specific fitness components.
4. To understand the historical and philosophical basis of Yoga.
5. To understand the therapeutic aspects of Yoga.

#### **Unit1: Physical fitness**

- 1.1 Concept of physical fitness, physical activity & exercise
- 1.2 Meaning & components of HRPF
- 1.3 Components of SRPF
- 1.4 Components Of Wellness

#### **Unit2: Development of fitness**

- 2.1 Benefits of fitness program
- 2.2 Principles of physical fitness
- 2.3 Developmental exercise, effects of exercise
- 2.4 Obesity & weight management

#### **Unit3: Yoga**

- 3.1 Introduction, meaning & misconceptions of yoga
- 3.2 Ashtang yoga (8 stages of yoga)
- 3.3 Types of yoga
- 3.4 Importance of yoga program

#### **Unit4: Therapeutic Uses of yoga**

- 4.1 Hypertension & diabetes mellitus
- 4.2 Respiratory & cardio-vascular disorders
- 4.3 Mental health
- 4.4 Stress management

**Suggested Reading:**

1. Greenberg, Dintiman, Oakes. (2004). Physical Fitness & wellness.(3<sup>rd</sup> ed.) IL:Human kinetics.
2. NASPE. (2005). Physical Education for lifelong fitness. The physical Best teacher's guide. IL:Human Kinetics
3. Davis, Bull, Roscoe. (2000). Physical Education & study of sports. UK:Harcourt Publishing.
4. Jackson, A.L., Morrow, J.R. (2004). Physical activity for health & fitness. IL:Human kinetics.
5. Dr. Ajmer Singh (2003). Essentials of physical Education. Ludhiana: Kalyani publishers.
6. Daryl Siedentop (1994). Introduction to physical education, fitness and sports (2<sup>nd</sup> ed.). London: Mayfield publishing company.
7. Dr. A.K.Uppal& Dr. G. P. Gautam (2004). Physical education and Health. Delhi: Friends publisher.
8. बी. के. एस. अय्यंगार (२००४), योगदिपीका. मुंबई; ओरिएंट लाँगमन
9. सदाशिव निंबाळकर (१९८८) , आरोग्यासाठी योग. मुंबई: योग विद्या निकेतन
10. विश्वास मंडलिक (१९९९) , योग परिचय, नाशिक : योग विद्या धाम

## Paper IV: SECTION B

### Essentials of physical & sports

#### Objectives

1. To introduce the students to the latest trends in physical education & sports.
2. To enable them to understand the basic concepts & terminologies.
3. To acquaint them to different types of tournament, awards & records.
4. To help them understand the movement skills, patterns & its development.

#### Unit 1) Performer as a person

- Understanding basic concepts & terminologies in Phy.Edu & sports
- Purpose of Physical Education
- Problems & issues in Physical Education
- Physical activity, health, fitness & wellness, Connection to health , benefits of PA
- Obesity management & health
- Lifetime physical activity
- Technology in Physical Education

#### Unit 2) Tournaments & Competitions

- Types of competition & tournaments
- Indian & international level – tournaments & competitions
- Awards & records (last 5 years) Individual – Athletics, swimming.  
Other games- cricket, Football, Hockey, Tennis, Basketball, Volleyball, badminton, Table- Tennis, Shooting, Archery, Wrestling, Kabaddi, Kho Kho

#### Unit3) Movement skills & patterns

- Categories of fundamental movement skills
- Movement skills & patterns
- Movement concept
- Development of movement skills

#### Unit 4) Becoming a professional

- Learning about school
- Transition from student to teacher
- Maintaining your effectiveness as a teacher

#### Suggested reading:

1. Gallahue & Clelland. (2003). Developmental Physical Education for all children (4<sup>th</sup> ed)
2. IL: Human Kinetics
3. Himberg. (2001). Teaching Secondary Physical Education. IL: Human kinetics.
4. Graham, G., Holt, S.A. (1998). Children Movement. CA: Mayfield Publishing co.
5. Davis, Bull, Roscoe. (2000). Physical Education & study of sports. UK:Harcourt Publishing
6. Bucher & Wuest. (1987). Foundations of Phy.Edu & Sports. Missouri: C.V.Mosby co.
7. Research Reference & training div. (2008). India 2008. A Reference Manual. N.Delhi & the manual of every year.
8. The Defence review. (2001). India's highest Sports awards & those who won them. (1<sup>st</sup> Ed.). ND: Defence Review.

## Paper V

### METHODOLOGY OF TEACHING

#### Section A: Methodology of teaching physical education

#### Section B: Methodology of teaching optional subject

### Paper V: SECTION A

#### Methodology of teaching physical education

##### Objectives

1. To introduce the student teacher to the philosophical bases of curriculum.
2. To introduce them to the concept of standards & benchmarks.
3. To enable them to recognize the dynamics of change in curriculum.
4. To help them understand varied responsibilities of a teacher.
5. To help them understand methods of communication & its effective use in the teaching process.
6. To understand the concept of teaching styles, methods, & approaches and to blend them judiciously in the teaching.
7. To help them understand the importance & steps of planning.

#### Unit 1 Curriculum in Physical Education

- 1.1 Curriculum in Elementary, middle & secondary Physical Education
- 1.2 Physically Educated person, Standards & benchmarks, Goals & objectives
- 1.3 Fitness Education & motor development  
Teaching Physical activity pyramid
- 1.4 Teaching Fitness, movement concepts, themes & skills

#### Unit 2 Spectrum of teaching styles

- 2.1 Introduction to teaching styles, methods, approaches, Why multiple teaching styles
- 2.2 Spectrum of teaching styles-  
Reproduction/Direct- command style, practice style, reciprocal style, self check style, inclusion style  
Production/Indirect- Guided discovery, Convergent discovery, divergent discovery, task style, project method
- 2.3 Choosing & combining appropriate styles- factors to be considered

#### Unit 3 Effective Teaching

- 3.1 Maximizing learning – positive learning environment, atmosphere of respect & rapport, culture of learning, managing class procedures, behavior management, organizing physical space, readiness & needs, discipline systems, feedback
- 3.2 Effective teaching – communication, skillful instructions, observing & analyzing, motivating students
- 3.3 Effective class management – creating class protocols, developing rules for good behavior
- 3.4 Traits & conducts of effective teacher

#### **Unit 4 Planning for success**

4.1 Pre-planning & specific planning

4.2 Yearly plan, Unit plan

4.3 Lesson plan – Setting goals & objectives, Implementing daily lesson plan, organizing facilities & Equipments, preparing instructional aids, organizing student helpers

#### **Suggested readings**

1. Dauer, V.P & Pangrazi, R.P. (2000). Dynamic Physical Education for elementary school children (13<sup>th</sup>). NY:Mcmillan publishing company
2. Gallahue, D.L & Donnelley, F.C (2003). Developing Physical Education for all children. IL: Human Kinetics
3. Housner, L.D (2000). A guide for the elementary school children. (8<sup>th</sup>). WV:Fitness information technology
4. Schempp, P.G (2003). Teaching sports & physical activity- insight on the road to excellence. IL:Human Kinetics
5. Davis, Bull, Roscoe. (2000). Physical Education & study of sports. UK:Harcourt Publishing

**SECTION B****Methodology of teaching optional subject**

(Any one of the following)

1. Marathi education 2. Hindi education 3. English education 4. History education 5. Geography education
6. Mathematics education 7. General Science education 8. Information technology education
9. Environmental science education

**Paper V: SECTION B****Methodology of teaching Marathi education****Objectives**

1. To enable the student-teacher the knowledge of importance of mother tongue, aims and objectives of teaching M.T.
2. To develop among the student teachers a favorable attitude toward the subject Marathi.
3. To develop in the student teacher the skill required for effective teaching of M.T. in Secondary School.
4. To enable the student teacher to analyze the syllabus of M.T. in secondary school (V to XII)
5. To enable the student teacher to appreciate the close relationship between content & methodology by conducting different types of lessons.

**Unit I:** Present Position, importance, Aims, objectives, & cardinal principles of Marathi language learning.

**Unit II:** a) Maxims, methods and devices of teaching of Marathi.

b) Teaching process, poetry, grammar and composition in secondary schools.

c) Reading, Conversation, Reading writing & speaking of Marathi and their importance.

d) Modern trends and techniques for teaching Marathi e.g. Tape, Radio, T.V. Language Laboratory

**Unit III:** a) Planning & Organization of Marathi Teaching: Year Plan, Unit Plan, Lesson Plan, Unit test, Evaluation

b) Qualities of Marathi subject teacher. Difficulties faced by Marathi subject teacher & their organization.

c) Criteria of an ideal Text Book in 'Marathi'

**Unit IV:** Content cum methodology in teaching - learning of Marathi method.

a) Content cum methodology - concept and nature

b) Importance and need of content cum methodology in teaching - learning of Marathi.

c) Implementation of content cum methodology in teaching of Marathi.

**Suggested readings:**

1. Suggestions for the teaching of M.T. in India - W.M.Ryburn.

२. मराठीचि अध्ययन व अध्यानि - डॉ.द.हॉ.िटील, डॉ.श.रा.राणि

३. मराठीचि अध्ययनि - अकलकर, िटणकर, व्हीनस प्रकाशन, िणि १९७०

४. मातृभाषचि अध्ययनि - चंद्रकुमार डाम्गि, चरंजीव ग्रंथ प्रकाशन, िणि १९६२

५. मराठी केवतचि अध्ययनि - फाटक मे.व., मॉडर्नुक डॉ.ि.िणि १९६१

६. मराठीचि अध्ययन - कुंडल, श्रीवद्या प्रकाशन, िणि १९८५

७. मातृभाषचि अध्ययन व अध्यानि - सरदशिमुरख, व करंदीकर, नळकंठ प्रकाशन, िणि १९७१

८. भाषा मातृभाषा ओण रिभाषा - रा.सा.सिराफ श्रीवद्या प्रकाशन, िणि १९८४

९. मराठीचिअध्यानि, दुनाखिअ.र. नूतन प्रकाशन, णि२०००

**Paper V: SECTION B**  
**Methodology of teaching Hindi education**

**Objectives**

1. To enable the pupil teacher to understand place of Hindi in Indian life and culture.
2. To understand the objective of teaching Hindi in our Secondary Schools
3. To get familiarized with various methods of teaching to realize the objective and to develop skills for efficient teaching.
4. To develop knowledge, skills and interest to become a competent teacher of Hindi.
5. To acquaint them with the syllabi form std V to XII.
6. To enable because modern techniques of evaluation in the study of Hindi.

**Unit 1**

- a) The Place of Hindi language in the curriculum of Secondary Schools. Three language formulas. Objectives of teaching Hindi in Secondary Schools.
- b) Teaching of Grammar - place of grammar in the teaching of a language formal grammar, functional grammar, relation between Hindi grammar and of the mother tongue, different methods of teaching grammar.
- c) Teaching of Composition - Importance of oral and written composition & their relation . Mistakes occurring & remedies in composition work to overcome them. Different methods to teach composition work to overcome them. Different methods to teach composition (Picture, Composition, Story, Essay, Dialogue etc.)

**Unit 2**

- a) Method of teaching and learning and learning Grammar- translation method, direct method, West's method, structural approach. Audio-visual aids to teach Hindi Co-curricular activities in Hindi.
- b) Teaching of prose-importance, objective, selection, teaching pts. methods to be used.
- C) Teaching of Poetry - importance, objectives, criteria of selection of poem to various classes, Teaching pts. methods to be used.

**Unit 3**

- a) Lesson Planning-prose lessons, poetry lessons, composition lessons (story through picture or out line, letters essays)
- b) Study of Modern trends and techniques for teaching Hindi, Radio, TV. TR.etc
- c) Reading - its types and importance. Oral, silent intensive, extensive, supplementary and collateral. Reading for pleasure, method to teach Reading.
- d) Essential qualities of Hindi teacher.

**Unit 4** Content cum methodology in teaching - learning of Hindi method.

- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of Hindi method.
- c) Implementation of content cum methodology in teaching of Hindi method.

**Suggested readings:**

१. राष्ट्रभाषा शिक्षा - डॉ.श्री.ना.मुखर्जी, आचार्यक डी.डी.डादा, १९६५
२. हिंदीकी अध्यानि धिदती - कर्णी, कुलकर्णी, व्हीनस प्रकाशन, पुणि १९९२
३. राष्ट्रभाषा का अध्यानि - ग.न.साठ, महाराष्ट्र राष्ट्रभाषा सभा, पुणि, १९७१
१. राष्ट्रभाषा कैसिदिअं - रा.लु.भगत

**Paper V: SECTION B**  
**Methodology of teaching English education**

**Objectives**

1. To enable the students - teacher to acquire knowledge of:
  - a) The present position of English in the Indian School Curriculum.
  - b) The objectives of teaching English in Secondary Schools.
  - c) The effective means and methods worked out to reach the goals.
2. To develop in the student-teacher the skills required for effective teaching of English in Secondary Schools.
3. To develop among the student - teacher a favorable attitude towards the subject.

**Unit 1**

- a) Place of the subject (English) in the School curriculum.
- b) Objectives of teaching English  
Content cum methodology in teaching - learning of English method.
- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of English method.
- c) Implementation of content cum methodology in teaching of English method.

**Unit 2**

- Methods of Teaching
- a) The Grammar - Translation Method.
  - b) Dr. West's New Method
  - c) The Direct Method
  - d) Structural Approach
- Techniques of Teaching - Dramatization, Debates, Lectures, Story telling, Language - Games

**Unit 3**

Teaching of Prose: Text-Books, the difference between Reader & Text Books, Oral and Silent Reading, Teaching of Poetry-place of Poetry, Objectives of teaching Poetry, selection of Poetry, Teaching of Compositions - Oral, Written Forms of Composition, Correction of Compositions.

**Unit 4**

Teaching of grammar - Importance of teaching Grammar. Formal and functional grammar, Methods of teaching Grammar, Instructional Material - The need of language - Laboratory teaching of English, teaching material- visual, audio, audio-visual aids  
Evaluation - Oral and written Tests, Diagnostic test & Remedial Teaching

**Suggested readings:**

1. The teaching of English in India \_ Thomson & Wyatt
2. The Teaching of English as Foreign language- Menon & Patel, Acharya Book Depot, 1974
3. The teaching of English Abroad - I, II, III, F.G. French, Oxford University Press, London, 1969
4. Teaching English - Frishy
5. Teaching of Language teaching - Billows F.L. Longmans, London 1969
6. English as a foreign language - Gatenby
7. Structural approach to the teaching to English - B.D.Sriwastava, Ramprasad & Sons, Agra, 1968
8. The Principles of language study - Palmer
9. The essentials of English Teaching - R.K.Jain
10. Teaching of English - G.L.Gadre, Unmesh prakashan, Pune 1989

**Paper V: SECTION B**  
**Methodology of teaching History education**

**Objectives**

1. To help the student teachers to acquire the basic understanding of the scope of History.
2. To develop in the student-teacher the ability to present the subject matter in the proper perspective.
3. To develop in the student-teacher the ability to have a realistic approach to the teaching History.
4. To inculcate in the student teachers the spirit of National integration and international understanding.
5. To help the student teachers to develop in their students a broader and progressive outlook.

**Unit 1 History - its nature, aims & Objectives**

- a) Its meaning and scope with special reference to modern Concept of History.
- b) Kinds of History
- c) Importance of 'History' in School curriculum and in human life.
- d) Aims, Objectives & values of teaching History.

**Unit 2 History - curriculum, Textbook, Teacher, Planning, Organization, & correlation.**

- a) Principles of curriculum construction and their application to History.
- b) Criteria of an ideal Text Book in 'History'
- c) Special qualities for History teacher
- d) History-teacher organization, its contribution to professional competencies.
- e) Planning: a) Year's plan b) Unit plan c) Lesson plan
- f) Correlation: a) History & Geography b) History & Civics c) History & Language

**Unit 3 Methods, Instructional material & teaching aids in the teaching of History**

**Methods:** a) Story telling, b) Dramatization, c) Lecture, d) Discussion, e) Source Method  
f) Project, g) Problem, h) Text book method

**Instructional materials:**

- a) Text Books b) Supplementary (Reading material) c) Work books
- d) General reference material e) Advanced Books on History
- f) Instructional materials for teachers-such as teachers hand book- manuals

**Teaching aids:**

- i) Printed aids - a) Periodicals b) Books c) News papers
- ii) Visuals aids: a) Slides b) Filmstrips c) Models d) Graphs and Charts e) Pictorial Material f) Globes, Maps & outline maps
- iii) Audio aids - a) Tape Recorder, cassettes b) Phonograph discs, c) Radio
- iv) Audio visual aids: a) Motion Picture b) Television Needs & importance of well equipped - enriched - 'Historical -room' be stressed in this connection.

**Unit 4 Content cum methodology in teaching - learning of History.**

- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of History.
- c) Implementation of content cum methodology in teaching of History.

**Suggested readings:**

- 1) The Teaching of History - V.D.Ghate ,Oxford
- 2) Teaching of History - S.V.Kochekar (Revised edition)
- ३) इेतहासाचा अध्यानि - ेव.द.घाटि, दशिमुख प्रकाशन, णि १९५८
- ४) इेतहासाचा अध्यानि - न.रा.रिसनीस, व य.ज.धारुरकर, व्हीनस प्रकाशन, णि १९७१
- ५) इेतहासाचा अध्यानि - धिदती व तंत्र - श्री.मा.त्कि, मलिंद प्रकाशन, औरगौद १९८०
- ६) इेतहासाचा अध्यानि - धिदती - प्रा.सी.मे.तवारी. नूतन प्रकाशन, णि १९९९.
- ७) इेतहासाचा अध्यानि - दुनाखि अरविंद ,नूतन प्रकाशन, णि २०००

**Paper V: SECTION B**  
**Methodology of teaching Geography education**

**Objectives**

1. To understand the aim and objectives of teaching Geography at the primary, secondary and higher secondary level.
2. To understand the geographic control on human life.
3. To acquire proficiency in using various method of Teaching Geography.
4. To develop adequate skills in preparation and use of educational aids in teaching Geography .
5. To correlate Geography with other school subjects.
6. To acquire proficiency in planning for teaching and evaluation.
7. To understand the role of Geography to promote National Integration and International understanding.
8. To acquaint with evaluation in Geography

**Unit 1 Meaning & Scope of Geography**

- The Place of Geography in school curriculum
- Concepts of Geography
- Aims and objectives of teaching Geography and their specification.
- Importance of local Geography

**Unit 2 A) Correlation of Geography: Meaning & importance of correlation, Correlation of Geography with life, Correlation of Geography with History, Math's, Science, Economic s****d) Planning for Teaching Geography**

- a) Year-Plan b) Unit Plan c) Lesson Plan

**c) Special qualities of Geography teacher.****Unit 3 A) Methods of Teaching Geography: The observation, Comparison, explanation questioning. Method Story Method Journey Method Object Method Project Method Regional Method Laboratory Method Study of Modern trends and techniques.****B)Equipment and aids for learning Geography**

Black board, Earth Globe, Maps, Atlas, Charts, Models, Pictures, Graphs, Specimens, Epidiascope, Projectors, Radio, Books, Newspaper, Journals, T.V. Meteorological Instruments etc.

Equipping and using Geography room, importance field work.

**Unit 4: Content cum methodology in teaching - learning of Geography method.**

- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of Geography method.
- c) Implementation of content cum methodology in teaching of Geography method.

**Suggested readings:**

1. Geography in School -fairgrive (U.L.P.)
2. Hand-Book of Suggestion on the Teaching Geography (UNESCO)
3. भूगोलाचा अध्यानि - प्रा.पिणकर (मॉडर्न क डीनि) पुनि
4. भूगोली - अध्यानि ओण अध्यानि -डॉ. भा.गोपि (व्हीनस प्रकाशन)
5. भूगोलाचा अध्यानि - डॉ. गीक्षि (नूतन प्रकाशन, पुनि)
6. आशययुक्त अध्यानि धिदती, तंत्र - भूगोली -गिटील उषा, जाशिी सुरखिा, (प्रकाशक - सेचन जाशिी नोशक) १९८७

**Paper V: SECTION B**  
**Methodology of teaching Mathematics education**

**Objectives:** To enable the student teacher:

1. To understand nature, scope and importance of Mathematics as a school subject.
2. To understand the objectives of teaching Mathematics
3. To apply various methods of teaching Mathematics effectively.
4. To organize various co-curricular activities properly.
5. To develop adequate skills in the preparation and use of teaching aids.
6. To use various tools of evaluation.
7. To correlate Mathematics with other school subjects
8. To develop Mathematical out look.

**Unit 1** Objectives, Methods & teaching aids of teaching Mathematics at secondary and higher Secondary levels

- a) Inductive and deductive
- b) Experimental
- c) Analytical and Synthetically
- d) Heuristic
- e) Discovery
- f) Teaching aids: Graphic aids, Projectors, Blackboard, flannel board, magnetic board, and associated material. Models, T.V., Tape recorder, Calculator & Computer

**Unit 2** **Curricular and co- curricular activities**

- a) Oral work, drill work and home work.
- b) Mathematics club
- c) Guidance for gifted students and learners.
- d) Mathematics laboratory and practical work.
- e) Place of Mathematics in school curriculum: Nature, scope, & Importance

**Evaluation in Mathematics**

- a) Planning for learning experiences
  - Year's Plan, unit plan, and lesson plan
  - Unit test, Use of attainment tests, & diagnostic tests
- b) Correlation between branches of Mathematics and other school subjects
- c) Characteristics of a good text book of Mathematics
- d) Teacher of Mathematics - his qualities, training and out look
- e) Association of Mathematics teachers

**Unit 3** **Teaching of basic terms of Algebra:**

- a) Algebraic expressions
- b) Fractions
- c) Expansion & factorization of expressions
- d) Equations: Simple, simultaneous and quadratic
- e) Sets
- f) Number line & its applications
- h) Percentage, profit & loss
- i) Indices
- j) Rules of logarithms

**Teaching of basic terms of Geometry:**

- a) A point, a ray, a line segment, an angle, a plane, a triangle, a quadrilateral, a polygon and circle
- b) Similarity, equivalence and congruence
- c) Trigonometry ratios and identities

**Unit 4****Content cum methodology in teaching - learning of Mathematics method**

- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of Mathematics method.
- c) Implementation of content cum methodology in teaching of Mathematics method.

**Suggested readings:**

1. The teaching of Mathematics in New Education - Aiyangar, Univesal Publications, Delhi, 1973
2. Teaching of Modern Mathematics - Eletcher
3. Teaching of Mathematics - Siddhu S. Agarwal,
4. Teaching of Mathematics - Kulbi Singh Siddhu, Sterling publishers, New Delhi 1975
5. गेणतार्चि अध्यानि - प्रा.व.ि.दशिमुख,मॉडर्नुक डीीि प्रकाशन, णि १९७२
६. गेणत कसशिकवावर् - प्रा.ल.रा गद्री,श्री लखिन वाचन भांडार णि
७. गेणत अध्ययन ओण अध्यानि - डॉ.भा.गौीटि व प्रा.े.ना. कुलकर्णी
८. गेणत अध्यानि धिदती - प्रा.ह.ना.जगता, नूतन प्रकाशन णि १९८७.
९. गेणत आशययुक्त अध्यानि धिदती, यादव अेजत, सन्मिर्त्र प्रकाशन, कालिहारी २००१.

**Paper V: SECTION B**  
**Methodology of teaching General science education**

**Objectives**

1. To make the student teacher familiar with the objectives of teaching Science.
2. To enable him to analyze the Syllabus in Science.
3. To enable him to use various methods and techniques of teaching Science effectively.
4. To develop in him adequate skills in the preparation and use of a suitable teaching aids.
5. To help him to organize co-curricular activities in Science.
6. To enable him to prepare and use appropriate tools of evaluation
7. To enable him to interpret the result of various tools.

**Unit 1** a) Place of Science in life. Science in the present set-ups in India.

b) Place of Science in the school curriculum at various levels of education. Values of teaching the subject.

c) Objectives of teaching Science and their specifications

**Unit 2** a) Approaches to teaching and Science Historical, Biographical, Concentric, the topic and unit plan method. b) Methods of teaching Heuristic method, Demonstration method, Laboratory-method, Projective method

c) Co-curricular activities such as Science club, Science fair, etc.

d) Correlation of Science subjects with one another and with other school subjects.

e) Laboratory - Equipment, maintenance and improvised apparatus.

f) Museum, aquarium, botanical garden, audiovisual aids magazines & bulletins.

g) Observation of the sky visits to workshops, factories and fields.

h) Modern trends and techniques for teaching Science - use of film projectors, tape recorders, Overhead projectors, slide projectors etc.

**Unit 3 Preparation of the year's plan, Unit plan and daily lesson plan**

a) Study of the prescribed syllabus in secondary schools in Maharashtra

b) Critical study for textbook, criteria for the preparation of the text books.

c) Evaluation procedures, diagnostic testing, testing and remedial teaching in Science

d) The Science teacher, his out look and training.

**Unit 4 Content cum methodology in teaching - learning of Science method.**

a) Content cum methodology - concept and nature

b) Importance and need of content cum methodology in teaching - learning of Science method.

ec) Implementation of content cum methodology in teaching of Science method.

**Suggested readings:**

- 1) Sourcebook of Science Teaching- by UNESCO Press Paris, 1973
- 2) शास्त्र कसशिकवावा - गा.प्र.साहिनी, नीलकंठ प्रकाशन, पुणे
- 3) शास्त्राचि अध्यानि - ल.रा.गद्री
- 4) शास्त्राचि अध्यानि - अनारसदिवा, टिणकर, व्हीनस प्रकाशन, पुणे 1978
- 5) शास्त्र अध्यानि धिदती - कदम चा.ि.दिदार्डे, नूतन प्रकाशन, पुणे 1980
- 6) वज्ञान अध्यानि धिदती - जड,दशिगिडि, आहरि महाराष्टे वद्यागिठ ग्रंथेनेर्मती मंडळ, नागूरि 1987
- 7) वज्ञानाचि आशययुक्त अध्यानि - हकीम,प्रभाकर, नूतन प्रकाशन पुणे 1996

## Paper V: SECTION B

### Methodology of teaching Information technology education

**Objectives:** To enable the student teacher:

1. To understand nature, scope and importance of IT as a school subject.
2. To understand the objectives of teaching IT
3. To apply various methods of teaching IT effectively.
4. To organize various co-curricular activities properly.
5. To develop adequate skills in the preparation and use of teaching aids.
6. To use various tools of evaluation.
7. To correlate IT with other school subjects
8. To develop IT out look.

#### **Unit1: IT and its nature, Aims and Objectives**

1. Meaning and scope of IT
2. Place of IT in school curriculum
3. Importance of IT in daily life
4. Aims, and Objectives of teaching IT
5. Core elements, and values of teaching IT

#### **Unit2: IT - curriculum, Textbook, Planning, correlation, Evaluation, & teacher**

- a) Methods of curriculum construction in IT
  - 1) Concentric method
  - 2) Linear method
- b) Characteristics of good IT textbook
- c) Planning: Year's plan, Unit plan, Lesson plan
- d) Correlation; a) IT and Education b) IT and Commerce c) IT and Media
- e) Evaluation: Evaluation of skills, content, & application abilities of IT
6. Special qualities of IT teacher

#### **Unit3: Methods, instructional material and teaching aids in the teaching IT**

- a) Specific method
  1. Computer assisted teaching
  2. Demonstration method
  3. Project method
  4. Inductive & deductive method
- b) Self study method
  1. On line learning
  2. Off line learning

**Unit4: Content cum methodology in teaching-learning of IT**

- a) Content cum methodology- Concept and nature
- b) Importance and need of Content cum methodology in teaching-learning of IT
- c) Implementation of Content cum methodology

**Suggested readings:**

1. The teaching of Mathematics in New Education - Aiyangar, Univesal Publications, Delhi, 1973
2. Teaching of Modern Mathematics - Eletcher
3. Teaching of Mathematics - Siddhu S. Agarwal,
4. Teaching of Mathematics - Kulbi Singh Siddhu, Sterling publishers, New Delhi 1975
५. गेणताचि अध्यानि - प्रा.व.वि.दशमुख,मॉडर्न क डी प्रकाशन, पुणि १९७२
६. गेणत कस शिकवाव - प्रा.ल.रा गद्र,श्री लखिन वाचन भांडार पुणि
७. गेणत अध्ययन ओण अध्यानि - डॉ.भा.गौटि व प्रा.े.ना. कुलकर्णी
८. गेणत अध्यानि धिदती - प्रा.ह.ना.जगता, नूतन प्रकाशन पुणि १९८७.
९. गेणत आशययुक्त अध्यानि धिदती, यादव अजत, सन्मित्र प्रकाशन, कालिहारी २००१.
१०. शास्त्र कस शिकवाव - गा.प्र.साहिनी, नीलकंठ प्रकाशन, पुणि
११. शास्त्राचि अध्यानि - ल.रा.गद्र
१२. शास्त्राचि अध्यानि - अनारसिंदवि, टिणकर, व्हीनस प्रकाशन, पुणि.१९७४
१३. शास्त्र अध्यानि धिदती - कदम चा.ि.दिदार्डे, नूतन प्रकाशन, पुणि १९८०
१४. वज्ञान अध्यानि धिदती - जड,दशिडि, आहरि महाराष्ट्रे वद्याािठ ग्रंथेनेर्मती मंडळ, नागूरि १९८७
१५. वज्ञानाचि आशययुक्त अध्यानि - हकीम,प्रभाकर, नूतन प्रकाशन पुणि १९९६
16. Modern Science Teaching- Sharma R.C.,Dhanpat Rai & Sons Delhi 1988.

**Paper I: SECTION B**  
**Methodology of teaching Environmental science education**

**Objectives**

- To understand the aim and objectives of teaching Environmental science at the primary, Secondary and higher secondary level.
2. To acquire proficiency in using various method of Teaching Environmental science.
  4. To develop adequate skills in preparation and use of educational aids in teaching Environmental science
  5. To correlate Environmental science with other school subjects.
  6. To acquire proficiency in planning for teaching and evaluation.
  7. To understand the role of Environmental science to promote National Integration and International understanding.
  8. To acquaint with evaluation in Environmental science

**Unit 1 Meaning & Scope of Environmental Science**

- The Place of Environmental science in school curriculum
- Concepts of Environmental science
- Aims and objectives of teaching Environmental science and their specification.
- Importance of Environmental science

**Unit 2 A) Correlation of Environmental Science:** Meaning & importance of correlation, Correlation of Environmental science with life, Correlation of Geography with History, Math's, Science, Economic s

- d) Planning for Teaching Environmental Science** a) Year-Plan b) Unit Plan c) Lesson Plan  
**c) Special qualities of Environmental Science teacher.**

**Unit 3 A) Methods of Teaching Environmental Science:** The observation, Comparison, explanation questioning. Method Story Method Journey Method Object Method Project Method Regional Method Laboratory Method Study of Modern trends and techniques.**B) Equipment and aids for learning Environmental Science**

- Black board, Earth Globe, Maps, Atlas, Charts, Models, Pictures, Graphs, Specimens, Epidiascope, Projectors, Radio, Books, Newspaper, Journals, T.V. Meteorological Instruments etc.  
Equipping and using Environmental science room, importance field work.

**Unit 4: Content cum methodology in teaching - learning of Environmental Science education.**

- a) Content cum methodology - concept and nature
- b) Importance and need of content cum methodology in teaching - learning of Environmental science education .
- c) Implementation of content cum methodology in teaching of Environmental science education

**Suggested readings:**

1. Geography in School -fairgrive (U.L.P.)
2. Hand-Book of Suggestion on the Teaching Geography (UNESCO)
3. भूगोलाचा अध्यानि - प्रा.टिणकर (मॉडर्न क डीनि) पुनि
4. भूगोली - अध्यानि ओण अध्यानि -डॉ. भा.गो.टि (व्हीनस प्रकाशन)
5. भूगोलाचा अध्यानि - डॉ. गीक्षि (नूतन प्रकाशन, पुनि)
6. आशययुक्त अध्यानि धिदती, तंत्र - भूगोली -गीटील उषा, जाशी सुरखा,(प्रकाशक - सेचन जाशी नोशक) १९८७