

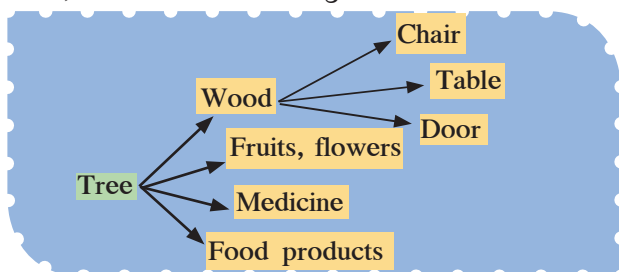
1. There is something, but what it is?

- **Introduction**
- **Ultimate Reality: Number and Nature**
- **Metaphysics in Indian philosophy**
- **Metaphysics in Western philosophy**
- **The scientific perspective**

Introduction

In the previous year, while getting introduced to Philosophy, we have taken the three major questions that it deals with and a brief account of the branches that are developed from them. Metaphysics is the branch of Philosophy that seeks answers to one of the fundamental questions i.e. 'What is'? Subsequently, we have also studied the origination of the concepts like real, unreal, permanence, impermanence, God etc. This year we shall get acquainted with some of the theories, concepts and problems of Metaphysics and their significance.

We are a part of a vast universe. This universe consists of innumerable objects of various types and properties. As these objects interact with each-other in different ways, various activities take place in the world every moment. The nature of everything keeps changing. Since ancient times man has remained curious and has sought to gain knowledge of this world. This curiosity and sense of wonder has led to the development of Philosophy and Science. While observing the world around them, humans realized that the innumerable objects of the world originate from some specific basic elements. Several objects, though apparently different from each-other, have common origins.



For example, if you look around the classroom, you will notice that the tables, chairs, benches, doors, windows and their frames are all totally different objects but all are made of wood. Wood is obtained from trees. Apart from wood, we get many more things from plants and trees. We get leaves, flowers, fruits, food items and medicines too. We prepare medicines from the medicinal plants. Bamboo is a good example of a multipurpose plant as it is used not only for making useful objects but also for creating artistic objects.

Let's collect!

Find information about the bamboo-made products and classify them.

The above-mentioned examples are of man-made objects. In natural world too we may experience multiple forms of a particular object. For example, a small spark, a flame, a burning fire, a forest fire all these are various forms of one and the same element i.e. Fire. Water-cycle or food-chain are the examples of natural transformation of a particular thing from one form to another. We may say that egg, larva, caterpillar, pupa, butterfly, are different entities or even different stages of the same life form.



Let's write!

Collect examples of 'various forms of one and the same object' and classify them into natural and man-made objects.

Through such observations man concluded that although the world is full of diversities, it must have been created out of some basic elements. Even if, this guess was correct it raised many questions. If it is believed that due to some changes among basic elements other objects were created, then what was the cause of that change? What was the process

of change? Did this change occur mechanically or someone planned it? If it was planned, then, what was the purpose? Along with these questions, man was curious about two basic questions; what is the number of these fundamental elements – one, two or many? And what is their nature? What are the qualities of these elements that make it possible for a variety of things to originate from them? In this lesson, we shall mainly study the responses given to these two questions in Indian and Western traditions. Hence, the title of this lesson is, ‘There is something, but what it is?’

It is said that understanding the nature of the ultimate reality or ‘Sat’ has been the matter of interest for Philosophy. The word ‘reality’ refers to the real or that which exists. It has nothing to do with political or any other sort of dominance or supremacy. As we have studied last year, the ‘real’ is independent and does not depend on any individual or experience for its existence. This ultimate reality is the reality which is at the root of everything that exists. It is called as ‘the ultimate reality’ as in the process of discovering the origin of everything that exists, one discovers reality at the end. It exists in itself and is not created. That is why the elements of the ultimate reality are called as the fundamental elements.

This can be better understood with an example, when we look at trees, we see the trunks, branches, leaves, flowers, fruits but the roots that nourish the trees and hold them to the ground, are hidden under the ground and usually they are not visible. But, the survival of the trees depends on them. Philosophers through their speculations and conceptualizations have attempted to explore and understand the ultimate reality which is the root-cause of the empirical world. When the intellectual leap that the philosopher had taken was coupled with the methods of modern science, this journey gathered momentum. That is how we have reached up

to the periodic table.

In this overall journey, the questions that the philosophers have contemplated upon, the methods used to solve these, their responses, concepts and language used for this are of great importance. We can see that science found its directions from the transitions that philosophy went through. Let’s study some of the important views of philosophers regarding the number and the nature of the ultimate reality.

Contemplation over the fundamental nature of the universe can be traced back to the earliest days of philosophical thought of both - the Indian and the Western traditions. The ‘Nasadiyasukta’ in Vedic tradition, the pre-Socratic thought in Greek tradition are some of its instances. Most of this contemplation was of the nature of logical reasoning. Mainly, the explanation of the naturally occurring events or of the existence of objects was not supported by any kind of divine or supernatural entity, as was otherwise found in ancient myths. With the increasing clarity of thought, the concept of ‘Dravya’ in Indian tradition and the concept of ‘Substance’ in Western tradition emerged. Knowledge of the world is primarily obtained through the medium of sense-experiences. As we have studied in the previous year, there is a difference between the experience and the thing we experience. It is not necessary that everything that we experience has existence, e.g. mirage. Similarly, not everything that exists is a matter of sense-experience, e.g. atoms.

We experience a material object through its appearance, color, shape, type, its dimensions and its relation to other objects. For example, when we eat an orange, we experience the orange-yellow color, the round shape, the sour-sweet smell, the taste and the cool touch. We also observe whether it is small or large and how it is different from sweet lemon. But is an orange just a bunch of color, smell, flavour, feel, shape or

something more? You may ask, what kind of a question is this? The smell, the taste etc. are the qualities of the orange and not the orange itself. By this, you may mean that an orange is that of which all these are the qualities. These qualities are dependent on the orange for their existence. It is this substratum of the qualities that is known as the substance. The relations, quality and quantity are always applied 'to something'. They cannot exist independently. Their existence depends on the substance. The qualities like color, smell, shape etc. can exist in several substances at the same time. However, they cannot exist without substance. Comparatively, substance is not dependent on the existence of any specific qualities for its existence. The writing board in the class can be black, green or white, but the board remains the board regardless of its color. A small shrub changes into a plant and plant grows into a tree but the fundamental substance remains the same. In short, even if the quality, quantity or relations of the substance changes, the substance exists forever.

Ultimate Reality: number and nature

The philosophers wondered about various questions such as: what could be the number of these substances that exist? Are the ones that exist, created from some fundamental substances? What are these basic elements? How many are they in number? You are all aware of the five basic elements discussed in Indian tradition. Earth, water, fire, air and ether are said to be the five basic elements. That is because, it was believed that the material world is formed out of the various combinations of the five basic elements in different proportions. Except Charavaka, all other prominent Indian schools of philosophy had accepted the notion of five basic elements (panchamahabhuta). The Charavakas admit the existence of four basic elements (earth, water, fire, air) while they rejected ether. Even the ancient Greek philosopher Empedocles considered only earth, water, fire

and air as the basic elements.

Today, we are aware that these five or four elements cannot be regarded as the basic elements. It is through scientific analysis, we have learnt how these elements originate. It is the combination of two atoms of hydrogen and one atom of oxygen that form a molecule of water, hence, water cannot be the basic element. However, this does not mean that the philosophical attempts made in search of the basic elements were mistaken. The notion of 'basic element' is not incorrect. In the pre-scientific period, it was difficult to find the exact number of the basic elements merely on the basis of reason and general observations. Nevertheless, it should be noted that this question discussed in philosophy paved the way for the scientific research in this direction.



Let's think!

The color of the sky or the colors of the rainbow are characteristics of which substance?

Logically speaking, the question 'how many fundamental elements are there in the universe?' can be obviously answered as one, two or many. Therefore, the answers given by different philosophers or philosophical systems can be categorized into monism, dualism and pluralism. Similarly, the possible answers to these questions regarding the nature of the elements can be specifically classified. As we have studied in the previous year, everything that exists can be classified into living and non-living (animate and inanimate). Inanimate objects are physical and material whereas in living beings we find consciousness existing alongwith the matter. Accordingly; we get specific logical possibilities, either the ultimate reality is material or spiritual or it is both material and spiritual. Consequently, three different theories are formed: materialism, idealism and realism. The philosophical contemplations in different traditions may slightly vary, but the

questions posed by them often remain the same. It is seen that the similar responses are put forth in unique ways by different traditions. Now, let's get acquainted with these significant theories of Indian and Western Metaphysical traditions.

Metaphysics in Indian Philosophy

In Indian tradition, both the orthodox and heterodox schools of philosophy have reflected upon the number and nature of the ultimate reality. Let's take a brief account of some of the major theories. While taking this review, it is also required to take into consideration the historical chronology. Majority of the darshanas acknowledge pluralism. These mainly include Charvaka, Jaina, Mimamsa, Nyaya and Vaishesika. However, they have some differences regarding the nature of the ultimate reality. Of all the main darshanas, Charvaka is the only darshana that has accepted materialism. Materialism states that the fundamental nature of the universe is material; that means it is non-conscious and physical. It also states that the consciousness is a by-product of matter. In the history of philosophy it is observed that the materialists are often pluralists. It implies that the number of the ultimate reality is more than two. Nonetheless, the theory believes that the fundamental principles are material, no matter what their number is.

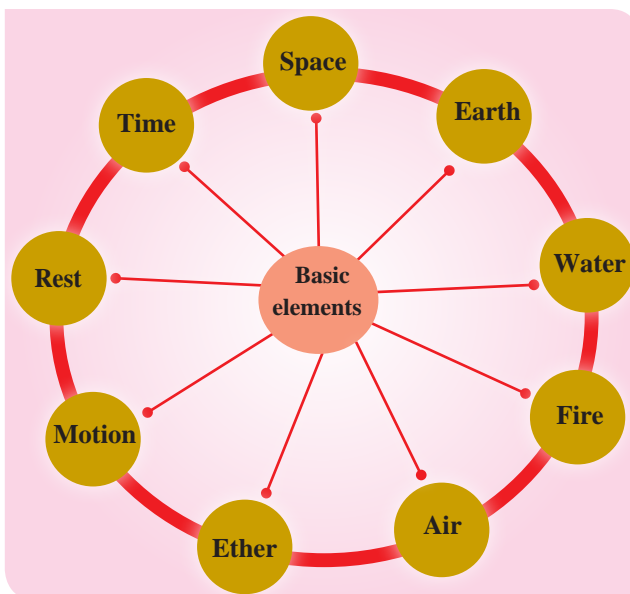
Charvaka Darshana

According to the Charvakas, the universe is created out of the four material elements viz. earth, water, fire and air. There is no creator of this universe. The interactions between the four basic elements and their compounds produce everything in this universe. It does not require any creator or purpose. Existence of an independent substance called 'soul', is generally accepted by many darshanas as the basis of the consciousness. Though, Charvakas accepted consciousness they rejected the notion of independently existing soul. They believed that the peculiar combination of the four basic elements produce

the living or conscious body. The answer to how these inanimate elements produce living beings lies in the peculiar combination of these elements. This point shall be discussed in detail in the third chapter. In a way, Charvaka's views are similar to views of modern science. Just like science, Charvaka embraces materialism and pluralism.

Jaina Darshana

Like Charavaka, Jaina darshana is also included in nastika darshanas and it too advocates pluralism. In Jaina philosophy, everything that exists is classified into living (jiva) and non-living (ajiva). While discussing the nature of the non-living objects, that are devoid of consciousness, apart from the five basic elements Jainas also take into consideration motion, rest, time and space. We have studied in Science that every physical object occupies some space. It exists in certain time. It requires motion to be created. Even if, you and your friends are reading the same book in the classroom, each copy of that book is in a different place. Students of the next batch may read the same book, although it may have been printed after your book. There is an active participation of many individuals-objects in the process of writing and printing of the book.



Each object is made-up of inseparable particles of matter (Pudgala) that is, atoms. According to Jainas, not only the bodies of living beings and natural objects but also the mind, the speech, the breath are products of matter. The Jiva or soul (atma) possesses consciousness. The soul is never unconscious. Jainas do not agree with the Charvaka's view that 'body itself is the soul'. According to them, the soul or jiva is different from the body. In the third chapter, we shall discuss the types of jivas and their nature as described by the Jainas. For now, it is enough to keep in mind that Jainas are pluralists. They believe that material substance and spiritual substance independently exist.

Vaisheshika Darshana

You may be aware of the fact that in

ancient times the concept of atoms was put forth by Vaisheshikas. Everything that we can see or experience has some shape/form. Therefore, it is possible for us to see it. Minute objects are not ordinarily visible. That is why a microscope is used to perceive such objects or organisms. Even the objects perceivable under the microscope have ultramicroscopic dimensions. When objects are broken, they are broken into smaller pieces. Have you ever observed the broken glass of a car that has met with an accident? How tiny are the pieces of the glass that is crushed! From such observations, it is understood that visible objects are made-up of extremely minute particles, invisible to the eyes. The more advanced the technology, the greater is our ability to divide objects into minute particles!

Buddha Darshana : Pratiyasamutpada and impermanent nature of the real

Siddharta Gautama Buddha was not interested much in the metaphysical questions. He believed that discussion of these questions are futile for attaining freedom from suffering. From the four noble truths that he has mentioned related to the problem of suffering, we understand his views on reality. In the formulation of the second noble truth i.e. 'there is a cause of suffering' he has stated the theory of Pratiyasamutpada. According to this theory, the existence of everything that exists depends on some conditions / on the existence of some other things. It means that the existence of everything is conditional. If the condition on which the existence of a particular thing depends gets destroyed, then the existence of that particular thing will be destroyed too. If we put this in the terminology of causation it can be said that, behind the existence of every object or event there is some or the other cause. Nothing exists without a cause. If there is a cause, then the effect is inevitably produced.

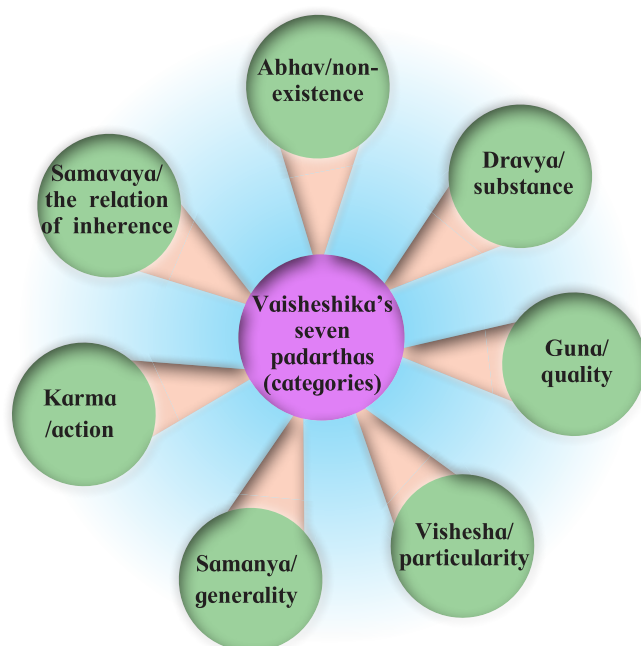
Similarly, if the cause or component that is necessary for the existence of a thing is destroyed, then the thing gets destroyed too. When a particular disease is caused due to some bacterial infection, the doctor gives us medicine that would kill the bacteria. For good health we require nutritious food. If there is lack of nutritious food it has adverse effect on the health.

The theory of impermanence proposed by Buddhism emerges from the theory of Pratiyasamutpada which states that, the origin of everything that exists is dependent on some other thing. According to this theory everything that exists in the world, will be destroyed eventually. Thus, nothing is eternal or permanent. Whatever is, is impermanent, changing, because existence of everything that exists is dependent on some other conditions. Impermanence, change is the characteristic of the universe. It is mainly due to this reason that Buddha darshana rejects the existence of God and soul or the existence of any permanent substance.

Let's speak

Give examples of household techniques used to convert objects into small particles. E.g. mill machinery, grinding stone, grinding wheel etc.

Vaisheshikas had realized that if we went on to divide objects, we would eventually reach the indivisible particles which would not be possible to divide further. They could not actually reach these particles, but through their logical reasoning they could predict the possibility of such particles. It was these indivisible particles that they named 'atoms' (Paramanu). All material objects are created from the integration of the atoms of earth, water, fire and air; while the destruction of the objects is due to the disintegration of the atoms. Atoms, however, are eternal. That is, they are neither created nor destroyed. They exist forever. In short, atoms are eternal and imperishable. However, the objects created from them are non-eternal and perishable. According to Vaisheshikas, there are in all nine substances that form the basis of the universe. Apart from the four basic elements mentioned above, they include fifth basic element ether as well as space, time, mind and soul under the category of substance.



The Vaisheshikas explain the visible world with reference to these nine substances, as well as their qualities, their activities, their similarities, their peculiarities and their relationships. A distinctive characteristic of Vaisheshika's metaphysics is that in the initial stage of explanation they merely discuss existence i.e. the things that exist. But, later, they also discuss non-existence. Our knowledge of the world includes 'what is' as well as 'what is not'. You arrive at the exam-center and suddenly realize that one of your friends has not come for the exam. Or while going on a trip, we miss some person who could not make it to the trip. At times when we go to a store we do not find the stuff we are looking for. Vaisheshikas discussed abhava/non-being in detail; because they were emphatically aware that our experience of the world is a combination of both- the existent and the non existent, being and not being, 'this is' and 'that is not'. From Vaisheshika's standpoint the ultimate reality is pluralistic and realistic.

Sankhya Darshana

In Indian tradition, Sankhya Darshana provides a systematic presentation of Dualism. The Samkhya system also accepts realism. According to Samkhyas the material principle and the spiritual principle exist independently. Both of these substances are eternal and infinite. Samkhya refers to the principle of consciousness as 'Purusha'. Consciousness is not just an attribute but the essence of the Purusha. Purusha is pure consciousness. There is no trace of matter in this principle. It does not undergo any kind of transformation. The Purusha is inactive; it means the Purusha does not perform any action. The Purusha exists beyond the physical world. Change, activity, creation, destruction are all characteristics of the material principle.

The material principle is called 'Prakriti' by Samkhyas. Prakriti consists of three elements – sattva, raja and tama. Since, all

the material objects originate from prakriti; these three elements are found in different proportion in every object. When the prakriti is in its original state, all the three elements are in equilibrium. That is, none of the elements overpowers the other. This equilibrium gets disturbed as Prakriti comes in contact with purusha. This initiates the churning of three gunas and the entire perceptible world sequentially evolves from prakriti. Prakriti's course of evolution that moves from subtle elements to gross elements is as follows – intellect (mahat or buddhi), ego (ahankara), mind (manas), sense-organs (jnanendriya), motor organs (karmendriya), five subtle elements (tanmatras), five gross elements (mahabhutas). Sankhyas believe that at the time of dissolution, each element returns to its original state and gradually the entire visible world merges into prakriti again. These states of creation and destruction occur repeatedly in course of time.

The concept of time in Indian tradition is cyclical. Due to this cyclical or circular motion of time it is believed that the similar states of existence keep recurring in the universe in the same sequence. The 'yuga' concept in Indian tradition is related to this cyclical notion of time.

Let's understand!

Get acquainted with the notion of four Yugas (eras) found in Indian tradition. Study its connection with the idea of time found in this tradition.

To summarize Sankhya metaphysics, the material principle and the spiritual principle exist independently. Their properties are mutually opposite. There is no element of consciousness in matter, similarly, in consciousness there is absolutely no trace of material substance. However, in human beings, the body and the soul, that is the material substance and the spiritual co-exist. What then is exactly the nature of human

being, material or spiritual? We will study this in the third lesson.

Advaita Vedanta Darshana

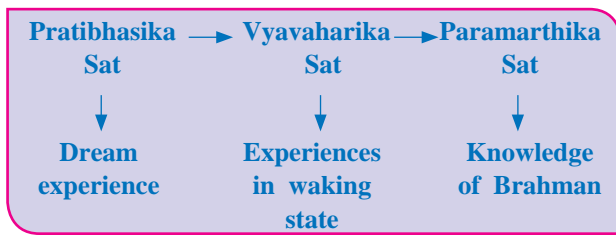
In Indian tradition from the earliest times, that is since Rigveda period, it is conceived that the universe is fundamentally one, everything that exists in it is just a part of the existence of an extremely colossal purusha. The development of this notion of oneness of the universe is found in the Upanishads as well. The one and only ultimate reality pervading the universe, came to be known as Brahman.

As per the exposition given by Adi Shankaracharya on monism, the plurality, diversity and change experienced in the world is merely an illusion. Only the permanent, eternal and unchanging Brahman exists. Whatever is, is only Brahman, it does not undergo any change really. It seems to have undergone change, but in reality it does not. We feel as if we experience many things, but everything is actually one and the same. Plurality does not exist. Moreover, 'we' and all that we experience, is not really separate from each-other.

All of us see dreams, right? In a dream we meet many people, see many things and experience them. But, the dream world is not real. And you also are aware of the fact that the existence of the dream is not separate from your existence. When you dream, the dream appears to be real. When you wake-up, you realize that what you were experiencing was just a dream and not the reality. Similarly, the examples of change and diversity that we experience in the waking state is merely maya, a grand illusion. We understand it only when we attain the proper knowledge of the ultimate reality. This knowledge is called 'Brahmadnyana'.

Shankaracharya describes three levels of reality. What we experience in dreams is called 'Pratibhasika Sat' (dream reality).

The reality that we experience in the waking state is called 'Vyavaharika Sat' (empirical reality). It is real on a practical level, but just as the dream world becomes unreal once we wake-up, similarly, the vyavaharika sat becomes illusory when one attains the knowledge of Brahman. That ultimate level of reality is called 'Paramarthika Sat' by Shankaracharya. However, the 'paramarthika' reality never proves to be unreal.



In the Chapter 'Appearances are deceptive' that we studied in the previous year, the examples of 'shuktirajat nyaya' and 'rajjusarpa nyaya' were given to explain this very point.

Brahman is devoid of properties, of any form, so it is called as attributeless and formless. It is due to our ignorance that we do not experience Brahman the one and the only reality, whereas, we experience only the objects that have some form and attributes. Brahman is consciousness. The same consciousness is present in us. According to Advaita Vedanta once you realize that your soul or your consciousness is the Brahman itself, you attain the knowledge of Brahman. In short, Advaita Vedanta tradition is Idealistic and monistic.

Western Metaphysics

In the pre-Socratic period, a group of philosophers was keen on understanding the ultimate nature of the universe. These philosophers came up with different ideas about the ultimate reality. Amongst these were the monists like Thales, Anaximander, Anaximenes, Anaxagoras, Parmenides, Heraclitus and so on. However, they had different views about the one ultimate principle. Do you remember having read

these in last year's book? More than deciding whether these beliefs were true or false, what is important today is to understand thought process of the philosophers behind these views. This was the period of beginning of the Western philosophy. Approximately two thousand five hundred years ago these philosophers observed the universe and contemplated over the origins of this universe and the thoughts we study are the fruits of their reflections.

In the previous year, while being introduced to metaphysics we studied the two concepts of 'permanence' and 'impermanence' related to reality. Among the philosophers mentioned above, Parmenides was the one who regarded permanence as the distinguishing characteristic of Reality. He believed that anything in relation to which we can use the terms such as 'is not', 'was not' or 'will not be' do not really exist. 'That which is'; always exists and we cannot use the words 'does not exist' or 'is not' for it. That is why Parmenides maintains that motion, change, time and distinctions are not real. When change occurs, that which did not exist comes into existence and that which existed disappears. Since, change is related to 'non-being', it does not have real existence. The idea of time is associated with change. In a world where there is no change, there is no time either.

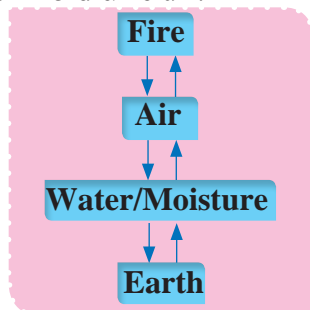


Different methods of measuring time

If there is motion, the objects can change their positions due to it. We move objects from one place to another, as also we ourselves move from place to place. Logically speaking, we require an empty space for any kind of movement to be possible. But, empty space means a place where there is nothing. Taking this into account it seems that an empty or vacant space cannot exist. If, there is no empty space, there is no motion, if there is no motion, there is no change. Similarly, if we try to analyze how the objects differ from each-other, then we may have to say that the differences too are not real. Because when there is a difference between two objects, it is implied that there is no similarity between them. We distinguish between pen and pencil, because the way a pen is, pencil is not and the way a pencil is, a pen is not.

Using such arguments, Parmenides holds that, that which is real and is the ultimate substance, is one and it is complete. There is no emptiness or 'nothingness' in it. It is permanent and eternal. It is neither created nor destroyed. Hence, it has no beginning and no end! Parmenides' speculation is a perfect example of how a theory can be developed just by using logical reasoning.

The philosopher Heraclitus, however, took a stand completely opposite to Parmenides. According to him, change is the essential characteristic of reality. Reality is constantly changing. Impermanence is the nature of the universe. This process is best symbolized by fire; the flames of fire are constantly blazing. While constantly consuming fuel it keeps producing smoke and ash. It was due to this nature of fire, that Heraclitus considered fire to be the primordial stuff.



His saying 'no one can step into the same river twice' is well-known. This means that although there is continuity in the universe there is no permanence.

The universe attains some harmony through the strife of the opposites. Heraclitus explains this idea with an example of a bow. Have you ever made or at least handled a toy bow? So long as there is an equal tension on both ends of the bow string, its curvature is maintained. When the tension decreases or increases, the string breaks and the bow straightens. That means the curvature of the bow comes into existence and perpetuates due to two opposite and equal tensions! The characteristics of reality are impermanence and stability emerging from conflict. Although, Heraclitus, just like Parmenides, is a Monist, their views regarding the nature of the ultimate reality are completely opposite.

Many attempts were made to reconcile the impermanence experienced in the world and the influence of the view that the real must be permanent. In the pre-Socratic period, the pluralism of Empedocles and Democritus is significant in this context. Empedocles postulated the four basic elements namely, earth, water, fire and air. It is due to the two forces of attraction and repulsion that the elements integrate and disintegrate. Through these, the world is shaped.

Democritus and his master Leucippus were materialists. They realized that the process of dividing material objects would lead to atoms, the indivisible particles of matter. There is infinite number of atoms in the universe. Atoms are basically dynamic in nature. They are constantly moving in the void of the universe. They differ in shape and size. There is no qualitative difference between them whatsoever. But, because of the constant motion and different shapes, they become inter-connected and give rise to various objects. These objects, however, have different properties. When atoms are separated

from each-other by mechanical actions-reactions, the objects get destroyed. Democritus believed that these ‘happenings’ in the world are not intentional; there is no purpose whatsoever behind it.



Let's write!

Compare Vaisheshika's concept of 'atom' with that of Democritus.

Plato

In the pre-Socratic Western philosophy, we come across two main streams with reference to the nature of reality. According to one standpoint the ultimate reality is not that which is changing and impermanent. The ultimate reality is unchanging, indestructible and eternal. According to the other, impermanence, constant change is the true nature of ultimate reality. This world is impermanent and is constantly changing. This is the only unchanging truth. Socrates' disciple Plato tried to reconcile both these views in his theory of two worlds.

We always experience that the world around us is constantly changing. How can we deny that? That is why this world must be considered as real. But, according to Plato, the existence of this visible world depends on what he calls the world of forms. This world of forms consists of essences or universals that are shared by innumerable particular objects. These essences are beyond space and time. They are neither created nor destroyed. They exist forever and do not undergo change. What we call trees have so many different shapes, types and properties. Unless all of these particular trees have something in common, we cannot call them by a common name. What is 'common' in all of these? Treeness!



Let's talk!

Find examples of universals or essences. Discuss Plato's world of essences.

All the common nouns used in our language denote these essences that are known through reason, but not experienced by the senses. This world of essences is real and exists in actuality, whereas, the everyday world that we experience is just a copy, imitation, shadow or reflection of that world. In a sense the shadows and reflections are also actual. Have you ever thought that your reflection in the mirror is unreal? However, whether it is a shadow or a reflection its existence depends on the existence of that object of which it is a shadow or reflection. Similarly, Plato asserts that the existence of this world depends on the world of forms.

Aristotle

Plato's disciple Aristotle, however, completely rejected the notion of an independent world of forms. He thinks that the world we experience is the only world that existed, exists and will exist. Changes occur in this very world and he discusses the kinds and causes of these changes. We shall study Aristotle's theory of causality later. The central concept of Aristotle's metaphysics is substance. According to him, except the two fundamental changes; namely creation and destruction - all other changes occur in the substance. Just like Vaisheshikas, Aristotle presents various categories in order to study reality. Whatever exists can be classified under these categories – substance, quality, quantity, relation, place, time, position, possession, activity and being acted upon. Like Vaisheshikas, he too believes that substance is the most important category of all.



Modern Philosophy

Descartes

In medieval as well as modern philosophy, the concept of Substance was considered important in metaphysics. As we have seen before, the category of substance does not depend on anything else, whereas the other categories depend on the substance for their existence. To take the previous example, orange color, the round shape, the sour and sweet taste are all properties of an orange. Color, shape, mass, taste cannot exist at all unless they belong to something.

The French philosopher Rene Descartes, known as ‘the father of modern philosophy’, defined the Substance as ‘that which exists independently’.

Last year, you have studied Descartes’ method of doubt. Using this method of doubt, Descartes arrived at the indubitable truth, ‘I think, therefore I am.’ However, after deeply contemplating over the question, ‘who am I?’ Descartes accepted dualism. As per the prevalent beliefs, thinking and functions related to it are not of the body but of the mind. The intellect, emotions and desires are rooted in the mind. This means that, the ‘I’ that Descartes proved exists indubitably is

the mind. But in reality we use the word ‘I’, for our existence which includes both the body and the mind.

Descartes has asserted that the body and the mind are two separate entities. The body is made-up of material substance and is physical in nature. Material substance exists in both time and space and is experienced by senses. These are the essential characteristics of matter. On the contrary, the mind or the soul whose nature is consciousness, does not occupy space and it cannot be experienced by senses. Descartes concluded that the universe consists of two independent substances – corporeal substance and incorporeal substance which have opposite attributes. Here, one has to take into account that matter and consciousness are independent of each-other. Their existence doesn’t depend upon one another. But, they are not self-dependent. Both these substances are created by God. Therefore, above mentioned definition of Substance given by Descartes is applicable only to God. But, in the world created by God we can call matter and consciousness as substances in a limited sense because their existence doesn’t depend upon each-other. Descartes’ metaphysics advocates dualism and realism.

Spinoza

Descartes was followed by philosopher Spinoza, in this rationalist tradition. However he rejected Descartes’ dualism and proposed monism. The arguments he offered were based on Descartes’s definition of Substance itself. Spinoza argued that if knowledge of the substance does not depend on anything else for its existence, then there should be no need of knowledge of anything else for acquiring complete knowledge of it. Nevertheless, what we experience, as we try to gain complete knowledge of an object is that; we also have to obtain information of objects related to it. If you wish to know what a pen is, you need to know the paper

on which the pen is to be used, the words or the language that it writes, the people who can read it. This list can always be extended.

In short, all the objects in the world appear to be directly or indirectly related to each-other. Likewise, they depend on each-other. Spinoza asserted, that all these objects, in fact everything that exists, is a part of a single fundamental, limitless, eternal, infinite reality. This fundamental reality was called 'God' or 'nature' by him. According to Spinoza, it is the one and only principle that pervades the universe and everything that exists in it. This view is also known as Pantheism.

Leibniz

Leibniz is the third philosopher who accepts the concept of substance discussed above. He propounded pluralism, rejecting both Descartes' dualism and Spinoza's monism. Like the ancient atomists, Leibniz argued that if we keep dividing the visible objects into parts we may end-up reaching fundamental indivisible substance called atoms. However, he argued that these atoms are neither completely material nor physical in nature, but have a primary level of consciousness. He named these atoms as 'monads'.

There are infinite monads in the world and all the non-living and living beings are created from the combination of these monads. The universe is a hierarchical structure of these monads. God is the highest monad. He has created all the monads. Although, as per the principle of mathematics infinite combinations of these numerous monads are possible, Leibniz asserts that God has created this world as the best possible world. Thus, it can be said that Leibniz combines pluralism and idealism.

Hegel

Like Parmenides and Spinoza, Hegel

also advocates monism. But, his monism was of different nature. Parmenides' concept of ultimate reality has no room for motion, change and time. According to Spinoza the fundamental principle has infinite attributes; it is impossible for human-beings to know all of them; as human intelligence has limitations. Everything in the universe is related and inter-dependent, because there is one and the same fundamental reality at its roots. Hegel also believes that the entire universe is created from this principle. He calls this principle the 'Absolute'.

The 'Absolute' is one, the existence of which is not relative to existence of anything else, it is that which absolutely is. It is not material, Hegel believes, it is conscious, he also considers it to be of the nature of reason. In other words, this absolute is as if the fundamental power or force which is rational. It is also dynamic in nature. Many potentialities, possibilities exist in it in a dormant form. The aim of this absolute is to realize itself by actualizing all of its potentialities. It is in this process that the universe is manifested. The Absolute manifests itself in the form of matter and the universe evolves gradually. This evolution has a specific pattern. This is known as 'Dialectics'. It means that from the conflict of two opposite principles another better principle emerges. Subsequently, a principle opposite to this third one emerges and there is again a conflict between the two, giving rise to a new principle. According to this pattern, Hegel believes that the universe keeps evolving.



Let's talk!

Discuss the similarities and differences in monistic idealism in the metaphysics of Advaita Vedanta and Hegel.

The Scientific Perspective

Since ancient times, humans have tried to understand the world around them. The world is filled with many objects. Is there

any similarity between these objects? What makes them different from one-another? Is it possible that seemingly different objects have the same origin? Early humans started to think about such questions. These questions had emerged out of great curiosity about the surrounding world. The answers to these questions were sought in different ways. Sometimes, self-experience became the source of knowledge. Sometimes, imagination accompanied experience. Experiments were also carried out. These were the simple experiments that we perform even today. Like making a mercury-based barometer, measuring the speed of falling objects etc. This knowledge was based on experiments. The results of these experiments were verifiable by anyone. This category defined what we now call as objective knowledge.

Tools of experiment became more precise with time. Use of experiments and instruments became unavoidable to gain objective knowledge. This became a scientific way of finding the objective truth. The basic objective of finding out the nature of reality was just the same. However, as science progressed, the quest obtained more precision. Answer to one question gave rise to a new question. While trying to understand nature of reality at macro level, it appeared that things happen quite differently at micro or atomic level.

Newer tools changed the way we understand the nature of reality. It was not possible for every new entity and phenomenon that was found out to have any name from the beginning. This was new knowledge. It required new terminology. For example, it was impossible to imagine any such thing as 'nucleus' of an atom without powerful microscopes and other tools. Science has adopted such new terminology from time to time. Sometimes, the new terminology is quite similar to the old one, sometimes, even though the term is just the same the meaning changes completely. Philosophers have used terms like particle and atom since long.

However, there is a big difference between the way we understand these terms today and their original meaning. Sometimes, original terminology proves to be insufficient and thus, can't be continued as it is. Ether is an example of such terminology. Sometimes, when we are talking of mind or heart we are actually talking about brain. Science accepted such changes in the terminology. Use of terminology can be confusing if the proper meaning and the use of the term is not taken into account. Thus, improper or inappropriate comparison of old and new terminologies should always be avoided.



Let's write!

Along with your classmates prepare a list of questions in metaphysics which you believe, are not yet solved by Science.

How does science address the question, "what is" in today's times? Universe is made up of particles such as atoms, molecules, ions, photons etc. The very existence of particles gives rise to various forces (gravitational, electro-magnetic and the two sub-nuclear forces acting on each-other) between them. These forces influence properties of matter, different processes that occur in nature as well as growth and behaviour of living organisms. The machines and gadgets that we make and use also function according to these forces and other laws of nature. Thus, it is important to understand the laws of nature and their effects on human life. Motion of particles is what we call 'energy'. Today science explains the nature of reality in this terminology.

This is just a brief introduction. Many branches of science are seeking to find the nature of reality. This quest has revealed certain important laws of nature. They are also called as the universal laws. Knowledge of these laws is the greatest achievement of science.

We saw what science has to offer with respect to metaphysical questions. It is difficult to conclude this discussion without a reference to its ethical implications.

The ethical concerns are - does this quest ever stop? Do we ever feel satiated with the answers? These are some major concerns regarding the development of science. We have acquired knowledge of laws related to matter and energy. However, we hardly discuss their effects on human life. Instead, all our curiosity is directed towards big bang theory and expansion of the universe. If, curiosity was limited only to the level of thought, there was no need to raise any concern. But, we use tools, equipments and instruments for it. They

need resources at a gigantic scale. Thus, how to prioritize the use of resources becomes a matter of debate. Should we exploit resources for the sake of knowledge that has little or no significance for human life? Ethical questions like these are important in the progress of science. Scientists take different positions on these issues. This increases the possibilities of keeping scientific progress on the right path. We will adopt scientific perspectives in our lives in a better way if we keep ourselves aware of the development of science. A healthy debate on ethical issues in science in which scientists and society equally participate will always be important for appropriate development of science.

Sat - सत्
Jiva - जीव
Ajiva - अजीव
Atma - आत्मा
Abhav - अभाव
Dravya - द्रव्य
Guna - गुण
Vishesha - विशेष
Samanya - सामान्य
Karma - कर्म
Samavaya - समवाय
Purusha - पुरुष
Prakriti - प्रकृति
Mahat - महत्

Buddhi - बुद्धी
Ahankara - अहंकार
Manas - मनस
Jnanendriya - ज्ञानेंद्रिय
Karmendriya - कर्मेन्द्रिय
Tanmatra - तन्मात्रा
Mahabhutas - महाभूते
Yuga - युग
Brahman - ब्रह्मन्
Brahmadnyana - ब्रह्मज्ञान
Pratibhasika - प्रातिभासिक
Vyavaharika - व्यावहारिक
Paramarthika - पारमार्थिक

EXERCISES

Q.1 Fill in the blanks choosing the correct option from the bracket.

- (1) Experience of objects is about the form color, shape, type etc. of object.
(material, imaginary, philosophical)
- (2) darshana classifies all the things

into jiva - ajiva types.

(Sankhya, Jain, Nyaya)

- (3) Instruments and experiments are necessary to acquire knowledge.
(subjective, inter-subjective, objective)
- (4) According to Plato, existence of visible

world is dependent on world of

(forms, reflections, material objects)

- (5) According to Descartes, corporal and incorporeal are two independent substances which have qualities.

(opposite, inter-dependent, inter-relational)

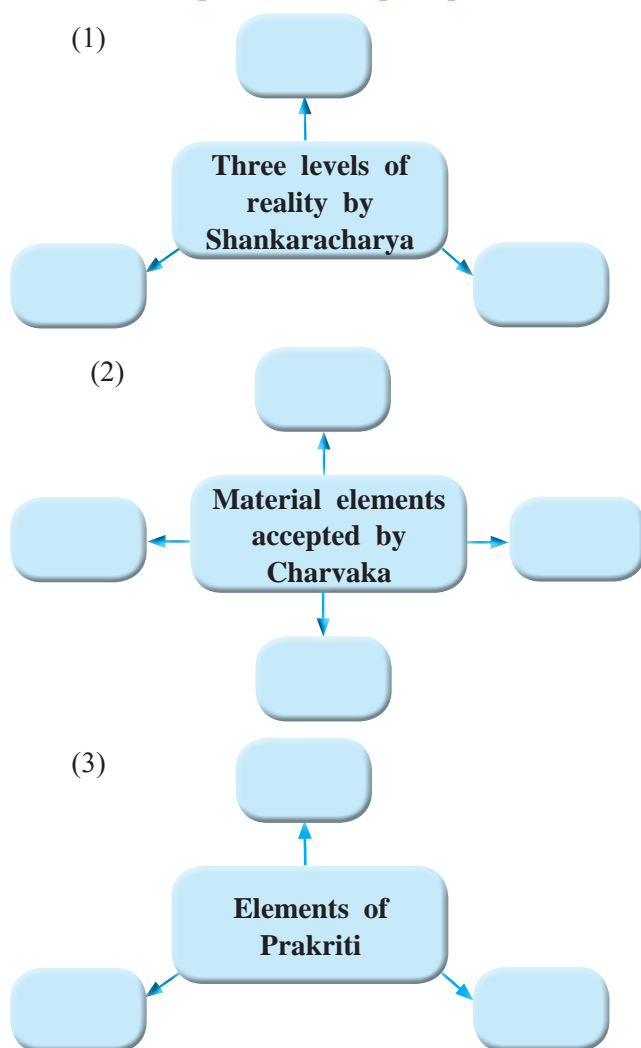
Q.2 Find the odd word/pair out and write.

- (1) Thales, Anaximenes, Heraclitus, Descartes.
(2) Materialism, Realism, Asatkaryavada, Chidvada.

Q.3 State with reason whether the following statements are true or false.

- (1) Leibniz was a monist.
(2) According to Parmenides reality is changing.
(3) Charvaka advocates materialism.
(4) Shankaracharya does not consider Pratibhasika Sat as ultimate reality.

Q.4 Complete the concept-map/flow-chart.



Q.5 Write the answers in 20-25 words.

- (1) What are the forces created by particles in the world?
(2) How many substances are given by Vaisheshikas? What are they?
(3) What is the dialectical method given by Hegel?
(4) State the nature of the atoms Democritus?

Q.6 Write a short note on the following.

- (1) Abhava
(2) Monism
(3) Heraclitus's notion of reality.
(4) Nature of Atoms according to Vaisheshikas.
(5) Hegel's concept of 'Absolute'.

Q.7 Explain the following statements with examples.

- (1) You cannot step into the same river twice.
(2) Terminology becomes outdated.

Q.8 Distinguish between the following:

- (1) Materialism and idealism.
(2) Dualism and pluralism.

Q.9 Explain in detail Descartes' dualism and Spinoza's monism.

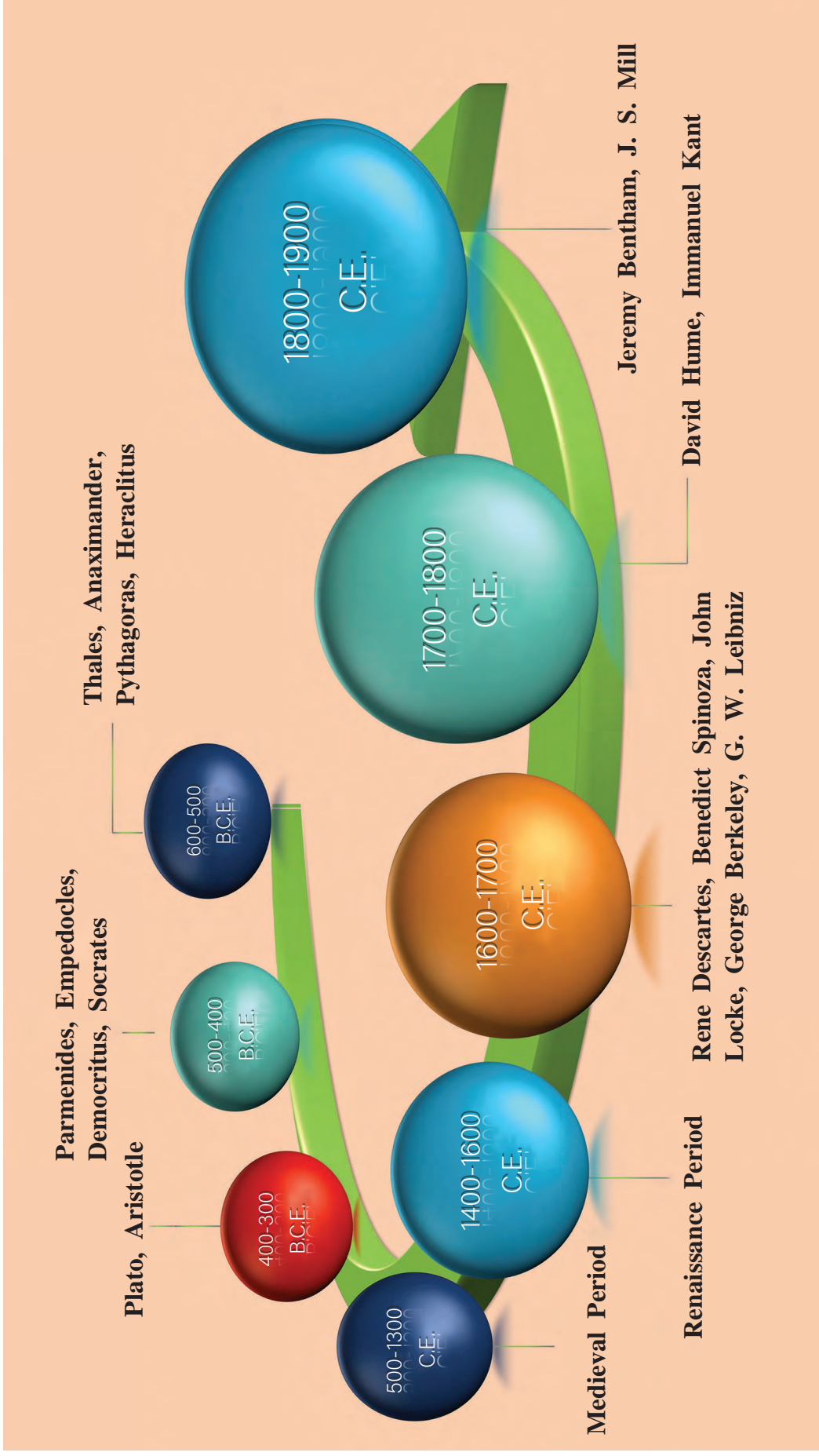
Q.10 Explain completely Sankhya's view about reality.

Q.11 Write a dialogue on the following:

Helping your classmate who believes that the things we see in dream are real, to understand the concept of 'Pratibhasik Sat'.

Activity

Prepare a play on the theme of philosophical discussion about Materialism and Idealism. Present the play in the annual gathering.



This is a timeline of the history of Western Philosophy. In this timeline, some of the most important philosophers are mentioned in chronological order along with certain time periods that are crucial in understanding the history of Western Philosophy.