

**ADDITIONAL TEXTBOOK
FOR CLASS XI**

HISTORY



**Government of Kerala
Department of General Education**



**State Council of Educational Research and Training (SCERT), Kerala
2023**

THE NATIONAL ANTHEM

Jana-gana-mana adhinayaka, jaya he
Bharatha-bhagya-vidhata
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata.
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he!

PLEDGE

India is my country. All Indians are my brothers and sisters.

I love my country, and I am proud of its rich and varied heritage.
I shall always strive to be worthy of it.

I shall give respect to my parents, teachers, and all elders, and treat everyone with courtesy.

To my country and my people, I pledge my devotion. In their well-being and prosperity alone lies my happiness.

Prepared by

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Dear learners,

As learners of Social Sciences, internalising the principles of democracy, secularism and humanism is of cardinal importance in making learning organic and meaningful. Developing and strengthening democratic values help one adhere to higher ideals such as social responsibility and commitment. The publishing of Additional Textbooks was necessitated by the omission of some pertinent areas from the content in History, Economics, Sociology and Political Science textbooks, prescribed for Class XI and XII. The purpose of this additional textbook is primarily to bridge the gap created by the deletion of certain topics and also to make you get familiarised with the values and ideals embedded in what has been removed. The sections incorporated herein have been meticulously chosen in strict accordance with the directives of the Kerala State School Curriculum Steering Committee. I hope this venture will be highly beneficial for you, enabling you to make learning meaningful and fruitful.

Dr Jayaprakash R K
Director
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Instructions to the learners...

The Additional Text book for Standard XI History includes the themes developed to compensate the deletion of the themes 'From the Beginning of Time', 'The Central Islamic Lands', 'Confrontation of Cultures' and 'The Industrial Revolution'. Care has been taken to ensure that the students get maximum benefit of content reduction without compromising on the essential portions. The items in the box, except tables are intended for further reading and will not be considered for evaluation.

ORIGIN OF HUMANS

In 1859, Charles Darwin, an English naturalist presented a theory to explain organic evolution in his masterpiece *On the Origin of Species*. In it, he explained the origin of man as an outcome of the gradual process of biological evolution.

Darwin observed that all organisms multiply prolifically, and no two individuals can be exactly alike. In each generation a large number of variations are formed. These offsprings compete with each other for a better living. Darwin called it 'the struggle for existence'. In this struggle the successful variations survive and the others become extinct. It is called the 'survival of the fittest'. Nature selects these fittest variations and they are allowed to propagate. Darwin named it 'the natural selection'. He said all organisms have evolved in this way and it took millions of years for them to arrive at their present form. This evolution reached the present form from simpler forms. Human beings came last in this process of evolution.

Evolution of Man

Many scholars explain human evolution in terms of four major developments. They are upright walking, reduction of anterior teeth and enlargement of cheek teeth, elaboration of material culture and increase in brain size. The history of the evolution of humans is very long and complicated. About 36 million years ago (mya), primates,

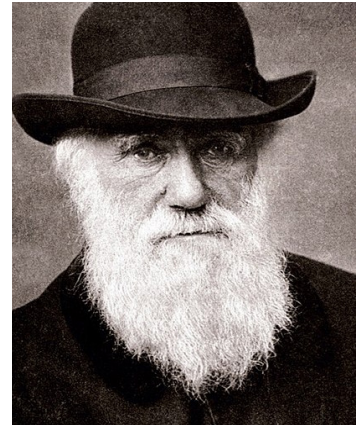


Fig.1.1 : Charles Darwin

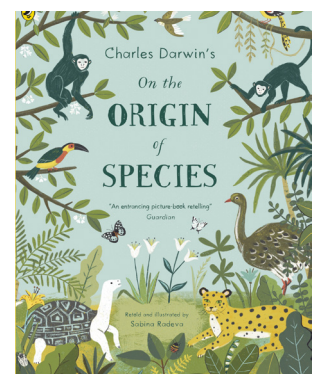


Fig.1.2 : On the Origin of Species

Primatology is the study of primates.

a category of mammals emerged in Asia and Africa. The primates had body hair, a relatively long gestation period following birth, different types of teeth, and the ability to maintain a constant body temperature. Grasping hands, hind limb-dominated locomotion and low reproductive potential were some of the other features of the primates.

By about 24 mya, hominoids, a subgroup of primates, emerged. They were quadrupeds. But their forelimbs were flexible. The hominoids included apes. The next group to evolve was that of Hominids. Hominids appeared by about 5.6 mya. They have an upright posture and bipedal locomotion. The hominoids and hominids have certain similarities as well as differences. Hominoids had a smaller brain than hominids, whereas the hands of the hominids had a speciality which enabled the making and use of tools.

ACTIVITY 1

Illustrate the different stages of human evolution.



Fig.1.3 : The remains of a skeleton discovered by Donald Johanson in 1975. It is one of the smallest specimens of Australopithecus

Hominids are again divided into branches. Of them *Australopithecus* and *Homo* are notable. But there are certain differences between them. *Australopithecus* has a smaller brain, heavier jaws and larger teeth than the *Homo*.

The term *Australopithecus* means 'southern ape'. They retained many features of an ape like small brain, large back teeth and limited dexterity of the hands. As they spent most of the time on trees, upright walking was restricted. Evidences show that *Australopithecus* were the earliest stone tool makers.

The Latin word *Homo* means 'Man'. The brain size of *Homo* (640 cubic centimetres) was significantly larger than *Australopithecus* (approximately 500 cubic centimetres). Body size was slightly larger too. The diet of *Homo* might have changed to include more meat. As per the characteristics of fossils, *Homo* is divided into three. The names given to them reflect their characteristics.

<i>Homo habilis</i>	The tool maker
<i>Homo erectus</i>	The upright man
<i>Homo sapiens</i>	The wise or thinking man

Place of Origin

There are two different views regarding the place of origin of modern humans. They are replacement model and regional continuity model. The advocates of replacement model are of the view that the modern humans have a single place of origin in Africa; accordingly, all older forms of humans were completely replaced with modern humans. The genetic and anatomical homogeneity of modern humans ratify this argument. The great amount of similarity that is visible today among modern humans is the evidence for the origin of modern humans from a population that originated in a single region, that is Africa. From Africa people migrated to different places. The physical differences that we can see among modern humans are the result of adaptation.

The scholars who support the regional continuity model are of the view that the modern humans have multiple regions of origin. They emphasise on the variations in the first appearance of modern humans in various parts of the world. The regional variations and dissimilarities that we notice among modern humans are viewed as evidences for multiple origin.

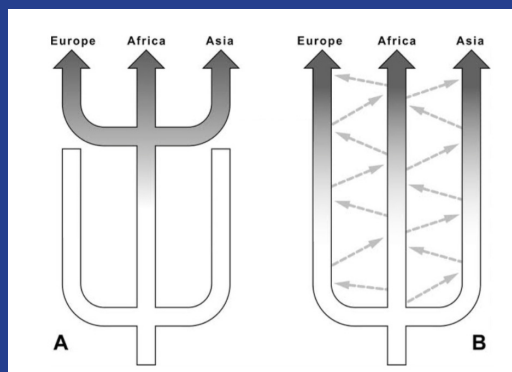


Fig.1.4 : Replacement Model

Regional Continuity Model



Fig.1.5 : Migration of modern humans from Africa to different parts of the world

Life of Early Humans

How did early humans obtain food?

What were their shelter and tools?

How did they communicate with each other?

Answers to these questions will tell you about the life of early humans. The early humans obtained food mainly through four ways:

- Gathering
- Hunting
- Scavenging
- Fishing

Early humans selected places having abundant food resources as their place of residence. Sites, where deposits of artefacts and tools were discovered would be identified as shelters of early humans. They used caves and open air sites as shelters. In the Lazaret cave in France they built a 12 x 4 metre shelter. At Terra Amata in France they built fragile shelters with roots of wood and grass for short term seasonal visit.



Fig.1.6 : Lazaret Cave

ACTIVITY 2

Evaluate the different theories regarding the origin of modern humans.

There are evidences like hearths for the use of controlled fire. Fire helped for cooking, hardening and flaking of tools and protection from the attacks of wild animals. It also provided warmth and light inside the cave.

Early humans made and used stone tools. They used spear-throwers and bow and arrow to kill animals. Both men and women made stone tools. Women made tools to sustain themselves and their children. They also used different tools to remove bones from the meat for drying, smoking and storage. They invented sewing needles to sew clothes. The introduction of punch blade technique helped to make small chisel-like tools, engraving on bones, antler, ivory or wood.



Fig.1.7 : Early Stone Tools



Fig.1.8 : Spear Thrower



Fig.1.9 : Punch Blade Technique

There are divergent views regarding the origin and the period of development of spoken language among early humans. Many cave paintings of animals have been discovered from Lascaux and Chauvet in France and Altamira in Spain. These cave paintings can be considered as an evidence for the communication of the early humans.



Fig.1.10 : Lascaux Cave Painting



Fig.1.11 : Chauvet Cave Painting

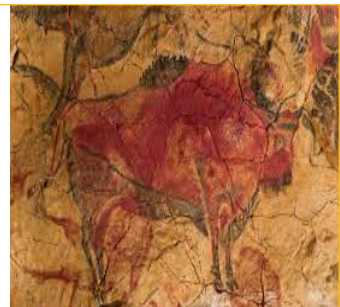


Fig.1.12 : Altamira Cave Painting

ACTIVITY 3

Compare the life of early humans with that of modern humans.

For a long period humans lived by hunting and gathering. Then they began domestication of animals and rearing of plants which eventually led to the beginning of pastoralism and agriculture. This shift from food gathering to food production was a milestone in the history of mankind. Subsequently, humans began to settle down which, along with other factors led to the development of civilization.

Exercises

1. Explain the different stages of human evolution.
2. Analyse the features of the life of early humans.
3. Identify the proponent of the theory of evolution.
4. Distinguish between the replacement and regional continuity models of human origin.

CULTURAL FORMATIONS IN THE MIDDLE AGES

This theme introduces to you the Arabian and American civilizations of the middle ages. Islam, as a religion, originated in Arabia. But over a span of about six centuries, it grew beyond the confines of religion and embraced societies and cultures of different nations. Islam was soon to become a very powerful, dominant social and cultural force, with its profound impact on millions of people in different continents. It was no longer a religion, but much more than a simple faith that was preached in the 7th century by Prophet Muhammad. In the American continents the Aztec, the Mayan and the Inca civilizations flourished till the Europeans reached there. The present theme will explain to you the features of these unique civilizations.

Arabia and the Emergence of Islam

From the beginning of the seventh century, the Arabs lived in the Arabian Peninsula and Syrian desert. They were divided into a number of tribes who led a nomadic life. Each tribe was led by a chief (Shaykh), usually selected by the clan elders from prominent families. They worshipped a variety of Gods and Goddesses (polytheists). Most of the Arabs in Pre- Islamic times depended on pastoralism and agriculture. By the early centuries of the Common era, they involved themselves in long distance trade with neighbouring lands.

During the sixth century, Mecca became the most important centre of Arabian culture and religious life. A religious sanctuary (haram), the ka'aba, located at Mecca attracted pilgrims from all over Arabia. Ka'aba became the repository of the idols of various tribal gods. All the tribes used to undertake annual pilgrimage to Ka'aba. During the fifth century, the Quraysh tribe, to which prophet Muhammad belonged,

took control over Ka'aba. No violence or killing was allowed there. Though the tribes engaged in continuous warfare, the pilgrimage was a period of truce.



About 612 CE, Prophet Muhammad was said to have received the revelation from God (nubuwwat) and announced himself as the messenger of God (rasul). He preached that there was only one God Allah and spread the message of monotheism among the Arabs. The five pillars of this new religion were (i) profession of faith (belief in Allah), (ii) prayers, (iii) fasting (iv) the giving of alms and (v) pilgrimage to Mecca. He also founded a community of believers known as 'umma'. Those who followed the religion of Prophet Muhammad were called Muslims.

Soon, Prophet Muhammad and his followers had to face opposition from affluent sections of Mecca. Due to their oppression, the Prophet and his followers were forced to leave Mecca in 622 CE and they settled in Medina. This journey is called *hijra* (migration), which became a major turning point in the history of Islam. His arrival in Medina marked the beginning of the Islamic Calendar called the *hijra* era. He adopted several measures for spreading the ideology of Islam throughout the region, later known as central Islamic lands. Naturally, his fame spread as a religious preacher and a political leader. He died in 632 CE and his life was marked as a story of revelation, community building and political expansion.

The Caliphate Imperium

Prophet Muhammad did not leave behind him a law of succession. So, no one could legitimately claim himself to be the successor of the Prophet. It created opportunities for administrative innovation among the Muslims. At the same time, it adversely affected the unity of the Muslim community. To resolve the issue, the institution of the caliphate was formed and the *khalifa* became the leader of the community (*amir-al-muminin*).

The first four Caliphs were Abu Bakr (632-634), Umar (634—644), Uthman (644 - 656), and Ali (656-661). They were called the Rashidun or the Rightly Guided Caliphs. They acted as temporal and spiritual leaders of the Muslim community. In course of time, factionalism developed among the Muslims and it led to the assassination of the third caliph Uthman. After that, Ali was elected as the fourth Caliph.

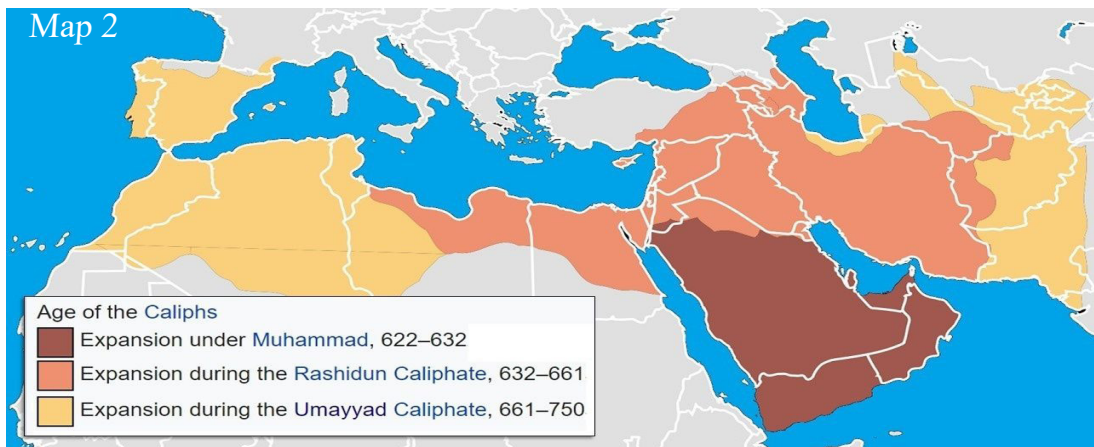
Ali's accession led to deep factional fighting among the Muslim community. Firstly, he was opposed by the Meccan aristocrats and also Ayesha, (wife of Prophet). But Ayesha was defeated by Ali in the Battle of Camel in 657.

Sunni and Shia

Muslims who accepted the succession of Muawiya and the historical sequence of Caliphs after him are called the Sunnis.

Those who believed that Ali was the only rightful Caliph and, only his descendants should succeed him were called Shias.

Simultaneously, Ali was also challenged by Muawiya, the third Caliph's cousin and the governor of Syria. Ali was not able to overcome the challenge raised by Muawiya. Ali's second battle (Siffin) ended in peace agreement between both parties. At the same time, it divided Ali's followers into two groups. Some of his followers called the secessionists (*kharijīs*) later turned against him. This incident also further fragmented the Muslim community and ended in the assassination of Ali by a *Khariji*. Soon, Muawiya declared himself as the next Caliph and founded the Umayyad Dynasty (650 -750 CE).



The Umayyad Dynasty

After his accession, Muawiya expanded the military and administrative powers of the state. He shifted the capital from Medina to Damascus. Other religionists like Christians and Zoroastrians were appointed in the administration. Besides, Muawiya was responsible for the introduction of hereditary succession for the first time in Islamic states.

Umayyads borrowed court ceremonies and administrative institutions from Byzantines. At the same time, they emphasised on Arab social identity. In order to retain Arab social identity, the Umayyad ruler

Abd al-Malik (685-705) adopted many measures. They are given below.

- Arabic language was to be the official language of administration.
- Islamic coinage was introduced in the empire.
- He built the Dome of the Rock in Jerusalem.



Fig.2.1 : Dome of the Rock in Jerusalem

The Rise of the Abbasids

After the death of Caliph Hisham in 743 CE, the Umayyad regime began to disintegrate. This situation was utilised by another Meccan group in the Muslim community. They were the Abbasids. Abbasid upheaval broke out in Khurasan (Eastern Iran). At that time, Khurasan was a centre of political agitation. Popular apocryphal writings such as *Jafar* and *Al Malabim* mention the coming of the Messiah (Mahati) and the beginning of a new era of universal justice. In this atmosphere, Abu Muslim, an Iranian slave rallied people in Khurasan, who were aggrieved by the loss of status and unjust taxes. With the help of about three thousand men, he fought and defeated the last Umayyad ruler, Marwan, and seized the caliphate. This happened in 750 CE and the movement is called *dawa*. The Abbasids claimed their descent from the Prophet's uncle, Abbas.

The Abbasid upheaval made some changes in the political structure and culture of Islam. They shifted the capital to Baghdad; nevertheless, the architectural style and court ceremonies of the Umayyads were retained. The rulers extended patronage to Islamic institutions and scholars. However, the Arabs soon lost their cultural hegemony to Iranian culture.

From the ninth century onwards, Abbasid power weakened due to the following reasons.

- The conflict between pro-Arab and pro-Iranian groups in the army and bureaucracy.
- Outbreak of civil war in 810 CE between the sons of Harun al-Rashid, Amin, and Mamun, which led to the rise of a new power bloc of Turkish slave officers.
- Struggle for power between Shia and Sunni was revived.

As a result, several new dynasties rose in different parts of the central Islamic lands. They were Tahirids, Samanids, and Tulunids. The Abbasid empire was limited to central Iraq and western Iran. This region was also lost, when the Buyids, a Shia group captured Baghdad in 945 CE.

Following the Arab and Iranian ethnic groups, the Turks were also converted to Islam. They established Turkish sultanates in the tenth and eleventh centuries. The most important Turkish rulers were Alptegin, Mahmud of Ghazni, Tughril, Chaghri Beg and Alp Arslan. In 1055 CE, the Turks recaptured Baghdad from the Buyids (Shia clan) and restored caliphate rule, and it continued till the abolition of the caliphate by Mustafa Kemal Ataturk in the twentieth century.

The Crusades

Jews, Christians, and Muslims considered Jerusalem as the holy land. From 638 CE, Jerusalem had come under the Arabs. The efforts made by Christians to regain the holy land from Muslims resulted in a series of wars in the eleventh and twelfth centuries. These battles are generally known as Crusades. Four major Crusades were waged between Christians and Muslims. The Crusades had a profound influence on the political, economic and social life of Asia and Europe.

- Cultural interaction between Asia and Europe strengthened.
- Changes in the attitude of the Muslim rulers towards its Christian subjects.

- Growth of trade between East and West
- Decline of feudalism

Legacy of Islam to the World

As Islam came into contact with new people, societies and ideas, Muslim scholars were eager to acquire new types of knowledge with a view to strengthening the Islamic identity. Thus, religious scholars (ulama) were appointed during the reign of Harun al-Rasheed. According to them, knowledge (ilm) is derived from the teachings of the Quran and the day-to-day practices of the Prophet (sunna). So, these were considered the only ways to understand the will of God to give guidance to the Muslims in this world. The religious scholars of the Islamic period were devoted to writing tafsir (commentaries on the Quran) and hadith (sayings and doings of the Prophet). Besides, for preparing Islamic laws, jurists also used reasoning. During the eighth and ninth centuries, four schools of law emerged: Shafi, Hanafi, Hanbali and Maliki.

The name 'Sufi' came into use in the late eighth and early ninth centuries. Sufis were a group of religious-minded people in Islam. They sought deep and personal knowledge of God through asceticism (renunciation of the world) and mysticism. The mystics attempted to acquire an immediate and personal experience of God's reality. During the eighth and ninth centuries, asceticism led to a higher stage of mysticism. It was known as pantheism. Rabia, a female mystic, wrote in her poem that unity with God

Rabia and her vision of god

Rabia Misriya was a sufi saint who lived in Basra in Egypt in the 8th CE. She illustrates her perception of God through a story.

Once, while walking through her village, Rabia saw an old lady searching for something in the courtyard of her house. "What are you searching for?" Rabia asked. The woman replied. "I am searching for my lost needle". Rabia also joined her in the search. Unable to find out the needle even after an hour's search, Rabia asked the woman "Where exactly did you lost it?". She replied that "she lost it inside her own house." To this Rabia retorted, "Then why did you search for it in the courtyard?". The woman replied, "Inside the house, it is quite dark, but in the courtyard there is sufficient light".

Rabia narrated this story to substantiate her point that 'though people know where God dwells, they search for Him somewhere else'.

can be achieved through intense love for God. Sufism accommodates all sections of people irrespective of their status, gender and religion.

Hellenic philosophy played an important role in Islamic thought. Under its impact, an alternate vision of God and the universe was developed by Islamic philosophers and scientists. The transmission of Hellenic cultures to Islamic societies depends on the survival of ancient academics. The most important ancient academics of Alexandria and Mesopotamia taught Greek philosophy, medicine, and science. Many Greek and Syrian works were translated into Arabic during the reign of Umayyad and Abbasid Caliphs. The Caliph al-Mamun is said to have founded an academy and observatory (*Bayt al-Hikma*) to encourage the translation of works into Arabic. As a result, the works of Aristotle, Euclid's *Elements*, Ptolemy's *Almagest*, and Indian works on astronomy, mathematics and medicine were translated during this period.

The influence of the study of new subjects instilled a spirit of critical inquiry among Islamic scholars. Among the scholars, *Mutazila* used Greek logic and method of reasoning to defend Islamic beliefs. Ibn Sina (Avicenna) the great physician and philosopher did not believe in the resurrection of the body on the day of judgment. This idea was strongly opposed by Islamic theologians. Ibn Sina composed the monumental work *al-Qanun fil Tibb* (*Canon of Medicine*). This book gives an introduction to the general study of medicine. It also mentions the importance of dietetics, the influence of climate and environment on health, and the contagious nature of some diseases.

The most recognised attributes of a person in medieval Islamic society were creative imagination and fine language. It was believed that these skills helped to develop a person's communication skills (*adab*). *Adab* forms of expression were found in poetry (*nazm*) and prose (*nathr*). Ode (*qasida*) was the most important creation of the pre-Islamic period. It was further developed by the poets of the Abbasid time. The Persian poets refined Arabic poetry and challenged the cultural dominance of

the Arabs. Abu Nuwas (Persian poet) wrote poems on new themes like wine and male love, which were forbidden by Islam.

Pahlavi was the language of the people during the Arab conquest of Iran. Later, a new version of Pahlavi, with a large number of Arabic words emerged. The most important early poet of the new Pahlavi was the Samanid court poet Rudaki. He is considered the father of new Persian poetry, which has two forms: short lyrical poem (*ghazal*) and quatrain (*rubai*). The zenith of the glory of *Rubai* was during the time of Umar Khayyam. The Persian literary heritage of glories, romances, fables, and dynastic histories became a part of epic poetry. Among these, the most important is Firdausi's *Shahnama* or *The Book of Kings*. It is an epic of fifty thousand couplets and is considered an immortal work in whole Islamic literature.

Ibn Nadim, the Baghdad book seller's catalogue (*Kitab al Fihrist*) includes a number of books. These books describe new themes regarding moral education and enjoyment to readers. *Kalila wa-Dimna* (animal fables), stories of Alexander and Sindbad (adventurous heroes), *Quays* (unhappy lovers), and *Thousand and One Nights* were some of them. In course of time, the scope of *Adab* expanded to other areas such as biography, manual ethics, history and geography. *Ansab al-Ashraf* (*Genealogies of the Nobles*) of Baladhuri and *Tarikh al-Rasul wal Muluk* (*History of Prophets and Kings*) of Tabari were the most important historical works of this age. The dominant figures in the field of geography were Muqaddasi (*Ahsan al-Taqasim*), Masudi (*Muraj al-Dhahab*), and Al Biruni (*Tahqiq ma lil-Hind*).

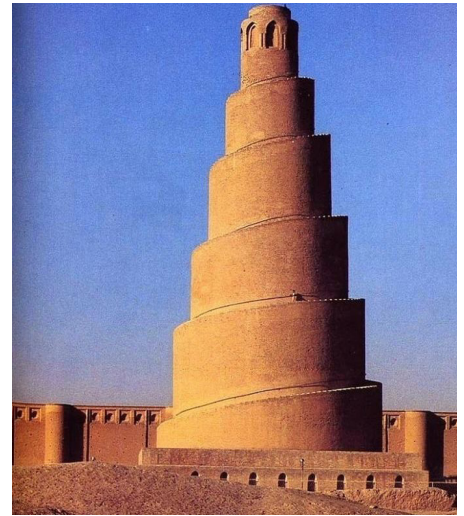


Fig.2.2 : Minaret of the Great Mosque, Samara

The presence of Islam was identified by travellers during the tenth century through Islam's contributions to the field of architecture. The sacred buildings such as mosques, shrines, and tombs with arches, domes, minarets, and open courtyards as special features constitute a remarkable legacy of Islam. From the early period itself, a mosque obtained significance in the cultural life of the community. It contains an open courtyard where a fountain or pond was situated. Besides, there was a longitudinal hall that accommodates a long line of worshippers and the prayer leader (*Imam*). Inside the hall, there was a concave niche (*mihrab*) indicating the direction of prayer (Mecca) and a pulpit (*minbar*), where the official Friday sermon was delivered by the prayer leader. Another feature of the building was the minaret. It served two purposes marking the presence of the new faith and announcing the prayer time to the faithful. This pattern of construction was found in caravans, hospitals and palaces.

Islam did not depict living beings in its art forms. Gradually new art forms like calligraphy (the art of beautiful writing) and arabesque (geometric and vegetal designs) emerged in Islamic art forms. *Kitab al-aghani*, *Kalila wa Dimna* and *Maqamat* of Hariri were important literary works illustrated through the miniature painting of the Islamic period.



Fig.2.3 : Calligraphy, Manuscript

At all stages of human civilisation, three aspects had played prominent roles : they are religion, community and politics. In the case of central Islamic lands, throughout the period under discussion all the three had prominent roles. Towards the closing

years, politics had an upper hand whereas religion and community went hand in hand.

Civilization in Central and South America

The cultural formation in America was shaped by the Mayas, the Aztecs (Mesoamerican civilisation) and the Incas. These civilisations were situated in Central and South America. Some of their common features were progress in agriculture, especially the cultivation of corn and their architectural remains which made these civilizations world famous.



The Aztecs

The Aztec civilization flourished in the central valley of Mexico. They were basically a society of warriors and established their capital at Tenochtitlan. Agriculture was the backbone of Aztec civilization. They cultivated various crops such as potatoes, pumpkins, corn, beans, manioc root etc. Because of the shortage of cultivable land, they built

artificial Islands, called *Chinampas*. Their craftsmen were skilful workers and produced delicate mosaics of stone and shell. They also continued the prevalent tradition of pyramid building.

Aztecs gave great importance to education. There was universal education. *Calmecac* and *Tepochcalli* were the two types of schools that existed under Aztecs. The former was the centre for children of nobility and the latter for other children. *Calmecac* imparted training to become military and religious leaders. Education on myths, history, religion and ceremonial songs was given to children from other social classes in *Tepochcalli*.

The Aztec civilization began to decline in the early 16th century. Internal problems, especially dissatisfaction among the newly conquered people were the main reasons.

The Mayas

Among the Mesoamerican civilisations, the Mayas achieved the highest stage of intellectual development. Like other civilisations in America, they also depended on agriculture. Corn cultivation was important; several rituals associated with corn cultivation such as planting, growing and harvesting, were performed. The Mayas attained a high level of architectural skill which is exemplified in their imposing stone structures. Their wall frescoes, stone sculpture, wood carvings polychrome pottery and dyed textiles prove their artistic skill. The Mayas introduced their own calendar. A system of writing also was developed by them.

The Incas

Of the civilizations that arose in the continent, the largest in territorial extent was maintained by the Incas of South America. It spread in the western part of South America, from Ecuador to Chile. It rose in about 1100 CE and reached its height in the late fifteenth century. The Inca capital was Cuzco, situated in Peru.

Inca state was a confederation of tribes, comprised of clans and was governed by a council of elders. A centralised system of government was formed by them. The king was considered as the descendant of the Sun god. Like the other pre-modern civilizations, agriculture was the backbone of Inca civilization. They cultivated corn, potatoes and domesticated llamas for meat, hides and wool. Incas exhibited their excellent artistic skill in making pottery, textile designs and metal works. They also developed an accounting system called quipu.

The Incas were great builders. They built roads over the mountains and constructed bridges, tunnels and aqueducts. This shows their high engineering skill. The city of Machu Picchu in Chile is a living example of the architectural achievements of Incas. In 16th century, Spaniards under Pizarro demolished Inca cities and looted them. However, the city of Machu Picchu remained intact, fortunately because the Spaniards did not notice it.

A close study of the native civilizations of America reveals that they shared many common features such as existence of an agrarian economy, absence of private ownership of resources, achievements in architecture etc. In a later theme, you will study the cultural formations of Europe in the Middle Ages.

Exercises

1. Examine the salient features of the life of Arabs in pre Islamic Period.
2. Elucidate the significance of hijra.
3. Explain the importance of Abbasids in the history of Caliphate imperium.
4. Examine the impact of crusades.
5. Analyse the legacy of Islam to world civilization.
6. Explain the features of the civilizations of Central and South America.

AGE OF DISCOVERIES AND INVENTIONS

The Renaissance, Protestant Reformation and Geographical explorations and discoveries of the 14th and 15th centuries changed the picture of the whole world dramatically. A spirit of enquiry, adventure, and the wish to spread religion set hundreds of enterprising sailors, on voyages to unknown lands. Discovery of lands and even continents led to greater trade contacts between the East and the West. The contact between the Europeans and the peoples of the America, Africa and Asia caused multiple impacts on either sides. Asian African countries and the Americas were soon colonised by Europeans, who were in need of raw materials and markets. The Industrial Revolution soon followed, which was marked by invention of machines, revolutionising production. So, let us now learn the geographical discoveries and Industrial Revolution in detail.

Geographical Explorations

The spirit of curiosity, discovery and adventurism enthused by the Renaissance motivated the Europeans to undertake geographical explorations. The fall of Constantinople in 1453 to the Turks had blocked the trade routes to the eastern countries. This made the Europeans find an alternative route to the East and their attempts resulted in the discovery of lands hitherto unknown. As the natural resources of countries like Portugal were poor, they were looking forward overseas for the luck of exploration, trade and colonization. Glowing descriptions on the fabulous wealth of the East in the travel literature motivated the Europeans to take up adventures. At the same

time there were strong demands for oriental commodities, * in European countries. The crusades resulted in an increase of Europe's trade with Asia and created a strong taste for its products. Greater geographical knowledge, love of adventure and the patronage of kings also went far in the field of geographical explorations. Desire to spread Christianity made kings, nobles and missionaries encourage sea voyages.

** Demand for Asian spices and slaves was great. The temptations of the East like silk from China, pepper and cinnamon and other spices and cotton goods from India made the Europeans to undertake adventure travels.*

Portugal, a small country in Europe took the lead in exploring new lands. The Portuguese explorer Bartholomew Diaz sailed along the western coast of Africa and reached the southern tip of the continent in 1486 and named the cape as 'Cape of Storms' as he and his sailors were caught in a dangerous storm. But the king of Portugal renamed it as 'Cape of Good Hope'. On 3rd August 1492, Christopher Columbus (1451-1506) started his journey from the port of Palos** (Spain) and reached what he thought was India, but it was the island of Guanahani in the Bahamas (Columbus renamed the place as San Salvador). Columbus conducted three more expeditions and discovered many parts of South America. Later in 1499 Amerigo Vespucci, a geographical explorer from Florence, sighted South American coasts and realised that the land discovered by Columbus was not India, but a new land, and he described it as 'New World'.

*** Columbus and his crew started sailing from Palos on 3rd August 1492 in three ships, Santa Maria, Pinta and Nina. Columbus commanded the ship Santa Maria, the largest of the ships.*

Vasco da Gama (1469-1524), a Portuguese traveller, set sail from Lisbon and discovered a sea route to India in 1498. In 1500, Cabral, another Portuguese sailor, on his way to India, reached Brazil accidentally. In South America Spanish expeditions continued and Mexico was discovered by Hernan Cortez (1471-1541) in 1519 and Peru by Francisco Pizarro.

Through the voyages of discoveries, the world became larger; the explorations created a long lasting impact on Europe, America, Asia and Africa, but on different notes. For the European nations, Spain and Portugal first - then England, France, and Holland, it opened the doors to raw materials and resources and also markets for their goods. Soon, joint stock companies were formed by their merchants and several trading expeditions were sent to the eastern countries. In order to get more resources from the newly discovered lands, they started carving out spheres of influence there. The availability of large variety of raw materials in large quantities helped them further expand their industries, which ultimately resulted in the Industrial Revolution. In their search for raw materials, the western countries exploited the wealth and natural resources of Asian and African countries and the Americas and soon carved out colonies in those countries. This was to lead to colonization, conflicts, wars and imperialism at the cost of freedom of many colonial peoples.

Enslavement of population and slave trade were the most wicked of the results of the geographical discoveries. Even though the system of slavery existed in every part of the world from early period onwards, enslavement of the native population by force and slave trafficking became a horrific practice after the geographical discoveries and consequent conquests. Young men and women were captured and sold as slaves. When agricultural plantations and cattle farms were established and mining was started after the discovery of gold, lakhs of slaves from African and Asian countries were imported to Brazil and other regions of America. In fact, the slaves formed the bulk of the labour force in these plantations, farms and mines.

Industrial Revolution

The most fundamental transformation of life, in the recorded history of man, was brought about by the Industrial Revolution, which began in the 18th century Britain. The name 'Industrial Revolution' is given to a series of changes that brought about a transition from production by

hand to production by machine, from hand-made goods to machine-made goods.

Invention of machines and development of technologies first led to an increase in commodity production, especially in textile and iron industries. Added to these, faster means of transportation using steam power came into vogue. Developments in metallurgy, improvements in mining techniques and the coming of electricity, all together effected a total transformation in the field of industry and commerce. Britain was the first country to witness all these.

The British Leadership

England was fortunate to have everything that was needed for an Industrial Revolution.

Factors favouring Britain;

- Political stability under the monarchy, resulting peace and order in the country
- Common laws, language, single currency and a market
- Extensive use of money as a medium of exchange
- Increasing demand for British goods in Europe
- Effects of Napoleon's Continental System*
- Abundant deposits of iron and coal in the country
- The Agrarian Revolution**
- Cheap labour in the form of people who migrated to towns in large numbers

** The 'Continental System' introduced by Napoleon imposed restriction on British trade. As a retaliatory measure England blocked European ports and prevented raw materials from going to them. This enabled England to secure all raw materials she needed very cheaply.*

*** The Agrarian Revolution which took place in England in the eighteenth century was highly favourable to England. Bigger landlords created very large estates for increasing production by purchasing small farms near their property and, through 'enclosure' of the village common lands. This made the farmers and people who had been living by grazing animals on the village common lands, landless and jobless. They started moving towards nearby towns and cities in search of a living.*

The English people were enterprising in many fields. In sailing in ships, in colonising, in empire building, in organising trade and commerce and in other activities, they stood apart from other explorers.

Growth of Towns, Improvement in Trade and Finance

During the 18th century many towns in England grew in size and population. Eleven out of nineteen European city centers which increased their size and population were in Britain. London was the largest among them.

London soon grew in global significance, when in the 18th century, the Mediterranean ports of Italy and France lost their growing importance and the global trade was shifted to the Atlantic ports of Britain and Holland. The Bank of England was founded in 1694 and it became the nerve centre of England's financial system providing financial backing for international trade by providing loans. In England, banking system grew fast. There were more than hundred provincial banks in England by 1784, and during the 1820s, the number increased to 600. In London alone, there were more than 100 banks, ready to provide financial support to enterprises to establish and maintain industries.

The network of rivers in England ensured cheaper and faster transportation of raw materials and goods until the coming of railways.

Coal and Iron Industries

England had abundant deposits of iron ore and coal, two basic materials essential in industrialisation. Until the eighteenth century there was a scarcity of usable iron. Originally, for melting the crude ore before smelting* charcoal was used. There were many problems with charcoal. The supply of charcoal had fallen steeply, as more and more forests were being cleared for timber. Moreover, charcoal could not produce high temperature and its impurities produced poor quality iron.

Coal was far better than charcoal, as it could produce greater heat and soon coal was to replace charcoal.

** Smelting is a process of separating the metal from impurities.*

Britain became the world's leading producer of coal and the coal output of Britain rose steadily from about 16 million tons in 1816 to 65 million in 1856. It was the expansion of iron industry that increased the mounting consumption of coal. The replacement of coal by coke, which could easily and effectively smelt iron, was an important step forward in the production of iron. Inventions in metal working industry made far reaching effects on Industrial Revolution.

Inventor	Invention	Purpose
First Abraham Darby (1677-1717)	Blast Furnace	Enhanced the efficiency of smelting
Second Abraham Darby (1711-1768)	Wrought iron from Pig iron	Refined the process of making usable iron
Henry Cort (1740 -1823)	Puddling Furnace	Molten iron could be got rid of impurities
	Rolling Mill	Roll purified iron into bars
John Wilkinson (1728-1808)	Iron chairs, and iron pipes	Conveyance
Third Abraham Darby (1750-1791)	First Iron Bridge	Transportation
Henry Bessemer (1813-1898)	Converter	Making harder, purer, and refined iron known as steel



Fig.3.1 : Darby's Blast Furnace at Coalbrookdale



Fig.3.2 : First Iron Bridge near Coalbrookdale

The series of inventions in the field of iron and steel production paved the way for the establishment of many huge iron and steel factories in England. A variety of iron and steel products began to be manufactured;



strong, sturdy and better machines and tools came to be widely used in hundreds of factories and mills in the 19th century England.

Revolution in Textile Industry

The textile industry was the first to exploit the potentialities of power-driven machinery. Till the beginning of 18th century, developments in the field of textile industry were very slow. But it began to change from the invention of flying shuttle for weaving cloth. A series of inventions took place in the fields of spinning and weaving which revolutionised the cotton textile industry.

Inventor	Invention	Purpose
John Kay (1704-1764)	Flying Shuttle	Speed of weaving doubled; It made weaving broader fabrics possible.
James Hargreaves (1720-178)	Spinning Jenny	One person could spin several threads of yarn.
Richard Arkwright (1732-1792)	Water Frame	could produce tougher and stronger thread
Samuel Crompton (1753-1827)	Mule (Spinning Mule)	Allowed spinning of strong and fine yarn
Edmund Cartwright (1743-1823)	Power loom (Automatic Loom)	This machine used an automatic shuttle worked by water power. Textile production revolutionised and the speed of weaving became two hundred-fold.
Eli Whitney (1765-1825)	Cotton Gin	An engine that separated the fibre or raw cotton from the seeds

By 1830 Britain operated more than fifty thousand power looms, and cotton goods accounted for half of its exports. The British Census of 1851 listed more than half a million workers employed in cotton manufacturing alone. The cloth making industry received a great impetus when Isaac Singer (1811-1857) popularised the sewing machine.

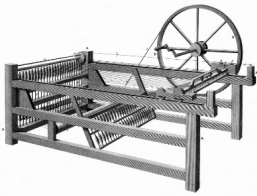


Fig.3.3 : Spinning Jenny

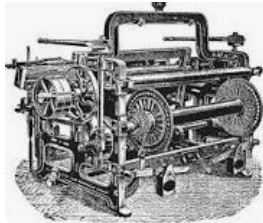


Fig.3.4 : Power loom



Revolution in the Field of Power

For centuries, water power and horse power had been the major conventional energy sources used in many industries. A great leap in the field of industrialisation was the replacement of water power with steam power and of steam power with electricity. Water power had some limitations such as availability, season and the speed of the flow of water. It was in the field of mining that steam power was first used. An increased demand of coal and iron hastened inventions in the field of steam power.

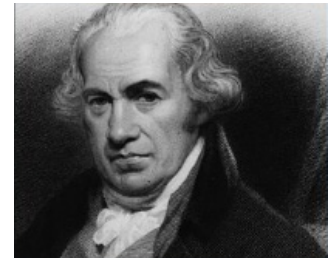


Fig.3.5 : James Watt

In 1698, Thomas Savery (1650-1715) produced a steam pump called 'Miner's Friend' for draining water from coal mines. In 1712, a new steam engine was made by Thomas Newcomen (1663-1729), who was working under Savery. But, this also proved defective. A far better Steam Engine (Beelzebub) was invented by James Watt (1736-1819) in 1769.

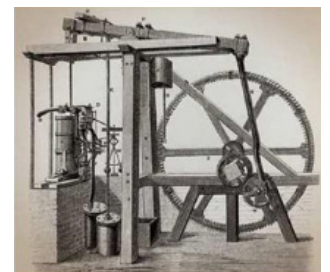


Fig.3.6 : Steam Engine

This engine had greater speed, consumed less coal and was economical. The introduction of steam power was indeed an important landmark in the field of industry. After steam power was applied, factories could be built anywhere and not necessarily near flowing water. Introduction of electric power, which replaced steam power, further revolutionised industrial production.

Revolution in Transport and Communication

With increased production in factories, transportation gained significance. The roads of England, unable to stand the strain of heavy loaded shipments, called for constant repair. John Mac Adam (1756-1836) devised a means of surfacing by building sturdy roads with layers of broken stone, called thereafter Macadamizing.

Between 1775-1850, great canals were constructed throughout England, which was rich with rivers, and this lessened the cost of transportation. Worsley Canal (1761) planned by James Brindley (1716-1772) was the first one built. In the so called 'Canal Mania' period (1788-1796) 46 new canal projects were undertaken.

After this came steam boats, with Robert Fulton inventing one. By the 19th century, railways emerged as a new means of faster and cheap transportation. Cast iron rails were developed by Abraham Darby's Foundry and coal from the mines began to be transported, by rail-lines. The "Puffing Devil" made by Richard Trevithick (1771-1833) pulled trucks around the mines. In 1814, George Stephenson's (1781-1848) "The Blotcher" put the steam engine on wheels heralding the coming of modern locomotive.

In 1825, the first railway line that connected the two cities of England, Stockton and Darlington, began running on the track. Stephenson's

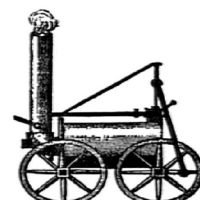


Fig.3.7: Puffing Devil by Richard Trevithick

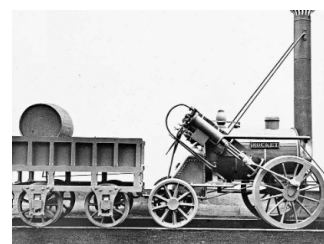


Fig.3.8 : Stephenson's locomotive - 'Rocket'

locomotive, called 'Rocket', began carrying passengers and goods in Liverpool-Manchester Railway in 1830. Railways proved to be a convenient, speedy and cheap means of transportation. Britain had 500 miles track in 1838, 6,600 miles in 1850, and 15,500 in 1870. A railway mania was visible in England during these times.

Communication also witnessed radical improvements. In 1840 Britain inaugurated a postal system called 'Penny Post', in which a letter could go from London to Edinburg, for instance, at the cost of one penny. More revolutionary was the beginning of telegraph by utilising electricity for instantaneous communication. The first telegraph message was made from Baltimore to Washington in 1844. Then came the first sub-marine cable under the English Canal in 1851, the first transatlantic cable in 1866 and the first telephone in 1876.

Effects of Industrialisation

The 'Industrial Revolution' led to large scale production which necessitated the rise of factory system. Millions of uprooted people from villages came to towns and started working in these factories. Soon, there was much overcrowding in the cities causing housing problems. There were no building restrictions and no regulations to prevent overcrowding of cellar dwellings. There were no arrangements for disposing of the house refuse which always accumulated, overflowed and spread. With no system of drainage and sanitation along with an inadequate supply of clean water, towns soon became insanitary places causing the outbreak of epidemics like plague, small pox and other virulent fevers. The life span of city population fell sharply: in the city of Birmingham it was 15 years, in Manchester 17, and in Derby 21. Nearly half of the children in these cities failed to survive beyond the age of five.

Women, Children and Industrialisation

Industrial Revolution changed the lives of women and children. Earlier, women earned an income from working in farms, rearing livestock,

collecting firewood, spinning yarns in their homes, etc. along with bringing up children and doing household work. Likewise, children also were made to do some work. With the rise of factories women and children also went to work there with an aim to supplement the family income. Soon, they were increasingly drawn into the labour force by factory owners. They worked in the factories at half a man's wage or less, for long hours under strict discipline and severe punishments. The factory owner preferred women and children as they need to be paid lesser salary. It was in the cotton industries that they were employed in large numbers. It is true that women achieved financial independence and self-esteem with the income received from their jobs; but it was more than outweighed by the horrible working conditions, physical exhaustion due to long hours of work and the poverty in their houses.

Child labour formed the bulk of labour power in the cotton and textile factories as they could move easily between the machines. Industrial machines in cotton spinning factories, like Spinning Jenny, were designed to be used for children. They were the worst sufferers among the working people. They worked for long hours, not getting enough sleep and even Sundays they had to work. On several occasions they got injured, caught their hair in the machines or even died by falling into them.

In coal mines also, children were employed in large numbers. Mines were dangerous places for children to work. Injuries were common in mines as explosion was a general phenomenon. Children were to stand at mine gates to open and close the doors, when the wagons travelled in and out of the mines. They worked as coal bearers and carried heavy loads of coal on their backs. However, for factory owners child labour was meant for training children for future factory work.

Grievances, Aspirations and Protest Movements

As we noted at the beginning of this theme, the Industrial Revolution changed the lives of human beings.

The immediate effects were:

- ▶ rise of factories
- ▶ creation of a large working class in which there were women and children also
- ▶ long working hours for women and children
- ▶ heavily crowded towns and miserable living conditions for workers in these towns
- ▶ fighting insanitation, epidemics and poverty.

Naturally, the workers started expressing their anger and frustrations in numerous forms of protest.

This was the period when the British were fighting the Napoleonic Wars (1795 – 1815). Trade between England and Europe was disrupted,



Fig.3.9 : Child labour in textile factories



Fig.3.10 : Child labour in coal mines

Factories were closed and unemployment grew in an increasing speed. The working class could not afford the prices of essential food items like bread and meat. Workers of towns and factories started protesting against their working conditions, low wages, long hours of work, etc. Several bread riots occurred throughout England. The government concentrated on the wars and tried to suppress the workers' protests by force and through laws. Thus, the two Combination Acts were passed in 1795 which made it unlawful to incite people by speech or writing to hatred or contempt of the king, constitution or government. Public meetings were banned.

Adding to the miseries of the common people, came 'Enclosure Movement', where hundreds of small farms were merged into large plantations and estates by powerful landlords. This had thrown thousands of villagers out of job, who then migrated to towns to work in factories. But the introduction of machines, especially in the cotton industry, pushed out thousands of workers making them unemployed. Consequently, they fell into poverty. The workers believed that machines had put them out of work and made their lives miserable. Handloom weavers, who hated the coming of machines, went on strike, and even destroyed the power looms. Similar events happened in Yorkshire where thousands of machines were destroyed by rioters.

Discontented workers formed secret societies against increasing Industrialisation. Luddism, led by General Ned Ludd during 1811-1817 in the weaving districts of Britain, was one such movement. Under him the protestors put forward their demands like minimum assured wages, control over employing women and children, compensatory work for those who lost job due to mechanisation and even the right to organise. When the textile owners refused to remove new machines, or not to reduce their number, the Luddites attempted to destroy the machines.

Riots occurred in the field of agriculture also. Mechanisation destroyed the employment opportunity of agricultural labourers and they found threshing machines as a threat to their labour. The rioters attacked and smashed these machines at many places. During early 1800s, many were arrested, and given severe punishments including death penalty and deportation.

Workers in factories and mines soon began to organise into groups, and voice their grievances to employers and even to the government. Thus in 1819, about 80,000 people gathered peacefully at St. Peter's Fields in Manchester claiming democratic rights like right to form unions, conduct public meetings and the freedom of press. This resulted in a brutal suppression by the government and this event came to be known in history as 'Peterloo Massacre'.

Changed Attitude of Governments

The series of protests and riots had their impact. In 1819, the British Parliament passed a law, prohibiting employment of children under the age of nine in factories and limited the working hours of children between nine and sixteen to 12 hours a day. In 1833, another Act declared children under nine to be employed only in silk factories; besides limiting the working hours of older children. In 1842, the Mines and Collieries Act was passed, banning children under ten and women from working in underground mines. And much later, in 1847, the 'Ten Hours Bill' was passed, which limited the working hours for men and youth.

Industrial Revolution made the countries of the West rich and powerful. Western countries, with Britain in the lead, went in search of raw materials and worldwide markets for their manufactured goods. In the name of trade, they came to the East and soon started carving out colonies there, exploiting the wealth of those people. At the same time the western countries clashed among themselves for colonies in Asia and Africa, which ultimately led to imperialism. Unfortunately, the Industrial Revolution sowed the seeds of war, bitterness and hatred all over the world.

Exercises

1. Geographical explorations greatly transformed the world. Examine.
2. The Industrial Revolution first took place in Britain. Why? Explain.
3. Discuss the features of Industrial Revolution.
4. Analyse the impact of industrialisation on women and children.

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Theme 2

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Fig. 2.2 : Hattstein and Delius, Islam: Art & Architecture, konemann UK Ltd., Cologne, 2000.

Fig. 2.3 : <https://www.britishmuseum.org/>

Theme 3

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