



INDIAN SCHOOL MUSCAT
SECOND PRE BOARD EXAMINATION 2019-20
PHYSICAL EDUCATION

QP & Marking Scheme

Roll Number:

CLASS: XII

Sub.Code: 048

Time Allotted: 3 Hrs.

03.02.2020

Max.Marks: 70

General Instructions:

1. The question paper consists of 34 questions
2. All questions are compulsory
3. Answer to question 1-20 carrying 1 mark.
4. Answer to question 21-30 carrying 3 marks should be in approximately 80-100 words
5. Answer to question 31-34 carrying 5 marks should be in approximately 150-200 words

SECTION A

A Choose the correct answer

- | | | |
|---|--|---|
| 1 | Importance of the tournaments is | 1 |
| | a) Development of sports skills | |
| | b) Propaganda of sports | |
| | c) Helpful in the selection of players | |
| | d) All the above | |
| | Ans: d) All the above | |
| 2 | Formula to find out the number of matches in single league tournament is | 1 |
| | a) $N(N-1)$ | |
| | b) $N(N-1)/2$ | |
| | c) $N-1 \times 2$ | |
| | d) $N+N(N-1)$ | |
| | Ans: b) $N(N-1)/2$ | |
| 3 | Seeding method is used in the Knock-out fixtures to | 1 |
| | a) Avoid strong teams to get eliminated | |
| | b) Give equal chance to all the teams | |
| | c) Finish the first round rapidly and eliminate weaker teams | |

- d) Minimise the expenditure of the tournament
Ans: a) Avoid strong teams to get eliminated

- 4 Healthy weight according to National Institute of Health in BMI between 1
a) 5 & 10
b) 11 & 18
c) 19 & 25
d) 26 & 31
Ans: c) 19 & 25

- 5 Obesity is that condition of the body in which the 1
a) Body weight exceeds 100 kg.
b) Improper weight training without proper diet.
c) Person intakes excessive water
d) Amount of fat increases to extreme level
Ans: d) Amount of fat increases to extreme level

B. Give one word answers

- 6 Give two benefits of Bhujangasana. 1
Ans: It alleviates obesity. It provides strength and agility.

or

What is Dyslexia?

Ans: It means person may have difficulty in writing, reading, speaking etc. An individual with cognitive disability may exhibit dyslexia.

- 7 How do you correlate disability and poor approach to health care? 1
Ans: Sometimes good health care facilities are not available during difficult labour and birth. It may cause a baby to be born with a disability such as cerebral palsy. Proper immunization can also help in preventing many disabilities.

- 8 Environmental factors influence motor development in children. Comment on this statement. 1
Ans: Environmental factors such as physical and social factors are likely to affect the motor development of children. Motor development takes place at a faster rate in children who are encouraged to explore their surroundings.

- 9 State two exercise guidelines for the stage of adolescence. 1
Ans: During the stage of adolescence moderate to vigorous intensity physical activity is recommended for at least 60 minutes and up to several hours every day. This should include strengthening, running, gymnastics, push ups, jumping rope, playing games, resistance training etc.

- 10 What do you understand by a correct posture? 1
Ans: Correct posture means balancing the body in accurate and proper manner while sitting, reading, writing, or doing any other action. In a proper posture the whole body weight is balanced on both feet without any effort and the entire body appears to be in vertical line.

or

What are the main causes of Knock-knees?

Ans: Generally, the lack of balanced diet, especially vitamin D, calcium and phosphorous is the main cause of knock- knee. It may also caused due to rickets, chronic illness, obesity, flat foot and carrying heavy weight in early age.

C. State True or False

- 11 Female athlete triad is a syndrome in which osteoporosis, amenorrhea and eating disorders occur. 1

Ans: True

- 12 Triceps Skinfold is a Kraus- Weber Test 1

Ans: False

- 13 Cardiovascular fitness is the ability of the heart and lungs to supply oxygen-rich blood to the working muscle tissues and produce energy for movements. 1

Ans: True

- 14 Adiposity is a state of absolute subcutaneous fat in the body. 1

Ans: True

- 15 Sports medicine gives knowledge about the causes of injuries. 1

Ans: True

or

Injudicious officiating may cause sports injuries.

Ans: True

D. Fill in the blanks

- 16 PRICE & MICE are the two procedures for the treatment of sprain. 1

- 17 TRANSVERSE fracture breaks in one of the bones of the spine or part of it. 1

- 18 An object thrown into the space either horizontally or at an acute angle under the action of gravity is called PROJECTILE 1

- 19 Law of ACCELERATION is the second law of motion. 1
- 20 Stress is classified into PHYSICAL STRESSORS & COGNITIVE STRESSORS 1
or
Mr. Gosta Holmer developed FARTLEK training in 1937 to develop endurance.

SECTION B

- 21 What is coordinative ability? Explain any three coordinative abilities. 3
Ans: Coordinative abilities depend on the central nervous system. The coordinative abilities are those abilities of an individual which enable the individual to do various related activities properly as well as efficiently.
There are various coordinative abilities which are very significant in the field of games and sports.
1. Orientation Ability: It is the ability to determine the position of the body and its parts in time and space in relation to gravity, moving objects like ball, opponent, partner, playing field etc.
 2. Coupling Ability: This is the ability to combine the movements of different body parts for performing perfect sports movements.
 3. Reaction Ability: This is the ability to react immediately or quickly and effectively to a signal. There are two types of reaction ability, Simple reaction ability and complex reaction ability.
- 22 Write a note on Jung's classification. 3
Ans: C G Jung has classified personality on the basis of sociability character as introverts, extroverts and ambiverts.
1. Introverts: These are the persons who share characteristics such as shyness, social withdrawal and tendency to talk less. These persons seem to be self centered, unable to adjust easily in society or social situations, very sensible, rigid in ideas and future oriented.
 2. Extroverts: These are the persons have a tendency to be friendly, outgoing, talkative and social in nature. They are generous, supportive, courageous, interest in present reality than future, express feeling openly, take decisions quickly and not affected difficulties easily.
 3. Ambiverts: There are few persons who are pure introverts or pure extroverts. The remaining majority of persons possess both the qualities or traits of introverts and extroverts such persons are called as ambiverts.
- 23 What are the different types of movements in joints? 3
Ans: There are various types of movements in joints which may be divided into four major kinds. They are:
1. Gliding Movement: Gliding movement is the simplest kind of motion that can take place in a joint, one surface gliding or moving over another without any angular or rotator movement.

2. Angular movement: Angular movement occurs only between the long bones. By angular movement, the angle between the two bones increases or decreases. It may take place forward, backward, flexion, extension, adduction, and abduction.
3. Circumduction: This is the movement which takes place between the heads of a bone and its articular cavity. This kind of motion is best seen in the shoulder and hip joints.
4. Rotation: This is a form of movement in which a bone moves around a central axis without undergoing any displacement from this axis. Moving a part around an axis is called rotation.
5. Other movements: Hyper extension, Dorsiflexion, Plantar flexion, Inversion, Protraction, Retraction, Elevation, Depression, Supination, Pronation and Eversion are coming under the other movements.

or

What is aerodynamics? What are the factors influencing aerodynamics?

Ans: Aerodynamics is the study of properties of moving air and the interaction between the air and solid bodies moving through it. In other words aerodynamics is related to the flow of air around a projectile, which can influence speed and direction of the object.

There are four basic forces in aerodynamics.

1. Lift: It is the force that pushes the object to move upward. It is the force that is opposite of weight.
2. Weight: It is the force generated by the gravitational attraction of the earth. The weight of an object controls how strong the push has to be.
3. Drag: It is a force that tries to slow the object down. It makes hard for an object to move. The shape of an object also changes the amount of drag.
4. Thrust: It is the force that is opposite of drag. Thrust is the push that moves some objects forward.

24 Give any three sports activities which involve Newton's third law of motion. 3

Ans:

1. Swimming: A swimmer pushes the water backwards (action). The water pushes the swimmer forward (reaction) with the same force.
2. Walking: When a person walks, he presses the ground in the backward direction (action) by his feet. The ground pushes him in the forward direction with an equal force.
3. Shooting: In shooting, when a gun or pistol is fired, the bullet moves forward (action). The gun or pistol jerks backward (reaction).
4. Dribbling in Basketball: When a player dribbles he exerts force on the ball and the ball strikes on the floor with a force (action). Then, the ball comes up with an equal force from the floor.

25 What do you understand by the term functional fitness in aged population? 3

Ans: With the help of physical activities every person can slow down the pace of ageing. Physical activity is the most powerful tool in the hands of aged people to maintain their routine work or functional fitness effectively. It makes the person more energetic and removes the signs of ageing. It can reverse the common signs of old age such as muscle and bone loss, increased body fat, memory and cognitive decline, decreased metabolism,

decreased flexibility, decreased blood flow etc.

The physical activity prescription for aged people should include aerobic, muscle strengthening, and flexibility exercises. The entire physical workout should be done by the doctor's advice.

26 List down any six long term effects of exercise. 3

Ans:

1. Increase in the size of heart: With regular exercise the muscles of the heart increases in size and strength. The heart walls grow stronger and thicker.
2. Decrease in resting heart rate: After regular exercise, the heart finally becomes more efficient. It does not require beating so quickly to supply blood to the body at rest.
3. Stroke volume increases at rest: The stroke volume at rest remains up to 50-70 ml/beat in untrained individuals, 70-90 ml/beat in trained individuals and 90-110 ml/beat in the best athletes.
4. Increase in cardiac output: The cardiac output 14-20 liter/minute in untrained individuals, 25-35 liter/minute in trained individuals and can be as high as 40 liter/minute in the best athletes.
5. Increased blood flow: Muscles need more oxygen during the exercises. So body increases its number of capillaries. As a result of above mentioned facts there is an increased blood circulation in the body.
6. Decrease in blood pressure: Regular exercise decreases the blood pressure (systolic and diastolic blood pressure) by up to 10mmHg at rest.

or

What is oxygen transport?

Ans: The amount of oxygen taken into the blood from lungs has to be transported to the working muscles. The oxygen transport depends on the amount of oxygen which the blood has absorbed from the lungs and the ability of the circulatory system to carry this quickly to the working muscles. The amount of oxygen absorbed into the blood depends on the speed of blood flow through the lungs and on the blood hemoglobin. The transportation of oxygenated blood depends on the capacity of the heart. This capacity can be improved through training. Consequently, there is an increase in aerobic capacity.

27 How do you measure arm and shoulder strength? 3

Ans: This is a part of Barrow Three Item General Motor ability test. It is also known as Medicine ball put test. The subject stands between two restraining lines which are 16 feet apart. In case of girls, a medicine ball of 1kg is provided, whereas in case of boys a medicine ball of 3kg is provided to be put. Subject should hold the medicine ball at the junction of the neck and shoulder then the ball should be put straight down the course. The best three trials are recorded. If all the trials are foul subject should try until makes a fair put.

28 Discuss the psychological aspects of women athlete. 3

Ans: Role of women has changed drastically due to the large participation and acceptance in society. However, gender beliefs and stereotypes still do exist across the world especially in sports. Most of the people in our society consider that sports are not meant for

females but only for males. Social tradition, customs and cultures have great influence upon the psychology of women. In a male dominated society, males are expected to be aggressive, independent, dominating, robust and confident whereas females are expected as well as considered to be emotional, sensitive, cooperative, sympathetic, loyal etc. The various psychological traits of women athletes are Gender role orientation, Competitiveness, Confidence, Self esteem, Self image or body image, depression and aggression.

29 Elaborate the six causes of bad posture. 3

Ans:

1. Improper diet: The bones and muscles of our body become weak if we do not take a proper diet. Due to an improper diet, a person suffers from deficiency diseases like rickets and pigeon's chest that causes bad posture.
2. Diseases: Various diseases like rickets, polio, and infantile paralysis may result in a bad or poor posture in a child. Chronic illness may also lead to a poor posture. These diseases may result in undue curvature of vertebra.
3. By Birth: A person may have a bad posture from birth. Kyphosis, clubfoot and dislocation of hip are such deformities which might be present from birth.
4. Due to accidents: Accidents may cause injuries to the body. These injuries may further lead to physical deformity or poor posture.
5. Fatigue: If work continuously for longer duration, we experience fatigue and we become lazy and lethargic. So we adopt a bad posture and we tend to follow that bad posture even after the work.
6. Fashion: Wrong selection of clothing that creates hindrance in the smooth functioning of the body. Even tight and high-heeled shoes may change the gait of an individual.

30 Write down the strategies to make physical activities accessible for children with special needs. 3

Ans:

1. Medical Check-up: Medical check-up is essential in children with special needs or with various disabilities. If we really want to make physical activities accessible for the children with special needs, we need to understand the type of disabilities of the children.
2. Physical activities must be based on interests of children: Physical activities must be based on the interests, aptitudes, abilities, previous experience and limitations of children with special needs.
3. Equipment related physical activities should be according to the needs of children: These equipment should vary in size, shape, colour and weight.
4. Specific environment should be provided: The area of physical activities should be limited as movement capabilities of children with special needs are limited.
5. A variety of different instructional strategies should be used: Different instructional strategies such as verbal, visual, and peer teaching should be used.
6. Rules should be modified according to the needs of children with disabilities: In the beginning rules of the physical activities should be simple but later on these rules can be modified according to the needs of the children.

7. Children's previous experience must be taken into consideration: For making physical activities more accessible for children with special needs, the concerned teacher of physical education should have comprehensive understandings and knowledge of children's previous experience about physical activities.

or

What are disability etiquettes?

Ans:

1. Always put the person first, say person with disability rather than disabled person.
2. Always avoid the outdated words like handicapped, retarded, physically challenged or differently-abled.
3. It is appropriate to shake hands to the person with disability.
4. When you meet a person with a visual impairment, always identify yourself and others who may be with you.
5. Leaning or hanging on a person's wheelchair should always be avoided because such act is generally considered annoying.
6. Always listen carefully as well as attentively when you are having conversation with a person who has difficulty in speaking.
7. To get the attention of a person who is deaf or having hearing impairment, tap the person on the shoulder or wave your hand.
8. Always avoid asking personal questions to an individual who is differently abled.

SECTION C

- 31 What is hypertension? Discuss the benefits and contraindications of Vajrasana and Ardha Chakrasana. 5

Ans: Hypertension means increased blood pressure. In fact, the main function of the heart is to supply pure blood to the various parts of the body through arteries. When the heart contracts, it pushes the blood through blood vessels and consequently the blood pressure increases in arteries. This pressure is known as systolic blood pressure. It is represented by the first number. The pressure between two heartbeats is called diastolic blood pressure. It is represented by the bottom or the second number. A person whose blood pressure readings are beyond 140/90 mmHg is said to be having hypertension.

Vajrasana: Benefits:

1. It is helpful in improving concentration.
2. It is helpful in curing dysentery, back pain, and chest disease.
3. It enhances memory power.
4. It alleviates the problems related to menstruation.
5. It removes mental stress.
6. It strengthens the pelvic muscles.
7. It cures postural defects.
8. It prevents hernia and helps to relieve piles.
9. It is the best asana for people suffering from sciatica and sacral infections.
10. It helps in reducing the hip fat
11. It gives relief from constipation, acidity and increases the efficiency of the

digestive system.

Contraindications:

1. A person suffering from joint pain should not perform Vajrasana
2. The individuals who have any spinal column problem should not perform Vajrasana.
3. The individual who have some difficulty in movement should practice Vajrasana with a lot of care.

Ardha Chakrasana: Benefits:

1. It helps to make ankles, thigh, shoulders, chest, spine and abdomen stronger.
2. It relieves stress and tension
3. It improves digestion
4. It cures menstrual disorders.
5. It cures pain in legs.
6. It reduces fat in the waist and thigh.
7. It helps alleviate upper back pain
8. It relieves stress in the neck and shoulders.

Contraindications:

1. Avoid performing this asana if you have migraine, headache, low blood pressure, diarrhea and insomnia.
2. Avoid doing this asana if you have peptic ulcer and hernia.
3. Avoid this asana in case of hip or spinal problems.
4. Pregnant women should avoid doing this asana.

32 Diet or nutrition for sports persons is important. What should be the aims of preparing diet for sports persons? 5

Ans: Sports nutrition is the study and practice of nutrition and diet as these relate to performance in the field of games and sports. It has a direct relationship with the type and quantity of fluid and food intake by a sports person. In fact it deals with the nutrients such as carbohydrates, proteins, fats, vitamins, minerals, water etc.

Any diet which has all the constituents of food in sufficient amount, necessary for the maintenance and growth of body is essential for all the individuals whether they do simple work or engage in highly competitive sports. A well balanced diet is essential to ensure good performance. A well balanced diet may not guarantee success in sports but it is a given fact that imbalanced diet definitely affects the performance adversely.

Fat: Fat is considered as major source of fuel for light to moderate levels of activity.

Various types of sports require different proportions of fat to muscles to maximize performance

Carbohydrates: Carbohydrates are helpful in increasing the endurance of sports persons. It should not be given to athletes in excessive amount.

Protein: It is necessary for the growth and development of various tissues of the body.

Vitamins: These are essential in the normal diet for good performance in work and sports but there is no clear evidence that extra amount of vitamins improves performance.

Minerals: Deficiency of minerals can decrease the performance especially during the exercise in hot climate. Sweating reduces the amount of sodium and chloride in the body.

Water: The deficiency of water in the body has shown decreased performance. There can be the risk of central nervous system disorders.

or

What do you mean by Healthy weight? Explain the methods to control healthy body weight to lead healthy living.

Ans: According to National Institute of Health “ A healthy weight is considered to be the one that is between 19 and 25(BMI) In simple words , it can also be said that a healthy weight is that which lowers an individuals risk for various health problems such as heart diseases, stroke, high blood pressure , diabetes etc.

1. Set an appropriate goal
2. Lay stress on Health not weight
3. Cut your calories
4. Active lifestyle
5. Bring out support
6. Yogic exercise
7. Avoid fatty foods
8. Avoid junk and fast foods
9. Avoid overeating
10. Don't eat smaller meals frequently
11. Avoid rich carbohydrate food
12. Don't skip meals
13. Regular exercise or physical activity
14. Balancing the intake of calories and expenditure of calories.

- 33 What is the meaning of Tournament? Draw knock-out fixture of 27 teams. 5
- Ans: Competing in physical activities has been the natural tendency of human beings since the beginning of the stone age. With the passage of time some rules came into existence and competitions began to be held in civilized ways.

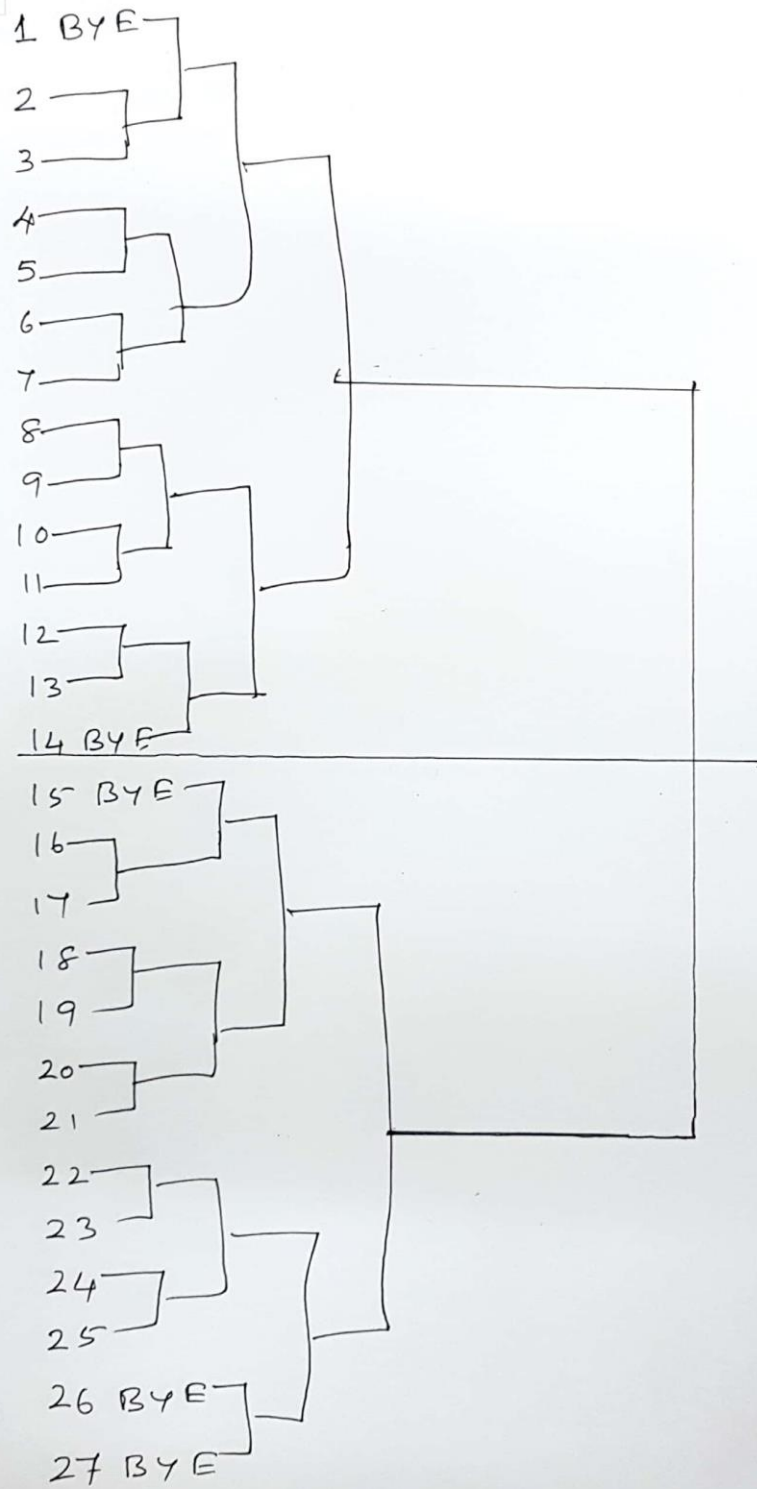
Total no. of teams- 27

No. of byes- 5 ($32-27=5$)

Teams upper half- $N+1/2 = 27+1 = 28/2 = 14$

Teams in lower half - $N-1/2 = 27-1 = 26/2 = 13$

27 teams



34 What do you mean by coping? Discuss in detail about the problem- focused and emotion- focused coping strategies. 5

Ans: Coping refers to the thoughts and actions which we usually use to deal with a threatening situation. In other words coping is expanding conscious efforts to solve personal or interpersonal problems and seeking to minimize or tolerate stress or conflict.

Problem- focused coping strategies: It deals with the root causes and try to improve the stressful environment experienced by the sportspersons. The problem –focused coping strategies include the following methods or techniques.

1. Analyse the stressful situation
2. Talk to your coach or teacher
3. Know your limits
4. Stop worrying about the stressful situation you cannot change.
5. Reset your goal
6. Improve physical fitness
7. Anticipate the problem
8. Build self confidence

Emotion focused coping strategies: These are the strategies that try to reduce the negative emotional responses linked with the stress such as embarrassment, fear, anxiety, depression, excitement and frustration. The following emotion-focused coping strategies are commonly used to manage the stressful situations.

1. Denial or reality
2. Blame
3. Venting emotions
4. Mentally disengaging from stressful situation
5. Praying for guidance and strength
6. Crying
7. Brooding
8. Ignoring the stressful situation
9. Avoidance
10. Substance abuse.

End of the Question Paper