

**CLASS XI**  
**PHYSICAL EDUCATION**

Q1: Define physical education.

Ans: Physical education is that field of education which deals with big muscle activities and their related responses.

Q2: What is the aim of physical education?

Ans: The aim of physical education must be to make every child physically, mentally and emotionally fit and also to develop in him such personal and social qualities as will help him to live happily with others and build him up a good citizen.

Q3: Mention the objective of physical education.

Ans: In fact objectives of physical education can be grouped into four major domain –

1. Physical development
2. Social development
3. Emotional development
4. Development of health

**PHYSICAL DEVELOPMENT**- The objective of physical education is physically development. Physical development deals with physical activities having relation with organ systems like respiratory system, circulatory system, muscular system, cardio-vascular system, digestive system, endocrine system, and nervous system. Physical activities influence the development in size and shape, efficiency and working of these organic systems.

Hence, it can be said that organic development leads to attaining the aim of physical education.

**Social development**- Man is a social animal and he can live better only in a society. Physical education develops social traits, which are essential for a good citizen. Such quantity like co-operation, sympathy, loyalty, sportsmanship, courtesy, fraternity and other qualities of leadership are developed through physical education. It enables him to understand the value of competition and cooperation in games and in life too. A good sportsman is always a good citizen. He knows how to adjust with others.

**Emotional development**- Physical education encourages a person to participate in competitive situation where success and failures and defeat in a balanced manner. It helps in promoting emotional stability within a person and he is able to face all kinds of situations in life in a balanced and stable manner. Aggressiveness can be eliminated

through physical activities. Various physical activities overcome stress, tension, sensitiveness and withdrawing attitudes toward any activity. Physical education controls over nervousness of an individuals.

**Development of health-** It is accepted that physical education promotes health and fitness through practice of physical activities. Healthy and fit person may contribute a lot in development of their country. The body and its parts become mobile, flexible a healthy lifestyle.

Q4. What do you mean by the concept of integrated physical education? Describe its principles.

Ans: today physical education is not just limited to games and sports but has become a complete discipline. Integrated physical education has evolved to meet the competitive needs and demands of modern and futuristic standards in the field of physical education. And thus integrated physical education is considered the need of the hour. In earlier times, it is believed that students learning integrated physical education on their own, would be able to integrate what they had learnt and achieved into a meaningful whole and see the interrelationship among various areas. However, this consideration is considered superannuated and is not appropriate according to the demands of changing society.

Integrated physical education is comprehensive concept. It is not only confined to physical activities, games and sport but has become a complete discipline with the passage of time to meet the demands of the changing time. The knowledge in the field has increased tremendously within last two decades.

They should also have thorough understanding of the sub-disciplines or specialized areas for the integration or interrelatedness of these sub disciplines. The teacher, trainers and coaches can use the multidisciplinary learning and integrated or interrelate this learning with practical applications for best results . This integrated and inter related knowledge will promote fitness, wellness and health of individuals . High quality programmes can be designed and implemented for maximum benefit and best result .

Principles of integrated physical education ----

1. It must give impetus in the field of physical education to face the challenges of present and future
2. It must give motivation and impetus to an individual to have life -long health life - style .
3. It must bring forth development skill, interaction etc.
4. It must maintain and supply a better understanding and awareness of physical education .
5. It must be suitable to the people of all fields and work of life .

Q.5 What do you mean by the concept of adapted physical education . Explain its principles.

ANS- All children have an equal right to enjoy the physical education programmes . the physical education programme designed for individuals with disabilities such as deafness or hearing impairment , mental retardation , orthopaedic impairment visual impairment including blindness, traumatic brain injury , etc . is called adapted physical education . these programmes are adapted or adjusted to meet the need of individuals through modification and accommodations.

Adapted physical education may be defined as a diversified or branch out programmes of development activities, games, sports and rhythms, befitted to the interests, capabilities and limitation of students with disabilities, who may not safely or successfully engaged in unrestricted participation in the general physical education programme .

Principles of adapted physical education ---

1. medical examination – proper medical check –up of the children should be done according to the disability of the student or individual .

2. interest of the student – the programme should be planned and directed based on the interests abilities , capacity and limitations of the students .

3. special equipment – special equipments should be used as per the requirement of the student. It should be according to the level of student.

4. proper environment – the play area should be well defined with proper boundaries and should be limited to smaller areas for the convenience of students with specific needs .

5. change in rules—rules of the sport and game should be changed or modified according to the specific needs of students . for example more number of chances at the skill giving more rest time or interval during the game or sport.

Q.6 Write short notes on the following ?

1. special Olympic bharat

2. career in book writing

3. career in sports photography

4. career in sports industry .

1. special Olympic bharat –

This programme was founded in 1987 as a special olympic india and changed to special Olympic bharat in 2001 . it is a movement that uses sports as a catalyst to change the lives of children and adults with intellectual disabilities or normally retarded person . special Olympic bharat is recognized by the government of india as a national sports federation for the development of sports opportunities for the people with intellectual disabilities .

The originer of special Olympics international was kennedy shriver sister of kennedy the former president of U S A ,Who convinced that children with intellectual disabilities could be exceptional sports persons and through sports they can realise their potential for growth and development .

Career in book writing ---ample career opportunities are available in field of physical education and sports as book writer , especially in india . those physical education , who have sound knowledge of various sub - disciplines of physical education , such as sports biomechanics , sports sociology , sports medicine , exercise physiology , research methodology , sports psychology , sports philosophy , sports pedagogy , sports management and various sports may take book writing as a part career .

Sports photography ----sports photography as a career option is applicable only to those physical education who have a keen interest in photography and a strong desire to communicate to public the true meaning of sports through photographs .

Sports industry --- for a person who has knowledge of physical education and sports careers are also available in sports industries it self . a person who wants a career in sports industry must have deep knowledge of physical education and sports .

Q1 Define physical fitness.

Ans the human body ability to move with the desired speed balance agility and strength gained through proper exercise and nutrition .

Successful adaptation to the stresses of one life style .

Q2. Define wellness.

Ans wellness involves a healthy balance of mind , body and spirit which results in overall feeling of well - being .

The quality of state of being healthy is called wellness .

Q3 Explain the importance of positive life style .

Ans As we know that a healthy lifestyle is very necessary for reducing the impact of problems.A healthy lifestyle is the need of hour. A healthy lifestyle is needed for recovery,for coping with life stressors and for improving quality of life. A number of researches have indicated that lifestyle plays an important role in our health and well-beign.Modern lifestyle which has backing of advancement in every field,discourages manual and muscular activities.the use of muscular activity saving gadgets has increased a number of diseases.Asa matter of fact we are not living in an age of peace,calm and relaxtion and harmony.Bad eating habit,fast pace of life,monotonous work,forced inactivity and disturbance to the nervous system resulting from noise and other atmospheric pollution are stressing the need for changing our lifestyle. A healthy or positive lifestyle is a boon for all of us. It is important for all of us follow these ways:

1. It increase the level of energy
2. It reduces tension and stress
3. It reduces the Risk of heart diseases and Dipression
4. It increases the level of physical fitness and self-confidenss
5. it increases the longevity.

Q.4 Enlist any four components of physical fitness?

Ans. There are various components of physical fitness and each component has its own importance in different games and sports.

1.Flexibility

It is the range of a joint to move maximum or in other words, it is the range of movement of joints.Flexibility varies from joint to joint due to its structure,surrounding,adjoining ligaments,tendons and muscles.flexibilty is related to genetic factors as well as physical – activitiy programmes . Flexibility prevents muscular injuries.maintaining flexibility throughout the life ,specially in back and leg muscles may help to prevent back problems.

2.streanth

It is a major component of physical fitness.it is the ability of the muscles to overcome resistance or in other words,we can define streanth as the amount of force of a muscle or group of muscles can exert.streanth of the body can be measured in pounds or dynes.diffrent games require different levels and types of streanth .streanth can be improved through systemetic training.

### 3.speed

Speed is the ability to move the body as fast as possible ,particularly in running.it is the ability of the sportsman/individual to perform a movement in the same pattern at faster rate.mostly speed depends on heredity factor ,specifically on the type of muscle fibres.muscle fibres are two types-fast twitch and slow twitch .fast twitch fibres are able to contract rapidly and produce maximum force ,whereas slow twitch fibres contract slowly and produce it is one of the important components for sprinting and also required for last response skills in sports . speed is of three types-reaction time ;acceleration and speed of movement .speed can be measured through reflex test ,short sprint etc.

### Endurance-----

endurance is the ability to sustain an activity .we can also define ability to resist fatigue.it is one of the important components for middle and long distance the number of repetitions ,such as the number of sit ups an athlete can complete in one minute is often used to measure the endurance of the abdominal muscles.

Q.no. 5- how can health threat be prevented through life style change ?discuss in detail.

ANS.-not only india but the whole world is facing a number of health threats .cancer,heart-attack diabetes,hypertension,obesity,arthritis,depression,kidney failure etc.are major health threats for all of us.change in our life style can help preventing such threats or disorders .adopting healthy life style is not an easy task but we have to adopt and maintain healthy life style ,if we want to survive or be ready to die premature death.it has already been mentioned the components of a life style as :

1.proper and balanced diet

2.regular physical exercise

3.proper rest and sleep

4.No use of drugs and alcohol

5.limit of T.V watching

6.no use of smoking

7.change in our physical environment.

1.proper and balanced diet-proper and balanced diet plays an important role in our lives .improper and imbalanced diet can result in the following ailments:

1)weight loss

2)obesity

3) organ malfunction

4. loss of tone in muscles

2 regular physical exercise – it is usually seen that most of the people try to avoid physical activities in their daily life . they prefer lift or elevator instead of staircase . even for a walking distance , they prefer scooter or motorbike .

Sufficient exercises give the following benefits –

1 healthy growth and development

2 improve general well – being

3 strengthen muscles bones and joints

4 prevent obesity

5 reduce cholesterol and heart – diseases

3.proper rest and sleep-proper rest and sleep is also a very significant part of our healthy survival .inadequate or insufficient sleep disturbs our daily routine and the person who has not sufficient sleep ,becomes irritable .therefore sound sleep is necessary for keeping an individual away from fatigue and exertion.

4. no use of drugs and alcohol –use of harmful drugs and alcohol has very negative and serious effects on health of the users .harmful drugs taken without a doctor’s prescription ,lead to may ailments such as loss of sleep ,loss of appetite ,liver damage , pain in muscles and damage to vital internal organs.

5.limit of T.V watching – watching T.V for a number of hours is not good for health . many eyesight complications and problems are consequence of excessive use of TV watching ,computers ,i-pads etc . such electronic gadgets must be use as necessity and not as addiction .decrease in T.V watching significantly reduces obesity and body weight

6.no use of smoking –smoking in any form or use of tobacco causes oral cancer up to some extent .so smoking in any form must be quit as early as possible .it is pathetic to say that some young men smoke cigarettes as a modern lifestyle and fashion without considering its consequences.

7.change in our physical environment – to use of artificial instruments such as air conditioner ,heating devices etc. is an attempt to change our physical environment .due to these changes , we are moving away from our natural surroundings and preferring to live behind closed doors . such artificial lifestyle is a threat for our healthy lives . but it is impossible to live without such electronic gadgets .there is need to minimize such change to avoid many health complication.

Q.1-Write short notes on the following:

- I. Olympic Flame
- II. Olympic Flag
- III. Olympic Moto
- IV. Olympic Awards
- V. Olympic Oath

Ans – i) **Olympic Flame:** The Olympic flame or Olympic torch marks the opening ceremony of the Olympic games. The Olympic torch is a symbol of the peace between the continents. All competing nations march in alphabetical order except Greece which marches first, bring the founder nation of the games. The Olympic flag is hoisted with the sound of fanfare and guns. The torch is lighted and after being lit, the flame continues to burn throughout the Olympics, and is extinguished on the day of the closing ceremony.

ii) **Olympic Flag:** The Olympic flag, made of white silk, represents the Olympic symbol, consisting of Olympic rings, which represents the unity of the five inhabited continents – North and south America, Europe, Australia, Asia and Africa. The coloured interlocked rings of blue, yellow, black, green, and red colour symbolize the union of five continents. Olympic flag was created in 1913 at the suggestion of Baron de Coubertin. It was first solemnly inaugurated in Paris in June 1914. But it was hoisted first time in the Olympic stadium at the Antwerp Olympic Games which were held in 1920.

iii) **Olympic Moto:** The Olympic motto consists of 3 latin words Citius, Altius, fortius, meaning “Faster, Higher, Stronger”. The words inspire the human spirit to move faster, higher and become stronger through sports. The motto was coined by a French educator Father Didon in 1895.

iv) **Olympic Awards:** The first, second and third position holders are awarded with gold, silver and bronze medals and a certificate respectively. The next five position holders are awarded with gold, silver and bronze medals and a certificate respectively. The next five position holders are awarded with certificates only.

v) **Olympic Oath:** The Olympic Oath is an important ceremony during opening of the games. A representative athlete of the host country, holds a corner of the Olympic flag while reciting the oath:

*“In the name of all the competitors I promise that we shall take part in these Olympic Games, respecting and abiding by the rules which govern them, Committing ourselves to a sport and without doping and without drugs, in the true Spirit of sportsmanship, for the glory of sport and the honour of our teams.”*

**The judge takes a slightly different oath:**

*“In the name of all judges and officials, I promise that we shall officiate in These Olympic games with complete impartiality, respecting and abiding by*

*The rules which govern them in the true spirit of sportsmanship.”*

Q.2 – Discuss the opening ceremony of Ancient Olympic Games.

Ans – The opening ceremony of games began with an oath taking ceremony with all the participants, their brothers, fathers, trainers etc. On the first day opening ceremony and religious rites were performed. On the second day march past, introduction of participants, chariot races, horse races and pentathlon were held. On the third day the animals were sacrificed followed by race competitions, wrestling and boxing contests. Fourth day, boxing, wrestling and athletic events were held. Fifth day, recreational programmes and awards ceremonies were held and the Games were closed. With the passage of time the number of games kept on changing, such as 400 yard walking was included in 724 B.C. Three miles race was included in 720 B.C, pentathlon in 708 B.C., boxing in 688 B.C. and horse – race was included in 648 B.C.

Q.3 – Write short notes on CBSE Sports Award and Chacha Nehru Sports Award.

Ans – CBSE Sports Award

The CBSE Sports Awards is given to the winning school. The awards are given for overall performance in all the disciplines.

- First Prize : Rs .Five Lac
- Second Prize : Rs. Three Lac
- Third Prize : Rs. One Lac

Chacha Nehru Sports Award

The Central Board of Secondary Education (CBSE) has started Chacha Nehru Sports Awards which is given in the form of scholarships for sports talents. The salient features of the award are as follows:

1. **Objective** – The aim is to identify, recognize, nurture and develop the extraordinary talent among the students studying in class VIII onwards in sports and games. This will help in the development of sports activities at the school level and support the importance of mental and physical health among the children. The financial support in the form of scholarship will motivate the students to excel in their sports activities.
2. **Number and value of each Awards** – There are 50 scholarships each year of Rs. 500/- per month to all indentified sports talents in class IX-XII based on the performance at national level in various disciplines of CBSE Inter School Sports and Games. Currently, there are 14 disciplines and number of scholarship available in each discipline.
3. **Duration** – The scholarship shall be awarded from the commencement of class IX (or higher class) and up to class XII (max. four years) subject to fulfillment of following conditions.
  - Visible level of improvement in performance in the skills of the concerned discipline.
  - Passing of each level of class examination

- A candidate selected for the award in class VIII but has not qualified for admission to class IX shall not be eligible for the award.
  - A candidate who has been discontinued from the rolls of an institution or has been rusticated shall forfeit the award.
  - The awards are generally not transferable.
  - Inability of the student to pursue the discipline due to health or medical reasons shall lead to discontinuation of the award.
  - A candidate who has failed in class IX (or any other class) shall not be eligible for the award for a second running year in the same. The candidate can seek renewal of scholarship subsequent to passing such class and producing documentary evidence.
  - However, if under age category 16 some students are selected, the scholarship in such case shall be till the completion of class XII studies.
4. **Eligibility** – The students must be Indian Nationals studying in schools located in India and should not be in receipt of any other scholarship for the same or similar purpose from any other agency (Govt. or non-govt). The student must be participant of the CBSE Inter school sports and Games competition, 2005 onwards at the national level.
  5. **Selection of the scholar** – The students shall be identified at the CBSE Inter school Sports and Games Competition on the basis of their overall performance and score at the national level. In respect of team games, a core committee of minimum three members shall identify the scholar. All the scholarship shall be identified by February 28 of the preceding academic year of the award.

Q.4 – Write about Paralympic games in detail.

Ans – The originator for paralympic game is Sir luding Guttmann. He started paralympic movement that finally developed into paralympic games. Now the paralympic games are the world’s largest sporting event for the people with physical, visual and intellectual disabilities .

In 1948 Sir luding Guttmann organized a sports competition for British world war II veterans patients with spinal with spinal cord injuries.

These games were known as the stoke Mandeville games .in fact these games were a great success and boosted the movements momentum. By 1960 the games had become very popular and in the same year these games were held in Rome after the Rome Olympics. In 1976, paralympic Games events for amputees and visually impaired athletes were organized for the first time. After four years the events for the athletes with cerebral palsy were included in 1980 Paralympic games. In spite of these improvements, the paralympic games were still not considered equal or parallel to the Olympic games.

### **International Paralympic Games**

The vision of this committee is to enable paralympic athletes to achieve sporting excellence and inspire and excite the world. International Paralympic Committee was established on September 22, 1989. Its main aim is to develop sports opportunities for all the people with an impairment from the beginner to the elite level.

The international Paralympic committee is a global governing body of the paralympic movement which organizes the summer and winter paralympic games.

### **Paralympic Games**

Paralympic games are held at an interval of every four years following the Olympic games. These games are a major international multi-sport event for the athletes with various disabilities, amputations, blindness and cerebral palsy. These games are governed by the international Paralympic committee. The first paralympic games (Summer Games) were held in Rome in 1960. The first winter Paralympic Games were held in 1976 in Sweden. These games are also held after every four years.

### **Opening Ceremony of the Games**

At the opening ceremony, first of all the host country's flag is hoisted and national anthem of host country is sung. After that athletes come for march past into the stadium grouped by nations. All the participating nations enter the stadium alphabetically according to the host country's chosen language. At last, performing the formal opening of the games, paralympic torch is brought into the stadium and passed on until it reaches to the final torch bearer who finally lights the paralympic flame.

### **Closing Ceremony of the games**

In closing ceremony flag bearers from each participating nation enter in the stadium followed by the athletes who enter in the stadium, followed by the athletes who enter together without any national distinction. The paralympic flag is taken down and the games are officially closed.

### **Categories of Disability**

International Paralympic Committee (IPC) has established ten disability categories which include physical, visual and intellectual impairment. Athletes with one of these disabilities can participate in the Paralympic Games. Physical disability (impairment) includes impaired muscle power, impaired passive range of movement, loss of limb, leg length difference and short stature etc. visual impairment includes impairment of one or more components of visual system. Intellectual impairment includes the significant impairment of intellectual functioning.

Q.5 – Write short notes on Rajiv Gandhi Khel Ratna Award.

Ans – The Rajiv Gandhi Khel Ratna (RGKR) is India's highest honour given for achievements in sports. The award was instituted in the year 1991-92 and is conferred for outstanding performance in sports by an individual or a team across all sporting disciplines in given year (April 1 to March 31). The words 'khel Ratna' means Sports gem in English. The award is named after the former Prime Minister of India, Late Rajiv Gandhi, former Prime Minister of India. The awardees receive their awards from the president of India at a specially organized function at the Rashtrapati Bhawan.

The objectives of the award can be briefed as follows:

1. To honour the sportsperson to enhance their general status in society and also to give them greater dignity and a place of honour in society.
2. To motivate the sportspersons to give their highest performance in sports events.
3. To intensify the spread of sports culture throughout the country.

The proposal for the Award should be submitted every year by the 31<sup>st</sup> of May, for the preceding year ending on 31<sup>st</sup> March. In case the application is received after 31<sup>st</sup> May, it will not be considered for that year and will not be carried forward to the next year. Proposals may be sent to the Ministry by members of Parliament, state government, sports authority of India or national sports federations. The award may be cancelled in case it is found that it has been obtained by malpractice or fraud or misrepresentation. In such a case, the cash and other honours given as part of the Award, however, shall not be taken back, nor the awardees or legal heirs be compelled to refund the same.

The withdrawal or cancellation of the award cannot be disputed in any court of law and the decision of the ministry is final in this matter.

### **Award**

#### **The Rajiv Gandhi Khel Ratna Award consists of the following:**

1. A scroll of honour
2. A plaque
3. A cash component of Rupees seven Lakhs Fifty thousand. This cash amount is also exempted from income tax or wealth tax during the year it is disbursed. In case, the award is given for a team game or sport, each team member shall receive an amount of three lakhs seventy five thousand.

Apart from the above, the awardee or awardees are also given a blazer, a tie/scarf and the reimbursement of TA/DA as decided by the government.

Q.6 – Write briefly about IOC.

Ans – The supreme authority of the Olympic Movement is the IOC, created by the Paris Congress on 23<sup>rd</sup> June 1884. It is the decision making body of Olympic movement. The IOC's role is to lead the promotion of olympism in accordance with the Olympic charter. The IOC encourages the development of sport on all levels and cooperates with competent organizations and authorities. It encourages the promotion of sport ethics and Olympic Ideals and takes measures to protect athletes and the unity of the Olympic movement. The IOC ensures that the Olympic games, the sport and cultural festivals of the Olympic movement are held regularly, with regard to the Olympic principles and the environment and in accordance with the Olympic charter.

At least once a year, the members meet at the general assembly called the Sessions. It is on the occasion of the sessions that important IOC decisions are taken on matters such as the election of future Olympic games host cities, the composition of the sports programme for the Games and the recruitment of new IOC members.

Q.1 – What is meant by Yoga? Write a note on the importance of yoga.

Ans – The term 'Yoga' is derived from a Sanskrit word 'Yuj' which means yoke or union. Those who practice yoga have been called yogi and yogini.

For better and clear understanding of the term we can study the various ways which describe Yoga:

1. In its most general sense, yoga involves harnessing or integrating the forces of embodiment (mind, body and spirit) in order to transcend embodiment.
2. Traditionally, yoga is a method joining the individual self with the divine or universal spirit. Physical and mental exercises are designed to help achieve this goal, also called self-transcendence or enlightenment.
3. Yoga is a general term for spiritual disciplines in Hinduism, Buddhism and throughout S. Asia that are directed toward attaining higher consciousness and liberation from ignorance, suffering and rebirth.
4. Yoga is an effort to obtain inner peace and happiness. It may be described as a method by which a restless mind is calmed and energies directed into constructive channels.

### **Importance of Yoga**

Yoga is a highly developed science associated with a healthy and lively lifestyle with a balanced approach to life. The goal of yoga is attainment of physical and mental well-being. In order to accomplish it, yoga makes use of different movements, breathing exercises, relaxation technique and meditation. Yoga is not a religion, but a way of living with health and peace of mind. Mind/body awareness can influence mood and self-esteem to improve quality of life. Yoga is the perfect way to ensure overall health and physical fitness. Some benefits of yoga have been listed below:

1. **Physical purity and cleanliness of Organs:** it massages all the internal organs and glands. The in turn reduces the risk of many diseases. Basically there are three types of substances inhuman body – pitta, vata and kapha. Various kriyas like jal neti, kapal bhaati, tratak, etc, help to clean internal organs. Yogic exercises improve bowel movement and relieve constipation.
2. **Cures and prevents from diseases:** Yoga is one of the best remedies known to humankind for curing chronic ailments that are otherwise difficult to be cured by other medications. Yoga has been used to alleviate problems associated with high blood pressure, high cholesterol, migraine headaches, shallow breathing, constipation, menopause, multiple sclerosis, varicose veins and many chronic illnesses.
3. **Reduces Mental tensions, fatigue and stress inducing relaxation:** Yoga offers techniques as proven therapies for illness and stress. Yogic exercises and deep breathing can reduce stress, thereby lowering blood pressure and inducing

relaxation. Yoga brings stability to the wavering mind and reduces physical and mental fatigue.

- 4. Increases Concentration and self-control-** The basic concept of yoga trains the body and mind to work towards a single goal with concentration. Various asanas like padmasana and Dhanurasana help in improving concentration power.

Q.2 – Write a note on yoga as the Indian heritage.

Ans – As per Hindu mythology, lord Shiva is considered as the founder of yoga. He narrated this science of health to his wife Parvati and later passed on to sages for the upliftment of human beings. For a clearer understanding of yoga as an Indian heritage one should go through related periods of history:

- 1. Pre-vedic Period (6000-3000 BC)** – Indus valley civilization reveal that forms of yoga were practiced in those times. Several seals discovered at Indus Valley civilization (3300-1700 BC) sites depict figures in a yoga – or meditation-like posture, archaeologist points to 16 specific “yogi glyptic” in the corpus of mature Harappan artifacts as pointing to Harappan devotion to ritual discipline and concentration.
- 2. Vedic Period (2000-1500 BC)** –The study of Vedas reveals that there were some partially developed concepts of yoga in this period. Vedas do not directly mention the word ‘yogis’ or ‘yoga’. In rigveda the usage of word ‘Yunjate’ suggests an idea of yoga for sense control.
- 3. Upanishadic Period (800- 200 BC)-** In the Upanishads, an early reference to meditation is made in Brihadaranyaka Upanishad. The main textual sources for the evolving concept of Yoga are the middle Upanishads, the Mahabharata including Bhagwat gita and the yoga sutras of Patanjali. Explicit examples of the concept and terminology of yoga appear in the upnishads.
- 4. Epic Period** – Epics – Ramayana and Mahabharata, are the important source of information about the yogic practice in that era. Sage Vishwamitra taught Sh. Ram and Lakshmana the art of yoga and pranayama. Lord Krishna narrated yoga to his disciple Arjuna in the battlefield. The term ‘yoga’ has been used in Bhagwat GIta in a variety of senses – Karma yoga (the yoga of action), Bhakti yoga (the yoga of devotion and jana yoga (the yoga of knowledge).
- 5. Sutra Period** – Patanjali, a sage, is widely regarded as the founder of the formal yoga philosophy. He gave us the present literary form of yoga in ‘Yogasutra’ in approximately 147 BC. It is divided into four books and patanjali’s yoga is known as Raja Yoga, which is a system for control of the mind.
- 6. Smriti Period** – Smrities were written till about 1000 AD. The literature of this period shows changes in beliefs, ideas, worship, rituals and customs. In most of the rituals pranayama and other purification techniques showed a significant presence.
- 7. Medieval Period** – In this period two cults were famous – Natha cult and bhakti cult. Hatha yoga finds its evolution and fame in Natha cult. Hatha yoga is a particular system of yoga. Hatha yoga differs substantially from the Raja Yoga of Patanjali in that it focuses on shatkarma, the purification of the physical body as leading to the purification of the mind (ha) and prana or vital energy (tha).

8. **Modern Period** – Yoga has taken up a new shape in the twentieth century which is contrary to its history of life-long devotion. The yoga practiced in modern times implements the techniques to strengthen mind and body. It is practiced to keep mind and body healthy. Yoga is now spreading all over the world.

Q.3 – Write a note on prevention and management of diabetes.

Ans – Prevention and Management of Diabetes

1. **Get more physical activity:** Exercise can help one lose weight, lower the blood sugar levels and boost and individual sensitivity to insulin – which helps in keeping the blood sugar within a normal range.
2. **Lose extra weight or maintain a healthy weight:** If one is overweight, diabetes prevention will require extra weight to be shed. Every kilo lost can improve the health of the person suffering from diabetes. To maintain a healthy weight it is advisable to strike a balance between the intake and expenditure of calories. Regular indulgence in physical exercise can improve the production of insulin and maintain appropriate sugar levels in the blood.
3. **Get plenty of fiber:** Fibers are known to help risk reduce the risk of diabetes by improving blood sugar control, lowering risk of heart disease, promoting weight loss. Foods high in fiber include fruits, vegetables, beans, whole grains, nuts and seeds.
4. **Go for whole grains** – Whole grains may reduce the risk of diabetes and help maintain blood sugar levels. Many foods made from whole grains come ready to eat, including various breads, pasta products and many cereals.
5. **Reduce intake of saturated fat:** People with diabetes are at high for heart disease. Limiting saturated fat can help lower risk of having a heart attack or stroke. The reason for this is intake of saturated fat that raises blood cholesterol levels which is risk factor for heart disease.
6. **Avoid carbohydrate – rich foods and skip fad diets and just make healthier choices:** Low-carb diets, the glycemic index diet or other fad diets may help one to lose weight at first, but their effectiveness at preventing diabetes isn't known nor are their long-term effects. And by excluding or strictly limiting a particular food group, you may be giving up essential nutrients. Instead, think variety and portion control as part of an overall healthy-eating plan.
7. **Eat small portion of meals:** It is important to and most effective to eat six small meals per day for an individual suffering from diabetes. Eating every three hours with a balanced, small meal contributes steady carbohydrates and proteins to the body, breaking them down at a more steady rate as compared to than if larger amounts are eaten only three times per day. If a patient is on insulin injections, it will be helpful to space his/her meals every two hours to avoid the risk of insulin-induced lows.
8. **Get enough sleep:** Too little sleep can raise the risk of diabetes. If one is already suffering from diabetes, sleep loss or deprived sleep can undermine blood sugar control. Some experts also believe that chronic sleep deprivation may lead to elevated levels of the stress hormone, cortisol. Elevated cortisol may in turn

promote insulin resistance, in which the body can't use the hormone insulin properly to help move glucose into cells for energy.

Q.4 – Write short notes on the following:

1. Neti
2. Dhauti
3. Nauli
4. Kapalabhati
5. Basti

Ans – **Neti** – The process of cleaning the nasal passage with salt water is called as jala neti. The specially designed pot is used for this purpose called neti pot. This kriya is best for preventing cold and problem of sinusitis, migraine, depression and tension, to maintain and to increase the efficiency of nasal passages.

**Dhauti** – It is the yogic kriya to cleanse the digestive tract. Dhauti is known to help prevent constipation, gastritis and dyspepsia. This kriya is also helpful in improving the kidney functioning.

**Nauli** – It is the yogic cleaning process which will rejuvenate the whole digestive system. It improves the function of the whole digestive system, helpful in overcoming problem of constipation; increases the efficiency of pancreas and hence best practice to prevent and overcome diabetes.

**Kaphalabhati** – means cranium; 'bhati' means shining. This is a kriya or cleansing process which cleanses the impurities of the Kaphala region and makes it shine with purity, so it called as Kaphalabhati. It relaxes the facial muscles and nerves, according to classical text on yoga it also slows down the aging process, helps cure respiratory disorders like asthma, bronchitis increases the lungs capacity and makes the lungs strong.

**Basti** – This is the yogic kriya that helps clean the colon. It is known to help cure urinary and digestive disorders.

Q.5 – Describe the elements of yoga in detail.

Ans – All forms of yoga lay emphasis on development of mental, moral, spiritual and physical well-being of man, in order to enable him to seek union with God.

1. **Karma Yoga** – Karma yoga is the science of karma or selfless action. Karma yoga teaches the student that all actions have inescapable consequences, some producing immediate results, others delayed results and some bearing fruit in future lives. Karma yoga calls for union with God through right action and service for service sake, without regard for accomplishment of glory or attribution.
2. **Gyana Yoga** – Gyana yoga is the path of knowledge, science and wisdom. It is the way of transcendent knowledge and is geared for those prone to intellectual curiosity, reason and analysis.
3. **Dhyana/Mantra Yoga** – Mantra yoga is the path of sacred sound. It is the science of sound vibration, prayer and hermetic utterance. According to hindu mystical belief, the world evolved from the essence of sound, through the diversity and intricacy of

vibration and utterance. One of the most sacred mantras is the three-syllable OM or Aum, origin of the universe.

4. **Bhakti Yoga** – Bhakti yoga is the path of love and devotion. An individual with an emotional temperament can transform those emotions, to be absorbed in spiritual service instead of being attached to physical or sensory gratification. Love can be centered on a familiar form of God, a great saint or some great task in life.
5. **Hatha Yoga (Physical discipline)** – Hatha yoga is known as the path of inner power. It is the science of physical exercises most familiar to common people. In Hatha yoga the mind, body and spirit are linked and purification of the body is intended to enhance mental and spiritual development, balance and harmony. Good physical health, however, is an essential prerequisite to the strenuous disciplines of this yoga system.
6. **Raja Yoga (Mastery of the self)** – Raja yoga is the path of stillness, whose goal is to quiet the mind through meditation to create a state of focused, unbroken concentration. It is also known as the path of spiritual science, particularly suitable for those of a more abstract or metaphysical temperament. This path combines religious study with refinement of all levels of the individual, culminating in transcendental awareness.

Q.6 – What is meditation?

Ans- According to Patanjali, “the concentration of chitta (mind) on an impulse (vritti) without any divergence is called Dhayana. According to Patanjali, the founder of yoga philosophy, the final stage of meditation in dhyana is considered to be jhana. At this stage of meditation, one does not see it as a meditational practice, but instead merges with the idea and thought. This stage is called the Dhyanaavastha.

According to Hindu Yog Sutra, written by Patanjali Dhyana (Meditation) is one of the eight limbs of Yoga. Five are external: yama, niyama, asana, pranayama, pratyahara. The last three are internal: dharana, dhyana and Samadhi.

- Dharana = concentration or contemplation – A state for which effort is required
- Dhyana = absorption or meditation – A state that is effortless
- Samadhi = enlightenment, Self realization or Bliss – The prime state which is unintentional.

In the quest to reach the Samadhi, all the external limbs prepare the physical body, purify and energize the body and begin the process of controlling and quieting the mind. The three internal limbs turn the flow of the mind inwards. In the process of concentration, the mind becomes even more quiet and still. All wandering thoughts are drawn together into one direction. There is an unbroken flow of thought from subject to object. In dhyana, the mind engages with the object in an unbroken flow and the sense of self and of time passing fades the chitta vrittis of the mind are stilled. At this stage an experience of profound peace and stillness is inevitable. Samadhi can be a moment, a period of time or a semi-permanent state. But one can't be in Samadhi and be an individual. Once an individual has reached Samadhi it is possible to return to the body and to normal life in a different way-no longer one is caught in the karmic cycle. One can stand back from the play of life and can act and

love without attachment. The practice of all 3 dharana, dhyana and samadhiis called samyama and this is what leads to vibhuttis or siddhis – special powers or understanding.

Q.1 – What is meant by doping? Elaborate on the history of doping.

Ans – The word ‘Doping’ is mostly used in the field of sports, with reference to use of prohibited substances or methods by athletes to enhance their athletic performance standards. In other words, doping in sport is the deliberate or inadvertent use by an athlete of a substance or method to gain an advantage over their competitors.

***To understand the word ‘Doping’ better the following definitions may help:***

- Doping in sport is defined as “the administration to or use by a healthy individual ... of any agent or substance not normally present in the body... and/or of any physiological agent or substance ... when introduced in abnormal additional quantities and/or by an abnormal route and/or in an abnormal manner, ... with the purpose and effect of increasing artificially and in an unfair manner the performance of that individual during the period of competition” (First definition of doping adopted in 1963 by the Council of Europe Committee for out-of-school education)
- According to International Olympic Committee, “doping is the use of any method or substance that might harm the athlete, in quest to gain an unfair advantage, over his/her fellow competitors.”
- According to **World Anti Doping Agency (WADA)**, “Doping is defined as the occurrence of one or more of the anti-doping rule violations set forth in Article 2.1 through Article 2.8 of the code. The following are the rules breach of which are considered as doping:

1. Presence of a prohibited substance or method
2. Use or attempt to use a prohibited substance or method
3. Refusing to submit sample collection after being notified
4. Failure to file athlete's whereabouts after being notified
5. Tampering with any part of the doping control process
6. Possession of a prohibited substance or method
7. Trafficking a prohibited substance or method
8. Administering or attempting to administer a prohibited substance or method to an athlete

Q.2 – What is meant by the prohibited substances and prohibited methods? Explain with examples.

Ans – The prohibited substances list is a list of all drugs, supplements and other substances and methods which are banned by WADA from use in sports.

Prohibited substances and prohibited methods are prohibited as doping at all times (both In-competition and Out-of-competition) because of their potential to enhance performance or their masking potential.

**In-Competition-** Unless provided otherwise in the rules of an International federation or other relevant Anti-doping Organisation, “In-competition” means the period commencing twelve hours before a competition in which the athlete is scheduled to participate through the end of such competition and the sample collection process related to such competition.

**Out-of-Competition-** Any Doping Control which is not In-Competition.

WADA (World Anti-Doping Agency) is responsible for maintaining and updating this list. The list of prohibited substances is updated annually to keep up with advances in science and technology, with a new list being issued on the 1<sup>st</sup> of January.

### **Substance Prohibited at All times or In-and-out-of-competition**

Currently the prohibited list contains 5 classes of substances and 3 methods of doping which are banned at all times and a further 4 substances banned during competition. Following are the list of prohibited substances prohibited at all times:

1. **Non-Approved Substances:** Any pharmacological substance which is not addressed by any of the subsequent sections of the list and with no current approval by any governmental regulatory health authority for human therapeutic use (e.g., drugs under pre-clinical or clinical development of discontinued, designer drugs, substance approved only for veterinary use) is prohibited from use.
2. **Anabolic agents-anabolic androgenic steroids (AAS)**
3. **Peptide Hormones, Growth Factors and related Substances**
4. **Beta 2 Agonists**
5. **Hormone and Metabolic Modulators**
6. **Diuretics and other Masking Agents**

Q.3 – Explain Testing in-competition and Out-of-competition.

Ans – Use of unfair means or practice to better sporting performance has been going on since the invention of sport. The authorities are constantly trying to stay one step ahead of the cheats. For this WADA was set-up; the organizations has done extensive work over the last few years to come up with the current framework of anti-doping rules and regulations. The prohibited list of substances and methods is updated every year by WADA; which is the list of prohibited substances and methods banned as they may be used by athletes to improve their performance by artificial means. Drug testing has become an increasingly large part of both professional and amateur sports. An athlete can be called for drug testing at any time, in or out-of-competition. The following tests are used to detect the presence of prohibited or banned substance:

1. Urine Testing: If a positive result is found with sample A, the athlete is notified before sample B, both samples are of the same unit kept with both agency and the athlete, is also tested. The athlete or his/her representative is entitled to be present at the unsealing and testing of the second sample. If this too is positive, the relevant sporting organizations are notified whose responsibility it is to decide what penalties or bans are to be imposed on the athlete tested positive on doping test.
2. Blood Test: The same procedure applies as in Urine testing.
- 3.

#### In-Competition Testing

In-competition testing, refers to the period of twelve hours before the commencement of the competition in which an athlete is scheduled to participate through the end of such competition and the sample collection related to this period of participation. In – competition is conducted on an athlete for a particular competition or sports event such as the Olympic games.

#### Out-of-Competition testing

Out-of-competition testing is any such testing of an athlete not in competition or in any way associated with the athlete's immediate participation in an event or match. Random testing is organized on the basis that the athlete provides sufficient data that he or she might be reached at any time. when the athlete is subject to advance notice of a test , he or she will be directed to attend a designated doping control station at a fixed time and date . in most national governing bodies , a deemed failure of a doping test will generate a two- year suspension , repeat offenders will often face a lifetime ban from the sports .

Q4 MENTION THE TYPES OF DOPING .

ANS . DOPING CAN BE SPLIT UP in to the following two types-

1. performance enhancing drugs
2. physical methods

Q5 What are safe ergogenic aids ?

Safe ergogenic aids -----

1. stress management – Excessive stress of competitive sports can affect sports persons both physically and mentally and as a result their performances are declined. stress management techniques are recognised ergogenic aids that enhance concentration and confidence. various relaxation techniques of stress management promote rest and recovery and maintain positive physical and mental states.

2. proper Nutrition – proper nutrition means opting good food choice that has to maintain good health, usually the daily calorie requirement for woman is 1940 calories and for men it is 2550 calories, so by increasing the calorie intake on proper nutrition basis, high performance can be achieved.

3. carbohydrate loading --- several days before competition if carbohydrate is taken adequately, there will be an increase in glycogen level in the muscles. most probably the endurance athletes rely on their stores of glycogen as a source of energy during training or competition. carbohydrate loading enhances the amount of glycogen in the body before competitions.

Q.6 write a short notes of the following.

1. blood doping 2. Gene doping

1 blood doping --- blood doping is the practice of boosting the number of red blood cells in the blood stream in order to enhance performance. because such blood cells carry oxygen from the lungs to the muscles a higher concentration in the blood can improve an athlete's aerobic capacity and endurance. Many methods of blood doping are illegal, particularly in professional sports.

2. Gene doping --- gene doping is defined by the world anti-doping agency as the non therapeutic use of cells, genes, genetic elements, or of the modulation of gene expression, having the capacity to improve athletic performance.

Q1 Define sports environment. Explain the need of sports environment.

Ans- Sports environment is the conditions and circumstances in which a sports person performs or indulges in sports activities.

Type of sports Environment –

1 – physical environment – it is also known as abiotic environment or natural environment. Abiotic or physical environment includes non-living things like land, water, air, atmosphere, stadiums, playground, courts, gyms etc. so, we can say that physical or abiotic environment is the environment which includes non-living or physical things, which affect the living thing. the physical or abiotic environment also includes climatic factors such as sunbeams, rainwater, precipitation, moisture, pressure and wind speed.

2. social or cultural environment –

This type of environment involves the culture and life style of human being the social or cultural environment means the environment which is created by the man through his different social and cultural activities and thinking. the historical, cultural, political, moral and ethical codes during sports and games, philosophy, economic aspects of human life etc.

Constitute the social or cultural environment.

**NEED OF SPORTS ENVIRONMENT** ---- Sports and games cannot ameliorate and flourish in the absence of appropriate sports environment. It is usually said, the environment plays a vital role in the growth and development of a plant. If the environment is appropriate, the plant grows well. On the other hand, if the environment is not proper its growth and development get hindered, and it does not flourish, in the same way, a sports person cannot flourish without proper sports environment.

1. **Develops Sportsmanship:** The proper sports environment creates sportsmanship among the athletes. It will develop a sportsmanship/conduct code that includes positive expectations, and describes unacceptable behavior (for example, coaches, and officials; use of vulgar language and intoxication).
2. **Safe playing environment:** The proper sports environment, well-maintained grounds and proper first aid application. Proper sports environment implements procedures for inspecting playing facilities for safety hazards every sports activity.
3. **Equal Play Opportunity:** proper sports environment also provides a non-discrimination policy that ensures participation for all children, regardless of race, creed, sex economic status or ability. It encourages programmes that allow boys and girls to participate together, whenever possible.
4. **Influence on Community:** In some communities popularity and love of sports helps in promoting programmes of physical education and games. These communities always encourage and motivate their children to play. It is also seen that sporting tradition, for example, the love of Football in Bengal has made football a traditional game of West Bengal. Football runs in their blood (genes). The availability of experienced and trained sportsmen in a community often help in making more sportsmen.
5. **Sports Environment in Schools and Institutions:** Proper environment for programmes of games and sports is of utmost importance in schools and colleges for promoting sports and games. The interest of children will definitely improve if these programmes of physical education and sports are properly organized in schools and colleges. It has been observed that if children are taught various skills and techniques of sports in their early formative years through proper programmes of physical education it helps. It becomes difficult to learn these skills at later years if not taught in early years of life.

Q.2 – What are the essential elements of positive sports environment? Explain in detail.

Ans – A healthy environment is essential for the promotion of games and sports and other physical education activities. The essential elements of a healthy sports environment are discussed below:

1. For a positive sports environment, the basic requirement is of having open spaces and grounds/court for conducting a wide variety of games, sports and other physical education activities.
2. The playgrounds and courts etc., should be in neighborhood, so that they may be utilized properly.
3. The playgrounds, court or track etc. should be well laid, leveled and pleasing to eyes to encourage their use.
4. Swimming pool, if provided, should be neat and clean. They should have lockers, showers and the services of a lifeguard.
5. The play area should be properly fenced to protect players from undesirable interaction. The playing area should have proper equipment.
6. All schools and colleges should have ample opportunities for conducting various programs of physical education.
7. School and college authorities should provide all necessary facilities, help and incentives for participation in games and sports activities.

Q.3 – What are the components of health related-fitness? Explain in detail.

Ans – Health related fitness components are as follows:

1. **Flexibility:** Flexibility is the range of movement possible at a joint or more simple the degree to which one can move one's limbs with grace and efficiency. Flexibility is important in performing exercise efficiently, enjoyable and safely. Without adequate flexibility, one may not be able to stretch sufficiently; one might overstress a muscle or ligament, and might even feel uncomfortable moving. Flexibility is probably the component of physical fitness that is most overlooked, yet the consequences of ignoring flexibility can be discomfort, injury and poor health.
2. **Body Composition:** Body composition is the percentage of body we get which is fat, muscle or bone. It helps sportsperson depending on the type of sport one plays, e.g. heavy rugby players are more effective in the light weight players, but light long distance runners will always beat heavy weights.
3. **Speed:** Speed is the differential rate at which an individual is able to perform a movement or cover a distance in a period of time or how quickly an individual can move. This helps all games players to move into position or get away from opponents quickly.
4. **Muscular strength and endurance:** The maximum pulling force or a muscle group is called muscular strength. The ability of a muscle to contract repeatedly or to sustain a contraction is called muscular endurance. Lifting a load or moving an object depends on muscular strength. Doing it repeatedly over time requires muscular endurance. In spite of tremendous cardiovascular endurance, with sufficient muscular strength or endurance one may not be able to do the things one wishes to do.
5. **Cardiorespiratory endurance:** Engaging in physical activity, even breathing requires oxygen. Without oxygen one cannot burn the food you need for energy. To supply oxygen to all parts of the body, one must have a transport system. The body's transport system consists of lungs, heart, and blood vessels. The lungs absorb oxygen into their blood vessels and transport it to the heart, where it is pumped out

through one can transport oxygen, the greater is one's cardio respiratory endurance is the ability to supply and use oxygen, over period of time and in sufficient amounts to perform normal and unusual activities.

6. **Cardiovascular fitness:** Cardiovascular fitness ability to exercise the whole body for long periods of time and sometimes called stamina.

Q.4 – Write short note on the following:

- i) aerobic activity
- ii) bone strengthening
- iii) muscle strengthening

Ans – Children and adolescents should do 60 minutes (1 hour) or more physical activity each day. This type of activity includes:

- a) **Aerobic Activity:** Aerobic activity should make up most of your child's 60 or more minutes of physical activity everyday. It can either be moderate or intense aerobic activity, such as running. One should be sure to include vigorous-intensity aerobic activity or at least 3 days per week.
- b) **Bone strengthening:** Include bone strengthening activities such as jumping rope or running, at least 3 days per week as part of your child's 60 or more minutes.
- c) **Muscle strengthening:** Include muscle strengthening activities, such as gymnastics or push-ups, at least 3 days per week as part of your child's 60's or more minutes.

Q.5 – What activities are recommended for adults? Explain in brief.

Ans – Physical activity is anything that gets your body moving. One needs to do two types of physical activity each week to improve one's health-aerobic and muscle strengthening. Adults need at least 2 hours and 30 minutes of moderate-intensity aerobic activity (e.g., brisk walking) every week and muscle strengthening activities on 2 or more days a week that work on all major muscle groups (legs, hips, back, abdomen, shoulders, chest and arms). Adults can also do vigorous intensity aerobic activity (i.e., jogging or running every week and muscle strengthening activities on 2 or more days a week that work on all major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

For most people daily light activities such as shopping, cooking or doing the laundry doesn't count toward the guideline. As one's body isn't working hard enough to get heart rate up.

Moderate-intensity aerobic activity means one is working hard enough to raise one's heart rate and break a sweat. Some activities that require moderate effort are walking fast, doing water aerobics, playing double tennis, riding a bike on level ground, or with few hills.

Q.6 – What are the recommended activity for older adults? Explain in detail.

Ans – As an older adult, regular physical activity is one of the most important things one can do for one's health. It can prevent many of the health problems that seem to come with

age. It also helps one's muscles grow stronger so one can keep doing one's day to day activities without becoming dependent on others.

Not doing any physical activity can be bad for one, no matter what one's age or health condition is. Keeping in mind that some physical activity is better than none at all. Health benefits also increase with the more physical activity that one does.

For older adults, 2 hours and 30 minutes of moderate intensity aerobic activity (i.e., brisk walking) every week and muscle strengthening activities on 2 or more days a week that work on major muscle groups (legs, hips, back, abdomen, chest, shoulders, and arms).

Besides aerobic activity one can do things to make muscles stronger at least twice a week. This type of activities will help keep one from losing muscle as one gets older. To gain health benefits muscle strengthening activities need to be done. There are many ways one can strengthen one's muscles, whether it is home or at the gym. The activities one can choose should work on all major muscle groups of our body.