Strictly Confidential: (For Internal and Restricted use only)
Senior Secondary School Certificate Examination
March 2019
Marking Scheme

Physical Education (048)

Series BVM (SET – 4, CODE NO. 75)

General instructions:

1. You are aware that evaluation is the most important process in the actual and correct assessment of the candidates. Small mistake in evaluation may lead to serious problems which may affect the future of the candidates, education system and teaching profession. To avoid mistakes, it is requested that before starting evaluation, you must read and understand the spot evaluation guidelines carefully. Evaluation is a 10-12 **days mission for all of us. Hence, it is desired from you to** give **your best in this process.**

2. Evaluation is to be done as per instructions provided in the Marking Scheme. It should not be done according to one's own interpretation or any other consideration. Marking Scheme should be strictly adhered to and religiously followed. However, while **evaluating, answers which are based on latest** information **or knowledge and innovative may be assessed and marks be awarded to them.**

3. The Head-Examiner must go through the first five answer books evaluated by each evaluator to ensure that evaluation has been carried out as per the instructions given in the Marking Scheme. The remaining answer books meant for evaluation shall be given only after ensuring that there is no significant variation in the marking of individual evaluators.

4. If a question has parts, please award marks on the right-hand side for each part. Marks awarded for different parts of the question should then totaled up and written in the left- hand margin and encircled.

5. If a question does not have any parts, marks must be awarded in the left hand margin and encircled.

6. If a student has attempted an extra question, answer of the question deserving more marks should be retained and other answer scored out.

7. No marks to be deducted for the cumulative effect of an error. It should be penalized only once.

8. A full scale of marks **0 to 70** has to be used. Please do not hesitate to award full marks if the answer deserves it.

9. Every examiner should stay full working hours i.e. 8 hours every day and evaluate 25 answer books.

10. Avoid the following common types of errors committed by the Examiner in the past: Leaving answer or part thereof unassessed in an answer book.
- Giving more marks for an answer than assigned to it.
- Wrong transfer of marks from the inside pages of the answer book to the title page.
- Wrong question wise totaling on the title page.
- Wrong totaling of marks of the two columns on the title page.
- Wrong grand total.
- Marks in words and figures not tallying.
- Wrong transfer of marks from the answer book to online award list.
- Answers marked as correct, but marks not awarded. (Ensure that the right tick mark is correctly and clearly indicated, It should merely be a line. Same is with the X for incorrect answer.)
- Half or a part of answer marked correct and the rest as wrong, but no marks awarded.

11. While evaluating the answer books if the answer is found to be totally incorrect, it should be marked as (X) and awarded zero (0) Marks.

12. Any unassessed portion, non-carrying over of marks to the title page or totaling error detected by the candidate shall damage the prestige of all the personnel engaged in the evaluation work as also of the Board. Hence, in order to uphold the prestige of all concerned, it is again reiterated that the instructions be followed meticulously and judiciously.

13. The Examiners should acquaint themselves with the guidelines given in the Guidelines for spot Evaluation before starting the actual evaluation.

14. Every Examiner shall also ensure that all the answers are evaluated, marks carried over to the title page, correctly totaled and written in figures and words.

15. As per order of the Hon'ble Supreme Court, the candidates are now permitted to obtain photocopy of the Answer Book on request on payment of the processing charges.

PHYSICAL EDUCATION (048) MARKING SCHEME CLASS XII (SERIES BVM-2019)

		Division marks	Total marks
1.	**What do you understand by planning in sports?** **Ans:**- Planning in sports: It is an intellectual process of thinking in advance about setting of goals and developing strategies which are required to attain the goal efficiently in the field of sports. Deciding the future course of action and developing strategies to attain the goals efficiently in the field of sports. (any one or other relevant definition)	1	1
2.	**Write briefly about 'Micro nutrient'.** **Ans:-** Vitamin and Minerals are commonly referred to as micro nutrients because human body requires small amount for survival and proper growth and development . Various micro nutrients are vitamin A, B, C, D, E and K, minerals such as iron, calcium, magnesium, iodine etc. **(OR)** **Suggest two reasons, why our body requires food- supplements.** **Ans:-** (i) To balance the lack of proper Nutrition in our diet (ii) Desired intake of vitamins and minerals. (iii) Helps in proper growth and development (iv) To overcome deficiency diseases (v) Regulate important functions of cardio-vascular, nervous, endocrine and digestive systems. (any two)	1 ½ + ½	1
3.	**Mention any two disability etiquettes.** 1. When you meet a person with visual impairment, always identify yourself and others who may be with you. 2. In case of introduction to a person with a disability, it is appropriate to shake hands. 3. Always avoid asking personal questions to an individual who is Differently abled 4. Always have conversation at a normal tone of voice. Don't talk in high pitch to such individuals	½ + ½	1

4.	**What do you mean by Intellectual Disability?** **Ans.** It is a disability characterised by significant limitations both in intellectual functioning (reasoning, learning, problem solving) and in adaptive behaviour, which covers a range of everyday social and practical skills. Usually it occurs before the age of 18.	**1**	**1**
5.	**Which type of deformity is Kyphosis?** **Ans.** Kyphosis implies an increase of a backward posterior curve or a decrease of a forward curve. It is also called round upper back. Depression of chest is common in Kyphosis. **OR** **What is Motor development?** **Ans.** Motor Development refers to the development of movement and various motor abilities from birth till death. It is the ability to move around and manipulate his/her environment.	**1**	**1**
6.	**Among females, what type of Menstrual Dysfunction is called Amenorrhea?** **Ans.** Amenorrhea is a Menstrual disorder in women where girls of 18 years and above either never began menstruating or there is an absence of menstruation for three months or more than that in woman with a history of normal menstrual cycle	**1**	**1**
7.	**What do you mean by Bulimia?** **Ans.** Bulimia is an eating disorder in which female athlete eats excessive amount of food and then vomits it in order not to gain weight. **OR** **Give two objectives of Extramural Activities.** **Ans. –** To improve standard of sports. - To provide enriching experience to students. - To broaden the base of sports - To provide knowledge of new rules and advanced techniques. (Any two)	**1** $\frac{1}{2}+\frac{1}{2}$	**1**
8	**Which test will you suggest to measure general motor ability?** **Ans.** Barrow's (three item) general motor ability test.	**1**	**1**
9.	**On the basis of physiological parameters, mention any two gender differences.** **Ans.** 1. Muscular Strength 2. Cardiovascular Fitness 3. Bones and ligament 4. Respiratory organs (Any two)	½ + ½	**1**

10.	**Which types of sports injuries is known as" Strain"?** **Ans.** It is a soft tissue injury. **OR** **What do you mean by soft tissue injury?** **Ans.** Soft tissue injury is the damage of muscles, ligaments and tendons throughout the body. Soft tissue injury includes sprain, strain, contusion, abrasion and bruises.	**1**	**1**
11.	**Which method will you suggest to develop endurance?** **Ans.** (i) Fartlek method (ii) Continuous method (iii) Interval training method Any one	**1**	**1**
12.	**Explain about the procedure and advantages of "Bhujagasan".** **Procedure:-** (i) Lie flat on your stomach with forehead touching the floor. Place the hand on the side of your thighs. (ii) Move hand to the front, keeping them at the shoulder level and place your palms on the floor. (iii) Straighten up your arms slowly, raising the head and trunk, your head should be backwards. (iv) Hold this position for 15-30 seconds. Back to the normal position. (v) For better result repeat this asana 3 to 5 times **Advantages:-** (i) Increases the circulation of blood. (ii) Cures acidity, indigestion, constipation etc. (iii) Enhances the function of the liver, kidney, Pancreas and gall bladder (iv) Strengthens the arms and shoulders (v) Decreases obesity.	$1\frac{1}{2}$ $1\frac{1}{2}$	**3**
13.	**What is the role of Yoga in preventing lifestyle diseases?** **Ans.** Yoga helps in improving our flexibility, lower our stress and increases our confidence and finally contributes to a healthier lifestyle on the whole. There are various lifestyle diseases like obesity, Diabetes, Asthma, Hypertension and Backache. Through regular participation in yoga (i) Bones and joints become strong (ii) Muscles becomes stronger and flexible. (iii) Circulation of blood becomes normal. (iv) Respiratory organs become efficient. (v) Efficiency of digestive system increases. (vi) Better neuro muscular coordination. (vii) Strengthen the immune system. Any three	**1x3**	**3**

	OR **Discuss about the meal guidelines for pre, during and post sports event.** **Pre Sports Events** **Ans.** The athlete should stock up on the glycogen store by eating foods rich in complex carbohydrates. Less content of fat, Protein and fibre. Food should include cereals, whole grain, Pasta, Fruits and Vegetables. **During Sports Events** Athlete should stay hydrated and prevent onset of fatigue. Fluid intake should be continued in small sips. If the duration lasts for more than an hour the athlete should take small amount of carbohydrates at regular intervals, Energy drinks can be taken to supply energy. If the duration is shorter than an hour, than the athlete should drink water frequently every ten to twenty minutes. **Post Sports Events** To store lost energy, carbohydrate rich food should be taken within an hour after the activity. Plenty of water, fruits, juices and sports drinks to replace loss fluid. Two hours after the event, Full meal that is high in carbohydrate content such as potatoes, cereals, vegetables, fruits, meat and soyabean to be taken,	**1** **1** **1**	
14.	**Pawan got admission in class IX in a reputed school. All the students of his class welcomed him. After few days Aryaman, the class monitor observed that Pawan's behavior is different from other students. He is aggressive, rude and non-cooperative. He finds it difficult to make friends. Even in school, nobody wants to be his friend. Aryaman had read about ODD in a science magazine in the library, which was similar to Pawan's behavior. He discussed this situation with his classmates and suggested to interact and be friends with Pawan. This would help him to remain calm and happy. .** **Answer the following questions based on the above passage:** **(a) What do you mean by ODD?** **(b) What are the symptoms of ODD?** **(c) What values are shown by Aryaman?** **Ans**. (a) ODD refers to Oppositional Defiant Disorder where the child behavior pattern is different from normal (b) The child is Aggressive, rude non – cooperative and argumentative. (C) Cooperative and helpful. And caring	**1** **1** **1**	**3**
15.	**What are the causes of Osteoporosis?**		

	Ans. (I) Calcium and Vitamin deficiency. (II) Amenorrhoea (III) Eating Disorder **OR** **Write briefly about the prevention and management of "Anorexia".** **Ans.** Prevention:- (i) Encourage a healthy view of the self and others means refraining from commenting on the body sizes of other children. (ii) Make children aware about their genetics, body shape and size. (iii) Make them to eat healthy, nutritious food and be physically active (iv) Stay away from the people, Places and activities which induce anorexia. Management:- (i) Face the reality. (ii) Restoring healthy weight. (iii) Individual Psychotherapy (IV) Antidepressants to aid the process of recovery	**1+1+1** $1\frac{1}{2}$ $1\frac{1}{2}$	**3**
16.	**Explain the various factors affecting projectile trajectory.** **Ans.** (i) Angle of Projection (ii) Initial Velocity (iii) Gravity (iv) Air resistance (v) Projection of height relevant to the landing surface (vi) Spin (Explanation of any three)	**1+1+1**	**3**
17.	**Explain the various types of axes of rotation.** **Ans.** Types of axis rotation: Axis is a straight line around which an object rotates. It is an imaginary line that passes through a joint or body to describe movement. 1. Sagittal Axis- Passes horizontally from posterior to anterior. It passes from front to back or vice versa. Eg. Cart wheel in gymnastics, front rolls etc. 2. Frontal Axis- Passes horizontally from left to right. It can be stated that frontal axis passes from side to side. Eg. Running, jumping, trunk twisted exercises etc. 3. Vertical Axis- Passes vertically from Inferior to Superior i.e.it passes straight from of the head down feet or vice versa. It is also known as longitudinal axis and is the longest axis. Eg. Ice skating, turning during tennis shots etc.	**1+1+1**	**3**

18.	**What do you mean by coping strategies? Write briefly.** **Ans**. Coping refers to the thoughts and actions which we use to deal with a threatening situation. It can also be referred to as conscious effort to solve problem and reduce stress. There are of two types. 1. Emotion focused coping strategies are those strategies which are used to tackle the feelings of distress rather than the actual problem. 2. Problem focused coping strategies deal with the root causes of stress and are tried by the sports persons to improve the stressful environment experienced by them. OR **Explain the strategies for enhancing adherence to exercise.** Ans. (i) Simple exercise in the beginning (ii) Exercise in the morning (iii) Concentrate only on yourself (iv) Set appropriate goal (v) Take support of others (vi) Select interesting exercises (vii) Be punctual (viii) Make a schedule (ix) Be aware about your progress (x) Variety in exercise program (xi) Be regular (Explanation of any three)	**1+2** **1+1+1**	**3**
19.	**Write briefly about the techniques of Stress management.** **Ans.** (I) Participation in physical activities (II) Achieve high level of physical fitness (III) Cognitive strategies to change perception of the stressor (IV) Building self confidence (V) Relaxation techniques (VI) Developing hobbies (VII) Stay cool and confident under pressure (VIII) Avoid the company of stressed persons (IX) Don't think about the stressful thoughts (Explanation of any three)	**1+ 1+ 1**	**3**
20.	**<u>Section - C</u>** **What is League tournament? Draw a Fixture of 9 teams on the basis of league**		

tournament using cyclic method. Explain British method to declare the winner.

Ans:- (i) League Tournament: In this type of tournament, each team plays with every other team once if it is a single league tournament. **1**

It is a Double league tournament when each team plays with every other team twice.

(ii) Fixture of 9 teams according to cyclic tournament:

Total no. of teams = 9

Total no. of matches = $N(\frac{N-1}{2})$ = $9(\frac{9-1}{2})$ = 36 **1**

Total no. of rounds = 9

IR

9	Bye
8	1
7	2
6	3
5	4

IIR

8	Bye
7	9
6	1
5	2
4	3

III R

7	Bye
6	8
5	9
4	1
3	2

IVR

6	Bye
5	7
4	8
3	9
2	1

VR

5	Bye
4	6
3	7
2	8
1	9

2

VIR

4	Bye
3	5
2	6
1	7
9	8

VIIR

3	Bye
2	4
1	5
9	6
8	7

VIIIR

2	Bye
1	3
9	4
8	5
7	6

IXR

1	Bye
9	2
8	3
7	4
6	5

Cont……

<u>British Method:</u> Divide the total points obtained by the total possible points. **1**

For Eg. :- If a team plays 8 matches in a tournament and wins 6 matches and 2

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	remains draw, the percentage of points will be (2 points for winning and 1 point for draw) Total points = 12+2 = 14 Possible points =8x2 = 16 Percentage of points = Total points obtained X100 = 14/16 x100 = 87.5% Total possible points **OR** The following way is used to decide a winner The team that win the match gets= 2point The team that draw the match gets= 1point The team that lose the match gets= 0 point		
21.	**Explain macro-nutrients and their role in our diet.** **Ans** :- Macro nutrients constitute the majority of an individual's diet. They include fats, proteins, Carbohydrates, and water. It can be said that they are taken in large amount. (Or any relevant answer) <u>ROLE</u> <u>Carbohydrates:-</u> 1. Act as major fuel for muscular contraction. 2. It provides the energy to our body. 3. It helps to maintain body weight and body temperature of the body 4. Important for different digestive operations in our body. (Or any other relevant role of carbohydrates) <u>Fats:-</u> 1. It provides heat and energy to the body 2. it protects the body from extreme cold and hot climate 3. Helps in regulation of body temperature. 4. It also helps to protect internal organs of the body. (Or any other relevant role of fats) <u>Proteins:-</u> 1. It also plays an important role in the physical and mental development of an	**1+4**	**5**

	individual. 2. Necessary for our growth and development and for repairing the wear and tear of tissues. 3. It helps in the formation of enzymes and hormones and also act as a source of energy 4. Transport oxygen and nutrient 5. Regulates balance of water and acid (Or any other relevant role of proteins) <u>Water</u>:- 1. Helps in transportation of nutrients to cells of body. 2. Regulates body temperature 3. Vital for various chemical reactions taking place in the body. 4. Essential for body metabolism. 5. Keeps the body hydrated.		
22.	**Explain 'Flat foot' and 'Knock knees' and also suggest corrective measures for both postural deformities.** **Ans:**- Flat foot: It is a deformity in the feet. There is no arch in the foot and the foot is completely flat which may cause pain in the foot. An individual with this deformity faces problem in standing, walking, jumping and running. Corrective measures for Flat foot: (i) Jumping on toes (ii) Rope skipping (iii) Walk on toes (iv) Stand up and down on heels (v) Walk on heels (vi) Walking on inner and outer side of foot (vii) Perform Vajrasana and Yogic exercises. Knock knees: It is a postural deformity in which both the knees touch or overlap each other in normal standing position. Cont…… Due to this deformity an individual usually faces difficulty in walking.	$2\frac{1}{2}$ $2\frac{1}{2}$	**5**

	Corrective measures for Knock Knees: (i) Horse riding is one of the best exercise (ii) Keep a pillow between the knees and stand for some time every day. (iii) Use of walking caliper may be beneficial. Perform Padmasana and Gomukhasana.		
23.	**Write in detail about AAHPER (American Alliance for Health Physical Educationand Recreation) Motor Fitness.** **Ans:-** (i) Pullups(Boys) /Flexed Arm Hang (Girls) (ii) Flexed leg Sit-ups (iii) Shuttle Run (iv) Standing Long Jump (v) 50 yard Dash (vi) 600 yard run-walk. (Explanation of any 5)	**5**	**5**
	OR **What do you know about Harvard Step Test? Explain its procedure and administration.** Cardiovascular fitness is the ability of the heart and lungs to supply oxygen-rich blood to the working muscle tissues and the ability of the muscles to use oxygen to produce energy for movements. Harvard Step Test is a cardiovascular fitness test. It is also called aerobic fitness test. ***Administrative procedure of Harvard Step Test*** **Purpose:** To measure the general capacity of the heart and circulatory system for measurement of cardiovascular efficiency. **Time Allotment:** 5 minutes **Facilities and Equipment:** A stop watch, 20" height bench, partners, stethoscope, metronome, score sheet. **Procedure:** The athlete stands in front of the bench or box. On the command 'Go' the athlete steps up and down on the bench or box at a rate of 30 steps per minute (one second up one second down) for 5 minutes (150 steps). Stopwatch is also Started simultaneously at the start of the stepping. After that the athlete sits down	**1+3+1**	

	immediately after completion of the test i.e. after 5 minutes. The total number of heartbeats are counted between 1 to 1.5 minutes after completion of the last step. The heartbeats are counted for 30 seconds period. Again the heartbeats are noted for 30 seconds after the finishing of the test. After that third time the heartbeats are noted after 3 minutes of completion of the test for 30 seconds period. The same foot must start the step up each time, and an erect posture must be assumed on the bench. **Calculation of the Score:** The athlete's fitness index score is calculated with the help of following formula: Fitness index score = (100 x test duration in seconds) / (2 x sum of heart beats in recovery periods) **"Students own view relevant to this question also acceptable"**		
24.	**What are the effects of exercise on respiration system? Write in detail.** **Ans.:-** Effects of exercise on respiratory system - Strengthens will power to push beyond the capacity of regular training - Decreases rate of respiration during exercise and at rest - Strengthen muscles of Diaphragm and chest - Increase in Tidal capacity - Activates unused Alveoli since more oxygen is required for endurance activities - Avoid second wind - Efficient Gaseous exchange - Increase in residual air volume - Increase in size of lungs and chest - Increase in vital air capacity - Increase in endurance - Exhale and inhale in fast pace prevents accumulation of waste in lungs and prevents lungs diseases (Any five effects explained)	**1+1+1+ 1+1**	**5**
25.	**What do you understand by Fracture? How can Fractures be classified? Explain.** **Ans.:-** Fracture: Broken or cracked bone is known as Fracture. It is a very common	**1+4**	**5**

	injury in games and sports. Classification of Fracture: (i) Simple Fracture (ii) Compound Fracture (iii) Green stick Fracture (iv) Impacted Fracture (v) Communicated Fracture (vi) Stress Fracture (vii) Complicated Fracture (viii) Transverse Fracture Oblique Fracture explanation of any 4 classification		
26.	**What do you understand by coordinative ability? Discuss about different types of coordinative abilities.** **Ans.:-** Coordinative abilities are those abilities which enable an individual to do various related activities accurately and efficiently. Coordinative abilities mainly depend on the central Nervous System. Types: (i) Orientation ability (ii) Coupling ability (iii) Reaction ability: (a) simple reaction ability (b) Complex reaction Ability (iv) Balance Ability (v) Rhythm ability (vi) Adaptation ability (vii) Differentiation ability explanation of any 4 classification **OR**	**1+4**	**5**

Write in detail about strength improving methods – Isometric, Isotonic and Isokinetic.

Ans.:- Strength is the capacity of the whole body or parts of to exert force. There are two types of strength – Dynamic & Static strength. Following methods are used to improve strength:-

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1. **Isometric Exercise:-** Means where we do these exercises work is done cannot be observed. In these exercises, work is performed but it is not seen directly. In these exercises a group of muscles carry out tension against the other group of muscles. For example: Pushing against the sturdy wall, we will not be able to move it from its place. So, we should not consider it as work. Our muscle exert force, while pushing wall, but we see that work is not done.
   When we do exercise expenditure of energy is usual phenomenon. Some time body temperature may increase while performing these exercises. Muscles may feel a slight tremor if exercise is done for a prolonged time. Regular performing these exercises muscle size and shape can be changed.

2. **Isotonic Exercise:-** Isotonic exercises are those exercises in which movement can be seen directly. Work is done in these exercises. The lengthening and shortening of muscle can be called eccentric contraction and concentric contraction accordingly.

Examples are – callisthenic exercises, running and jumping on the spot, lifting of weights or exercise with medicine ball. These exercise can be done with or without equipment.

3. **<u>Iso-kinetic exercise :-</u>** In Iso-kinetic exercise contraction of muscle apply maximum forces throughout the complete range of movements. According to individual's capacity, the speed of contraction can be adjusted. The Iso-kinetic excise can be used effectively for the development of strength.