UNIT 3 : RELEVANCE OF YOGA THERAPY WITH MODERN MEDICAL SCIENCE

UNIT STRUCTURE

3.1 Learning Objectives

3.2 Introduction

3.3 Principles of Yoga Therapy

3.4 Three Components of Yogic Approach

3.5 Relevance of Yoga Therapy with Modern Medical Science

3.6 Let Us Sum Up

3.7 Further Reading

3.8 Answers to Check Your Progress

3.9 Model Questions

3.1 LEARNING OBJECTIVES

After going through this unit you will be able to –

- state the concept of Yoga Therapy
- explain the Principles of Yoga Therapy
- describe the three components of Yogic approach
- discuss the Relevance of Yoga Therapy with Modern Medical Science.

3.2 INTRODUCTION

Basically, Yoga is a science of consciousness. In other words we can say that, Yoga is a systematic process for accelerating the growth, of a man in his entirety. And with this growth, man learns to live at higher states of consciousness. Yoga provides an integrated system of techniques by which we can develop our hidden potentials to the fullest. It means, Yoga is a methodical effort towards self- perfection through developing our latent potentials on all possible levels- physical, mental, intellectual and spiritual. To achieve this goal, one must have control/ mastery over his mind. Maharshi Patanjali has explained the eight steps and other means

to control the mind achieve the highest state of consciousness.

Yogic science was never developed during Vedic period for treating ailing human beings. But, it is fact that, it is the key to good health and happiness in today's world. Yoga is becoming a respected science with wide applications for the benefit of humanity. By practising Yoga, sanskaras are uprooted which cause mental and physical illnesses. Yoga changes the pattern of mind, the mental conflict that exacerbates illness. Hence, Yoga, although never meant as a therapy, is very effective in helping us to attain and maintain good health and well- being. People who practice Yoga remain healthy and energetic, tranquil and balanced.

Great advances in medical science over the past century have reduced the incidence of most of the physical disease that have plagued humanity for centuries. Ever- better drugs and surgical techniques have led to the eradication of most infectious diseases and the control of many metabolic disorders. But, these techniques are less than effective against the new and ever more common causes of ill health- chronic stress and psychosomatic ailments.

Conventional medicine, by concentrating on a physical and mechanistic approach to healing, can do little to relieve conditions such as these, since they are caused more by lifestyle and attitudes than by physiological anomalies. The frenetic pace of modern life exposes many people to continuous, unrelieved stress. And if you are largely sedentary in your habits and overindulge in health- damaging substances and foods, your well being and fitness will be further compromised.

Eventually, stress may manifest itself in the form of physical disease or mental breakdown. Modern medicine has countered with symptom-suppressing treatments, which do little to tackle the root cause of the problem. Whereas, Yoga practices can allow patients to get more time and attention for their deeper, inner personal needs, to help alleviate social, mental and emotional problems through regulated, systematic and progressive exercise and relaxation programs. Yoga exercises have a holistic effect and bring body, mind and conscious and soul into balance. So, Yoga is capable of filling this gap. Here, in this Unit, we will discuss the

principles of Yoga and how Yoga can be relevant with modern medical science in order to face and solve the present day problems.

3.3 PRINCIPLES OF YOGA THERAPY

Yoga is fundamentally different from conventional medical practice in its approach to body, mind, human existence and healthcare. In order to achieve and maintain the healthy condition, yoga lays emphasis on following principles-

- Principle of Prana
- Principle of Pancha kosha
- Principle of Shat-chakra

Principle of Prana

The human body is enlivened by the vital force known as Prana. This Prana is responsible for the various functions being carried out within the body. There are five major aspects of Prana. The particular aspect of the prana is felt to be more active in some specific area, and accordingly is described to be responsible for the activities of the organs situated in that area-

- Prana
- Apana
- Samana
- Udana
- Vyana

Prana- It is essential for the life activity to go on ceaselessly to replenish the exhausted energy, continuously. The energy is required to be brought in from outside the body either in the form of Oxygen, nutrients or water. The vital force responsible for bringing in the energy in this way is known as Prana and its area of activity is from the nose to the chest. It controls the functioning of the respiratory system including the oro-pharynx, naso-pharynx, larynx, cardiac system and circulatory system

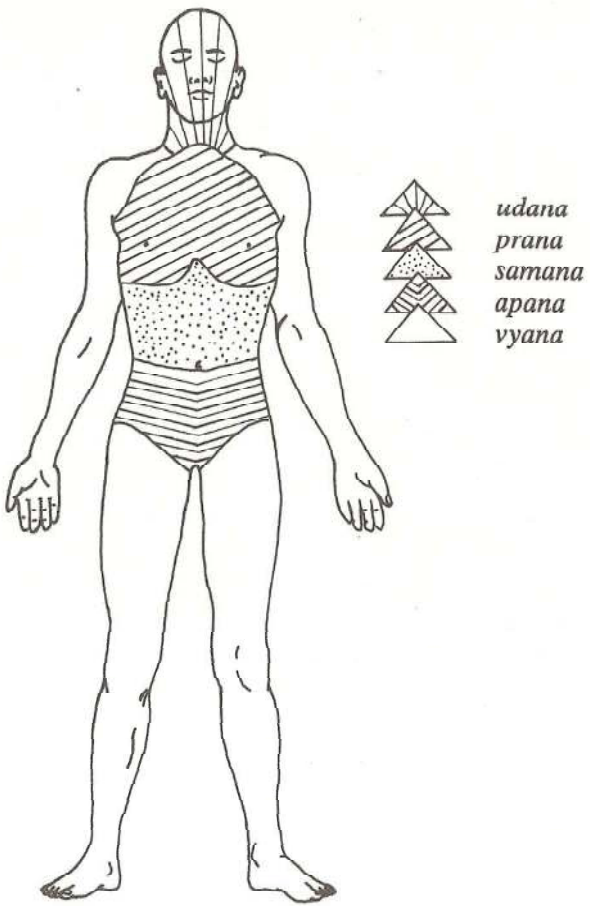


Image 1: Pancha Prana

Apana- In the process of continuous utilization of the energy required for various activities, a lot of waste matter is produced. The vital force responsible for expelling unwanted waste matter out of the body is known as Apana, and its area of activity is within the abdomen below the level of umbilicus. It is located in the pelvic region between the navel and the perineum. It is also responsible for the expulsion of breath. It controls the functions of the genitor- urinary system and gut motility, especially of the large intestine, excretory and reproductive system.

Samana- After having brought in, the energy source, it needs to be converted into a suitable form, so that the body can use it. This is a process of digestion. The vital force which controls the activity of digestion is situated in the abdomen above the level of umbilicus and is known as Samana. It activates and controls the functioning of the digestive and metabolic system and acts as a balancing or coordinating force between the two opposite

forces of prana and apana.

Udana- Apart from the vegetative functions there is a continuous effort in the body-mind complex to excel itself through the subject level of functioning which includes expression and communication and the vital force responsible for this activity is known as Udana. Its area of activity is the head and the neck. It is also located in the arms and legs. It is responsible for the sensory organs and the motor organs, and controls the sympathetic and parasympathetic nervous systems.

Vyana- After making the energy available in a usable form, it has to be transported to each and every part of the human body. This transportation and circulation of energy all over the body is under charge of Vyana and its area of activity covers the whole body. It pervades the whole body. It regulates and coordinates the musculo-skeletal system, acts as a reserve or back up and also as a coordinator for the other four pranas.

There are also other minor activities carried out by the Prana and these subdivisions of Prana are known by different names according to their functions. They are-

1. **Naga** - for regurgitation
2. **Kurma** - for blinking
3. **Krikal** - for sneezing
4. **Devadatta** - for drowsiness
5. **Dhananjaya** - for thirst

Principle of Pancha kosha

The five different dimensions of human existence from gross to subtle nature of function are-

- Annamaya kosha (The physical dimension)
- Pranamaya kosha (The bio-plasmic energy dimension)
- Manomaya kosha (The mental – emotional dimension)
- Vijnanamaya kosha (The dimension of psyche or intuition)
- Anandamaya kosha (The dimension of blissful joy)

Annamaya kosha- Annamaya kosha, the 'food sheath' is the physical dimension of human existence. The origin of this system depends on the physical food that we eat. The food we eat, containing carbohydrates,

proteins, fats, minerals and other nutrients, are broken down during digestion. It is absorbed into the body and the various components are used to make cells, supporting tissues, enzymes, hormones and other items according to the body's needs.

All the systems and organs including the five sense organs, the five motor organs, the brain and other systems, form annamaya kosha.

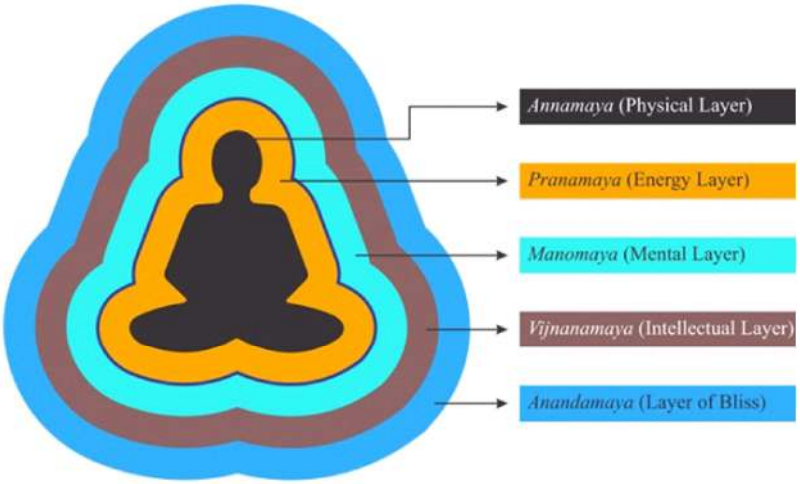


Image 2 - Pancha Kosha

Pranamaya kosha- After Annamaya kosha the next subtlety is Pranamaya kosha. Here the word prana refers to the vital energy present in all living beings. It is responsible for providing the energy needed for the activities of all the koshas. Just like electricity which is responsible for the working of the light bulbs, heater, fan, washing machine and computer; prana is responsible for all the activities of the human being, including at the levels of mind and consciousness.

Based upon the functions carried out, this prana is further divided into five main sub-pranas and five another smaller pranas.

The five main pranas are- Prana, Apana, Samana, Udana and Vyana. They are already explained in the Principle of Prana.

Manomaya kosha- The third dimension deals with 1) the gathering of perceptions received via the physical body through the sense organs, 2) the cognition, analysis and assimilation of these perceptions, 3) the imparting of further instructions based on these perceptions, and 4) storage of these perceptions, their analysis, the action taken and the result obtained

from that for future reference via the memory.

The organs used for this purpose are known as antah karana. The antah karana is comprised of manas, buddhi, chitta and ahamkara.

Vijnanamaya kosha- This fourth dimension deals with the deep unconscious strata of our being. It is the power house of intelligence and thoughts. This kosha develops the capacity of choosing the good/ bad thoughts, taking the right and quick judgement and bring the stage of sthita pragya.

Anandamaya kosha- This dimension is even subtler than vijnanamaya kosha. This fifth sheath is full of native bliss and joy as reflected from the purest pristine fountain source Atma. It is divine gossamer, reflecting Atmananda base for Asampragyat Samadhi and self- realization. It manifests more easily in infants and younger children in whom manomaya kosha is not yet developed and hence does not overshadow anandamaya kosha.

Principle of Shat-chakra

In our human body, there are six nodal centres, through which the Ida and Pigala criss cross each other in a spiral way. When Kundalini arouses, the prana starts rising through each of these centres and the energy field in each centre gets activated. These energy centres are known as Chakras.

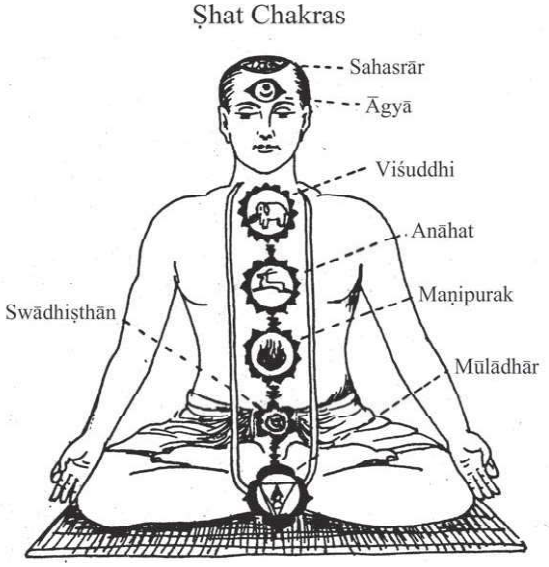


Image 3- Shat Chakras

Mooladhara Chakra- This is the lower most of the Chakra situated at the tail end of the spine, at the level of perineum which is between genital opening in the front and the anal opening behind. It is represented as a lotus with four petals.

Swadhishthana Chakra- This is situated at the level of pubic symphysis, a bone just above the genital organ. It is represented as a lotus with six petals.

Manipura Chakra- This is the third Chakra from below and is situated at the level of umbilicis. It is represented as a lotus with ten petals.

Anahat Chakra- This is the fourth Chakra from below and is situated in the chest at the level of heart. It is represented as a lotus with twelve petals.

Vishuddhi Chakra- This is the fifth Chakra in the ascending order and is situated in the throat. It is represented as a lotus with sixteen petals.

Ajna Chakra- This is the sixth Chakra in the ascending order and is situated at the level of Bhrumadhya (Eyebrow centre). It is represented as a lotus with two petals.

Sahasrara Chakra- This is the highest centre in the brain and on reaching here Prana alters the consciousness completely.

3.4 THREE COMPONENTS OF YOGIC APPROACH

Now, we will throw light on the three main components of Yoga. When we use Yoga as a Science of Health and Healing, all the Yogic techniques and methods which are basically meant for spiritual experiences automatically get geared to do their job for the promotion of Health and bring the Healing touch to the body and mind. We can divide all the approaches used for Health and Healing into three components-

A. Practical Discipline
B. Regulation of diet and daily habits
C. Change in attitude, behaviour and life-style

Practical Discipline

This practical discipline involves Shat-karma, Asana, Pranayama, Mudra-Bandha and Meditation.

Shatkarmas involves six purification practices that make the body clean, strong and free from diseases. It removes toxins and improves concentration. It improves the flow of prana into the organs.

Asanas involve the increases awareness of various physical and physiological processes influenced by controlled stretching, contraction and relaxation of various muscles.

Pranayama practices involve the manipulation of breathing mechanism along with the increases awareness of the pressure changes inside the cavity of chest and abdomen.

Mudra and Bandha bring stability to the mind. They work on a much deeper and more subtle level than the asanas. A mudra is a particular posture that channels energy into particular chakras (plexus) while Bandha involves the contraction of muscles and organs, which causes the accumulation of energy at a particular plexus.

Meditation practices increase the awareness of one's own mental processes including the thoughts, emotions, memory etc. The increases awareness with the manipulative techniques of Dhyana practices gradually keep the psycho-physiological functions healthy, harmonious and in balanced state.

Regulation of diet and daily habits

This component concerns with the regulation of diet as well as the regulation of daily habits involving working habits, pattern of sleep, recreational activities etc. This helps in removing the responsible factors for the imbalance in the functioning of body – mind complex.

Change in attitude, behaviour and life-style

This component concerns with the changes in one's attitudes, behaviour and life-style which help in inducing the feeling of sharing, feeling of warmth in friendship, love and respect for the beautiful universe. This is required for constructing the correct psychological attitude so that the stress factors are best tackled and nullified.

Bhagawad Gita says,

Yuktahar viharasya yuktachestasya karmasu,

Yukta swapnavabodhasya yogobhavati duhkhaha

That is, just enough diet, work, sleep, wakeful state, entertainment or sport will remove the grievances and one will become happy.

3.5 RELEVANCE OF YOGA THERAPY WITH MODERN MEDICAL SCIENCE

Yoga has a lot to offer as we approach the 21st century. It gives us the means to complement medical technology with a holistic system of healthcare that addresses the problems of the mind and spirit, as well as those of the body.

Maharshi Patanjali, who wrote the classic text on yoga more than 2000 years ago, described it as “a science of mind”. And it is through teaching you to control your mind, your desires, and your reactions to stress that yoga can fundamentally help you.

Yogic approach to healthcare is different from Modern Medical system. Instead of trying to reduce the cause of disease to a single factor and to correct it using a specific cure, yoga aims to treat illness by improving health on all levels simultaneously and by restoring inner harmony.

Yoga teaches us to change our attitude towards disease, to see it as a learning experience and at the same time offers us the techniques by which we can not only remove disease, but also manipulate and cultivate our internal body processes so as to achieve higher states of awareness and fulfilment.

In Asthma, for example, it offers us technique to relax spasmed muscles, induce bronchodilation, remove clogged mucus, rebalance the nervous system, allay anxiety and remove the root cause from the emotional and psychic body.

In diabetes, it lowers blood sugar and rebalances imbalanced neural and metabolic processes as well as helping us to become stronger, fitter and happier.

Most systems of healing have failed to deal adequately with psychosomatic and degenerative diseases, because they have not recognised the deeper needs of the patients at the more subtle levels of their existence. We, the human beings, are much more than a physical

body.

According to Yoga, human beings have a physical, emotional, mental, psychic and spiritual side to their existence. Each level must be nourished, stimulated and developed if we are to grow into totally balanced and healthy people. It is in this regard that Yoga will be most useful and helpful to modern medicine. Yoga not only outlines a clear and precise description and roadmap of the mind and our higher, more subtle aspects, but also gives us the techniques by which we can manipulate, heal, improve, cultivate and develop the mind and higher consciousness.

Most systems of healing fail to deal with the mind and fail to understand how powerful and all pervading the mind actually is. In this regard, Yoga and meditative techniques are essential tools in dealing with diseases, because they cultivate and bring us into direct experience with the mind. They allow us to feel that the mind is actually enhancing and expanding our awareness.

Friends, at first glance, modern medicine and Yoga may seem to be totally incompatible and in some ways even antagonistic to each other. But, it must be stated that Yoga and any form of medicine work together and are not antagonistic. Allopathy, homeopathy, Ayurveda, Acupuncture and other forms of healing are all useful and beneficial to mankind. They focus on and aim to eliminate the disease process.

Yoga on the other hand, is not so much therapeutic as strengthening and health promoting, leading to good physical health, more as a by-product than an inherent aim of the techniques.

Thus, the medical tradition is required to monitor the progress of the disease and adjust drug requirements and therapeutic modes while the Yogic side helps to relax, purify and strengthen, to actually aid the effects of the medicine, reduce the amounts required, and enhance tissue healing and regeneration.

Both Yoga and modern medical science understand the need for total health. Modern medical science has the ultimate aim and goal of producing a state of optimum physical and mental health thus leading to the optimum wellbeing of the individual. Yoga also aims at the attainment

of mental and physical wellbeing though the methodology does differ. While modern medical science has a lot to offer humankind in its treatment and management of acute illness, accidents and communicable diseases, Yoga has a lot to offer in terms of preventive, promotive and rehabilitative methods.

Yoga and modern medical science work together well. If we utilize the best of both systems, both doctor and patients must benefit. One very good way to achieve this aim of friendly cooperation and amalgamation of the best of both worlds is for patients to visit their doctors for regular ongoing medical check-ups and their physical health. This will also allow the Yoga teacher to know if the Yogic methods are working. Suitable adjustments of medicines and Yoga can be made.

Allopathy alone actually offers very little in the psychosomatic situation, for the patients overall well-being, for total health care. Yoga practices can allow patients to get more time and attention for their deeper, inner personal needs, to help alleviate social, mental and emotional problems through regulated, systematic and progressive exercise and relaxation programs. The physical side benefits from this and the patient's overall condition improves.

Prevention of Disease-

The Yogic lifestyle that includes the Yama and Niyama can help prevent a great many of the modern diseases like Hepatitis B and AIDS. Cleanliness that is taught through Shaucha can help prevent and limit spread of contagious and infectious diseases. Mental peace and right attitudes of Yoga such as pratipaksha bhavanam (taking the opposite view), samatvam (equanimity of mind) and vairagya (dispassionate detachment) can help prevent many psychosomatic ailments. If these Yogic values and practices such as Asanas, Pranayamas, kriya and dhyana are inculcated, we can prevent most of diseases.

Promotive Health-

Yoga is an excellent tool of promotive health that can enrich modern medicine. The practice of Yoga leads to the efficient functioning of the body with homeostasis through improved functioning of the psycho-

immuno- neuro- endocrine system. A balanced equilibrium between sympathetic and parasympathetic wings of autonomic nervous system leads to a dynamic state of health. Yoga re-orients functional hierarchy of the entire nervous system. Yoga not only benefits the nervous system but also digestive, respiratory, cardiovascular, endocrine and immune systems in addition to bringing about biochemical changes in yoga practitioners.

Management of Diseases and Disorders-

Modern antibiotic treatment of infectious diseases and modern emergency medical and trauma management techniques are life-savers in times of dire need. While Yoga has a lot to offer in psychosomatic stress related disorders such as diabetes, asthma, hypertension, back pain as well as other functional disorders. Yoga can help reduce and in some cases eliminate drug dosage and dependence in patients suffering from diabetes mellitus, hypertension, anxiety, bronchial asthma, constipation, insomnia, arthritis etc.

Rehabilitation-

Yoga can help the patients recovering from accidents and physical traumas to get back on their feet faster and with better functional ability. Yoga also has a lot to offer those suffering from drug and substance abuse in assisting them to get back to a normal life. Yoga helps develop their self-control and will power and also gives them a new philosophy of living.

Relaxation-

Relaxation is important in order to get better. Yogic relaxation practices help relax body, emotions and mind. Shavasana has been reported to benefit hypertensive patients while practices such as anuloma viloma, Yoga Nidra are also available to attain a state of complete relaxation.

When Yoga and modern medical science can work together in this manner, we will be paving the way for a better world, one in which the physical, emotional, mental and deeper psychic needs of people can be catered for. This will lead to total patient's health care, ultimately allowing us to transcend the present limitations of the healing professions, and endowing us with a system of attaining health, happiness and fulfilment.



CHECK YOUR PROGRESS

Q 1: Fill in the blanks:

A. Number of Koshas in the body are .....

B. The subtlest kosha among all is ..... kosha.

C. The vital force responsible for expelling unwanted waste matter out of the body is known as .....

D. Head and neck is the area of activity of .....

E. ..... chakra is situated in the perineum.



3.6 LET US SUM UP

Great advances in medical science over the past century have reduced the incidence of most of the physical disease that have plagued humanity for centuries. Ever- better drugs and surgical techniques have led to the eradication of most infectious diseases and the control of many metabolic disorders. But, these techniques are less than effective against the new and ever more common causes of ill health- chronic stress and psychosomatic ailments. Yoga on the other hand, is not so much therapeutic as strengthening and health promoting, leading to good physical health, more as a by-product than an inherent aim of the techniques. While modern medical science has a lot to offer humankind in its treatment and management of acute illness, accidents and communicable diseases, Yoga has a lot to offer in terms of preventive, promotive and rehabilitative methods. Yoga practices can allow patients to get more time and attention for their deeper, inner personal needs, to help alleviate social, mental and emotional problems through regulated, systematic and progressive exercise and relaxation programs.



3.7 FURTHER READING

1) *Living with Stress without Distress through Yoga*- Dr. Shrikrishna, Kaivalyadhama: Pune.
2) *Yoga for common ailments*- Dr. R Nagarathna and Dr. H R Nagendra, Swami Vivekananda Yoga Prakashana: Bengaluru.
3) *Yoga Therapy for selected diseases*- Dr. M M Gore, Dr. D R Vaze, Dr. S A Kulkarni, Dr. J P Oak, Kaivalyadhama: Pune.
4) *Yogic management of Asthma and Diabetes*- Dr. Swami Shankardevananda, Yoga Publication Trust, Munger: Bihar
5) *Structure and functions of Human Body and Effects of Yogic Practices on it*- Dr. Shrikrishna, Kaivalyadhama: Pune.
6) *The Science of Yoga* (1961) - I K Taimini, The Theosophical Publishing House, Adyar: Chennai.
7) *Integrated approach of Yoga therapy for positive health*- R Nagarathna and H R Nagendra, Swami Vivekananda Yoga Prakashana: Bengalore.
8) *A primer of Yoga Therapy*- Ananda Balayogi Bhavanani, Dhivyananda Creations: Puducherry.



3.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: A. Five

B. Anandamaya kosha

C. Apana

D. Udana

E. Mooladhara



3.9 MODEL QUESTIONS

Q 1: Discuss the Principles of Yoga Therapy.

Q 2: Describe in brief the three components of Yogic approach.

Q 3: Discuss the relevance of Yoga therapy with modern medical science.

Q 4: Explain the concept of Pancha-kosha.

Q 5: Write a short note on- Pancha prana.

Q 6: Discuss the importance of Yoga therapy in the prevention of disease, promotive of health and rehabilitation.

*** ***** ***