

SAVITRIBAI PHULE PUNE UNIVERSITY



Guidelines and Manual for Physical Education Scheme

(For First Year Students of All Faculties)



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VICE-CHANCELLOR'S MESSAGE



It gives me immense pleasure to learn from the faculty of Physical Education that in response to the Government's resolution regarding the policy for the sports 2012, the experts in the field of Physical Education have taken noteworthy effort to prepare the manual for the Physical Efficiency Test for the University. It is truly said that, the Youths in every walk of life are under stress. They have incredible muscles to make the revolutionary changes in the society.

We are living in the era of materialism. Naturally everyone is losing their Physical strength to face the challenges of the daily life. In this background, it is the appreciable initiative taken by the experts of the University to make the first year admitted students to undergo the physical exercises to improve their productivity. I believe that, this productivity in turn definitely extends its help in improving the productivity and the economy of the Nation.

I, hereby appeal to the fraternity of Physical Education, to implement the policy in the first instance and engage the students admitted to their colleges to undergo the plans and program designed under this scheme. I agree that every scheme/ policy always has its pros and cons; this newly coined scheme is not exception to it. It is also open for any alteration in future. I wish good luck to all the College Directors of Physical Education and Sports for the successful implementation of the scheme and to prepare the Youths (backbone of the society) to enhance the muscular power.

(Dr. Wasudeo Gade)
Vice-Chancellor

FOREWORD



Dear Colleagues,

You might have been aware of the Government policy for sports 2012. The same issue was also discussed in the forum of the Advisory Board. It is expected by the Government resolution to improve the physical efficiency of the youths that are admitted to higher and technical education in the state of Maharashtra should undergo the physical training programs for enhancement of the physical efficiency. It is also observed by the Government officials that the Universities in the state of Maharashtra do not have such sort of prescribed programs or those which are having, are inconsistent with the present requirements. Hence, they have appealed to the universities to frame such programs to develop the physical efficiency of the youth.

In response to the same, the Faculty of Physical Education has formulated a committee of the experts in this field. They have been shouldered with the responsibility to design appropriate program for the enhancement of physical efficiency. It was a challenge before them considering the available infrastructure and equipments, other assisted support and the various commitments of the College Director of Physical Education and Sports in the Colleges.

I believe that, in the very initial efforts, the committee has done their very best in preparing the required physical efficiency improvement program for the admitted youths in the colleges. They have also tried their level best to provide all the necessary supporting documents along with the norms that will surely be supportive to conduct the said program. I am confident in my colleagues that, they will surely extend their fullest cooperation to fulfill the expectations of the university and the Government also giving respect to the appeal made by the Hon'ble Vice-Chancellor of this University.

Dr. Deepak Mane
Dean,
Faculty of Physical Education

PREFACE

This manual consists of detailed information of the test to be administered along with the norms and marking system. The section 'A' and Section 'B' are defined in the table and accordingly the description of the tests is encrypted. The scores achieved by the students can be easily converted with the help of the tables provided for the respective tests. The expert committee has taken the utmost care to provide the standard norms of the test selected for the drive. It is expected that the selected tests will surely come up to the expectations in enhancing the physical efficiency of the youths undergoing the tests.

*** All the figures, matter, norms, units, information used and appeared in the manual are subject to availability of the prints of the respective sources. This manual do not contain any individual opinion of the members of the Editorial Board**

SAVITRIBAI PHULE PUNE UNIVERSITY



PHYSICAL EDUCATION EXAMINATION SCHEME GUIDE LINES

(For First Year Students of All the Faculties)

AIM OF THE SCHEME :

The aim of the scheme is to make Physical Education as an integral part of educational system. Students studying in the colleges should have the benefit of physical education to improve their health during the course of college education. It is designed to ensure that on completion of this training, they would attain the minimum prescribed standard. A student will have to select any one game from the list of games organized by the Association of Indian Universities, New Delhi and understand and practice the game in the academic year.

OBJECTIVE OF THE SCHEME :

The objective of the scheme is to enhance physical efficiency and maintain fitness of mind, body and character, which would help the student to be mentally alert and physically efficient to withstand the strain and fatigue of daily life. It would prepare them for the strenuous training which will help them to be fit to face the different barriers in life.

The students will undergo this scheme for the first year of his/her under graduate course education.

PATTERN OF THE SCHEME :

SECTION-A: Health Related Physical Fitness Tests (80 Marks) :

A student will have to choose any one sport event conducted by the Association of Indian Universities, New Delhi (List of events available on website www.aiuweb.org) and practice the selected sports event throughout the year, which would help in enhancing the fitness level of the student. The choice of sports event will be according to the facilities available in the college. The student shall have to show minimum fitness levels required to pass the test and achieve the score as per the prescribed norms of the tests at the end of year. (As per mentioned in the Scheme Manual enclosed)

SECTION-B: Project Work (20 Marks) :

Every student will have to prepare a handwritten project work on the sports event selected for that year from the list of AIU sporting events in his/her language selected for studies. The project to be prepared will be based on the following contents :

- i. History of the Game
- ii. Ground measurements
- iii. Skills of the game
- iv. Basic rules of the game
- v. List of Arjuna and Shri Shiv Chatrapati Awardees for last 10 years

OTHER ACTIVITIES :

At least one seminar to be conducted by the College in the Academic Year especially in the field of Health Sciences, Sports Medicine, Psychological Parameters in Sports, Food & Nutrition etc.

EVALUATION OF STUDENT'S PERFORMANCE IN HEALTH RELATED PHYSICAL FITNESS AND PROJECT WORK

RECORD OF STUDENT ACHIEVEMENT :

The student's achievement in a particular activity shall be noted in the prescribed achievement card (App. I).

GRADES :

The grades shall be given according to the achievement of the students.

ACHIEVEMENT CARD :

A copy of the achievement card should be given to students to record their performance and know their achievements in different activities during the course of the year. Yearly records should be noted in the achievement cards and signed by student and College Director of Physical Education. (Specimen of the Achievement card App. I)

RECORDS :

The record of the Student's achievement should be maintained and the copy of the same can be handed over to the student after the final examination.

CONDITIONING AND MOTOR ABILITY EXERCISES :

In order to improve the physical fitness standards of students, they should be given various conditioning exercises that would help in enhancing the overall health of the student. The teacher in-charge of the activities is advised to select for this purpose suitable lead up activities and physical training exercises for this purpose. Such exercises shall enable students to acquire adequate skill and motor abilities necessary for the activity selected. The conditioning exercises shall be pertaining to motor abilities.

OPERATION OF THE SCHEME :

SR. NO	MONTH	ACTIVITY
1	JUNE	PREPARATION FOR THE ACADEMIC YEAR AND ORIENTATION OF TEAM LEADERS
2	JULY TO 14 TH JANUARY	IMPLEMENTAION OF THE SCHEME AND ORGANISATION OF SEMINAR FOR THE STUDENTS
3	15 TH JANUARY TO 15 TH MARCH	PHYSICAL EDUCATION EXAMINATION
4	16 TH MARCH TO 16 TH APRIL	PREPARATION OF RESULTS

The Physical Education Scheme Time Table will be prepared by College Director of Physical Education and Sports in consultation with the Head of the Institution/College.

EXAMINATION :

In the second term the students will have to appear for the Physical Education examination consisting of Section- A- Health Related Physical Fitness test (80 marks) and Section- B- Project Work (20 marks), which will be converted into grades. The examination will be conducted as per the convenience of the college in between 15th January to 15th March of each academic year.

ALLOCATION OF MARKS (As mentioned in the Scheme Manual) :

HEALTH RELATED PHYSICAL FITNESS (80 Marks)

SECTION- A

SR. NO.	ABILITY	TEST OF EVALUATION	MARKS
1	CARDIO VASCULAR ENDURANCE (Any one)	1. MODIFIED QUEENS COLLEGE TEST 2. 12 MINTUE RUN WALK	20
2	FLEXIBILTY	1. SIT AND REACH TEST	20
3	MUSCULAR STRENGTH & ENDURANCE (Any one)	1. BENT KNEE SIT UPS 2. PUSH UPS 3. MODIFIED PUSH UPS	20
4	BODY COMPOSITION	1. BODY FAT PERCENTAGE	20
TOTAL :			80

SECTION-B

SR. NO	PARTICULAR	EVALUATION	MARKS
1	PROJECT WORK	GENERAL INFORMATION OF THE GAME SELECTED	20
TOTAL :			20

Sr. No	Particulars	Marks
1	SECTION-A	80
2	SECTION-B	20
Total :		100

Note:

As Section-A and Section-B have separate head of passing, the student have to secure minimum 32 marks in Section-A and minimum 08 marks in Section-B. The total marks obtained in Section-A and Section-B will be converted into the grades as mentioned in the guidelines of the scheme.

i) The maximum marks to be awarded will not be more than 100. The distribution of these marks would be as under :

The student obtaining the prescribed standard will be awarded maximum 80 marks (20x4=80) for **Health Related Physical Fitness** activity and 20 marks for **Project Work** and these marks will be converted in to grades and added to the mark list of the student obtained by him/her in the final examination.

ii) The grading of marks will be given by adding the performances of **Health Related Physical Fitness** and **Project Work** as follows:

Grade	Marks	Remarks
O	100	Outstanding
A+	90	Excellent
A	80	Very Good
B+	70	Good
B	60	Above Average
C	50	Average
P	40	Pass
F	Below 40	Fail
Ex	0	Exempted
Ab	0	Absent

MEDICALLY UNFIT/ DIFFERENTLY ABLE STUDENTS :

Medically unfit/ differently able students will be exempted from the practice and tests in the Physical education subject after producing the valid documents. This is not depriving them from the equality of opportunity with other students.

Important Note : The student exempted shall have to submit his/her medical certificate at the time of admission from a Civil Surgeon of respective District Civil Hospital.

PASSING CRITERIA :

It is compulsory for every student to appear or pass the Physical Education test in the first year else an opportunity will be given to clear the same in the subsequent years. If the candidate is unable to clear the prescribed test, his terms at the final year will not be granted.

ORGANIZATIONAL GUIDELINES :

1) STAFF:

The colleges are expected to have qualified teachers in Physical Education and Sports. The scheme can be managed with the help of contributory teachers but, the regular teacher in-charge of sports and physical education will have to be appointed to streamline the working of the department.

The colleges those who have not appointed qualified Director of Physical Education may appoint contributory staffs who are having Physical Education qualifications and good sports background for the smooth implementation of the scheme.

For facilitating the smooth working of the scheme, every class should be divided into a groups of 25 students each with a team leader who would help the college Director of Physical Education and Sports in the organization of the work.

The evaluation of students should be done by Director of Physical Education and External Examiner.

2) FACILITIES AND EQUIPMENT :

a) PLAYGROUD :

The sports facilities available at the college should be maintained for the regular practices and should be made available to conduct the tests.

b) EQUIPMENT :

According to the playing facilities available in the college, the required equipment for the same needs to be made available to the students.

3) FINANCIAL PROVISION :

a) FEES :

For the conduct of this scheme fees of Rs. 50/- (per student) should be collected by college and the amount collected thereof should be strictly utilized for the conduct of these activities.

b) REMUNERATION DISTRIBUTION :

The remuneration shall be paid as follows:

Sr. No.	Amount	Particulars
01	Rs. 30/- per student	To be kept by the college for whole year activity and infrastructural development
02	Rs. 20/- per student (Distribution of Rs. 20/- as follows)	For conduct of Examination
	Rs. 8/- per student	External Examiner Remuneration
	Rs. 6/- per student	Internal Examiner Remuneration
	Rs. 6/- per student	Contingencies and Assisting staff Remuneration (Grounds man, clerk etc.)

c) SUPPORTING STAFF :

College may appoint supporting staff to assists the College Director of Physical Education in conducting the examination. The remuneration should be paid from the fees collected.

GENERAL GUIDELINES TO IMPLEMENT THE SCHEME

1. APPOINTMENT OF STUDENT LEADERS :

To run the program throughout the year effectively, every college shall appoint student leaders amongst the students as per their requirement.

Normally after every 25 students, the college may appoint 01 student leader who shall extend his/her help to conduct the program under the supervision or as per the guidelines given by the college Director of Physical Education.

2. STUDENT LEADERS ORIENTATION PROGRAM :

The College Director of Physical Education at the beginning of the academic session shall organize at least three days orientation program for the selected student leaders. It is expected that the entire scheme related important responsibilities shall be conveyed to the student leaders, if possible with the required demonstrations.

3. TRAINING TO STUDENT LEADERS :

The College Director of Physical Education at the beginning of the academic session, selects the student leaders as per his/her requirement and shall train them to conduct the decided program. Normally, following training shall be given to the student leaders.

- Method of taking attendance
- Preparation of weekly program
- Record keeping
- Preparation of test sheets
- Marking of play grounds
- Checking of equipment specifications
- Class Controlling

Program and Activities to be arranged during orientation of Student Leaders:

- Warming up Exercises
- Conditioning Exercises
- Introduction of scheme
- Demonstration of Various Tests
- Imparting of training schedule
- Group dynamics
- Various methods of testing
- Introduction and operational use of the equipments
- Method of extension of help during the tests

4. ADMINISTRATION IN ABSENTIA :

The College Director of Physical Education normally shall have to supervise, guide, control and has to visit various places during the conduct of Intercollegiate Sports programs, hence, in his/her absence the student leaders shall conduct the decided programs as per the guidelines issued by the Director of Physical Education of Sports from time to time.

5. REQUIREMENT OF FINANCIAL ASSISTANCE TO CONDUCT THE STUDENT LEADERS' ORIENTATION PROGRAM :

The head of the institution shall make available the required financial assistance to the College Director of Physical Education to conduct the student leaders' orientation program. The college authorities may seek the help of the team leaders rendering the services through Earn and Learn Scheme.

Every year at the beginning of the session the College Director of Physical Education shall submit the required budget to the Head of the College. The expenditure on the same shall be incurred from the fees collected for this program.

6. INFORMATION ABOUT THE SCHEME :

The College Director of Physical Education and Sports at the beginning of the academic session shall inform and explain the program to the admitted students.

7. APPLICATION FORM :

The College Director of Physical Education at the beginning of the academic session shall issue and collect the duly filled prescribed application form from the students admitted to First year of the Courses. (Appendix –II)

The College Director of Physical Education at the beginning of the academic session shall sort the duly filled in application forms and accordingly make the required arrangements.

8. APPOINTMENT OF EXTERNAL EXAMINER :

Looking into the number of students to be evaluated the College authority should appoint the separate External Examiner for every faculty for the smooth conduct of tests in consultation with the approved teachers from the nearby affiliated colleges. The remuneration and other allowances shall be paid to them as mentioned above. Any change proposed in future shall be automatically applicable.

9. CLASSES OF THE ACTIVITIES :

Minimum two periods per day of the decided time shall be conducted either by the College Director of Physical Education or by the Student leader appointed. If the Director of Physical Education and Sports of the college has been shouldered with another responsibility by the college, in that case student leader shall conduct the classes as instructed by the College Director of Physical Education.

10. CERTIFICATE TO STUDENTS LEADER :

Every year at the end of the academic year the Director of Physical Education and Sports of the College shall award certificate to the student leader as per the Appendix - III.

APPENDIX - I

Achievement Card for
Section-A and Section-B

Name of the Student :

College :

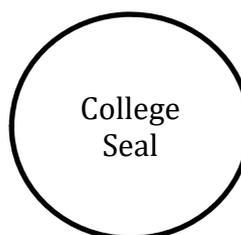
Sr. No	Activity	Particular	Out Of Marks	Performance	Total	Grade
1	Health Related Physical Fitness	• Cardio Vascular Endurance	20			
		• Flexibility	20			
		• Muscular Strength & Endurance	20			
		• Body Composition	20			
2	Project Work	• General Information of the Game selected	20			
Total :			100			

Signature of the Student

Signature of Teacher In- charge :

Signature of Principal :

Date : / /



APPENDIX - II

**Application Form
Physical Education Scheme**

Paste latest
passport size
photograph

Name of Student	
Address for Correspondence	
Class	

Section	
Sex	Male / Female
Date of Birth	
Age	
Blood Group	
Height	
Weight	
Game Selected	

** The Student shall have to choose any one sport event as per the availability of the infrastructure and equipments in the college. For his/her convenience they may consult the College Director of Physical Education.

I, the undersigned declare that, I shall practice the selected events as per the instructions given by the College Director of Physical Education and abide by the rules made thereof. Further, I certify that, I shall not change or switch over to any other event in the mid of the session and appear the final test in the events selected under this form.

.....
Signature of the Student

Date : / /

Place :

APPENDIX - III

Certificate of Appreciation

This is to certify that Shri/ Smt/ Kum.

of

Has successfully rendered his/her valuable services for the smooth conduct of the Physical Education Scheme designed by the University for the Academic Year

Date : / /

Director of Physical Education of the College	Seal of College	Principal of the College

SAVITRIBAI PHULE PUNE UNIVERSITY



PHYSICAL EDUCATION EXAMINATION SCHEME

PHYSICAL EFFICIENCY TEST

MANUAL

(For First Year Students of All the Faculties)

HEALTH RELATED PHYSICAL FITNESS (80 Marks)

SECTION- A

SR. NO.	ABILITY	TEST OF EVALUATION	MARKS
1	CARDIO VASCULAR ENDURANCE (Any one)	<ul style="list-style-type: none">• MODIFIED QUEENS COLLEGE TEST• 12 MINTUE RUN WALK	20
2	FLEXIBILTY	<ul style="list-style-type: none">• SIT AND REACH TEST	20
3	MUSCULAR STRENGTH & ENDURANCE (Any one)	<ul style="list-style-type: none">• BENT KNEE SIT UPS• PUSH UPS• MODIFIED PUSH UPS	20
4	BODY COMPOSITION	<ul style="list-style-type: none">• BODY FAT PERCENTAGE	20
TOTAL :			80

SECTION-B

SR. NO	PARTICULAR	EVALUATION	MARKS
1	PROJECT WORK	GENERAL INFORMATION OF THE GAME SELECTED	20
TOTAL :			20

Sr. No	Particulars	Marks
1	SECTION-A	80
2	SECTION-B	20
Total :		100

Note :

As Section-A and Section-B has separate head of passing the student has to secure minimum 32 marks in Section-A and minimum 08 marks in Section-B. The total marks obtained in Section-A and Section-B will be converted into the grades as mentioned in the guidelines of the scheme.

SECTION - A

HEALTH RELATED PHYSICAL FITNESS TESTS

SECTION -A
(PHYSICAL FITNESS TEST DESCRIPTION)

1. MODIFIED QUEENS COLLEGE STEP TEST :

OBJECTIVE :

To provide a practical, convenient means for assessing cardio respiratory fitness.

VALIDITY :

using maximal oxygen consumption as the criterion, a correlation of - .75 was obtained between the first heart rate recovery score (5-20 seconds after exercise) and max. VO₂ expressed in ml/kg/min

RELIABILITY :

A reliability coefficient of .92 was reported

EQUIPMENT AND MATERIALS :

Bleachers serve as stepping bench (16.25 inches). A metronome is used for the cadence. Women 22 steps per minute and Men 24 steps per minute.

PROCEDURE :

Half of the class may be tested at one time with the other half serving as partners to count pulse. Following the explanations of the test and pulse-counting procedures, the counters are allowed several practices in counting their partners pulse rates for 15-seconds intervals.

The test consists of stepping up and down on the bleachers step for 3 minutes. At the end of the time period, the subjects remain standing while the partners count pulse rate for 15 seconds interval beginning 5 seconds after the cessation of exercise. The counters and steppers then exchange places and the other half of the class is tested.

SCORING :

The 15- seconds pulse count is multiplied by 4 to express the score in beats per minute.

NORMS :

Men & Women (Performance in Beats per minute)	Marks out of 20
≤ 140	20
141 - 148	19
149 - 152	18
153 - 156	17
157 - 158	16
159 - 160	15
161 - 162	14
163	13
164	12
165 - 166	11
167 - 168	10
169 - 170	9
171	8
172	7
173 - 176	6
177 - 180	5
181 - 182	4
183 - 184	3
185 - 196	2
≥ 197	1

Marks based on percentile norms Ref.: Johnson, B. L. & Nelson, J. K. (1986). Practical Measurement for evaluation in physical education (3rd edn) Mc Millan Publishing Company USA. Pg. 161



2. TWELVE MINUTE RUN AND WALK TEST (COOPER'S TEST) :

OBJECTIVE :

To measure cardio-respiratory endurance.

VALIDITY :

Validity is 0.90 when correlated with treadmill measurements of oxygen consumption and aerobic capacity.

RELIABILITY :

Reliability is 0.94 with test-retest method.

EQUIPMENT AND MATERIALS :

Stopwatch or clock with sweep second hand, whistle or starter's pistol, track, football field, or some running area marked so that distance travelled in 12 minutes can be calculated easily.

PROCEDURE :

Performers assemble behind starting line. At the starting signal, they run or walk as far as possible within the 12 minute time limit. An experienced pacer should accompany performers around the running area during the actual test. Performers should have experienced some practice in pacing. At the signal to stop, performers should remain where they finished long enough for test administrators to record the distance covered. Ample time should be given for stretching and warm-up as well as post-test cool down.

SCORING :

Score is distance in meter covered in 12 minutes.

NORMS :

Men (In meters)	Women (In meters)	Marks out of 20
≥2701	≥2351	20
2641 - 2700	2261 - 2350	19
2551 - 2640	2181 - 2260	18
2461 - 2550	2111 - 2180	17
2401 - 2460	2051 - 2110	16
2351 - 2400	2001 - 2050	15
2311 - 2350	1971 - 2000	14
2271 - 2310	1941 - 1970	13
2231 - 2270	1901 - 1940	12
2191 - 2230	1871 - 1900	11
2161 - 2190	1841 - 1870	10
2131 - 2160	1811 - 1840	9
2101 - 2130	1791 - 1810	8
2061 - 2100	1761 - 1790	7
2021 - 2060	1721 - 1760	6
1971 - 2020	1681 - 1720	5
1921 - 1970	1651 - 1680	4
1871 - 1920	1621 - 1650	3
1801 - 1870	1551 - 1620	2
≤ 1800	≤ 1550	1

(Marks based on percentile norms Ref: Hoffman J. (2006). Norms for fitness performance & health. Human Kinetics. USA. Pg. 73)

3. SIT AND REACH :

OBJECTIVE :

To measure the hip and back flexion as well as extension of the hamstring muscles of the legs.

VALIDITY :

Face validity was accepted for this test.

RELIABILITY :

An 'r' of 0.94 was found when the best score of three trials was recorded from separate testing and correlated.

EQUIPMENT AND MATERIAL :

Flexomeasure case with yard stick and tape.

PROCEDURE :

- i. Line up the 15 inch mark of the yardstick with a line on the floor and tape the ends of the stick to the floor so that the flexomeasure case (window side) is face down.
- ii. Sit down and line up your heels with the near edge of the 15 inch mark and slide your seat back beyond the zero end of the yardstick.
- iii. Have a partner stand and brace his or her toes against your heels. Also, have an assistant on each side to hold your knees in a locked position as you prepare to stretch.
- iv. With heels not more than 5 inches apart, slowly stretch forward, while pushing the flexomeasure case as far down the stick as possible with the fingertips of both hands. Take your reading at the near edge of the flexomeasure case.

SCORING :

The best of three trials measured to the nearest quarter of an inch is your test score.

NORMS :

Men (in cms)	Women (in cms)	Marks out of 20
≥ 46.1	≥47.6	20
44.1 - 46	45.6 - 47.5	19
43.1 - 44	44.1 - 45.5	18
42.1 - 43	42.6 - 44	17
41.1 - 42	41.6 - 42.5	16
40.1 - 41	41.1 - 41.5	15
39.1 - 40	40.6 - 41	14
38.1 - 39	40.1 - 40.5	13
37.1 - 38	38.6 - 40	12
36.6 - 37	37.6 - 38.5	11
35.6 - 36.5	37.1 - 37.5	10
34.6 - 35.5	36.6 - 37	9
33.6 - 34.5	36.1 - 36.5	8
33.1 - 33.5	35.1 - 36	7
31.1 - 33	33.6 - 35	6
29.6 - 31	32.6 - 33.5	5
26.6 - 29.5	28.1 - 32.5	4
23.6 - 26.5	25.6 - 25	3
21.1 - 23.5	23.6 - 25.5	2
≤ 21	≤ 23.5	1

Marks based on percentile norms Ref.: Hoffman J. (2006). Norms for fitness performance & health. Human Kinetics. USA. Pg. 102



4. BENT KNEE SIT UPS :

OBJECTIVE :

To measure the dynamic (isotonic) endurance of abdominal muscles.

EQUIPMENT AND MATERIALS :

A stopwatch and a mat or dry turf or clean floor.

PROCEDURE :

The subject is asked to lie on the back with knees bent, feet on the floor with heels not more than 12 inches from the buttocks. The angle of the knees should not be less than 90degree. The subject is asked to put his or her hand on the back of the neck with finger clasped and to place the elbows squarely on the mat or turf or floor. The subject's feet are held by a companion to ascertain that the feet do not leave the surface and remain touching it. Then the subject is asked to tighten the abdominal muscles and to bring the head and elbows to the knees. The entire above process constitutes one sit up.

The subject is asked to return to starting position with his/her elbows on the surface before sitting up again. The tester gives the above demonstration to all the subjects to be tested before the actual performance of the test. The timer gives the starting signals ready, go ! at the word 'go' the timer starts the stopwatch and the subject starts the sit ups performance as quickly as possible with /her best efforts. The tester starts counting the number of sit ups performed. After 60 seconds, the timer gives the signal stop and the subject stops, while the tester records the number of correctly executed sit ups performed by the subject in 60 seconds. This gives the score of the test.

Only one trail is given unless the tester believes that the subject has not had a fair opportunity to perform. A subject is not allowed any rest in between sit ups during his performance. No incorrect sit ups is counted in which the subject does either of the following mistakes:

- a) Keeps the fingers unclasped behind the neck.
- b) Returns to the incomplete starting position with elbows not flat on the surface before starting the next sit up.
- c) Brings both elbows forward by pushing of the floor with any elbow.

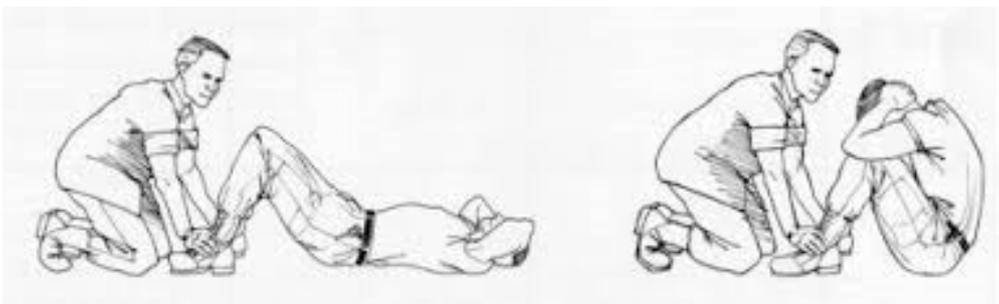
SCORING :

Number of correctly executed sit ups performed by the subject in 60 seconds

NORMS :

PERFORMANCE (NUMBER OF SIT UPS) Men	PERFORMANCE (NUMBER OF SIT UPS) Women	Marks out of 20
≥ 48	≥ 39	20
44 - 47	35 - 38	19
41 - 43	33 - 34	18
40	30 -32	17
38 - 39	29	16
37	28	15
36	26 - 27	14
35	25	13
33 - 34	24	12
32	23	11
31	22	10
30	21	9
29	20	8
28	18 - 19	7
27	17	6
25 - 26	15 - 16	5
24	14	4
23	11 - 13	3
18 - 22	8 - 10	2
≤ 17	≤ 7	1

(Marks based on percentile norms Ref : The Cooper Institute (2006).
Physical fitness specialist course and certification. Texas, USA. Pg. 29 & 36)



5. **PUSH-UPS (MEN) :**

OBJECTIVES :

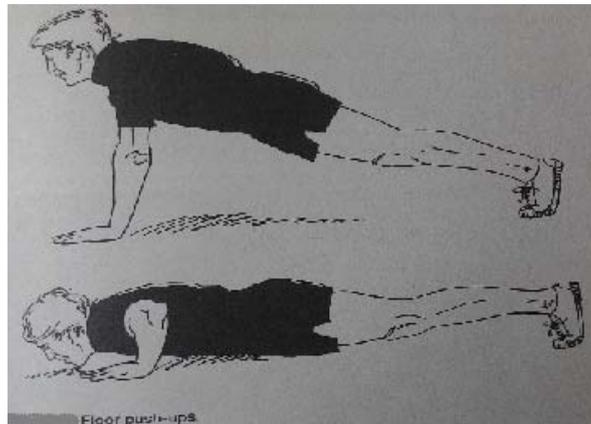
To measure the dynamic muscular endurance of the arms and shoulder girdle.

EQUIPMENT AND MATERIALS :

A floor mat

PROCEDURE :

Floor push-ups – performer takes a front-leaning ready position with arms and legs straight. He then lowers the body until the chest touches the mat and pushes up to the straight arm position for one minute continuously. The exercise is continued as many times as possible without a rest as shown in the figure.



SCORING :

Score is the number of correct push-ups continuously executed. When body pikes or sags, chest does not touch mat, or arms do not fully extend, that trial does not count. If performer stops to rest, the test should be considered completed. As a helpful technique in determining correctness of the push-up, the tester or partner can place his hand on the mat under the performer's chest. If the chest is lowered enough, it will touch the hand of the tester.

NORMS :

Men (NO OF PUSH UPS)	Marks out of 20
≥ 41	20
37 - 40	19
35 - 36	18
31 - 34	17
30	16
27 - 29	15
26	14
25	13
23 - 24	12
22	11
20 - 21	10
19	9
17 - 18	8
16	7
14 - 15	6
12 - 13	5
11	4
10	3
6 - 9	2
≤ 5	1

Marks based on percentile norms Ref.: The Cooper Institute (2006), Physical fitness specialist course and certification. Texas, USA. Pg. 30

6. **MODIFIED PUSHUPS (WOMEN) :**

OBJECTIVES :

To measure the dynamic muscular endurance of the arms and shoulder girdle.

EQUIPMENT AND MATERIALS :

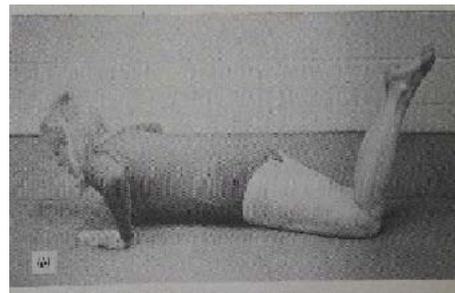
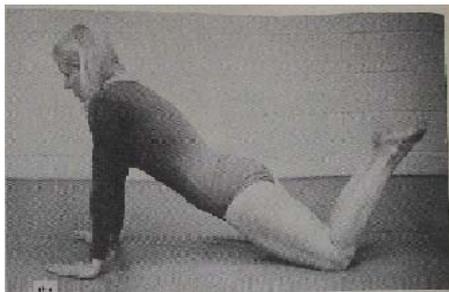
A floor mat

PROCEDURE :

Performer lowers her body to the mat and pushes back to straight arm position. The exercise is continued as many times as possible without a rest as shown in the figure.

SCORING :

Score is the number of correct push-ups continuously executed. If performer stops to rest, the test should be considered terminated. If the body sags, chest does not touch mat or arms are not fully extended, the trial does not count.



Modified Push-Ups (Repetitions)

Women (NUMBER OF MODIFIED PUSH UPS)	Marks out of 20
≥ 21	20
19 - 20	19
18	18
17	17
16	16
15	15
14	14
13	13
13	12
12	11
11	10
10	9
9	8
8	7
7	6
7	5
6	4
5	3
2 - 4	2
≤ 1	1

(Marks based on percentile norms Ref: The Cooper Institute (2006). Physical fitness specialist course and certification. Texas, USA. Pg. 38)

7. **PERCENTAGE BODY FAT :**

Bioelectrical Impedance (BI) :

Bio electrical is gaining popularity because of its ease in administration and its similarity to skin fold measurements regarding accuracy. BI is based on the relationship between total body water and lean body mass. Since water is an excellent conductor of electricity, a greater resistance to an electrical current passing through the body indicates a higher percentage of body fat. Likewise decrease when there is higher percentage of lean tissue. Since BI is sensitive to changes in body water, subject should refrain from drinking or eating within 4 hours of the measurement, void completely before the measurement, and refrain from consuming any alcohol caffeine, or diuretic agent before assessment. Failure to do so increases measurement error. For this Omron Body Fat Monitor can be used.

NORMS :

Men (%)	Women (%)	Marks out of 20
≤ 6.1	≤ 12	20
6.2 - 7.1	12.1 - 14.5	19
7.2 - 8.2	14.6 - 15.7	18
8.3 - 9.4	15.8 - 17.1	17
9.5 - 10.6	17.2 - 18	16
10.7 - 11.8	18.1 - 19	15
11.9 - 13	19.1 - 19.7	14
13.1 - 14.1	19.8 - 20.6	13
14.2 - 15	20.7 - 21.2	12
15.1 - 15.9	21.3 - 22.1	11
16 - 16.7	22.2 - 22.9	10
16.8 - 17.4	23 - 23.7	9
17.5 - 18.5	23.8 - 24.6	8
18.6 - 19.5	24.7 - 25.4	7
19.6 - 21	25.5 - 26.6	6
21.1 - 22.4	26.7 - 27.7	5
22.5 - 23.8	27.8 - 29.2	4
23.9 - 25.9	29.3 - 32.1	3
26 - 27	32.2 - 34	2
≥ 27.1	≥ 34.1	1

(Marks based on percentile norms Ref: Hoffman J. (2006). Norms for fitness performance & health. Human Kinetics. USA. Pg. 92)

SECTION – B

INTERNAL ASSESSMENT (PROJECT WORK)

SECTION - B

PROJECT WORK (20 Marks)

GENERAL INFORMATION OF THE GAME SELECTED

The project work is compulsory for all students which need to be done on any one game organized by the AIU. The Project Work is of 20 marks for internal assessment in which the student needs to get minimum 08 marks in the project work or else will fail in the examination. Every student will have to prepare a handwritten project work on the sports event amongst the list of AIU in the language selected for his studies.

The project to be prepared will be based on the following contents :

- History of the Game
- Ground measurements with diagrams
- Skills of the game
- Basic rules of the game.
- List of Arjuna and Shri Shiv Chatrapati Awardees for last 10 years