
UNIT 31 TRANSITION TO MODERN WORLD

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31.1 INTRODUCTION

In the earlier Units you have studied in detail the debates on feudalism and its decline, the commercial structure of the medieval world and the salient features of the cultural life. In this Unit you shall see the changes that start taking shape in the medieval societies and these led to the emergence of modern world. This unit explains:

- what is meant by modern world;
- changes that were taking place in feudalism from the point of view of agrarian production;
- how the decentralised political structures transformed into centralised states and the corresponding changes in other major parts of the world;
- how the new trade routes contributed to the emergence of modern world system;
- the impact of international trade on manufacturing and commerce in different parts of the world;
- cultural trends in different societies and the ways in which these contributed to the formation of new social attitudes;

- the changes in the methods of warfare; and
- the reasons for the triumph of Europe as the dominant region.

Historians regard the period around 1500 as the age of transition from the medieval to the modern way of life. Such a transition has conventionally been considered valid only for the European society as many of the crucial events responsible for this transition had profound effects on Europe. Yet this passage from the medieval to the modern world was not an exclusive intra-European phenomenon. Europe itself had borrowed many of the ideas and knowledge from the non-European world, especially from the Arabs and from the Chinese. What happened in the subsequent five centuries was the integration of different regions of the globe that shook life everywhere and sooner or later the old ways into new. From the late fifteenth century began the rise of Europe to the stage of dominance. The decline of feudalism in some parts of the world brought about changes in the agrarian structures, which were becoming more responsive to the market pressures. Geography provided a stimulus to the maritime states of Europe. Once the traditional monopoly of the Italians in the Levant region and the Arabs in the Indian Ocean was destroyed by the discovery of new sea routes around Africa, the societies in Asia and Africa witnessed profound changes. The rise of trans-Atlantic trade routes brought the trading world much closer and marked the first stage of global integration. Trade and commerce, missionary activities and new methods of warfare became the chief tools of expansion. The process of empire building commenced from the late-fifteenth century and set in motion the forces of capitalism based on competition and exploitation. In the political sphere, almost all the regions witnessed a transformation of state structure from a decentralised or fragmented to centralised form. The rise of nation-states in Europe with definite boundaries and the amalgamation of smaller principalities or states into centralised empires were not confined to Europe alone but can be seen in China, India and Turkey. These new political structures provided security to trade and economic activities. Developments in the field of culture in the non-European societies first influenced Europe and were later themselves profoundly affected by the European developments in the sphere of science and technology. Scientific and cultural progress in Europe created new social attitudes and influenced the mentality of the people. Improvements in the science of manufacturing, artillery, weapons, techniques of navigation and military warfare led to the supremacy of the western world.

31.2 MEANING OF MODERN WORLD

Modernisation implies making suitable changes and bringing reforms to meet the present day challenges. It includes changes in political and economic structures and to develop social attitudes based on rationality and scientific approach. One way of looking at the emergence of the modern world is the process of change in the direction of industrialisation – transition from agrarian regimes to the industrial and the capitalist stage. But this is to see Modernisation through a telescopic eye. A modern country like Denmark is not a fully developed industrial power but more of agriculture based economy. Italy, the most industrialised region of Europe, in the late medieval period took centuries to emerge as a modern state. Constant reforms in every sphere of life – administration, legal system, economy and society, religion and thought –

constitute the path of modernisation. From this point of view, we can say that till the end of the Middle Ages, every society – the Europeans, the Chinese, the Indians and the Arabs made significant contributions in changing the lives of the people in their own ways. Each society adopted its own model of modernisation that differed in sequence. For all their dramatic novelty the oceanic discoveries of the late fifteenth century by men like Columbus, (discovered America) Diaz (found route via Cape of Good Hope) and Vasco da Gama (traced the direct sea route to India) must be seen in the context of a long period of preparation and development. Till this period, the Arabs and the Chinese had led the rest.

Marshall Hodgson, in his three-volume work *The Venture of Islam: Conscience and History in the World Civilisation* places history of Islamic civilisation in the context of world history. In this he re-evaluates modern history (post-1500) and the place of Europe in it. He partially transcends the Eurocentric modernisation theory and instead treats it as a global process. Modernity does not mean westernisation. Instead of treating the post Abbasid Caliphate period till the rise of the gun powder empires' of the sixteenth century as the period of decline, Hodgson believes that it was the time of the greatest advances of Islamic civilisation that witnessed the elaboration of its culture into China, India, South and South east Asia well into the Balkans and the Mediterranean States. He argues that the Renaissance did not inaugurate modernity. Instead, it brought Europe up to the cultural level of the other major civilisations. It did so in some measure by assimilating the advances of other Asian civilisations. It is not necessary that the process of modernisation take off simultaneously in all the regions of the globe, synchronising with the rise of modern west. China and the Arabs had already reached a reasonable level of maturity when the Europeans started coming out of the feudal mode. It is also true that from this period the non-European world slowed down or even stagnated for various reasons, in comparison to the west. In fact, after the fifteenth century, it was Europe that led the world and dictated changes through its scientific ideas, trade and imperialism. Henceforth, various civilisations began to move from the relative ignorance of each other into direct and accelerating contact across all the oceans. The physical hindrances between regions had been largely overcome by men of the fifteenth century. The pace of change hastened everywhere from the nineteenth century onwards as the coming of industrialisation unleashed the forces of imperialism and nationalism. Many non-European societies were forced to carry out programmes of reforms and modernisation to defend themselves against the imperialist onslaughts and to occupy honourable place in the community of nations.

31.3 DECLINE OF FEUDALISM

It would be wrong to say that the decline of feudalism was a universal phenomenon and that the transition was smooth and quick-paced. In fact, it was an extremely slow process and it almost took three centuries and even more for the forces of capitalism to triumph. England, the Netherlands, some regions of northwestern Europe and parts of France were among the first geographical regions to experience the decline of feudal order. In eastern and central Europe, feudalism persisted and even strengthened after the crisis of the seventeenth century. Without going into the debate on the reasons for the decline of feudalism, we can say that a combination of factors- demographic,

trade, inner contradiction in the feudal mode of production and class conflict, led to the transition from medieval to modern world. You have already studied in Block 6, unit 23, the relationship between trade and decline of feudalism. Northwestern Europe came to occupy an important place on the new trade route that developed along the Atlantic coastline in the sixteenth century. However, the feudal decline had set in earlier than this. The growing burden of population and the excessive exploitation of the peasant population by the feudal lords had created a crisis in agriculture. The unresponsive nature of medieval agriculture, the growing demands for revenue, feudal limitations, the mounting expenses due to wars and increasing price level and the rising pressure of population had all caused this crisis. The emergence of world market became a crucial factor in the decline of feudalism. Agriculture was forced to transform itself wherever the pulls of market forces became strong.

With the coming of feudal crisis the social structure underwent profound transformation and the social balance began to change though its pace varied from one region to another. The lower order began to gain greater freedom and security. Feudal dues were gradually replaced by monetary payments. The rising prices of agricultural products, the swelling of population and the growth of urbanisation led to a rapid expansion of commercialisation of agriculture. It offered new opportunities to the enterprising landlords but caused problems for the traditional feudal lords. The feudal aristocracy experienced a steady decline while the rise of commercial economy led to the rise of bourgeoisie. Increase in area under cultivation and improvement in yield per unit of land was the result of growing demand. In the late medieval period a three-field system had prevailed over most of Europe. From the sixteenth century, a variety of cropping methods were adopted to make a more intensive use of the soil. The practice of fallowing was abandoned, at least in parts of the Low Countries. Peas, beans, turnips and green vegetables and fodder crops were being grown. Interestingly, many of these ideas were also implemented in China. Robert Temple gives credit to China for spreading the ideas of crop rotations, drilling (plants grown in proper rows with equi-distance from one-another), intensive hoeing of weeds, etc. These were the ideas on which the European agrarian revolution was based. Even the Arabs had shown great interest in agriculture and made many innovations. The irrigation projects on Tigris and Euphrates rivers in “Sawad” or Black land led to a remarkable level of prosperity under Umayyad and early Abbasid rulers. The Arabs are credited with the introduction of rice, sugarcane, cotton tree, saffron, spinach and a variety of fruit crops to Spain and subsequently to other parts of Europe. In both the regions, China and Arab States – their respective governments showed concern in major agricultural projects such as flood control, artificial irrigation and transportation of agrarian products. In China, a number of agricultural techniques had been evolved such as the square pallet chain pump, swan-neck hoe for weeding purpose, the rotator winnowing fan and the multi-tubes for sowing seeds in drill fashion. Advances were made in the sphere of soil conservation, improvement of crops and canal linkages. However, all these changes had come about over a long period of time and were gradual and not revolutionary.

In contrast to these, the agrarian transformation of Europe was much broader in scope and its impact was felt beyond the territorial boundaries and even in the sphere of trade and manufacturing. It also had a strong impact on the social structures of different states and profoundly altered their economies.

European agriculture facilitated trade beyond the national frontiers, e.g. the Baltic region became the granary of European food grain, sending food grains to all parts of Europe through sea routes. The Low Countries, the Netherlands and some other regions began to specialise in dairy farming – Spain, England and the Alpine lands concentrated on sheep farming and began exporting wool to distant centres of production such as Flanders. At the end of the fifteenth century and in the course of the sixteenth, a great programme of drainage and dyke-building was set in motion. A wave of land reclamation took place in many parts of Europe. At many other places, enclosure of land became a common practice. The market pressures led to transition from arable farming to extensive grazing. Price-factor began to determine the direction of change in agrarian structure. During the sixteenth century, food production greatly increased and agriculture expanded enormously. Farming became more intensive and better communications between regions developed. Agriculture grew more specialised to suit the conditions of local advantages and promoted division of labour. New methods of agriculture received impetus with the setting up of printing presses in all parts of Europe that increased production of literature on new farming practices and agrarian manuals.

However, large parts of Europe continued to remain entrenched in feudal system and it took centuries to break its fetters. After centuries of stagnation, agrarian change became the dominant theme from the late fifteenth century. Regional specialisation, which had been of only minor significance during the Middle Ages, became an important aspect of agricultural production. To generate additional income from agriculture, farmers and landlords began to take special steps in its sale and exports. The Price Revolution of the sixteenth century played an important role in transforming European agriculture by encouraging capitalist farming, and thereby hastened the process of feudal decline. The class structure began to change along with this, thereby laying the foundations of modern agriculture.

31.4 TRANSFORMATION OF POLITICAL STRUCTURES

Transformation of political structures was one of the important developments. It was witnessed in Europe, East and South Asia and in the Arab World.

31.4.1 Emergence of Centralised States in Europe

In the late fifteenth century the people of Europe were governed in a variety of ways – hereditary, elective or even joint monarchies, oligarchies and confederations and even empires. Yet the European political structure in the late fifteenth century remained essentially feudal in character. What was driving Europe towards the modern world was the emergence of strong centralised monarchies that came to rule in some parts like France, Spain, England and Muscovy (modern Russia). The crisis of feudal economy and the internecine feudal warfare brought about significant changes that affected the relationship between the changing society and state-building process. The local coercive power of the lord and his retainers over peasantry altered with the rise of strong rulers and the state began to monopolise the use of force and subsequently reduced the powers of the feudal lords, towns and corporate groups including the church. The rise of absolute states, particularly in Western Europe implied

the absorption of smaller states to form modern nation-states with definite boundaries. Russia is the best illustration of this process. From a tiny principality called Muscovy, Russia became a vast empire by this policy of territorial expansion. Similar transformation took place in Spain. This also involved the strengthening of centralised government under a single sovereign head, establishment of law and order and the application of unitary and effective measures. The absolute monarchy carried out territorial expansion and consolidation, administrative centralisation and political integration. They unified the economies of their respective states by centralised taxation. They developed the administrative apparatus on modern lines with the help of a professional bureaucracy and judiciary, and maintained their power through permanently standing armies. The formation of modern administrative, judicial and financial structure had its roots in the era of absolute states. Although the exact nature of the European absolutism is a subject of debate, it is generally accepted that these states played a progressive role in facilitating the rise of capitalism. These states played the role of large-scale tax collectors and re-distributors of private income. Though based on feudal structure, these states ensured the interests of mercantile and manufacturing classes by removing internal barrier to trade, regulating external tariff in the interest of local industries, promoting colonial activities and creating trading companies. In these ways, the absolute rulers encouraged primitive accumulation of capital and created preconditions for capitalism. Moreover, these absolute states became the forerunners of modern nation-states based on the principle of sovereignty. The English Civil War (1642-49) destroyed the feudal structure of the state and brought the new landed class and the bourgeoisie to share power. The so-called Glorious Revolution ended a prolonged class war and established a constitutional arrangement that still continues with slight modifications. The nature and composition of Parliament changed dramatically from the late fifteenth century. It began to represent public opinion at the highest level and established the importance of legislature in state affairs. In France the Revolution of 1789 overthrew the feudal structure and opened the path for capitalist development. The Revolution transformed France from a medieval state to a modern nation-state by adopting sweeping reforms. The new democratic concepts of equality, liberty, citizenship and sovereignty were popularised not only in the Europe but world over, although the ideas of equality and fraternity existed in the Islamic world for centuries. The relationship between the government and the governed had undergone a major change – subjects of monarchs became the citizens of nations. After the French Revolution most of the European states were shedding the feudal traits and transforming themselves into modern nation-states.

The Reformation movement also contributed to the process of state building by creating national church in every state. It strengthened the powers of the rulers. The Reformation shattered the religious unity of Europe – the chief feature of the Middle Ages and gave birth to many new ideas like political rights and individual freedom. Medieval Christianity was rejected in favour of secular authority.

Although Italian city-states do not fall into the pattern of absolutist state, they played an extremely important role in developing the modern rules of international relations and brought about sophistication of the art of diplomacy.

In the course of fifteenth century, Italian courts became the centres of politics. The concentration of power in the hands of the rulers came to be called *stato*,

a model emulated by many European rulers. These Italian princes made a distinct contribution to the idea of “resident diplomacy”. Just as the Italians had laid foundations of the techniques of modern business organisation, they also perfected techniques of modern international relations. These included the practice of appointing resident ambassadors in the courts of foreign rulers, formation of offensive and defensive alliances with the opponents of their enemies, non-aggression pacts and commercial treaties – practices that are followed by all modern states. The most important contribution of the Italian states to the modern concept of international relations is the idea of balance of power. Each state tried to preserve its own territory and defend its own interests by ensuring that no single state became strong enough to enslave the other and for this a balance was maintained by a group of states to counter the design of some others. The cold-war period of the twentieth century demonstrated a similar tendency as was the anti-French coalition against Napoleon.

31.4.2 East and South Asian Political Transformation

As you have studied in the earlier units, Chinese civilisation is one of the oldest in the world. Its developments were largely indigenous. China had maintained a fair degree of isolation from the rest of the world except the surrounding states. Since the eleventh century Chinese sailing vessels, some even bigger than European vessels of that time, sailed across Malay Peninsular and India into Arab region. However, the Ming rulers imposed restrictions on this trade. Trade was allowed only with those states, which accepted Chinese suzerainty. Trade was seen only as a source of taxation. The advent of the “Age of Discovery” created a drastically different situation. Portuguese and Spanish inroads into southern China via new sea routes in the sixteenth century brought traders and missionaries in this region. Soon, the Russian advances across Siberia to the Manchurian borders in the seventeenth century broke the relative isolations of China and set in motion a series of changes. By mid-nineteenth century, the direct East-West contact caused a head-on-collision between the two in the form of Sino-British wars. This entire period from the sixteenth century coincided with the rise of the Manchus and the establishment of Ch’ing dynasty. The characteristics of this period became markedly different from the earlier ones. At the same time it should be noted that although the Chinese meeting with the Europeans began in the sixteenth century, its effects did not assume significance till the nineteenth century when wide ranging political, administrative and economic reforms were introduced in China to face the challenges of western imperialism.

Historians hold two divergent views on whether the sixteenth century or the nineteenth century should be regarded as the beginning of modern China. One school of historians regard the Opium War of 1839-42 as the point of departure as this was the beginning of foreign imperialism and that the Chinese set in motion a series of reforms to modernise in order to face the foreign threat. This is also the time in Japan for Meiji reforms that transformed Japan into a strong modern nation. The second school of historians consisting primarily the Chinese scholars, consider the arrival of European explorers and missionaries during the transition from the Ming (1368-1643) to Ching (1644-1911) as the real point of beginning. Western learning was first introduced in this period, and this intensified the process of change. The intrusion of the West can be construed as catalyst that transformed traditional China into a modern nation, although

China never followed the western model of modernisation based on capitalism. China never totally revamped the political structure till the Revolution of 1911 and the Chinese identity was retained and only piece-meal administrative changes were carried out. The strong centralised Chinese empire survived till 1911 but new administrative departments were created from time to time to face the new situation created by western presence. These included the creation of *Lifan yuan* in 1638 to manage affairs concerning Tibet, Mongolia and the Western Region, the Creation of Grand Council in 1729 to centralise decision-making and the establishment of *Tsungli Yamen* in 1861 to direct foreign relations. These attempts were followed by a series of reform movements that led to the formation of modern China. The rise of Chinese nationalism was a direct product of these developments.

South Asia had a long and rich political history representing a variety of arrangements. The vast cultural, linguistic, religious and ethnic diversity made it difficult to retain a centralised structure. However, at the time of the Portuguese arrival in India, the Indian sub-continent held a special place in the trading world. The Arab merchants nominally controlled trade in the Indian Ocean but in reality the effective control was in the hands of mixed ethnic and religious groups, who participated in this extremely profitable trade that included items like cotton fabrics, silk and spices. However, inter-regional traders did not exercise any determining influence on the state administration and the Mughal rulers could not foresee the Portuguese threat in this region. The Mughal Empire of the sixteenth and the seventeenth centuries was one of the three largest empires of Asia. It revealed an exceptional degree of tolerance towards other cultures. Under their rule, a highly refined culture emerged representing a synthesis of Indian and Persian traditions. From the late seventeenth century, centralised state structure started disintegrating and was replaced by autonomous regional states. These political developments coincided with the rise of the English as political contenders. The entire south Asian region came under the yoke of the European powers till the middle of the twentieth century. The first wave of modernisation was experienced in the nineteenth century representing broadly two streams of responses. The first approach suggested that to reach the western standards, social awareness had to be created through reform movements based on western-model- knowledge of science, technology, political thought and liberalism. The second response stressed the superiority of the ancient culture in comparison to the west, and emphasised the revival of past greatness. However, this region showed an exceptional liberal and flexible attitude in adopting western knowledge and educational models despite facing insurmountable problems like mass poverty, colonial subjugation and social disunity due to a variety of factors. The spread of national movement and the direction of political reforms under the British government helped in creating a democratic political structure in most parts of this region.

31.4.3 Changes in the Arab States

The Abbasid dynasty that lasted till 1258 had brought political, economic and cultural transformation of the Arab states. The Abbasid caliphate disintegrated into distinct political and regional entities. The common traits of them were their Islamic faith, the Arabic language and the Arabic intellectual traditions, which gradually diversified. The caliphate broke down into three major areas, and they were further divided into smaller entities. The first comprised of the

old lands of Iraq and Iran and the neighbouring territories. The second centred at Egypt that controlled Syria and Palestine, while the third area was of North Africa and the Mediterranean territories extending upto parts of Spain. Like the Christian world of Roman Catholics and the Orthodox Christians and subsequently the Protestants, the Muslims in the Arab world came to have a sharp division between Sunni and Shi'ites that sometimes caused serious political consequences.

In the period of political disintegration of the Arabs, two outside powers held sway over their territories – the Ottomans and the British. The rise of Ottoman Empire in the Balkans and the Near East brought many Arabian territories under its subjugation. After the Middle Ages, the history of Arabs got inevitably bound with the Ottoman Empire. The Ottomans established themselves in Turkey in the fifteenth century and then expanded in all directions, particularly in Mediterranean and Eastern Europe. Moving southwards, the Turks acquired Hijaz in 1517, which was ruled from Egypt by the Mamluks. While Syria and Egypt were defeated and subjugated in 1516-17, the Persian invasion in 1535 led the occupation of Baghdad. This was the beginning of a prolonged and costly struggle. Yemen became part of the Ottoman Empire in 1538. A struggle between the Sunnis (Ottomans were from this sect) and the Zaydis (a sect opposed to Sunnis) forced Ottomans to withdraw by 1635. Henceforth, the political developments came to be closely tied up with trading activities of this region.

The British contact in this region started in early seventeenth century to establish commercial relations. Aden had been an important port, located on the southwest coast of the Arabian Peninsula. It enjoyed the benefits of good anchorage facility, strategic location as it provided a link between east and west and had a direct access to the Asian and African trade routes. The discovery of the direct sea route to India in 1498 caused serious damage to the fortune of Aden. Ottoman occupation of this port worsened the situation. In 1618 the British established a factory at an alternative port- Mukha (Mokha). The Dutch and the French followed them. The British supremacy over Red Sea was established in 1763 after the Seven Years' War. From 1785, the Americans began competing with the British. Napoleon's capture of Egypt in 1798 was an epoch-making event in many ways. It marked the beginning of the break with the past. He brought to Cairo an Arabic press, which became *Matba'at Bulaq*, the official printing institution of the government for propaganda. He also established *académie littéraire* with a library. Till this time the people of the Arab world were generally leading a self-contained, conventional life. This was an abrupt encounter with the west outside the sphere of trade that kindled an intellectual spark. Napoleon's invasion of Egypt and the establishment of autonomous and westernised dynasty there brought many Syrian and Lebanese writers seeking freer environment, making Egypt the centre of Arabic Renaissance. This *Annahdah al-Adabiyah* was a literary movement of the nineteenth century, aimed at creating modern Arabic literature. It was inspired by their western contacts. After the dismemberment of the Ottoman Empire following the Second World War, this movement spread to the other Arab countries. It also activated the British, who till now had confined themselves to trade and political relations. The Arab response reflects a state of paradox- resisting the political domination of the west while accepting the European ideas and their techniques. The most important of these ideas were – nationalism, democracy and the principle of

self-determination. The Egyptian occupation of Syria (1831-40) was another milestone in this direction. Arab nationalism started from a wide base- the entire population of this region was seen as a part of one nation. The Syrians started an intellectual movement deriving ideas from the west. In the Arab states, political intervention took the form of mandates: the British established their control over Palestine and Iraq while the French controlled Syria and Lebanon. Later local interests and responses led to fragmentation of the Arab lands into smaller nations, beginning with Saudi Arabia in 1927 till the British withdrawals in 1960s and 70s. Their break with the political past had been quite radical and the transformation to modern state different from the west.

31.5 TRADING ACTIVITIES

Trading activities increased to a new level during the period of transition to Modern World. Growth of maritime trade was the main feature of the inter-continental trade. East Asia and the Arab World contributed and participated in this process.

31.5.1 Emergence of Europe as the Centre of World Trade

The beginning of modern trading activities and the enlargement of commercial economy were closely linked with the fifteenth century maritime activities by way of geographical explorations and search of unknown lands. Till this time the European states did have trade links with Asia via overland transport. Spices such as pepper, cinnamon, mace, etc. as well as silk and cotton pieces were bought from the east, from India and beyond, and trans-shipped to Europe by the Italian merchants. Similarly, some regions of Africa sent gold and precious stones in exchange for European goods. The rise of Ottoman Empire in the eastern parts of Europe in the fifteenth century caused problems for the overland trade routes to Asia. This fact along with the religious wars between the Christians and the Muslims leading to Crusades against the latter led to vigorous search for new sea routes to Asia. The Portuguese and the Spaniards provided the lead in these ventures. The year 1492 marks the discovery of America by Columbus and the beginning of the world of two hemispheres and became a key step towards the circumnavigation of the globe. The importance of Christopher Columbus is not that he discovered America. His discovery from the European perspective is valuable because it marks the first stage of global integration that proved most beneficial for the Europeans. And when in 1498 Vasco da Gama successfully found a new sea route to India with the help of an Arab navigator- Iben Mejid, the beginning was made of the European imperialism in Asia and Africa. Magellan was the first to circum-navigate the earth and proved that oceans are not hindrance but facilitator to journeys.

The building of trade linkages and sea routes connecting different parts of the world made Europe the centre of the emerging world economy. Oceanic trade became the most popular means of transporting goods from one continent to another. Not only the volume of international trade grew enormously, the commodity pattern altered drastically. These sea journeys for economic gains proved a turning point in human history. The discovery of silver mine at Potosi in Central America by the Spaniards had global repercussions. The navigational superiority of the Europeans with their use of firearms in trading activities led to their domination of the global trading network. Trade acted as a tool of expansion and helped in the creation of modern world.

The European transformation proceeded through a diversified path. Some changes were of swift and abrupt nature, while others were gradual incorporating the old and the new to produce new ways of life. In immediate terms, the long distance trade contributed to the shipping industry and provided immense stimulus to the merchant marines. Historians like Fernand Braudel, Immanuel Wallerstein, Eric R. Wolf, etc., have highlighted the significance of population migrations after this period. While the scope of migration to Africa and Asia hardly existed as they were already well populated, the vast tracts of American land and the West Indies provided plenty of opportunities to those who wished to seize them. A large number of Portuguese went to Brazil while lakhs of Spaniards went to Central and South America and the West Indies. This was followed by an exodus from the continent consisting of the Dutch, the English, the French and the Germans to North America and Canada. They all left for various reasons; to exploit the new riches, to participate in trade, to make fortune in the new lands, to enhance their social status, to escape the tyrannical rules and oppressive religion while the missionaries moved out to proselytise their religion.

The arrival of the Europeans in America led to an exchange of crops and diseases, what Alfred W. Crosby terms as 'biological consequences'. The exchange of plants and animals led to a globalisation of biology. Europe's discovery of the new regions altered the nature of trade between Europe and the New World. Colonial trade brought new agricultural products to Europe which were rich in diet value, such as potatoes, tomatoes, cocoa, tobacco, maize, peanuts, vanilla, rubber and kidney beans. You can visualise how these must have transformed the food content of the Europeans and subsequently of the other regions of the world, where these were introduced and became items of daily consumption. Maize and potato were the two crops that solved the problem of feeding the growing population to some extent. The arrival of many new crops and their adaptation and dispersal to other climatic zones had important nutritional results. The course of adaptation was very slow as taste had to be cultivated for these. While potato became one of the staple crops in some parts of Europe, maize gradually replaced rye and millet. Tomato, another American vegetable changed the menu of the people all over the world. Products of daily consumption were exchanged from one region to another. Asian rice, ginger and pepper reached the New World, as did tea and coffee. Population migrations also resulted in the exchange of diseases in both directions. While yellow fever and probably syphilis affected Europe, small pox, measles, chicken pox, and bubonic plague spread to other regions. The spread of small pox caused heavy demographic losses in the New World after its first appearance in 1518. A historian describes this as 'bacteriological warfare'. The exchange of animals between the two worlds proved beneficial to both. On the other side, the inhuman consequences associated with the European expansion were quite glaring. Slave trading was one such result. Thousands of Africans and some Asians were bought through agents, often kidnapped and beaten up and taken to unknown lands away from their families forever. The exploitation of the Blacks and Amerindians caused a sharp decline of their populations. Many of them died in the course of sea journeys or due to alien conditions. It is estimated that nearly 11 million slaves were exported between 1500 and 1800. Strong protests were made against such practices after the spread of enlightened ideas during the eighteenth century.

The discovery of new routes and new territories not known by the Europeans

resulted in the widening of knowledge of geography and cosmography, although the Arabs knew some of this. Many of the centuries old views and theories were proved wrong such as the shape of earth or the problem of distances. New literature that began to appear on these subjects helped the process of unifying the world. The expansion of world trade on the one hand promoted commercial economy based on exchange and thereby led to the rise of bourgeoisie and on the other hand, acted as the external dissolvent agent for feudalism. Although, some historians reject the notion of treating sixteenth century marking a qualitative shift from the feudal to the capitalist mode of production, we can argue that there was a vast extension and the broadening of the world-system during this period of what had been slowly going on in the earlier period. There was an acceleration of trading and commercial activities and a shift in the mode of production beginning in the sixteenth century that was increasingly moving in the capitalist direction (except in Russia and China, where it went beyond capitalism to pursue the socialist path by twentieth century).

31.5.2 Trade Structure in East Asia

China had kept herself aloof from the West for all these years in respect of trade relations though the Chinese goods were reaching Europe via Levant through the Arabs. At the time of Marco Polo's seventeen years stay in China in 1270s, substantial quantities of Chinese silk, textiles, porcelains and other items of trade reached parts of Asia, East Africa, the Middle East, Mediterranean and even coastal Europe partly by sea routes and partly through caravans. However, these commercial contacts were greatly reduced and there was a contraction of commercial activities between the early fourteenth and late fifteenth centuries affecting the entire Eurasia. Marco Polo left such a glowing description of the Asian wealth and luxuries that it drew the attention of many sea voyagers and traders including Columbus. The Chinese political troubles of the Ming dynasty (1368-1644) and economic crisis were on the wane when the Europeans were discovering new sea routes to Asia and America. The Chinese goods were highly prized in the European and the Middle Eastern markets. The Portuguese entry into the Indian Ocean and their trading settlements in Asia gave them greater accessibility to the market. The Chinese porcelain was now reaching Lisbon and Antwerp in plenty. The Dutch also started importing large quantities of Chinese luxury goods during the seventeenth century. The Chinese showed no inclination to buy the European manufactured goods and the only commodity in which they were interested was silver. The pressure of rising population, the growing monetary problems, increasing dependence on silver as a medium of exchange and significant decline in domestic production in China were the chief factors that made her to take up silver import from the West.

The government in China strictly controlled trade. It seems that some relaxations were made in state policy towards trade during the fifteenth century to encourage silver mining in the Chinese empire, although it failed to increase production. However, developments outside China had substantial bearing on her economy. Between 1460 and 1530, production in the silver mines of Central Europe increased by almost 500 per cent. This stimulated and sustained economic activities in Western Eurasia. This became an important place for the purchase of oriental luxury goods, particularly the Chinese. European silver was reaching China through this route. A little later, discovery of silver mines in Central and

South America greatly increased international circulation of silver bullion. This led to the formation of three major routes through which silver started reaching Asia: (a) from Acapulco on the west coast of Mexico to Manila in the Philippines, (b) from the Spanish colonies in America to Portugal and through the Portuguese traders it reached Asia, (c) the other European countries like the Dutch, the English and the French also carried vast quantity of silver to purchase Asian products. In the meantime, the political unification of Japan brought about in the period of Hideyoshi and Tokugawa Ieyasu in late sixteenth and early seventeenth centuries greatly augmented silver production in Japan. Trade between China and Japan caused a large influx of silver into China and the Portuguese also participated in this trade and thereby increased its volume. The Portuguese entry into China at Macao (1557) through Malacca opened the door for the British, the Dutch and the French. On the other hand, the expansion of trade between Spain and Manila proved beneficial to the Chinese as it led to a steady increase of import of her silk by the New World. It also opened up opportunities of population migrations to the centress of mining in Mexico. At the same time, foreign trade and silver imports created problems for the Chinese. Although the chronic shortage of precious metal could not be solved, these imports contributed to the process of urbanisation and caused frequent monetary fluctuations and business speculation. Though the foreign trade never ceased, its volume declined considerably till the eighteenth century. In the nineteenth century, the favourable balance of trade was reversed with the coming of the British, who began selling opium as a substitute of silver. Henceforth, an aggressive form of trade as conducted by the western powers, became a threat to the Chinese establishment. This marks the phase of western imperialism in China. Chinese response, like many other regions facing a similar situation, was to pursue a programme of modernisation – adopting western science and technology but retaining her culture. Thus, international trade became a catalyst of change.

31.5.3 Trading Activities of the Arabs

The Arabs had successfully linked the two most prosperous trading zones of the medieval world – the Mediterranean and the Indian Ocean. In the Middle Ages the bulk of the sea-borne trade between the Mediterranean and the Indian Ocean passed through the Red Sea. The trade belt had shifted alternately a number of times between the Persian Gulf and the Red Sea mainly due to disturbed political conditions. Cairo emerged as an important centre of trade and manufacturing. In this period Egypt maintained active trade relations with the Italian states. On the East African coast, Egypt and Persia were strong maritime states but both did not maintain permanent fleets in the Indian Ocean. Ming China was more powerful but the Chinese had started withdrawing from this region. The coming of the Portuguese in the Indian Ocean caused a breach in the Arab maritime domination although it did not come to a complete end at least till the beginning of the eighteenth century. In 1513, the Portuguese governor of Goa, Albuquerque failed to breach the strong walls of Aden, the chief entrepot at the mouth of the Red Sea. Later he was able to capture Ormuz on the northern shore of the Persian Gulf. The Portuguese policy was to forge an alliance with Persia against the Ottoman Empire exploiting the religious differences between the two. The Portuguese set up naval bases instead of undertaking the policy of territorial conquests and developed a network of ancillary trades. They did not create new trade routes in Asia as the Europeans

had done in the New World. Asian trade routes in the Indian Ocean had existed for centuries linking East Africa, Arab coast, India, Southeast Asian islands and the Chinese coast. The Portuguese first participated in it and then established their dominance with the help of their naval strength. They can be called the first worldwide traders who opened up Asian oceanic trade for rest of the European nations. After the arrival of the Portuguese in the Indian Ocean, the Arab trade moved towards the west. With the decline of the Italian silk industry and the contraction of the Chinese trade, the demand for Iranian silk grew. Since the mid-fourteenth century, Tabriz was the trade emporium of Asian goods and had replaced Baghdad and the other cities of this region but changing conditions made Basra an important silk centre. Gradually, the Arab region lost its place in the world trade till the construction of Suez Canal in the nineteenth century. Its importance suddenly increased with the discovery of the oil mines, which became instrumental in the creation of modern trade system.

31.6 ECONOMIC MODERNISATION – CHANGES IN TRADE, COMMERCE AND INDUSTRY

The emergence of modern world economy from the sixteenth century with new trade routes and massive growth of trade volume had a profound impact on the European economy. The arrival of bullion from the New World brought about a fundamental change in the balance of European society. It resulted in rapid progress of capitalism and a spirit of enterprise in trade and manufacturing sectors. Population growth caused increasing urbanisation that created more demand for industrial products. The structure and trade also underwent significant changes to handle an increasing demand. With this, the financial activities multiplied. All these factors pushed Europe towards the modern era.

Trade expansion was going on throughout the fifteenth century. The opening out of commercial economy led to changes in the form of trade organisations. In late medieval period, trade was organised either by individuals or in the form of family partnership. In Italy the business organisations like *commendas* or *societas* were short-term ventures limited to single journey or a very brief period. Increased volume of trade necessitated changes in trade management. The regulated companies like Merchant Adventurers of England emerged in the late medieval period. Many others like the Eastland Company, the Levant Company, the Muscovy Company, etc., were assigned specific regions to carry out trade on monopolistic lines. These were followed by formation of the joint stock companies. These enjoyed several advantages such as permanent character, greater financial resources through public shares, and a corporate form of functioning. A large number of these companies came into existence by the seventeenth century in different states of Europe, such as the Dutch East India Company or *Oost Indische Compagnie*, The English East India Company, the Mineral and Battery Works Company in England, the *Compagnie des Indes* or the French East India Company.

The rise of exchange economy on international scale began to change the structure of markets. The transition from a largely self-sufficient medieval economy to a well-developed exchange economy led to the emergence of permanent market structures in place of weekly bazaars or fairs. A number of functionaries appeared performing specialised market operations like retail trading, storage, brokerage and so on. New trading towns were getting linked

to each other with postal services, newspapers and trade information. The nature of banking operations started changing from the stage of merchant banker family activities of the medieval Italy and Germany to the level of public banking. Several such banks were established in Venice, Milan, Amsterdam, Hamburg and Nuremberg. These banks had their roots in medieval period. Greater banking facilities led to the adoption of new methods of financial transactions. It marked the coming of Commercial Revolution in Europe from the late sixteenth century. The Italians had already devised a number of credit instruments like promissory notes, letters of credit, bills of exchange and commercial practices such as the book-keeping system, the double-entry methods of accounting and the insurance system. From the sixteenth century, the rest of Europe on a much larger scale adopted these methods of credit instruments. Negotiability of credit instruments became an important feature of commercial transactions by the seventeenth century. Trading risks during long sea voyages increased manifold with the expansion of trading network and this popularised the concept of insurance. From the fifteenth century, the Italian merchants worked out maritime insurance but later it was extended to other fields of business activities. An increasing need of capital for the purpose of investments in trade and manufacturing led to the creation of stock exchanges in many parts of Europe. The stock exchange of Amsterdam made significant advances not only in terms of scale but also in terms of organisation. In the words of Fernand Braudel, these stock exchanges became the meeting place of bankers, merchants and businessmen, currency dealers, brokers and investors. They introduced modern concept of financial dealings. They also reflect an element of sophistication in the money markets.

From the late fifteenth century started a proper integration of economic activities-agriculture, trade and industry. While many of the traditional crafts continued and expanded, several new industries developed such as those of glass manufacturing, copper, brass, paper and the most important of all, the textiles. Although, the technology took a long time to change, the nature of organizing these manufacturing activities underwent steady changes. The Black Deaths and economic recession had resulted in a sharp decline in agricultural income. The most important development was the decline of medieval craft guilds in some parts of Europe and the setting up of the rural cottage industry in England, Holland, France and Germany. This was to avoid the strict regulations of the guilds that resulted in high cost of production with no corresponding increase in productivity. The rural industries took advantage of lower wages and cheaper waterpower and produced cheaper and affordable textiles for the ordinary people. Slowly the putting-out system was adopted at the expense of guilds. This is called the phase of proto-industrialisation that led to the formation of modern industries.

Similarly, coal mining made rapid strides at a time when the mounting pressure of population and shortage of wood was experienced in Europe. Subsequently, the iron industry developed with improvements in technology. This paved the way for industrial revolution, which had serious consequences not only on the European economy but also affected the entire world through imperialism and market forces.

31.7 CULTURAL TRANSFORMATION – SCIENCE, RELIGION AND SOCIETY

In this section we will provide a brief overview of the contribution of China, Arab World and Europe in the cultural transformation.

China

The Chinese civilisation was among the first to develop science and technology to suit social needs. The mechanical appliances included the south-pointing carriage. They developed kites which arrived in Europe at the end of the sixteenth century. Matches, the Chinese invention of 577 A.D. also reached Europe at around sixteenth century. Folding umbrella, the wheelbarrow, navigational knowledge including compass, printing (wood block printing as different from machine printing of Europe), the art of making paper and gunpowder were all-important developments. The Chinese had made astonishing astronomical observations much before the Europeans. They regularly observed novas and supernovas as early as 1006 A.D. They were the first to systematically catalog the stars. Their geographers made some of the earliest accurate maps based on grid system, much earlier than the Europeans. The same discoveries reached Europe and revolutionised the Western European society but in China it made only a modest impact. For example, printing immensely contributed to the spread of classical humanism and the ideas of Renaissance and Reformation. In China it simply spread the traditional ideas and thereby helped in sustaining the traditional scholarly class domination. The introduction of gunpowder in Europe made castles and other medieval fortifications obsolete and thus helped to liberate Western Europe from feudal, social and political domination. However, Lynda Shaffer (in *Readings in World History*) cautions the readers against judging the Chinese history by later events in Europe. In order to find changes in China, she suggests, one must abandon the search for peculiarly European events in Chinese history. For example, printing contributed to a rebirth of classical Confucian learning and affected the political system by transforming the government administered examinations as it made available inexpensive books to the students studying for such examinations. So the extent and intensity of impact varied from one society to another, which depended on receptibility and responsiveness of each region.

With a solid economic base through trade and agriculture and the technical and scientific progress under the Sung dynasty suggested that China was on the brink of major industrialisation. The entire process was delayed due to political turmoil caused by the Mongol occupation during the thirteenth and fourteenth centuries and a strong conservative state policy thereafter.

Arab World

The rise of modern science does not mean that other civilisations were not familiar with scientific knowledge. The Arabs had seen a remarkable growth in the scientific field between 900 and 1100 A.D. A large number of institutions of higher learning were established. In Baghdad, a library of valuable manuscripts had been collected. It was the Arab mathematics, which is believed to have created algebra. They borrowed concept of numerical from India which in turn was taken to Europe by scholars and came to be called the Arab numerals. Al-Khwarizmi was their renowned mathematician. Mathematics was used in the

study of astronomy and in commerce, as the Arabs were great traders. They set up observatories and achieved greater accuracy than the Greeks. Their contributions in alchemy and chemistry are well known. Medicine was another well-developed field in the Islamic world. Al-Razi was perhaps the greatest physician of the Arab world who wrote several monographs including a treatise on small pox and measles. Arab's contribution to science, technology and culture was no less than that of the Europeans and this makes Ameer Ali to describe them as "the vanguard of civilisation". The Europeans acquired a great deal of their scientific knowledge from the countries of the Caliphate, which had been filtered through Spain, when the Arabs conquered the latter. The Arab people were known for their expertise of navigation science, shipbuilding and cartography. They enjoyed an immense geographical advantage of being situated halfway between the Far East and Europe. Consequently they enjoyed a lucrative maritime trade as they had invented a number of mariner's instruments, which came to Europe much later. They had important centres of manufacturing – silk and cotton goods in Egypt and Damascus, luxury garments in Yemen and Mosul, carpets in Khurasan and Armenia and coloured glass industry in Syria from whom the Venetians learnt of this art to become world famous. In many fields of science, the Arabs became the teachers of later western scholars, particularly in the astronomy, arithmetic and algebra, some of which they themselves borrowed from India.

The geographical location of the Arab world enabled them to extend in all directions and led to the assimilation of the achievements of the conquered people. On the one side they became the natural heirs of Hellenistic culture that had spread throughout the Near East, the Persian Empire and Egypt. On the other side, their direct contact with Indian society and through it to the Far East enriched their trade and culture. However, all these developments slowed down after the sixteenth century. It is difficult to say whether this was due to their confrontation with the west or it was caused by internal disintegration. Possibly both these factors were at work to delay their efforts of modernisation.

Europe

The European cultural transformation began with the socio-religious movements of the fifteenth and the sixteenth centuries- The Renaissance and the Reformation. The former was a momentous cultural movement that arose as a reaction to the medieval culture and aimed at reshaping social values. One stream of the Renaissance was Humanism, a literary movement that focused on individualism and secularism. It emphasised dignity of man and public virtues and tried to transform intellectual life by providing fresh insight to education, philosophy, history and politics. Machiavelli, the famous political thinker of that period, suggested separation of politics from religion – that forms the basis of modern political system. Though emerging in the medieval setting, the Renaissance created a new culture in Europe. Attempts were made in the later medieval period to reform the church but they had failed. The Protestant Reformation brought about a change in the religious outlook and the reformed religion removed the traditional obstacles in the path of capitalist development by encouraging thrift, worldly vocation or 'calling', as the reformers called it and sanctioning the charging of interest on productive loans. This new attitude cleared the way for capitalism and enterprise.

As regards the gender relations, the social status of women in the medieval society for majority of them was hedged about with legal limitations and indignities. A man could divorce, even kill his wife for adultery, witchcraft or theft and remarry but this right was not with the wife. A good number of women belonging to the ordinary section of the society, whose marriage could not be arranged for various reasons, entered convents. But unlike their male counterparts, they could not move up in the church hierarchy. The position of the aristocratic women was relatively better. Humanist movement and Reformation recognised the need of providing elementary education to women but it was not meant to widen their intellectual horizon but simply to enable them to read Bible and be good wives and good mothers. The competition among the artisans due to the growth of market economy adversely affected the position of women. They were often excluded by the guilds. From the late Middle Ages till the seventeenth century, women, particularly the widows and spinsters, were subjected to the most abhorring practice of witchcrafts. They were considered morally weaker and hence an easy prey to devil's enticements. The widespread practice of witchcraft is seen as the last chapter of the medieval world. The spread of scientific thought brought an end to it. The spread of proto-industrialisation saw the beginning of improvement of their plight. However, women continued to struggle for their political rights and gender equality throughout the twentieth century. Modern world for them started much later.

The greatest achievement of the Europeans was in the sphere of modern science. A series of discovery and inventions, some of them accomplished with the aid of Asian knowledge of science, transformed social climate and created modern attitudes to the world. No doubt, the Arabs had preserved the Greek natural philosophy and carried out translations, while the Chinese invented technological devices but it was only in Europe that a true integration of observation, experimentation and formulation of scientific laws could take place, based on mathematical application. A mechanical picture of world was created, which was free from divine intervention. This came to be called Scientific Revolution. It was the work of not only a handful of Scientists but also numerous institutions, including some scientific academies that created a social environment for scientific activities. The role of Rene Descartes and Sir Francis Bacon deserve special mention for developing scientific method to spread scientific and rational spirit among the people. Copernicus, Keppler and Newton successfully destroyed the Aristotelian view of the world that had dominated the European mind for almost thirteen centuries and replaced it by the modern scientific view.. It was this rapid progress in the field of science that laid the real foundations of the modern world.

31.8 NEW METHODS OF WARFARE

The Economic level is reflective of the state of technology. The medieval warfare was based more on the strength of the army and individual bravery rather than on technological knowledge. The medieval period witnessed building of fortress-like castles by the feudal nobility to meet the military needs. These proved effective so long as the military technique was confined to simple warfare. The introduction of catapult led to the replacement of wooden structures by stone castles. The introduction of gunpowder totally negated the advantages which the warrior aristocracy had enjoyed till now. Gunpowder was a Chinese invention

but in Europe it assumed a deadly character and had a devastating impact. The Chinese were producing it with Saltpetre, sulphur and crushed charcoal from the ninth century. According to the well-known historians, the Chinese cannon in the early fifteenth century was equal or superior to the one used in Europe. However, in the subsequent period, Europe took the lead. It caused panic in the land of its origin when the Europeans used the improved version in the sixteenth century. The Chinese had failed to develop and prepare herself to war exigencies. New type of weapons such as artillery and the improved version of heavy canons (first employed around 1330) revolutionised the nature of military warfare in Europe by the fifteenth century. The development of corned gunpowder in about 1420 provided an advantage of instant combustion. Two important conflicts of medieval Europe were decided in 1453 due to the use of heavy artillery. In the Hundred Years' War, the French used it to drive out the English from France and to recapture Bordeaux. The Ottoman Turks also used heavy artillery to capture Constantinople. The employment of cannon made the old form of feudal warfare redundant as its heavy cost could not be borne by individual nobles. Henceforth, the advantage passed on to national rulers who had all the financial resources at their command and their own permanent army.

The large-bore and mobile artillery capable of following the swift movements of the troops made its appearance in the fifteenth century. It was first carried on oxen but in the Spanish war in Italy in 1494 it was drawn on powerful horses. No city could survive its onslaughts easily. With the passage of time, constant improvements were carried out. Naval artillery was introduced in the period of early colonial empires during the sixteenth century. The growing threat of privateers in the high seas forced all vessels to equip artillery on the ships with expert gunners to fire them. Many other weapons were devised such as arquebuses, muskets and rifles. These weapons transformed inter-state warfare and led to the adoption of aggressive policy of territorial expansion. The Europeans used cannons in their ships in quest for overseas expansion. It was with these weapons they conquered almost the entire central and south America and carried out settlements in the West Indian islands. It was not merely the use of these weapons but its production on a massive scale, the availability of capital to sustain it and constant endeavor of the Europeans to use scientific knowledge for its improvement that gave them a distinct edge over the rest of world. The successful control over a large part of the globe was achieved because of this armed superiority. Warner Sombart talks of the new kind of war, rejuvenated by technology, the midwife of modern times, hastening the establishment of capitalist systems.

31.9 WHY EUROPE TRIUMPHED?

The rise of modern Europe owes a great deal to the outside world. Historians emphasise the role of technology in bringing about the European domination. A series of inventions and discoveries in the later medieval period, some of these borrowed from the Eastern civilisations, created a fresh climate for change. The Chinese achievements cannot be doubted in the field of technology but these breakthroughs could not be followed up at a desirable pace as had happened in Europe. Moreover, the relative geographical isolation of the Chinese from the western world kept these inventions unknown to the Europeans at least till the Scientific Revolution of the seventeenth century. Although, there were several reasons that can be cited to explain the triumph of Europe in the world system

and list can easily be elongated, three factors can be regarded of crucial importance; technology, social attitude and the rise of modern science.

According to Braudel, the great technological ‘revolutions’ between the fifteenth and eighteenth centuries were artillery, printing and ocean navigation. We have already discussed the role of gunpowder in changing the world. A series of changes in the technique of shipbuilding and improvements in the skill of map-making led to the success of the Europeans. Greater understanding of geometry and arithmetic provided the essential foundation of navigation, cartography and surveying. Maps and charts that were in use since the thirteenth century, owed little to the academic science. Mathematicians and astronomers like Martin Behaim and Gemma Frisins provided theoretical basis to scientific navigation. The first recorded use of stars to estimate latitude was made in 1462 and in 1484, Abraham Zacuto prepared a table of the sun’s height. Mercator’s compass devised a method of projecting on a flat piece of paper an accurate picture of the curved earth. These developments were accompanied by improved version of ship designing. *Cobs* were replaced by *caravels* and *fluyts*. Another instrument of great significance was the mechanical clock. It was invented before 1300 A.D. Initially it was too expensive to be bought by individuals but after it became a common instrument of use, it began to regulate work with new precision and brought efficiency in economic life of Europe by a new emphasis on time keeping. The invention of printing press of movable type in about 1450 brought revolutionary changes in the cultural sphere. It provided readable material to the Europeans at affordable price in different countries and cities. It also ensured that ideas spread fast and authentic literature was made available to the readers. The success of the Humanist movement and the religious reformation of Martin Luther owes a great deal to the spread of printing press. It contributed to the cultural transformation of Europe and hastened the pace of change by spreading new ideas. These new concepts emanated from the social and cultural movements like the Renaissance, Reformation and the scientific discoveries. These provided an ideal mix of factors to shake up the tradition-bound society, something that was not there in China and other Non-European societies. In the subsequent period, a series of scientific discoveries and inventions gradually brought about a change in social attitude and mentality of the people. Rationality, experimentation and scientific temper became the hallmarks of the western society that broadened the geographical and intellectual horizons that brought them to the stage of modernity.

31.10 SUMMARY

Europe of the late-fifteenth century was vastly different from Europe of the mid-fourteenth century. The economy had become more complexed and new patterns of trade and manufacturing were emerging and Europe was on the threshold of modernity. In this unit we have seen that feudal structure in some parts of Europe began to disintegrate, thereby initiating agrarian changes. The decline of feudalism led to the rise of centralised states under absolute rulers and under them conditions of capitalist development were created. Further constitutional changes and popular revolutions led to liberal democratic structures although, their nature varied from state to state. We have also seen how the new trade routes and long-distance trade contributed to the emergence of modern world system. The rise of international trade acted as a solvent of feudal system, expanded the European economy including commerce and

manufacturing and pushed it in the capitalist direction. This led to the rise of bourgeois class. It acted as an instrument of change in other parts of the world. We have seen the trade structure of China and the Arabs and how that was affected by the European intrusion. The role of cultural factors in the transformation of medieval society into modern world has been explored, emphasising the contribution of modern science and technology. They determined the progress in the art of warfare by introducing new techniques.

31.11 EXERCISES

- 1) What do you understand by the term 'modern world'?
- 2) Compare the European agricultural developments with those of China and the Arabs.
- 3) When did the modern period begin in China?
- 4) Explain the role of France in introducing modern changes in the Arab states.
- 5) Highlight the role of trans-Oceanic trade in introducing changes in the European society.
- 6) Examine the nature of the Chinese foreign trade. What impact it had on China?
- 7) Bring out the salient features of the European commercial transformation.
- 8) Evaluate the progress of China and the Arabs in the field of science. Why these could not transform their respective societies?
- 9) Bring out the chief features of the cultural transformation that changed Europe from medieval age to modern.

GLOSSARY

Acceleration	: Any change in velocity, that is, any change in direction, speed or both.
Alchemy	: The practice of trying to turn other metals into gold that never succeeded.
Amerindians	: The natives of America who were called Indians or red Indians.
Annates	: First year's revenue of benefice paid to Pope
Arquebus	: Early type of portable gun supported on tripod by hook or on forked rest
Baptism	: A Christian religious rite consisting of immersion in or sprinkling of water. It is a symbol of cleansing of sins to make a person member of Christian community.
Basilica	: Church with special privileges from Pope
Benedictine	: The member of Christian order established by St. Benedict in 6 th century.
Benefice	: An official position within Church entitling the person to power and privileges associated with the office.
Burgher	: Free man or citizen of a foreign country
Capillary	: Very slender blood vessels that join the ends of arteries to the end of veins.
Caravels	: Small light fast ships mainly Spanish and Portuguese
Catapult	: Machine which worked on the principle of lever and ropes to discharge stones or other objects at a higher speed on a target and was used in medieval warfare.
Cistercians	: The member of an order which was a more strict offshoot of the order of Benedictines. It was established in 1098.
Concentric Spheres	: Spheres having a common centre
Elliptical	: Having the shape of a curve made in such a way that the sum of its distances from two fixed points is a constant- forming a somewhat flattened circle.
Eucharist Sacrament	: Christian sacrament in which bread and wine are consecrated and consumed.

Fallowing	: The practice of fallowing pertains to leaving fields under cultivation for a year without sowing any crops.
Friars	: Member of one of certain religious orders especially of the four mendicant orders of Franciscans, Augustinians, Dominicans, and Carmelites.
Geocentric	: With the earth at the centre.
Heliocentric	: With the sun at the centre.
Heresy	: Unorthodox belief opposed to the doctrinal belief of Church hierarchy.
Heretics	: Holder of an unorthodox opinion
Huguenots	: French Protestants
Humanism	: The revival of interest in classical literature and art, the increase in individualism and emphasis on secular concerns that was a feature of Renaissance.
Hypothesis	: A tentative assumption made in order to draw out and test its logical or empirical consequences.
Inductive reasoning	: A process of reasoning that establishes general truths based on particular instances.
Indulgences	: Documents which absolved the sinners of their sins, or a kind of Christian penance.
Inquisition	: A judicial instrument to control heresies within Catholic Church.
Laity	: Lay persons in respect of religion or profession
Liturgy	: Form of public worship
Mass	: The sacrament of Eucharist in which Christ's Last Supper is commemorated by the consecration of bread and wine.
Mendicancy	: Living on alms
Modern world system	: An expression used by Immanuel Wallerstein and some other scholars to indicate how industrial production, marketing and consumption combined with world trade to create a global system
Muskets	: A type of light gun which was carried by individual soldiers

Novas and Supernovas	: A sudden lightening of stars caused by explosion of gas
Pluralism	: Holding of several offices or benefices simultaneously.
Popes	: Pope is from Latin word Papa meaning father, used for the heads of Holy Roman Church
Presbyters	: Heads of reformed Scottish Churches.
Proselytise	: To convert from one creed or religion to another.
Proto-industrialisation	: Spread of rural cottage industry by utilizing surplus agricultural labour and based on putting-out system to meet the demand of long-distance markets. It is a pre-factory stage of industrialisation
Purgatory	: Condition or place of spiritual purging especially of souls departing this life in grace of God but having to expiate venial sins etc; place or state of temporary suffering.
Putting-out system-	: A system in which entrepreneurs advance the required capital and raw material to artisan or craftsman and the latter works at home to finish the ordered product
Retrograde motion	: Motion of celestial bodies in a reverse or retrograde direction.
Sacrament	: An outward sign combined with a prescribed form of prayer for conferring some specific grace upon those who receive it.
Scholasticism	: A philosophical trend of the Middle Ages marked by adherence to dogma and traditional authority.

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