

GENERAL KNOWLEDGE PRIMER



Class: 7,8 & 9 Category: Pre-Senior

GENERAL KNOWLEDGE PRIMER

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"We have made every effort to update the information in this book in a simple manner for the easy understanding by students. In this fast-moving world, a lot changes in a split second, and therefore, nothing replaces staying current and reading on a regular basis, to keep oneself updated. This is our modest efforts to cover the basics of General Knowledge, both of the world and India."

Founder Author
Late Mr. Jiya Lal Jain
Founder and Secretary General
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FOUNDER AND SECRETARY GENERAL OF UNITED SCHOOLS ORGANISATION OF INDIA LATE MR. JIYA LAL JAIN





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CHAPTER 1 Life on Earth

For 500 million years, Earth was a giant planet with hot rock, and it was constantly bombarded by asteroids and meteorites. With each space rock that crashed, its energy was converted into more heat, thereby delivering chemical elements. As Earth cooled, volcanoes filled the air with toxic gases, along with vast quantities of water vapour. This water vapour fell as rain and filled the ocean. Lightning may have caused chemical reactions in the water there by forming complex molecules. These molecules formed the 'basis of life'.

The chemical processes that followed needed to take place in a protected environment. This gave rise to tiny, toughwalled bubbles, which were the first living cells. These microscopic packages of life-giving chemicals were called bacteria - the simplest surviving living forms.



Life needed energy. The first cells used chemical energy, but about 3.5 billion years ago, cells called cyanobacteria started using solar energy to make food from water and carbon dioxide, releasing oxygen.

It is likely that the first living cells developed in warm coastal pools of salty water. However, life may have begun in the deep oceans, around hot volcanic vents. As soon as life began, it started to change. Over time, these changes give rise to new forms of life. This process of change is called Evolution, and this created diversity of life on Earth.

Every living being is slightly different from its parent. If the difference helps it to survive, it is likely to pass the advantage do its own young. This is the basis of evolution. After several years, these may lead to a change large enough for the result to be called a different species.



Natural Selection

Life in the natural world is like a competition, with winners and losers. Those that survive and breed, have a combination of qualities that helps them thrive in their habitat. However, with changing conditions, the winners may turn into losers. This process resulting in the survival of those individuals from a population of animals or plants that are best adapted to the prevailing environmental conditions, is called natural selection. The survivors tend to produce more offspring than those less well adapted, so that the characteristics of the population change over time, thus accounting for the process of evolution.

The remains of plants or animals preserved from prehistoric times are called fossils. Fossils are found in sedimentary rock, asphalt deposits, and coal and sometimes in amber and certain other materials. The scientific study of fossils is called palaeontology. The scientists who study fossils are called palaeontologists. They are experts at finding, identifying and preserving fossils.

The history of life is not a story of steady progress. Living things have faced many global disasters caused by asteroid impacts and climate changes. Some have left very few survivors, which had to live in an altered world. This has changed the direction of evolution several times, so new types of animals and plans have evolved while others have become extinct. For about 84% of Earth's history, the largest life forms were microscopic bacteria.

THE LIVING WORLD

Every species of living thing is related to others that have evolved from the same ancestors. They form groups of species that are related to other groups in the same way, like a giant family tree. This tree has six main stems - the six kingdoms of life. Three of these kingdoms are made up of organisms that are mostly too small to see without a microscope, but the others consist of animals, plants and fungi. The six kingdoms are:

ARCHAEA

• First life forms on Earth, consist of a simple structure - single cell enclosing a tiny drop of fluid containing molecules vital to life. Live in hostile places such as hot, acidic springs;

BACTERIA

• Cyanobateria has produced almost all of the oxygen in the atmosphere. Similar cell structure as in Archaea;

PROTISTS

 Also known as algae and protozoans. Mainly singlecelled, with a distinct nucleus;

FUNGI

• Feed on other living or dead organisms. Some fungi are single-celled microbes;

PLANTS

 Multi-celled living things that use energy from sunlight to make food. Release oxygen that is vital for animal life;

ANIMALS

Multi-celled organisms that can mmove about freely.
 Cannot make their own food. Eat other organisms or plants.

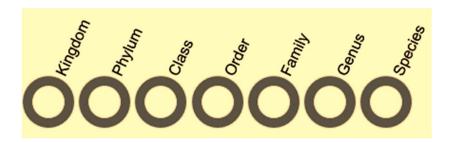


The animal kingdom has the largest total number of named species. Scientists estimate that there could still be upto 8.7 million undiscovered animal species.

Life has evolved into a variety of life forms. There are almost 1.8 billion known species and many more yet to be discovered. Life is everywhere on Earth, but some areas have more species than others. Such areas are called 'biodiversity hotspots'. The warm tropics are the richest especially tropical rainforest and tropical coral reefs. Biodiversity is the variety of plant and animal life in a particular geographical area or habitat. No plant or animal species operates in a vacuum; each is part of an ecological system.

Classification of Life

Each of the above kingdoms of life, are further classified based on the similarity of their nature. Both plant and animal forms have followed the taxonomic categories as below:



RELATED CONCEPT

What are viruses?



A virus is a microscopic infectious agent that enters animal, plant or bacteria hosts. Viruses have been excluded from the above classification since viruses cannot survive on their own and need a host cell. Antibiotics have no effect on viruses.

What is essential for life?

All living things have basic needs - water being the most essential without which chemistry of life is not possible. Living things need raw materials to build their tissues, energy to fuel the processes that turn chemicals into living cells. While all living things need the same essentials, many have more specific requirements. For instance, plants need sunlight, while animals need energy rich food. Some other living requirement of living beings are warmth, shelter, nutrients, energy, living space, oxygen etc.

What is photosynthesis?

Photosynthesis is the process by which plants using carbon dioxide from the atmosphere, water from the soil and sunlight, convert energy into food. The end product is sugar, which is food for plants. The waste product is oxygen which is released into the atmosphere. Chlorophyll, the green pigment in leaves is essential for photosynthesis. The word 'photosynthesis' means *putting together through light*.

Food Chain

All living things need energy. Plants and other organisms gather energy from sunlight and use it to make sugar. Animals eat the plants and turn the sugar back into energy and body tissues. Other animals eat the plant eaters, so the energy along with vital nutrients, passes down a food chain. Eventually the energy and neutrons are turned into a form that can be recycled by plants.

What are warm-blooded and cold-blooded animals?

A feature unique to warm-blooded animals is the ability of the animals to maintain a constant body temperature (99°F for humans). Cold-blooded animals cannot maintain a constant body temperature. Since they do not turn energy into body heat, they rely on their habitat to provide the warmth their body needs. E.g.: Snakes.

One of the biggest differences between animals and other life forms is the evolution of nerve cells. Nerves send messages flashing through its body, allowing it to respond instantly to its surroundings. More complex animal life forms, have a complex of nerve cells called 'brain', which helps them with unique characteristics such as instinct, memory, ability to teach and learn.

What is the meaning of 'threatened species'? Due to changes in the environment, certain species may be

threatened and become endangered with all or most of its population. For instance, the polar bear, a victim of global warming, is a threatened species.

Extinction is the permanent loss of a plant or animal species when they fail to reproduce at the same rate as they ultimately die. Extinction generally occurs due to environmental changes, and the inability of the species to adapt to the

changes. Since life began on Earth, there have been 5 mass extinctions. Extinctions are catastrophic events that have killed a large population of life on Earth, most likely caused by natural forces. After each extinction, life recovered slowly and new types of animals, plants, and other living things appeared. Evidence suggests that we are in the early stage of a sixth mass extinction caused by human activity. The dinosaurs are an example of an extinct species.



- The scientific name for human beings is Homo Sapiens.
- Giant horsetail plants formed into coal deposits millions of years ago.
- Cacao plant, from which chocolate is made is in fact a medicinal plant, used to treat several ailments.
- Fermentation is the process of respiration in the absence of oxygen.
- The island of Madagascar has the greatest concentration of unique plant and animal species on Earth.
- Most large animals have millions of microbes living in their stomach that help them digest their food.
- After a big meal, the great white shark can go without food for up to two months.
- The biggest snake in the world is the South American Green Anaconda.
- A large crocodile can survive for 12 months between meals.
- The size of 1 ostrich egg is equivalent to 24 chicken eggs.
- A dolphin's brain is bigger than a human brain.
- An elephant spends 18 hours a day eating to fuel its huge body.
- Nearly 40% of the world's oxygen is produced in the tropical rainforests.

CHAPTER 2 The Human Body

The human body is a complex machine containing 206 bones, 650 muscles and 75 trillion cells, all packed together beneath the skin. Our bodies are 60% water. The human body is made from simple chemical elements - the most abundant being oxygen and hydrogen. By mass, the human body is 65% oxygen. The next most abundant element is carbon which form the backbone of all organic molecules such as carbohydrates, fats and protein. Some elements such as sodium, magnesium and iron are essential for life and needed in small quantity.



How is the human body organized?

The human body is constructed from simple parts, that fit together in an organised manner. Small living units called cells join

together to form larger structures called tissues which build organs and organ systems.

The various building blocks of the body are:

Atoms and Molecules:

The smallest individual parts in the body are atoms and molecules. The DNA molecule stores the instructions needed to build and maintain the body.





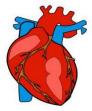
Cells:

Every part of the body is made up of tiny living units called cells. There are nearly 75 trillion cells in the human body, that are specialized to do specific jobs.

Tissue:

Cells join in groups to form tissues. For instance, the wall of the heart is made of special kind of muscle tissue. Other tissues include skin, bone.



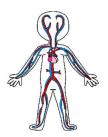


Organ:

Tissues join together to form organs (such as heart, stomach or brain. Organs perform a specific job. For instance, the heart's job is to pump blood all over the body.

System:

Organs work together in systems. The heart is part of the circulatory system along with all the blood vessels and blood.



There are eight various systems that make up the body. These are:

NERVOUS SYSTEM

- •This system allows our body to react with speed.
- •Thousands of nerves run through the body, carrying electric signals to and from the brain.
- •Some nerves bring signals from the sense organs to the brain, while others send signals to muscles to make the body react.

RESPIRATORY SYSTEM

- •Our body's cells need oxygen which comes from the air.
- •The respiratory system's job is to take in oxygen and pass on to the blood.
- •Lungs the main organ of the respiratory system suck in air when we breathe.

CIRCULATORY SYSTEM

- •The heart, blood and a network of blood vessels makeup the circulatory system.
- Its job is to transport vital supplies such as oxygen and food molecules to all parts of the body.
- Blood also carries away waste chemicals for disposal.

DIGESTIVE SYSTEM

- •What we eat passes through the digestive system.
- •The organs of the digestive system breakdown the large molecules in food into smaller molecules that the blood can absorb.

REPRODUCTIVE SYSTEM

- •This body system works only during adulthood.
- •It helps humans procreate.

MUSCULAR SYSTEM

- Muscles make us move.
- •The largest muscles work by pulling on bones allowing us various movement.
- •Muscles also keep our heart beating and churn the food inside the stomach.

IMMUNE SYSTEM

- •The job of the immune system is to keep us healthy by fighting off germs (microscopic organisms that can cause diseases).
- •Any germ that gets inside our body are attacked by white blood cells found in the blood and tissues.

SKELETAL SYSTEM

- •The skeletal system is a tough living framework of bones that supports the weight of our body.
- •It also protects the delicate internal organs, such as the brain and heart.
- •The skeletal and muscular systems work together to help us move our body.

WORKING OF THE HUMAN BODY

Throughout history, the workings of the human body were a mystery. People relied on supernatural theories to explain diseases. The earliest recorded attempt to study the body scientifically, date back to ancient Egypt. But it took many centuries before we discovered how the living body works and why illness occurs.



Ancient Egyptians

When preparing bodies for mummification, the ancient Egyptians pulled out organs to preserve them separately. This is when they discovered that the heart is a kind of pump that pushes blood all over the body.

Father of Medicine

Hippocrates, the ancient Greek doctor, is known as Father of Medicine. He was one of the first to realise that diseases have natural causes and are not punishments by Gods.

Dissecting bodies

Flemish professor, Andreas Versalius dissected corpses (cut up dead bodies) in the 1500's and made detail drawings of the bones, muscles and organs. His pioneering work, which was published in a textbook, turned the study of the body into the science of anatomy.

Discovery of cells

Dutch lens maker, Antonie van Leeuwenhoek built one of the first microscopes. He used to view blood cells and discovered the microscopic organisms that cause diseases.

DNA

In 1953, English scientist Francis Crick and his colleague, James Watson, figured out the structure of DNA (deoxyribonucleic acid). The DNA molecule carries the instructions for life as a simple four-letter code.

LOOKING INSIDE

In the past, doctors could only find the inner workings of the human body by dissecting corpses. Today, there are several technologies that allow doctors to examine the human body. These techniques make it possible to identify diseases in its early stages.



X-ray image

X-rays are a form of electromagnetic radiation (like light), but are not visible to our eyes. They are shone through the body and captured by cameras to make an image of bones.

MRI scan

An MRI (magnetic resonance imaging) scanning machine uses powerful magnets to make water molecules in the body give out radio waves. A computer turns these waves into an image of the organ, part or body.

CT scan

In computerized tomography (CT), beans of X Rays are shone through the body from multiple angles and then used by a computer to build a 3D image. Doctors use the technique to view 'slices' throughout the body.

Ultrasound

This technique is widely used to see babies in the mother's body. High-pitched sound waves that we cannot hear, are beamed into the body, which bounce off the internal organs producing echoes that a computer turns into images.

Endoscope

An endoscope is flexible tube with a tiny camera and light at the end. It is pushed into the body through either a natural opening, such as mouth, or through a small incision.

Light microscope

Like telescopes, light microscope use glass lenses to magnify an image. Doctors use these microscopes to see the body cells in a tissue sample and look for signs of disease.

Electron microscope

More powerful than the light microscope, an electron microscope can magnify images up to 10 million times. This allows us to see germs such as bacteria and viruses, in greater detail.

HUMAN SENSES

The sense organs gather information and send to the brain in the form of electric signals. The brain decodes this information and uses to create awareness. There are 5 main senses that dominate world: vision, hearing, smell, taste and touch. We also have additional senses. These additional senses help us move, balance, detect heat, feel pain and the passage of time.

The human body is not made to last forever. As we age, many organs go into decline, as do the risk of diseases. With advancement in medical sciences, better diet, life expectancy is higher today, than it was earlier. However, it is greatly

varied around the world. The average life expectancy is highest in Japan and lowest in central Africa.



- The longest cells in the human body are the nerve cells that run from our spine to our toes.
- A single cell in our body contains 2m (8 ft) of DNA.
- The life span of a skin cell is one month.
- 50% of the bones in the skeleton are in the hands and feet.
- Calcium is the most abundant metal found in the human body.
- An average meal spends 4 hours in the human stomach.
- The length of time a heart can survive if removed from the human body is 5 hours.
- An allergy occurs when the immune system attacks something harmless like dust or pollen.
- Antibodies are chemicals that stick to specific germs and destroying them.
- A vaccine triggers our body into producing antibodies, making us immune to the disease without suffering it.
- 1,700 litres of blood passes through the kidneys each day.
- We breathe 10,000 litres of air each day.
- Our right lung is slightly bigger than the left lung.
- 20% of our energy intake is used by our brain.

CHAPTER 3 The Ancient World

Around 10,000 B.C., the Ice Age waned, and the planet began to war. Humans now had to adapt since a lot of things around them changed. Large mammals that people relied on for food, had perished due to global warming. Meanwhile, edible plants flourished. There are Three Ages of Human History. They are:

First phase of tehnological development. Divided into: Paleolithic. Neolithic. ·Neolithic age is also called the New Stone Age **STONE AGE** which introduced the production of tools and weapons made of copper and other metals. tools. **BRONZE AGE**

•Techniques were developed of micing molten copper with tin or other alloys to produce metal

Mesolithic.

and

•Inventions include the wheel and ox-drawn plow, which increased agricultural potential.

IRON AGE

- In this age, iron tools and weapons were developed.
- ·Iron ore was more widely available than tin which was needed to produce bronze.
- •Great cities of the ancient period date back to this period.



What does B.C. and A.D. mean?

B.C. stands for 'Before Christ' and A.D. stands for 'Anno Domini' (Latin for 'In the year of our Lord'). In order to date historical events, scholars used the year that Jesus Christ was

born as the baseline to date events. BCE (Before Common Era) and CE (Common Era) have largely replaced BC and AD respectively.

OUR CIVILIZATIONS

As human civilization progressed, ancient cultures built impressive cities, built their military capabilities, kept records, developed literature and codified laws. Our history can broadly be divided into: The Ancient World, the Medieval World, and Modern Times.

ANCIENT CIVILIZATIONS

During the late Stone Age, nomadic tribes of hunters began to settle down. They planted crops, instead of gathering food from the wild, and built farm and houses instead of living on the move. Farming offered more reliable food source than hunting and gathering. Farmers could grow crops, rear and breed livestock, thereby producing more food every year. The extra food could be stored in case of famine. At the same time, staying in one place made the settlers vulnerable to raiders who could steal livestock and food. People had to be able to defend themselves by building walls around their homes.

As early towns grew, they had to develop new systems of government, new means to store and distribute food, and new ways to protect themselves. The strongest settlements expanded their territory by conquering their neighbours thereby creating the first empires.

One of the most powerful early empires belonged to the Babylonians. In the 18th century BC, they conquered a large area (of what is now the Middle East), but were defeated by their rivals - the Hittites. They rose to power again in the 6th century BC and their capital city, Babylonia became one of the richest and most magnificent in the ancient world. Mesopotamia was the first human civilization of the world. It originated in southern Mesopotamia, where the Tigris and Euphrates Rivers converged. The inhabitants, called Sumerians, made great progress in agriculture, trades, architecture, law and order. As a result, their cities expanded into city-states.



What was Hammurabi's Code?

Hammurabi was the 18th century BC ruler of Babylon, who united Mesopotamia under the authority of his laws titled Hammurabi's Code. He also set forth a collection of laws, which

were recorded on a stone marker. These laws appeared harsh, but putting down laws protected people. The reason why laws were needed was because as empires grew, their people required detailed written laws to resolve disputes and protect property.

Indus Valley Civilization

Along the Indus River Valley, since the land was extremely fertile, there were abundant harvests in the cities of Mohenjo-Daro and Harappa. This civilization arose around 2500 B.C. and the cities had standardized housing for the common people, larger residences for the elite, sanitation system with bathrooms linked to sewers. The timeline of the civilization is:

1500 BC Aryans Invaded Indus Valley. Aryan rulers were called rajas, forming kingdoms across

northern India.

520 BC	Persians conquered Indus Valley. Indus Valley
	was made a province of their empire.
320 BC	Alexander the Great invaded the Valley.
300 BC	Chandragupta Maurya, from Magadh, united
	India under his rule. His grandson, Ashoka,
	renounced violence and embraced Buddhism.

Egyptian Civilization

For more than 3000 years, Egypt was home to one of the most advanced civilizations of the ancient world. They have left behind many clues about their way of life - from religious text to huge mysterious pyramids.

Who were the Pharaohs?

Since Egypt's Nile Valley was extremely fertile, farmers could increase the amount of land under cultivation and produce food to support other people - priests, rulers etc. Some powerful men, called pharaohs (great house) collected grains as taxes and drafted troops and labourers for military campaigns. Over time, 'pharaoh' began to mean the king, and his palace. They were considered 'children of the gods'.

The complex Egyptian society had strict layers - priests, governors, mayors, soldiers and peasants. All developed a detailed system of writing to keep records of wealth and ownership. Egyptian life was full of rituals. They worshipped hundreds of gods and goddesses. Pharaohs and priests performed complex rituals to ensure good crops, keep away diseases and bring success in wars. They also built massive tombs for their dead, many of them stuffed with gold and treasure.

Mummification is the practise of ancient Egyptians to preserve the body after death. They do so by removing the

perishable internal organs and embalming the remains. The internal organs were removed from the dead body, and kept in containers called canopic jars, and housed in a shrine. Originally confined to royalty, later times saw mummified animals being buried as offerings to gods.



Ancient Egyptian writing used pictures called hieroglyphics. Each symbol would present a sound, a word or action. Instead of paper, the Egyptians used flattened sheets of a type of reed called papyrus.

Greek Civilization

Greek civilization began on islands in the Eastern Mediterranean Sea, around 2000 BC. With time, as the city states grow more sophisticated, they gave rise to great thinkers, builders and writers. They also defeated the armies of the powerful Persian Empire to the East. The Greeks believed in many gods and goddesses, and told stories so that they could be remembered. The first known democracy was formed in Athens. All political decisions in Athens, were taken by a political vote. However, voting was restricted to male citizens, who only made up to 12% of the population. 6,000 minimum number of citizens were needed for a vote to be valid.

The Greeks also held regular athletic contests in honour of their Gods. The most important of them were the Olympic Games which were founded in 776 BC and held every four years. The athletes who took part had to be Greek citizens although they completed



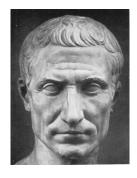
individually. They were rewarded with wild olive leaves.

Alexander the Great, considered himself as the hero of ancient Greece. He was tutored by Aristotle, the Greek

philosopher, and claimed that he descended from Achilles, legendary leader who was instrumental on the assault on Troy. He conquered the Persian empire, and founded cities on the Greek model. One such main city is Alexandria, Egypt. He was the greatest Greek King and a military genius whose empire stretched all the way to India. He was victorious in every war he led.

Roman Civilization

From its beginning as a small village in central Italy, the city of Rome came to rule over one of the largest and most prosperous empires in history. Rome was first ruled by Kings. In 509 BC, the Kings were replaced by Republic and control of the city fell to consuls chosen by the Senate. The Senate appointed generals to lead Rome's armies in conquests. They also built new cities and roads, imposed Roman laws on the conquered subjects. The Roman spread wealth, stability and valuable new ideas all across their empire. As the Roman army grew stronger, its generals became more powerful than the Senate. A series of civil wars between military leaders, led to the collapse of the Republic. This is how Julius Caesar became the sole ruler. His adopted son, Augustus became the first Roman Emperor.



Who was Julius Caesar?

Julius Caesar was the Roman dictator who is touted as the greatest military commanders of history. Caesar was assassinated by a group of rebels led by Mark Brutus, his friend and confidente. He was stabbed 23 times when he was assassinated

Romans came to be known for their politics and philosophy. Roman authors produced great works of history, poetry, politics and philosophy. They were also astonishing engineers and used concrete to build strong watertight structure, and invented stone arches. They were also instrumental in building a huge network of roads allowing armies, messengers and traders to move quickly within the empire. Combined with regular and careful recordkeeping, the Romans were able to control a huge and prosperous empire.

Imperial China

At its height, China was one of the most powerful empire in the world. China is also one of the world's oldest civilizations, with written records going back to 3,500 years ago. Its history includes long periods of civil war and conflict with neighbours. Despite all of this, the Chinese Imperial society, was extremely stable and well organised. From the first century BC, the government was run by civil service which would later on only be entered by passing difficult exams. Chinese explorers established trade routes as far as Africa and Arabia. Chinese craftsmen created some of the most important inventions in human history – paper, gunpowder and porcelain.

Several dynasties rose to power over the centuries. Some brought war and famine, while others saw incredible advances in philosophy, technology and art. The first ruling dynasty in the 16th century BC, under the Shang, but they controlled only a part of the vast empire that would follow.

Shang dynasty succeeded the Xia dynasty, which was then succeeded by the Zhou dynasty. It was during the Zhou dynasty that great sages lived. Under their rule, Laozi (founder of Tao philosophy) and Confucius brought codes that still influence Chinese culture today. At the end of Zhou dynasty, China was split into several warring states as their rules founght for land and power. After nearly 200 years of

conflict, the ruler of the strongest kingdom, Qin, unified China after centuries of war. Qin Shi Huangdi (First Emperor) became the Emperor in 221 BC. Upon his death 11 years later, he was buried in a vast complex, guarded by an army of thousands of terracotta warriors, complete with weapons and armour.

The Yellow River in China came to be known as such due to the fertile yellow soil along its banks. However, the river would be clogged regularly causing floods. A king called Yu, from the Xia dynasty, helped find a way to build flood-controlled projects along the banks, and thus gained popularity.



The Ancient Americas

Dating back to 3000 BC, a series of advanced cultures dominated South and Central America. Centered on powerful city-states they were often at war with one another. The first cities were built by the Chavin people (in South America) and the Olmecs (in Central America) around 1000 BC. Both of these cultures, constructed huge pyramid-shaped temples, which became a feature of the cities that were built in the region over the next 2000 years. Different cultures rose and declined over centuries, until most of the city states has become part of the Inca Empire (in Peru) or the Aztec Empire (in Mexico). However, both of these empires were eventually conquered by European invaders in the early 16th century.

CHAPTER 4 The Medieval World

Historians generally divide the Middle Ages into three smaller periods: The Early Middle Ages; the High Middle Ages; and the Late Middle Ages. In the entire period during the Middle Ages, the Church gained significance importance among the people; the Kings felt that they had supreme power and the upper class-maintained control over the lower class. The Middle Ages began with the collapse of the Roman Empire around 500 A.D. During the late Middle Ages (1000 A.D. – 1500 A.D.), the Crusades began; and Europe suffered several wars and disease. Several fairy tales have their roots in the Middle Ages, which are related even to this day.

The Fall of Rome

In the 5th century AD, the Roman Empire collapsed splitting into smaller kingdoms that were poorer and less advanced than the Romans had been. A huge Arabian empire arose in the Middle East which was built on the knowledge of the ancient Greeks and Romans. Meanwhile, in India and China, new empires discovered scientific advances that would not be matched in Europe for hundreds of years.

In the 4th century AD, the Roman Empire split between East and West. The Western Empire, ruled from Rome, became weaker as its armies could not defend against barbarian raiders from Germany. By the by the end of the 4th century it had lost much of its territory and by 476 AD, the last emperor of Rome had lost his throne. The Eastern Roman Empire survived longer than the Western Empire. Emperor Justinian recaptured Italy and North Africa, but the empire was invaded by Muslim armies soon after. The Ottoman Turks conquered the capital, Constantinople, in 1453.

Around 450 AD, barbarian tribes had setup kingdoms in lands previously owned by the Romans. The new Kings adopted some Roman customs, such a giving our written laws. The Huns, Goths, Angles and Saxon, Magyars and Vikings were some of the Barbarian tribes.

Changes in Europe

Everyday life in medieval Europe was dominated by the Church on the one hand, and powerful Kings on the other. France was conquered by the Franks, a Germanic tribe, but went on to become the most powerful country in Europe. They fought and won the 100 years' war with England (from 1337 – 1453). The Moors, the Islamic People from North America, conquered Spain in 8th century. They were driven out of after a series of wars lasting 1492. Most devastating of all, was the Black Death.



What was the Bubonic Plague?

The bubonic plaque is a disease caused by rodents that had been infested by fleas. This was also known as 'black death', as black sores that covered the bodies of victims before they died. This was the

most widespread outbreaks in history, killing more than 20 million people in Europe.

Who was Joan of Arc?

Joan of Arc was a French farmer's daughter, who inspired the French troops to advance and fight against the English forces, because of which the French troops won. She was captured a year later by the English troops, and burnt alive at age 19. However, she still remains a hero for the French.



During the medieval period, the Christian Church grew even more powerful. Most people paid one-tenth of their income as tax to the church, with which huge cathedrals sprang up in cities across Europe. The head of the Church was the Pope, based in Rome. His power often made rulers resentful.

Asia in the Middle Ages

During the Middle Ages, trade grew which gave Asia even more prominence. In addition to that, several wars and conflicts also took place simultaneously, giving rise to several prominent leaders. Some of the greatest empires of the medieval period were in Asia. India, China and Japan had courts and governments that far more advanced than in Europe. Between the 12th and 15th centuries, China was conquered by the Moguls, Japan was engulfed civil wars and India was invaded by tribes from the North.

India: From around 320 AD, much of India came under the rule of the Gupta empire, famous for its wealth and advances in literature art and science. After almost 150 years of peace, the Gupta empire fell around 570 AD. North India came under the rule of the Harsha empire but when their leader died in 647 AD, India broke up into smaller kingdoms only reuniting in the 13th century.

China: China was divided for many centuries into warring kingdoms. In 618 AD, it was reunited under the Tang dynasty. The Tang capital at Chang'an lay at the end of the Silk Road (trading route from Asia to the Mediterranean), bringing fabulous wealth to China. Under the time roll Tang rule, Chinese armies captured many towns and reached the borders of Persia. A huge uprising in 755 weakened the Tang empire and in 907 China fell apart.

Japan: Japan in the Middle Ages was ruled by an emperor but governed by military generals called *daimyo*. These

generals often fought amongst themselves. At the head of their armies, were some of the most fearsome warriors of all times: the samurai. The samurai lived at the top of a strictly layered society. While and emperor and his family held the most respect, the samurai controlled the wealth and political power. Rich and influential *daimyo* gave their samurai supporters gifts of land and the samurai would fight for them in exchange. The peasants working on the land paid taxes in return for food and money.

The samurai began as bodyguards to the emperor, but by the 12th century, they became the real rulers of Japan. Although the emperor was officially still in charge, true power rested with the *shogun*, the head of the most powerful samurai clan. Many battles were fought between the rival *daimyo* for the honour of becoming *shogun*. The greatest of these took place between 1550 and 1600, the *Sengoku period* during which all of Japan was launched into civil war. The victor was Tokugawa leyasu, who ushered in a peaceful age known as the *Edo period*. In 1868, a new government replaced the Tokugawa rulers. To modernise Japan, they abolished the samurai. It was from 1633 – 1853, that Japan had completely isolated itself from the outside world. During this period, no foreigner could enter Japan.

The Japanese did not have any written language when they first came under the influence of China. They adopted the Chinese script, and Japanese scholars spent years mastering its complexities. It was in the ninth



century that 'kana', a simpler phonetic Japanese script was developed. It could be learnt without any lengthy schooling and was also learnt by women.

The Mongol Empire: In 1206, the nomadic tribes of Mongolia were united under one ruler, Genghis Khan. He conquered a vast empire including much of Central Asia, Persia and China. The Mongols were famous and astonishing archers, master horsemen and brutal warriors. By 1279, the Mongols controlled around a sixth of the Earth's entire land surface. Their last major conquest was China.



Who is Genghis Khan?

Genghis Khan or Universal Ruler, was the son of a Mongol chieftain. He united many Mongol tribes and used both terror and diplomacy to win over his enemies.

Islamic World: In the early 7th century, the tribes of the Arabian Peninsula were united under a new religion – Islam, founded by Prophet Muhammad. Upon the death of Prophet Muhammad, the Islamic empire expanded beyond Arabia to include Egypt, Persia, most of Syria and Palestine. Under the *Umayyad* dynasty, which ruled from 661 AD, North Africa was invaded and from 711, Spain was captured. The eastern borders extended to Afghanistan and northern India.

As the Islamic empire grew, its cities expanded housing palaces of rulers, as well as mosques, hospitals and libraries. They also became centres of trade and learning. Several cities gained prominence. Medina, was the first powerful Muslim city. Damascus, became the capital of the *Umayyad* dynasty and still one of the oldest continuously inhabited cities. Jerusalem, is one of the holiest cities and site of one of the first great mosques. Baghdad, was the centre of learning and the capital of the *Abbasid* dynasty. Cairo, was the largest city in the world in 1325. Istanbul (former Byzantine capital Constantinople) was captured by the Ottoman Turks remained their capital for 450 years.

Scandinavian Conquests

From the late 8th century, fierce warriors from Scandinavia terrorised coastal settlements across Northern Europe. The Vikings attacked without warning, killing anyone who resisted them and carrying off treasures and slaves. The Vikings had a fearsome reputation, but they were also champion ship builders. The ships they built travelled quickly and safely across the roughest seas, travelling for thousands of kilometres in every direction. They were bold explorers, reaching America, centuries before anyone else from Europe. They built settlements in Iceland and Greenland where their culture influenced local life for centuries. The Viking were also excellent craftsmen, producing fine leatherwork and intricate metal jewellery.

The Crusades

Between 1095 and 1271, European armies set out on a series of Crusades. Since they involved the largest armies and the biggest battles, the first four Crusades (between 1095 and 1204, were called the 'Principal Crusades'. In addition to these, there were five 'Minor Crusades' in later years as well as many other expeditions in between. The first crusade began after Pope Urban II called on Christian knights to capture Jerusalem. Thousands responded and since the Muslim leaders of the Holy Land were divided, they were able to take the city. The Crusader setup small states and build castles, often defended by orders of religious Knights such as the Templars. The Crusaders slowly lost ground when rulers such a Saladin and Baybars united the Muslims. It was in 1291, that the last Crusader fortress fell.

The Ottoman Empire

For more than 600 years, the Muslim Ottoman Turks ruled one of the largest empires ever seen. The Ottoman Empire began as a tiny state in the North West of present-day Turkey. The Ottomans were skilful warriors and they quickly increased their territory. By 1453, they had captured Constantinople (which had been the capital of the Byzantine Empire for 1100 years) and renamed in Istanbul. It was made the centre of the Islamic empire and its rulers - the Sultans - became leaders of the Muslim world. The Ottomans remodelled Istanbul by building magnificent mosques and lining the streets with beautiful gardens. They built a luxurious complex called the Topkapi Palace, was constructed as the centre of government and home of the sultans. Another remodelling was done at the Church of Hagia Sophia, which stood at the centre of Constantinople. The Ottomans converted it into a mosque adding minarets and painting over the Christian images.

By 15th and 16th centuries, the Ottoman empire became very powerful and wealthy. The Sultans built grand mosques and palaces, and several cities became popular for their craft: Iznik for ceramics, Bursa for silks and textiles, Cairo for carpets, and, Baghdad for calligraphy.

The Ottoman empire was ruled by descendants of a single family for 600 years. The early sultans were warriors who fought to gain more land. Under them, life in the empire was mostly peaceful and secure. Later, the sultans were less ambitious, and the Empire was overtaken by rivals in Europe. Some of the famous sultans were:

- * Orhan: During his reign, the Ottoman armies first invaded Europe;
- * Murad I: He was instrumental in reorganizing the army into a paid one in the service of the sultan;
- * Mehmed II: Known as 'The Conqueror', he was only 21 years old when he led the Ottoman Empire to capture Constantinople.
- * Suleyman I: Known as 'The Magnificent', Suleiman was one of the greatest Ottoman sultans. It was under his rule that the empire became a world power.

How was the Ottoman Empire organised?

The Ottoman Empire was organised from Istanbul by the sultan and his government. The Sultan was both the political leader and religious head of the Muslim world. He was supported by grand vizier or Chief Minister, court officials and military commanders. The soldiers who volunteered for the army, received land in return. The sultan's crack troops, the janissaries were a tough, highly trained army of foot soldiers willing to lay down their lives for the ruler.

CHANGE IN IDEOLOGY

The world experienced huge changes between 1450 and 1750. A wave of new ideas swept across Europe, as explorers found new colonies and trading networks all across the world. European rivals often went to war with each other especially over new territory. New ways of thinking came about.



Renaissance or rebirth is the period in Middle Ages when art, literature, architecture, science and inventions blossomed in Europe. Italy, gave rise to Renaissance and cities such as Florence and Venice became hubs for famous artists

such as Michelangelo, Raphael and Leonardo da Vinci.

Reformation was a movement started by a German priest, Martin Luther. He attacked the wealth of the Church and the right of the Pope to decide what people should believe. This created a split between the traditional Christian (Catholics) and supporters of Luther (Protestants).

CHAPTER 5 The Modern World

The years since 1750 saw huge turbulence in every area of life. Globe-spanning empires arose in the 19th century and fell apart, as the balance of power shifted from nobles and emperors to everyday citizens. New technology transformed agriculture, industry, transport and warfare. The digital revolution changed communication and entertainment forever.

Age of Revolution

From around 1750, new political movements called for kings and governments to grant more freedom to the people. At the same time, colonies began to seek independence from their ruling countries. When rulers and colonial powers refused these demands, the populace rose up in rebellion. Some won their freedom by force, forming new colonies.

In 1789, the French rebelled against King Louis XVI. **The French Revolution** became a bloodbath and new leaders turned on each other in an era of violence known as 'The Terror'. After the French Revolution, a popular general named Napoleon, became emperor of France and began a long and bloody war of conquest across Europe.

In the 19th century, a German philosopher Karl Marx, proposed a new theory of government called *Communism*. It argued that the wealth of a country should be shared equally among its people. In 1917, Russia overthrew the Tsar Nicolas II, to establish the world's first communist state. It would go on to become USSR (Union of Soviet Socialist Republic) one of the superpowers of the 20th century. After the Tsar was overthrown, Vladimir Lenin declared himself as

the leader of the people. He was head of the Communist government, until his death in 1924.

Meanwhile, in Latin America, between 1813 and 1822, revolutionary movements led by Simon Bolivar and Jose de San Martin, freed most of South America from Spanish control. Mexico, too, became independent after a revolution headed by Miguel Hidalgo.

Age of Imperialism

During the 19th century, European countries expanded their overseas colonies into vast empires. European armies were well trained and armed with guns, making it easy to overcome any resistance to their expansion. This policy of acquiring new colonies is called *imperialism*. This quickly spread European rule over much of Africa, Australasia and large parts of Asia by 1900.

By 1914, a few powerful countries had control over almost every part of the world. The largest empire belonged to the British. Their colonies were guarded buy a powerful Navy which controlled the seas and oceans. Wars during this period, became larger and bloody, as rival empires fought with their full might against each other. Some of the most important wars in history were:

- * Seven Years War (1756 63): The world's first global world war, was fought between the empires of Britain and France over colonies in India and North America.
- * Napoleonic Wars (1803 15): Napoleon Bonaparte proclaimed himself the Emperor of France and waged a war of conquest. He was defeated at Waterloo by an alliance of European powers.
- * Crimean War (1853 56): Russia's attempts to capture land from the Ottoman Empire, were halted when Britain and France allied against them.

- * Opium Wars (1839 60): The Chinese tried to stop the British merchants from trading in opium, sparking to wars with Britain. The fighting ended with the Chinese forced to open 14 ports to European trade.
- * Russo-Japanese War (1904-05): Japan's powerful, modernised army and Navy inflicted a shock defeat on Russia in war over territory in China and Korea.

European colonies In Asia and Africa found it harder to win independence than those in America. However, two World Wars had greatly weakened the European empires. India and Pakistan won their independence from Britain in 1947, after several protests led by Mohandas Karamchand Gandhi. In Africa, Ghana was the first colony to win independence in 1957, and many other soon followed. The first half of the 20th century, saw two of the bloodiest wars in human history. Each started with conflicts in Europe, and spread to countries all across the world.

World War I (1914-1918)

World War I was between the Triple Alliance countries (Germany, Italy, Austria-Hungary), and the Triple Entente countries (France, Great Britain, Russia). The trigger for the war was the assassination of Archduke Franz Ferdinand of Austria-Hungary that initiated conflict between Russia and Austria-Hungary. This conflict then quickly expanded to include other countries, primarily France and Germany, who were already established rivals at that time. World War I was characterised by the introduction of new concepts in war like Trench Warfare, Machine Guns, Tanks, Chemical Weapons, and the use of Airplanes for reconnaissance.

What is the Great Depression?

The Great Depression, was a period of extreme economic suffering in the United States from 1929 - 1939. America at that time, had a booming economy which crashed with the

stock market in 1929. The shareholders panicked and began selling their stocks at any price. Stocks then began losing their value. This led consumers to refrain from purchasing, which indirectly led to lower production by business. As



businesses laid off workers, unemployment rose to 5 million in 1930, and 13 million in 1931. The crash on Wall Street destabilized Germany as nervous American investors demanded repayment of loans. As unemployment in Germany doubled between 1929 and 1930, Hitler's Nazi Party made big gains in the legislature, eventually taking power in 1933.

World War II (1939-1945)

World War II was between the Axis countries (Germany, Italy, Japan), and the Allied nations (Great Britain, Russia, USA). Germany, led by Hitler, started World War II by conquering most of Europe, and then turning against the Soviet Union, a former ally. On being attacked by Japan in 1941, the US joined the war on the side of Great Britain and Soviet Union. World War II saw the use of atomic bombs, that caused mass destruction. The Japanese cities of Hiroshima and Nagasaki were completed devastated, killing several thousand people. It was Winston Churchill (PM of Great Britain) and Franklin Roosevelt (President of USA) who then initiated the need for an international body that would maintain international peace. This body was later called United Nations. Another aftermath of World War II was a period of decolonization as the earlier colonial powers were significantly weakened by the war and were left with little choice but to focus on rebuilding their own countries.

USO ALSO CONDUCTS UN INFORMATION TESTS ANNUALLY. STUDY MATERIAL HAS COMPLETE INFORMATION ON THE HISTORY, STRUCTURE, SPECIALIZED BODIES, IMPACT AND ALL OTHER RELEVANT DETAILS ON THE UNITED NATIONS.



Who was Hitler?

Adolf Hitler, born in Austria, in 1889, was a German dictator. He developed political views shaped by his experiences during World War I and Germany's defeat. These views evolved into a social philosophy, whereby he felt that Germany could avenge its humiliation and dominate Europe if it regained its will to victory and eliminate those, he accused of

betraying the nation. He succeeded in convincing the German public that Jews were to blame for Germany's downfall. This led to mass annihilation of millions of Jews, a period called the Holocaust.

What is the Cold War?

The Cold War was a period between 1945 - 1991. Although the USA and USSR (Union of Soviet Socialist Republics) had been allies during World War II, they became enemies once it was over.



The term 'cold' was used since there was no fighting directly between the two sides involved. They fought a 'Cold War' by other means, such as overthrowing governments friendly to the other side. This period was especially dangerous as both sides had nuclear weapons that could have killed millions of people. It ended with the dissolution of U.S.S.R. into 15 independent countries, of which Russia is the largest. Mikhail Gorbachev was the last leader of U.S.S.R.

Age of Industrial Revolution

While wars and revolutions brought political changes, advances in science and technology transformed society.

Developments in medicine created cures for diseases that had killed millions. The Industrial Revolution saw new machines that could do the work of dozens of workers. These new societies brought much greater equality, as women and non-white people fought to win equal rights. The Industrial Revolution not only brought great new advances, but also new problems. Goods and household items became cheaper, as they were mass produced in factories instead of being made by hand. However, many workers were badly paid ad and lived in terrible poverty, especially in the cities.



What is globalization?

Globalization which has accelerated in the 20th century, is the increasing interaction of people through the growth and flow of goods and services, ideas, culture etc. Due to advances made in technology, in recent times, this has been

easier to achieve. This has led to increased exports, which increased from \$1.9 trillion in 1985 to \$6.3 trillion in 2000.

The 19th and 20th centuries saw a rapid rise in the world population, and a huge increase in the resources human beings use. Supplies such as coal, oil and even freshwater may become scarce. Many natural habitats have been damaged by pollution or human exploitation. Rising global temperatures threaten to disrupt vast areas of farmland and human living across the world. In the 1990's, air pollution led to a breakdown in the ozone layer - a part of the atmosphere that protects the Earth from harmful radiation. At its largest, the hole situated above Antarctica, was twice the area of Europe.



- Metallurgy is the art and science of extracting metals from their ores and modifying the metal for use.
- Middle East, is called such, since it straddles two continents. Called the Fertile Crescent in ancient times, it is the birthplace of Judaism and Christianity.
- Ancient Egypt's Pharaoh, Ramses II, fathered more than 100 children.
- Because of flooding, Mohenjo-Daro was rebuilt nine times.
- In ancient Athens, only adult males born could vote.
- The Mali emperor, Mansa Musa, became a legendary figure in the Islamic world when he made a spectacular pilgrimage to Mecca, taking with him more than 1,000 followers and 100 camels, each carrying 300 pounds of gold.
- The Versailles Palace of King Louis XIV of France was Europe's largest with 1,400 fountains, 230 acres of gardens, 200 feet long hall of mirrors, and 70 windows overlooking the gardens.
- The world's largest cities in 1900 were London, New York, Paris and Berlin.
- Swahili is the most widely-spoken language in Africa.
 It is the amalgamation of many different languages,
 borrowing words from Arabic, Persian, Portuguese,
 English and German.
- King Tutankhamun, who became the pharaoh at 9, died suddenly. He was buried in an underground tomb.

COLONIZATION

•Spain led this initiative, bringing vast areas under its authority. Christopher Columbus, began colonization of the Caribbean, taking natives as slaves after extracting all gold. The Spanish 'Conquistadors' plundered both the Aztec and Inca empires.

REVOLUTION

•From Renaissance, rose Enlightenment, an intellectual movement. In several places, a period of discontentment and resentment with the monarchy arose, giving rise to revolutions. People began to question monarchy since the rulers had amassed large debts to sustain their lifestyle. Enlightenment gave rise to ideals such as liberty, equality and fraternity.

NATIONALISM

•The French Revolution shook Europe. No monarch could ignore the will of the people. Napoleon Bonaparte, who crowned himself the Emperor of France, was quick to recognise this, and despite his dictatorial spirt, granted legal rights to citizens, instituted public health and reformed the tax system.

INDUSTRIAL REVOLUTION

•Industrial Revolution began in Great Britain, which had large deposits of iron ore and coal. Britain also had a thriving cottage industry that would give rise to a new business economy. James Watt perfected the steam engine, and steam power was applied to textile industry as well. Small cottages became factories, and productivity increased, attracting investors and profits. During the 19th century, industrial revolution spread across Europe and reached other parts of the world,, giving rise to urbanisation.

IMPERIALISM

•Imperialism began with the Europeans colonizing the Americas. The technologically advanced nations could easily dominate the less advanced countries economically without colonizing them. Great Britain had colonized nearly a quarter of the world (including India) and 400 million people. The slave trade which was prevalent at the time of imperialism.

CHAPTER 6 India – Through the Ages

ANCIENT INDIA

The Indus Valley Civilisation

The first Indian civilization rose in the Indus Valley about 2,600 BC. Farmers used bronze tools; grew wheat, barley, and peas; raised cattle, goats, and sheep; and used buffaloes to pull carts. People spun cotton and traded with other cultures (such as modern-day Iraq). Some of the people of the Indus Valley began to live in towns. The two largest were at **Mohenjo-Daro** and **Harappa**.

Mohenjo-Daro had a population of 35-50,000. The town consisted of two parts. One part had a citadel, contained a public bath, assembly halls and granary where grain was stored. The lower part had streets laid out in a grid pattern consisting of brick houses with a network of drains.

Life in Mohenjo-Daro was highly civilized and ordered. Most people were farmers outside the towns. The Indus Valley civilization may have had a form of writing which was seen on many engraved seals and terracotta figurines. The civilization was at its peak in the years 2,300-1,700 BC. Then, after 1,700 BC it broke down.

The reasons for this are not clear. One theory suggests that perhaps there was a climatic change, and the area grew cooler and drier. Another theory suggests that rivers may have changed course. In those days, less rainfall or a change in the course of a river would have had severe consequences. Any civilization could thrive if the farmers made a surplus. They could exchange their surplus with craftsmen for manufactured goods. However, if the farmers no longer made any surplus, they could not support the craftsmen who

lived in towns. Trade and commerce declined. As society grew less prosperous, people returned to a simpler way of life. This may have been the reason why The Indus Valley civilization vanished. It was re-discovered in the 1920's.

The Aryans

After the collapse of the Indus Valley civilization, the Aryans came from central Asia and entered India through Afghanistan after 1500 BC. Mainly nomads, they wandered about with herds of cattle and their main invention - the 2-wheeled chariots. By 1,000 BC, they learned to use iron. In due course, the Aryans settled down and became farmers.

Slowly, a more ordered and settled society evolved. Tribes became kingdoms. The Aryans became priests, rulers, warriors, peasants, and merchants. The original people (from the Indus Valley civilization), became slaves, laborers, and artisans. In time, this stratified society crystallized into the caste system. The Hindu religion evolved and the Vedas were created at this time. (At first, they were orally transmitted and later were written down).

In time, the Aryans learned to farm rice, rather than crops like barley. By 600 BC, rice cultivation was flourishing in India. Trade and commerce grew, and people began to live in towns again. Writing was re-invented, and a highly civilized society emerged in India. Around the same time, the Persians captured the extreme North-west of India. Alexander the Great destroyed the Persian Empire and penetrated the far North-west of India. However, after his death in 317 BC, the Greeks withdrew, and his empire split up. Seleucus took the eastern part and attempted to reclaim Indian provinces once ruled by Alexander. His army was stopped by Chandragupta Maurya in 305 BC. Seleucus was then forced to cede most of Afghanistan to Chandragupta.

The Mauryan Empire in India

In 322 BC, Chandragupta Maurya became king of the powerful and highly centralized state of Magadh in North India. This new empire became rich as trade thrived. Its capital was one of the largest cities in the ancient world. In 296 BC, Chandragupta abdicated in favour of his son Bindusara, who pushed the frontier of the empire further south. The greatest Mauryan ruler was Ashoka (269-232 BC) who conquered Kalinga (modern day Orissa). Afterwards, he declared he was appalled by the suffering caused by war and decided against any further conquest, and converted to Buddhism. He decreed that Buddhist principles of right conduct should be engraved in stone pillars or rocks throughout his kingdom to teach the people how to live. Ashoka set about pacifying and consolidating his empire. Despite his conversion to Buddhism, Mauryan rule was authoritarian and punishments for wrongdoers were severe.

After his death, the Mauryan empire suffered an economic decline and political instability as different brothers tried to become king. A general assassinated the last Mauryan ruler in 185 BC and took over the empire founding the Shunga dynasty. However, in 73 BC, the last Shunga ruler was assassinated. They were replaced by the Kanva dynasty which ruled from 73-28 BC.

The influence of the Mauryans penetrated into Southern India. In the time of the Mauryans, the farmers became more advanced. By the first century BC, organized kingdoms had grown up and trade and commerce flourished.

The Indo-Greeks in India

After Alexander the Great's death, his empire was split between his generals. The various successor states fought each other until a strong state emerged in Bactria (modern Afghanistan). The Greek rulers of Bactria attempted to control Northwest India. In 185 BC, King Demetrius invaded India, and around 160 BC one of his successors, King Menander conquered most of northern India. However, after the death of Menander, this empire broke up into several states.

The Kushan

Nomads from Central Asia conquered Bactria around 120 BC. They settled down giving up their nomadic lifestyle. They were split into 5 tribes, one of which - the Kushans, conquered the others. They then turned their attention to Northern India. Gradually, they conquered more and more territory. Successive kings carved out a bigger and bigger empires in Northern India.

The Kushan Empire reached its peak under King Kanishka (about 78 AD to 114 AD). During his reign, Northern India was prosperous and did much trade with the Roman Empire. Kanishka was also a patron of the arts, which flourished. However, after his death, the empire declined and broke up. By the early 3rd century AD India was once again split into small states.

INDIA IN THE MIDDLE AGES

The Gupta Empire in India

A new empire was founded early in the 4th century AD by Chandragupta. After his death in 335, his son Samudragupta (335-375) conquered the whole of Northern India and much of Central India. India once again became prosperous and stable and much trade was done with China. Mathematics, astronomy, and medicine flourished and literature blossomed. This was the age of the great poet Kalidas. Gupta rule was less strict than Mauryan rule and punishments were less harsh as provinces of the empire were given some autonomy. The Gupta Empire reached a peak under

Chandragupta II 375-415 AD. However, it then went into decline, breaking up in the early 6th century.

The Huns

Mid-5th century AD, the Huns, a fierce tribe from Central Asia invaded Northwest India, conquering most of Northwestern India. However, their rule lasted no more than about 30 years. About 528 AD, the Indians, led by a ruler called Yashodharman defeated them in battle and drove them out.

Harshavardhana

The next great ruler in Indian history was King Harsha began as ruler of Harshavardhana (606-647). Kingdom of Thanesar, carving an empire in Northern India. However, in 630, when he attempted to conquer Southern India, he was defeated by King Pulakesin (610-643). Despite this setback, Harsha remained a powerful ruler. During his reign, his biography, the Harshacharita was written. After his death, his empire broke up and India once again became a land of several kingdoms. Three most important dynasties were the Rajputs, the Pallavas, and the Chalukyas. However, in the 9th century a new - Chola empire arose in Southern India.

The Cholas

In the late 10th century, King Rajaraja I, began to expand. He conquered his neighbours and took Sri Lanka and Maldives. The next king, Kind Rajendra I, took more territory including the Ganges and the Andaman Islands. The Chola was a prosperous empire with many merchants organized into guilds to protect their interests. Trade with Southeast Asia and Arabs thrived. The empire of the Cholas, although powerful, was less centralized than older empires such as the Gupta. Kingdoms were given a certain amount of autonomy.

The Turks

In the 10th century, Turks from central Asia conquered Afghanistan. Under their ruler, Mahmud (971-1030), they conquered Punjab. He led raids deep into India and plundered temples. The Turks returned in 1191, this time as conquerors, not raiders. They were led by Sultan Muhammad. He was defeated in 1191 at the battle of Tarain, but he returned the following year and was victorious. The Turks were able to conquer large parts of Northern India and they created a powerful state - the Delhi Sultanate.

The Delhi Sultanate

Under the Sultans, Qutubuddin (1206-1211) and Iltutmish (1211-1236), the Sultanate flourished. However, Iltumish was succeeded by his daughter Raziyyat, who reigned for three years before being deposed and murdered. The Sultanate reached a peak under Alauddin (1296-1316). In 1298, he conquered Gujarat. In 1309, he invaded Southern India.

Meanwhile a new threat came from the North - the Mongols. In 1296-97, they raided Northwest India. The Mongols returned in 1299, penetrating as far as Delhi, but then disappeared. They Mongols returned in 1306, but this time were driven back.

Muhammad Tughluq (1324-1351) extended the Sultanate still further, and moved the capital to Daulatabad, but was later forced to move his capital back to Delhi. The Sultanate of Delhi declined rapidly in the late 14th century. The final blow came in 1498 when Timurlane, a descendant of Genghis Khan invaded Delhi. In early 15th century, independent Sultanates appeared and Delhi Sultanate became one of several. Under Sultans, Bhalul 1451-1489 and Sikander Lodhi 1489-1517, Delhi revived to a certain extent but it never regained its former importance.

Meanwhile, another empire arose in the South - the Vijayanagar.

The Vijayanagar

The Vijayanagar Empire was founded by 2 brothers, Harihara and Bukka. According to legend, they were officers of Muhammad Tughluq, sent to crush a rebellion in the South. Instead, they broke away and founded their own kingdom. Harihara was crowned king in 1346. His brother Bukka I ruled after him (1357-1377). The Vijayanagar Empire is named after its capital city (Its name means the city of victory). The rulers of Vijayanagar gradually conquered more and more territory and the empire reached a peak early in the 16th century. However, in 1564, Vijaynagar was utterly defeated in battle. By then a new empire had arisen - the Mughals.

THE MUGHAL EMPIRE IN INDIA

The Rise of the Mughal Empire

Mughal Empire, was founded by Babur 1483-1530, a descendant of Genghis Khan. From 1504, he was the ruler of part of what is now Afghanistan. From the Turks, he had learned to use cannons and muskets. Guns enabled him to win great victories over the Indians who were still using traditional methods of warfare. He had also learned new cavalry tactics from the Turks. Instead of charging straight at the enemy Babur's cavalry rode round their flanks and attacked from the rear. In 1526, Babur crushed the army of Ibrahim Lodhi at the battle of Panipat. Other Indian rulers now united against Babur but they were crushed at the battle of Khanau in 1527. Babur then became ruler of Northern India.

He was succeeded by his son Humayun 1508-1556. However, in the 1530s, an Afghan ruler named Sher Shah

attacked the empire. By 1540, Sher Shah prevailed and made himself ruler of much of Northern India. Humayun went into exile and wandered from place to place. Then in 1542 his son Akbar was born. Humayun then moved to Persia. Sher Shah died in battle in 1545 and his empire split up. Humayun with Persian help re-conquered the Mughal empire, and by 1556 was in control of the North.

After Humayun's death, his son Akbar began conquering India. He took Gujarat in 1574, Bengal in 1576, Kashmir in 1586, Orissa in 1592 and Baluchistan in 1595. Akbar also reorganized the government and created an efficient civil service. Akbar admired Persian culture and promoted it in India. Persian language literature flourished in India during his reign. Persian and Hindu styles of painting merged to form a new style of Mughal painting.

Akbar was succeeded by his son Selim, who called himself Jahangir. Under him, Mughal influence in the South of India increased and the empire flourished. His wife, Mehrunissa (also called Nur Jahan or light of the world), was Persian and because of her Persian culture became even more influential in the Mughal realms. During the reign of Jahangir, the arts and architecture flourished.

The Mughal Empire reached its zenith in the 17th century. However, its only weakness was the powers struggles among the ruling family and occasional rebellions. Shah Jahan became ruler in 1627. Under him, the empire prospered. He is famous for building the Taj Mahal in Agra. It was built as a memorial to his wife, Queen Mumtaz Mahal (1594-1630). It took 20,000 craftsmen and laborers 22 years to build. Construction started in 1631 and was completed in 1653.

Aurangzeb (1658-1707) greatly expanded the empire further. He conquered almost all of southern India by 1687.

Under him, the empire became so vast it was difficult for one man to rule. Aurangzeb's greatest enemy was Shivaji, leader of the Marathas in southern India who led a form of guerrilla warfare. In 1664, his men raided the port of Surat. Aurangzeb sent an army to intimidate Shivaji then invited him to the capital, Delhi and offered him a post in the empire. However, Shivaji escaped from Delhi by hiding in a basket and returned to raiding. Shivaji was succeeded by his son Sambhaji. He was captured by the Mughals and executed in 1689 but the guerrilla war went on.

The Decline of the Mughal Empire

Aurangzeb was succeeded by his son Bahadur Shah (1707-1712). By his time, cracks were appearing in the empire. Oppressive taxation caused more and more rebellions. After 1712, powerful nobles in the empire began to break away and form virtually independent states. Meanwhile the old enemy, the Marathas attacked the Mughal Empire led by Baji Rao. In 1739, the Persians launched an attack on the Mughal Empire.

EUROPEAN IMPERIALISM IN INDIA

The decline of the Mughal Empire caused a vacuum into which the Europeans moved. The first Europeans to reach India by sea were the Portuguese who arrived in 1498 and began importing spices from India. They formed a base at Goa in 1510. However, in the 17th century, the Portuguese declined and the English and Dutch took their place.

The English East India Company was formed in 1600 to trade with India. In 1639, the English established a trading base in India, which soon grew as Bombay, Bengal and Calcutta were added. In the late 17th century, the Dutch also declined, and the French replaced them. In 1673, the French established a base at Pondicherry.

By the 18th century, the French and English became bitter rivals and both began to interfere in Indian politics. The Seven Years War between Britain and France began in 1756. The Nawab of Bengal, Siraj-Ud-Daulah captured the British base at Calcutta forcing the captives into a small cell where most of them suffocated overnight. This became known as the Black Hole of Calcutta. The East India Company sent a force led by Robert Clive (1725-1774) to recapture Calcutta, and they were successful. However, Clive wanted to take all of Bengal. Clive won a great victory at Plassey in June 1757. (The battle was won largely because of one of the commanders of the Bengali army, Mir Jafar changed sides and refused to join the battle). Clive then overthrew the ruler of Bengal, Siraj-Ud-Daula and replaced him with Mir Jafar.

In 1765, East India Company began to rule Bengal directly, thus ensuring that India would eventually become a British colony. Gradually, the Company took over India, a process taking several decades. East India Company eliminated the French influence in India. But British imperialism was bitterly resisted by the state of Mysore under the two rulers Haidar Ali (1761-1782) and Tipu Sultan (1782-1799). A series of wars were fought in the years 1767-1769, 1780-1784, 1790-1792 and 1799, the resistance of Mysore finally ended. Mysore was forced to hand over half its territory.

The British began to take over more territory in India, forcing Indian states to accept British 'protection'. One state, Hyderabad made a treaty with the British in 1798, and retained some independence but other states were forced to accept British rule.

In 1803, war broke out between the British and the Marathas. The British were led by Governor General, Arthur Wellesley (later the Duke of Wellington). Since the Maratha

chiefs were disunited, the British were able to make gains, taking Agra and Delhi. Several wars then ensued. The Maratha chiefs were defeated in the war in 1817, and were forced to accept British rule. By 1819, the East India Company was in control of most of India except the North West. Assam was annexed in stages between 1826 and 1838. There were revolts in parts of India between 1819 and 1839 but most of it was at peace. The British then began to impose their culture on India. In 1835, English was made the official language of Government and Education.

Outside the British control was a powerful Sikh kingdom. However, the leader of the Sikhs, Ranjit Singh, died in 1839 and fighting began over the succession. In 1845-46 the British fought a war against the Sikhs, and after some bitter fighting, they captured Lahore. The Sikhs were forced to surrender Kashmir and also parts of Punjab. However, a second war was fought in 1848-49, and in March 1849, the East India Company took control of all of Punjab.

The Indian Mutiny

The East India Company had long employed Indians as soldiers and there were supposed to be no more than 4 Indian soldiers to every British one. However, by 1857, there were only 40,000 British troops in India and 311,000 Indians. The mutiny began on 10 May 1857 which started because of the fact that soldiers were issued with a new rifle - the Enfield. was said that the cartridge was greased with fat from a cow (sacred to Hindus) or pigs (unclean to Muslims).

The mutiny began at Meerut (60 miles from Delhi) whereby the soldiers massacred the British. The uprising spread rapidly and the rebels took Delhi and proclaimed the restoration of the old Mughal Empire. The rebellion spread across Central and Northern India but the south did not rise. Soldiers in Madras and Bombay stayed loyal to the British. Eventually the British were able to re-establish control.

Rebels besieged the British in Kanpur and Lucknow. The British in Kanpur surrendered on 27 June, 1857. Sir Henry Havelock led a force to relieve Lucknow. He defeated the rebel leader Hana Sahib at Cawnpore on 16 July, 1857. Havelock reached Lucknow on 25 September, 1857. However, he then found himself besieged by the rebels. A relief force was sent under Sir Colin Campbell (1792-1863). He reached Lucknow and the garrison escaped. Campbell defeated a rebel force outside Cawnpore in December.

Meanwhile, the British recaptured Delhi in September. The British recaptured Lucknow in March 1858. Sir Hugh Rose took the rebel stronghold of Jhansi on 3 April. He decisively defeated a rebel leader, Tantia Topi, on 19 June, 1858 at the battle of Gwalior. This blow broke the back of the rebellion. The British than 'mopped up' the remaining rebels and by the end of 1858, the rebellion was over. However, the East India Company lost control of India. On 1 September, 1858 control was transferred to the British government.

India in the Late 19th Century and Early 20th Century

After the lesson of the Indian Mutiny the British became a little more respectful of Indian culture. However, the desire for independence grew. The Indian National Congress was founded in 1885 and the Muslim League was founded in 1906.

In 1861, legislative bodies were formed for India. However, the members were not elected but appointed by the governor-general or by provincial governors. Most of the members were British. Furthermore, after the mutiny, the

ratio of British soldiers to Indians was increased. In 1877, Queen Victoria was made Empress of India.

In the late 19th century the British created a network of railways in India. By 1900, there were 25,000 miles of railway in India. The first train made in India was built in Bombay in 1865. The British also built new roads across India. Improved communications meant the different parts of India were connected which encouraged a greater sense of national identity. In late 19th century many newspapers were founded which helped to mobilize public opinion.

In 1905, the British divided Bengal to make it easier to rule. This move provoked unrest in Bengal with people demonstrations and boycott of British goods. Meanwhile, India - an agricultural society – exported jute, raw cotton, tea and coffee to Britain. In return, textiles and other manufactured goods were imported from Britain. The Indian textile industry could not compete with cheap, mass produced British goods. However, in the early 20th century, Indian industries began to develop.

At the same time, Britain was in decline. In the mid-19th century, Britain was the most powerful country in the world but by the end of the century, other powers such as Germany and USA emerged. Britain was weakened by World War I, and continued to decline in the 1920s and the 1930's. As Britain declined, Indian nationalist feeling grew stronger. Indian public opinion was embittered by the Amritsar massacre, which took place on 13 April 1919. A crowd of thousands gathered in Jallianwalla Bagh to protest peacefully against the recent legislation. General Reginald Dyer told his men to open fire. Since there was only one entry / exit point, the gathering had no escape route, and several jumped in the well to save their lives. 379 people were killed and around 1200 were wounded.

At this point, Mohandas Karamchand Gandhi (1869-1948), rose to be the leader of the struggle for independence. Gandhiji was a lawyer, who had lived in South Africa. In 1915, he returned to India and soon emerged as the leader of the nationalists. In 1920, he launched a campaign of non-co-operation with the British. This included boycotting British textiles and their schools. Against Gandhiji's wishes, some people turned to violence. Gandhiji was arrested in 1922, and remained in prison for 2 years.

Not everyone agreed with Gandhiji's desire for peaceful campaigning. Nevertheless, he became the leader of the independence movement. In 1930, he began a campaign to end the government's monopoly of salt production and led a march to the sea to collect salt. The British arrested Gandhiji and several others. However, in 1931, they were forced to back down. They released Gandhiji and most (not all) of the other prisoners. They also allowed people to make salt for their own personal use. In 1932, the army began to recruit Indian officers.

Meanwhile in 1931, the capital of India was moved from Calcutta to New Delhi. Gandhiji continued campaigning, and was arrested again in 1932 and in 1933, but both times was soon released. By 1935, the British realized that Indian independence was inevitable, sooner or later. In that year, they granted a new constitution. When it came into effect, in 1937, Indians were allowed to elect provincial assemblies. (Although British retained the control of central government). In 1939, the Viceroy of India declared war on Germany, without consulting India.

INDIAN INDEPENDENCE

In 1942, the National Congress demanded that the British quit India. The British responded by imprisoning several leaders, including Gandhiji, who was released in 1944. In 1946, the Viceroy appointed an interim cabinet with Jawaharlal Nehru as Prime Minister. Mountbatten was then made Viceroy. India became independent on 15 August, 1947. Mountbatten agreed to stay in India as Governor-General for an interim period. Sadly, Mohandas Karamchand Gandhi was assassinated on 30 January 1948.

In December 1946, a Constituent Assembly met to draw up a Constitution for India. The new constitution came into force in January 1950 and India became a secular state. Prime Minister Nehru, made the economy a 'mixed economy' of some state- owned industries and some private enterprises. Industry was strictly regulated. Unfortunately, this restricted free enterprise. In the 1950s, a series of 5-year plans were devised. The first increased irrigation and boosted agriculture. The second and third plans boosted industry. On the other hand, India's population grew rapidly. Poverty and illiteracy increased.

India in the Late 20th Century

In the 1960's, India fought two wars. In 1962, there was a conflict with China. There were clashes along the border between India and Tibet in the late 1950s. Then in 1962, Chinese troops attacked along the North-eastern border of India. They quickly captured key mountain passes and redrew the border. On 21 November, the Chinese declared a ceasefire.

Pandit Nehru died in 1964, and Indira Gandhi became prime minister in 1966. She remains India's only female Prime Minister to date.

India in the 21st Century

In the 1990's the Indian economy was deregulated further and as a result it boomed. In the early 21st century, the economy of India grew rapidly. Presently, as a federal union of 28 states and 9 union territories, India is moving at a fast pace by embracing technology, developing youth with the right skills, and investing in infrastructure and education.

The present key people in Indian government are (as at August 2019):

CONSTITUTIONAL OFFICE HOLDERS	
President	Ram Nath Kovind
Vice President & Chairman	Muppavarapu Venkaiah
of Rajya Sabha	Naidu
Prime Minister	Narendra Damodardas
	Modi
Chief Justice	Ranjan Gogoi
Speaker of Lok Sabha	Om Birla
Chief Election	Sunil Arora
Commissioner	
Comptroller & Auditor	Rajiv Mehrishi
General	-
Attorney General	K. K. Venugopal
Chairman of Union Public	Arvind Saxena
Service Commission	

CABINET OFFICE HOLDERS*	
Minister of Home Affairs	Amit Shah
Minister of Finance	Nirmala Sitharaman
Minister of Defence	Rajnath Singh
Minister of External Affairs	Dr. Subramanyam
	Jaishankar
Minister of Agriculture	Narendra Singh Tomar
Minister of Human Resource	Ramesh Pokhriyal
Development	-
Minister of Railways	Piyush Goyal
Minister of Law and Justice	Ravi Shankar Prasad
Minister of Information &	Prakash Javadekar
Broadcasting	

Minister of Health and	Dr. Harsh Vardhan
Family Welfare	
Minister of Skill	Dr. Mahendra Nath Pandey
Development &	
Entrepreneurship	
Minister of Road Transport	Nitin Jairam Gadkari
& Highways	
Minister of Social Justice	Thaawar Chand Gehlot
and Empowerment	
Minister of Women & Child	Smriti Zubin Irani
Development	

^{*}This is not the complete list. Some Ministers are in-charge of more than one Ministry.

SOME KEY POSITIONS	
Cabinet Secretary	Rajiv Gauba
National Security Advisor	Ajit Doval
Solicitor General of India	Tushar Mehta
Principal Scientific Advisor	K. VijayRaghavan
Chief Economic Advisor	Krishnamurthy
	Subramanian
Governor, Reserve Bank of	Shaktikanta Das
India	
Chairman, National Stock	Ashok Chawla
Exchange	
Chairman of Chiefs of Staff	Air Chief Marshal Birender
& Chief of Air Staff	Singh Dhanoa
Chief of Army Staff	General Bipin Rawat
Chief of Naval Staff	Admiral Karambir Singh
Director, Intelligence	Arvind Kumar, IPS
Bureau	
Director, Central Bureau of	Rishi Kumar Shukla, IPS
Investigation	
Chairman, CBSE	Anita Karwal

Quick Facts on India

- India is the seventh largest country in the world.
- ❖ India is the second most populous country with 1.331 billion people.
- India has the world's second largest train network, and it is the largest civilian employer.
- India has the largest postal system in the world.
- ❖ The largest road network is the India over 1.9 million miles of roads cover the country.
- ❖ India has a very young population, as more than 50% of India is younger than 25 and more than 65% are 35 or younger.
- Pentium chip and Hotmail were created by Indians Vinod Dahm and Sabeer Bhatia respectively.
- Under PM Narendra Modi, initiatives such as 'Make-in-India', 'Digital India' and 'Skill India' have been launched.
- Mumbai's dabbawalla's deliver over 200,000 lunches by bike and train from home to office daily, making one mistake in every six million deliveries.
- ❖ Meghalaya, is the wettest inhabited place on Earth.
- Bollywood, is the world's largest film industry.
- ❖ India has been the largest troop contributor to the United Nations Peacekeeping Mission since its inception.
- ❖ Kumbh Mela, which is the world's largest gathering every 12 years, is visible from space.
- ❖ Lonar Lake, a saltwater lake in Maharashtra, was created by a meteor hitting the Earth.
- Until 1986, diamonds had been found only in India.
- ❖ India is one of only three countries that make supercomputers (US and Japan are other two).

CHAPTER 7 <u>Miscellaneous Floating Facts</u>

5 LARGEST COUNTRIES ON EARTH (by Area)

RUSSIA

- •Size: 17,098,246 sq.km (11.5% of world's land mass).
- •Population: 143,890,417 (1.87% of world population).
- Capital city: Moscow
- •Russia was born from the collapse of the Soviet Union (USSR: Union of Soviet Socialist Republic) in 1991. Its roots can be traced to the 9th century.

CANADA

- •Size: 9,984,670 sq.km (6.7% of world's land mass).
- •Population: 37,279,811 (0.48% of world population).
- •Capital city: Ottawa
- The longest international border in the world is shared by Canada and the United States.

UNITED STATES OF AMERICA

Size: 9,833,516 sq.km (6.5% of world's land mass).

- •Population: 329,093,110 (4.27% of world population).
- •Capital city: Washington, D.C.

CHINA

- •Size: 9,597,000 sq.km (6.4% of world's land mass).
- •Population: 1,420,062,022 (18.41% of world population).
- Capital city: Beijing

BRAZIL

- •Size: 8,515,767 sq.km (5.7% of world's land mass).
- •Population: 212,392,717 (2.75% of world population).
- ·Capital city: Brasilia.

5 LARGEST RIVERS ON EARTH

THE NILE

- •Location: In the continent of Africa; runs through nine countries: Egypt, Congo (formerly, Zaire), Kenya, Tanzania, Rwanda, Burundi, Sudan, Uganda and Ethiopia. It begins at Lake Victoria in Uganda and ends at Lake Tana in Ethiopia. Its mouth leads to the Mediterranean Sea off the coast of Egypt.
- •Length: It is 6,650 km in length.

THE AMAZON

- •Location: In the continent of South America and runs through six countries: Peru, Bolivia, Venezuela, Colombia, Ecuador, and Brazil. It originates in the Andes Mountains in Peru, near the Pacific Ocean and after traversing through South American continent, flows to Atlantic Ocean. Although the second longest river in the world, it is the largest river by water flow with an average discharge greater than the next seven largest rivers combined.
- •Length: It is 6,400 km in length.

THE YANGTZE

- •Location: It is the longest river in Asia, and the third-longest in the world, and the longest in the world to flow entirely within one country i.e; China. Originating from the Plateau of Tibet, it ends at to its mouth on East China Sea, traversing through 10 provinces.
- •Length: It is 6,300 km in length, and is the most important river of China.

THE MISSISSIPPI-MISSOURI

- Location: Located in North America, it flows through just one country: the United States. Beginning at Lake Itasca in Minnesota, the river winds its way through the centre of the country before emptying into the Gulf of Mexico.
- •Length: It is 6,274 km in length.

THE YENISEI

- •Location: Located in Russia and Mongolia, it is the largest river system flowing towards Arctic Ocean into the Kara Sea.
- •Length: 5,539 km.

5 LARGEST DESERTS ON EARTH

SAHARA DESERT

- •Location: It is found on the African continent (north) bordering Red Sea, and touching Mediterranean coasts.
- Area: 9,400,000 sq.km.
- •More than 25% of the sand dunes make it one of the least inhabited and least densely populated on the planet (less than 1 person per sq.mi). Temperature averages 45°C in summers and as high as 54°C.

ARABIAN DESERT

- •Location: Covers vast wild lands of U.A.E, Saudi Arabia, Iraq, Kuwait, Oman, Jordan, Qatar, and Yemen.
- Area: 2,330,000 sq.km.
- •The desert is covered with vast dunes and piles of sand. Temperatures go upto over 50°C in summers.

GOBI DESERT

- •Location: present in Asia. (Sand dunes cover northern and northwestern China and Southern Mongolia).
- •Area: 1,295,000 sq.km.
- •Temperature ranges from +50 °C to -40 °.

KALAHARI DESERT

- •Location: Found in southern Africa. It covers parts of Namibia, Botswana and South Africa.
- Area: 900,000 sq.km.
- It has large areas that are covered with red sand.

GREAT VICTORIAN DESERT

- Location: The desert covers west to south of Australia.
- •Area: 348,750 sq.km
- •Moderate temperatures ranging from 32°C-40°C in summers and 18°C-40°C in winters.

5 DEEPEST OCEANS ON EARTH

PACIFIC OCEAN

- Area: 60,060,700 square miles.
- •Covering 28% of the Earth, it is equal to nearly all land area on Earth.
- •The deepest point is the Challenger Deep within the Mariana Trench near Japan.

ATLANTIC OCEAN

- Area: 29,637,900 square miles.
- •It includes water bodies such as the Baltic Sea, Black Sea, Caribbean Sea, Gulf of Mexico, Mediterranean Sea, and the North Sea.

INDIAN OCEAN

- •Area: 26,469,900 square miles.
- •It includes water bodies such as the Andaman, Arabian, Flores, Java, Red Sea, Bay of Bengal, Great Australian Bight, Gulf of Aden, Gulf of Oman, Mozambique Channel, and the Persian Gulf.

SOUTHERN OCEAN

- Area: 7,848,300 square miles.
- •It is the world's newest ocean. In 2000, International Hydrographic Organization decided to delimit a fifth ocean, whereby, boundaries were taken from Pacific, Atlantic, and Indian Oceans.
- •The world's largest ocean current, the Antarctic Circumpolar Current, forms in the Southern Ocean.

ARCTIC OCEAN

- Area: 5,427,000 square miles
- Most of the year, much of the Ocean is covered by a drifting polar icepack that is an average of ten feet thick.

5 HIGHEST MOUNTAINS ON EARTH

MOUNT EVEREST

- ·Location: Border of Nepal and Tibet / China.
- •Height: 8,850 M above sea level.
- •The first successful ascent was on May 29th, 1953 by Sir Edmund Hillary (New Zealand) and Tenzing Norgay (Nepal).
- •Mount Everest is rising from 3 to 6 millimeters or about 1/3 inch a year.

K2 (MOUNT GODWIN-AUSTEN)

- Location: Border of Pakistan and China.
- •Height: 8,611 M above sea level
- •K2 was discovered in 1856 by Col. T.G. Montgomerie. He named the mountain K2, where 'K' stands for Karakorum and 2 since it was the 2nd peak to be listed.

KANCHENJUNGA

- ·Location: Border between India and Nepal.
- •Height: 8,586 M above sea level
- •The name means Five Treasures of the Great Snow, a reference to its five summits.

LHOTSE

- •Location: Border of Tibet and Nepal.
- •Height: 8,516 M above sea level
- •Its long east-west crest is located immediately south of Mount Everest. In Tibetan, Lhotse means 'South Peak'.

MAKALU

- Location: Border of Tibet and Nepal.
- •Height: 8,485 M above sea level
- •Makalu is an isolated peak whose shape is a four-sided pyramid.

FLOATING FACTS ON INDIA

5 LARGEST INDIAN STATES	
STATE	AREA
Rajasthan	342,238 sq.km
Madhya Pradesh	308,350 sq.km
Maharashtra	307,713 sq.km
Uttar Pradesh	243,290 sq.km
Gujarat	196,024 sq.km

5 MOST POPULOUS INDIAN CITIES	
CITY	POPULATION*
Mumbai	1.27 crores
New Delhi	1.1 crores
Bengaluru	51 lakhs
Kolkata	46 lakhs
Chennai	43 lakhs

5 RICHEST INDIAN STATES	
STATE	GDP*
Maharashtra	Rs. 16.8 lakh crores
Tamil Nadu	Rs. 13.8 lakh crores
Uttar Pradesh	Rs. 9.76 lakh crores
West Bengal	Rs. 8 lakh crores
Gujarat	Rs. 7.66 lakh crores

5 MOST EDUCATED INDIAN STATES / UT	
STATE	LITERACY RATE*
Kerala	93.91%
Lakshadweep	91.28%
Chandigarh	86.43%
Mizoram	91.58%
Tripura	87.75%

^{*}All data as at August 2019

5 MOST CULTIVATED CROPS IN INDIA		
CROP	LEADING PRODUCER (s)*	
Rice	West Bengal, Punjab, Uttar Pradesh,	
	Andhra Pradesh, Tamil Nadu, Bihar etc	
Wheat	Uttar Pradesh	
Jowar	Maharashtra	
Pulses	Madhya Pradesh	
Jute	Bihar, West Bengal, Orissa	

NUCLEAR POWER PLANTS IN INDIA	
NAME	STATE
Kaiga Generating Station	Kaiga, Karnataka
Kakrapar Atomic Power Station	Kakrapur, Gujarat
Kudankulam Nuclear Power Plant	Kudankulam, Tamil Nadu
Kalpakkam Atomic Power Station	Kalpakkam, Tamil Nadu
Narora Atomic Power Station	Narora, Uttar Pradesh
Rawatbhata Atomic Power Station	Rawatbhata, Rajasthan
Tarapur Atomic Power Station	Tarapur, Maharashtra

TOP 5 INDIAN TECHNOLOGY COMPANIES	
COMPANY	REVENUE*
Tata Consulting Services	Rs. 95,192 crores
Infosys	Rs. 60,878 crores
Wipro	Rs. 44,902 crores
Tech Mahindra	Rs. 23,562 crores
HCL Technologies	Rs. 21,476 crores

NOBEL PRIZE WINNERS - INDIAN CITIZENS	
NAME	FIELD (YEAR)
Rabindranath Tagore	Literature (1913)
C. V. Raman	Physics (1930)
Mother Teresa	Peace (1979)
Amartya Sen	Economic Sciences (1998)
Kailash Satyarthi	Peace (2014)

^{*} All data as at August 2019

Sample Test Paper (Pre-Senior Category)

1)	Who discovered Silk?				
	(a) Indian (b) Chinese	(c) Russian (d) American			
2)	Which element is not found in DNA?				
	(a) Nitrogen (b) Phosphorus	(c) Iron (d) Carbon			
3)	Fill in the blank: In warmer te	emperatures, the amount of			
	moisture in the air is called				
	(a) Humidity (c) Atmosphere	b) Biome			
	(c) Atmosphere	d) none of the above			
4)	True or False: India is the most populous country in the world				
	(a) True (b) False				
5)	What is the practise of ancient Egyptians to preserve the				
	body after death?				
		(b) Toxification			
	(c) Civilisation (d) Mummification				
6)	In which year did world war-l take place?				
		(b) 1939-1945			
	• •	d) none of the above			
7)	Fill in the blank: Laser stands for light amplification by				
	emission of radiation.				
	(a) Standard (b) Stimulated (c) Simulated (d) Surgical				
8)	Which virus attacks the imr	•			
	rendering the body vulnerable to diseases?				
	, ,	(c) Ebola (d) Rhino			
9)	Which is the largest day of the year?				
		(b) June 21			
		(d) December 22			
10)	What is the composition of Ozo				
		(c) O ₃ (d) None of the above			
11)	Which of the following is not layer of the earth?				
	(a) Lava (b) Mantle (c) Crust (d) Outer Core			

12)	What is condensed water vapour called?				
	(a) Snow	(b) Ice	(c) Rain	(d) Clouds	
13)	In which country did the period of warring state take place?				
	(a) India (b) Greece	(c) Persia	(d) China	
14)	Which two countries were on opposing sides giving rise to the				
	cold war from 1945-1991?				
	(a) USA & France		(b) USA & USSR		
	(c) USA & India		(d) USA & Germany		
15)	True and False: The modern calendar was developed by the				
	Egyptians?				
	(a) True (b) False			
16)	6) Fill in the blank: In Australia and Oceania rivers often e				
	·				
	(a) Fresh water I) Salt lakes	
17)	Which is biggest				
	• • •	-	(c) Nestle		
18)	Which country ha	=	· ·		
	. ,	b) India	(c) USA	(d) France	
19)	What is the unit to weigh pressure stone called?				
	• •	b) Litre	, ,	(d) Carat	
20)	Which gas is the	•			
		•	(c) Hydrogen		
21)	What is the regular rise and fall of ocean water called? (a) Water cycle (b) Tides (c) Hurricanes (d) Tsunami				
				• •	
22)	Which type of				
	existing between	the border to		water area?	
	(a) Fresh water		(b) Grass land		
	(c) Mangrove		(d) Boreal fore	est	
23)	What is multicellular organism called?				
	(a) Prokaryotes (b) Eukaryotes (c) Metazoans (d) Trilobites				
24)	What is the movement of peoples living in smaller towns to				
	larger developed cities called?				
	(a) Urbanisation		(b) Localisation	n	
	(c) Diversificatio	n	(d) Transition		

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