UNIT 31 NATURE OF THE WARS

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31.0 OBJECTIVES

In the previous Unit you learnt about the factors that caused the two world wars. You also learnt that scholars have recently been referring to the two World Wars as basically one war which went on for thirty years with a long period of truce in between. This Unit, therefore, talks about the nature of this long war. After reading this Unit, you would learn about:

- the nature of modern warfare, its absolute nature and its implications for human society;
- the major technological innovations which took place in different kinds of weapon systems;
- the transformation in the nature of military institutions brought about by modern warfare, and;
- the nature and extent of mass destruction, genocide and homelessness brought about by the war

31.1 INTRODUCTION

The nature of modern warfare was the result of two simultaneous processes. One was the emergence of modern politics which implied mobilisation of masses around some specific idea, goal or policy. Its manifestation was in the idea of 'nation in arm' or conscription in the French Revolution. This gave men equality in battle which was denied to them in actual life. This 'democratisation of war' transformed wars into mass-wars or people's war in which civilians and civil-life itself became the proper and sometimes the main target of military strategy. The other was the growth of industrial economy which provided the resources, the organizational techniques and methods of motivation needed to fight mass-wars, thus remodelling them as total wars, i.e., towards total involvement of

entire industrial societies in war. The American Civil War (1861-65) was the first such modern war which anticipated the nature and character of the great global conflict of twentieth century.

31.2 THE NOTION OF TOTAL WAR AND ITS IMPLICATIONS

The 19th and 20th centuries witnessed the transformation of war from specialized activity of a professional military group. first into the total mobilisation of industrial resources to produce weapons. then into total involvement of entire industrial societies in the process of hurling concentrated. mechanised forces against military or civilian targets anywhere on the globe. and finally into a scientific contest to develop weapons of mass-destruction and means of delivering them to destroy the opponent's total society, and even endangering the life of human species on the planet.

An International Court of Arbitration was established at the Hague (1907) for settling disputes among powers. However, the armament race among major powers continued, fuelled by the profit motives of the private firms such as Krupp in Germany, Vickers-Armstrong in Britain, Schneider-Cruesot in France, Skoda in Austria and Putiloff in Russia, collectively known as 'the merchants of death'. The growing militarism was further reinforced by the extreme nationalism of the period.

31.2.1 Trench Warfare as a War of Attrition

Most statesmen and people expected a short and swift conflict when the World War I began. But it soon got deadlocked into a positional trench warfare along the Western Front - a massive seize of 600 miles from Switzerland to the North Sea. This continuous front marked the end of local, small, isolated and restricted warfare. In fact, restricted warfare of the eighteenth century was part and parcel of an autocratic and hierarchical order, a relic of military organisation of Feudal Europe, in which the nobility specialised in military leadership. Now millions of men faced each other across the sand-bagged, parapets of trenches, under which they lived like, and with rats and lice. The opposing systems of zig-zag, timber-revetted, sand-bag reinforced trenches were fronted by tangles of barbed wire and scattered covered dugouts for providing shelter for troops.

Often, there were several lines in the depth of trenches. The heavy artillery and machine gun fire used by the opposing armies made it almost impossible to achieve any break-through. In order to break the stalemate, each side tried to expand its war-production. This necessitated total mobilisation of human and industrial resources. Warfare became a clash of national resources of industrial might and supply capacity, a war of attrition. It required complete subordination of the whole life of people and the economy of the belligerent state to the cause of preparing and waging war. It also became necessary to arouse and to develop a sense of personal involvement throughout the classes and groups of the warring nations as the war machine consumed people en masse. The battle of Verdun (February-July, 1916) in which the Germans attempted a breakthrough was a battle of 2 millions, with one million casualties. The British offensive on the Somme, designed to force the Germans to break off the Verdun offensive cost Britain 420,000 lives.

In this battle, British artillery was provided with 23,000 tons of projectiles whereas the French Artillery in the celebrated battle of Waterloo had used only 100 tons. In the third battle of Ypres (1917) which lasted for 19 days, the British bombardment used 4.3 million shells weighing 107,000 tons, a year's production of about 55,000 workers. The war, though a European conflict, forced the European powers to draw supplies from all over the globe to maintain such huge consumption of resources.

31.2.2 Naval Blockade and Submarine Warfare

Karl von Clausewitz, the philosopher of war had defined War as "an act of violence pushed

to its utmost bounds". In the epoch of total war, this meant effacement of the distinction between 'civilian' and 'military' targets and expenditure. As the role of munition workers and civilian production became important to the victory as the soldiers in the trenches, there was need for constant flow of supplies. The phrase 'home front' acquired wider usage during World War I. The supply lines of opponent became the first natural target of military strategy. The economic warfare was symbolised by naval blockade and unrestricted submarine warfare during World War 1. This was a prelude to mass civilian bombing and attempt to destroy the entire society of the opponent during the World War II.

The Allies attempted naval blockade on the Central Powers (Germany, Austria, Hungary) and their co-belligerents Turkey and Bulgaria. The blockade proved unsuccessful as the Central Powers continued to get their supplies through neutral countries. Germany launched attacks on Allied commercial shipping in October, 1914 through its submarines - the U-boats. Such attacks intensified in 1915-1917. By mid-1915, average monthly sinkings of Allied ships was 116,000 gross tonnes and touched 866,000 tonnes by April, 1917. However, the political disadvantages outweighed any logistical damage, since there was strong American reaction to these sinkings. The Allied Powers also developed measures to counter submarine menace such as the convoy system, increased ship-building and improved management and co-ordination of shipping movements and cargoes.

31.2.3 The Nature of Mobilisation in the World War II

The character of industrial mobilisation changed markedly during the World War II. Instead of the mass production of a few key items, as in the First World War, the second global conflict drew on virtually every phase of industry. The new engines of war, tanks, aircrafts, radar etc. were highly complex and delicate. It required an elaborate system of mass production of several million items according to schedules and priorities which went on shifting with new technical developments and the changing emphasis of war strategy. This could be planned only by states at a high level of economic development. All the world powers were spending huge sums on the military during 1933-38. Germany and Soviet Union spent 2,868 million and 2,808 million respectively. Japan (with 1,266 million), UK (1,200 million) and USA (1,175 million) were not far behind. However, the demarcation between 'military' and 'non-military' forms of investment is quite ambiguous in an epoch of total war. When the war came, all major combatants channelled their production capacities into the manufacture of goods for sustenance of war. The combined Allied output of munition at the end of 1944 was 180,000 million. The Central Powers produced 100,000 million worth of munition. In five war years, USA economy produced 300,000 military aircraft and 86,700 tanks. Germany produced 44,857 tanks and assault guns in the same period and also produced 111,767 aircraft during 1934-44. Britain produced 123,819 military aircraft between September 1934 and June 1945. Soviet Union assembled 136,800 aircraft and 102,500 tanks and self-propelled guns during the war. In the winter of 1943-44, one-third of world production was for war purposes. It became necessary to conscript the entire economy and civilian life to achieve these military targets. Since modern warfare involves all citizens and mobilises most of them, it is waged with armaments which require a diversion of the entire economy to produce them, and which are used in inconceivable quantities. To destroy factories or people who worked in them became 'legitimate'. Defeat in workshop and homestead could lead to defeat in the field. Mass bombing of civilians in cities became the next logical step in the brutal logic of military strategy.

A high level of armed mobilisation, which hovered around 20% for most powers during the Second World War, and which lasted for a few years, produced a kind of social revolution in the employment of women outside the household, temporarily in the World War I and permanently in the World War II. Only Germany avoided this integration of women in the labour market for ideological reasons, as the Nazi State did not consider women worthy of employment outside their houses (See Block 7, Unit 27).

However, German industrial war machine had an army of about 15 million slave labourers requisitioned from the vanquished countries. Another important aspect of war was that it was waged as a zero-sum game, i.e., as a war which could only be totally won or totally lost. Unlike the earlier wars which were fought for specific and limited objectives, world wars

were waged for unlimited ends. In the Second World War, this found expression in the phrase "unconditional surrender". This was another valid reason why total war necessitated the use of all productive resources (of national as well as other allied economics). The British economy, for instance, despite the concentration of resources on arms production, was unable to cover its own demands for armaments and depended heavily on American deliveries which prided itself as being the 'arsenal of democracy'. The USA removed all restrictions on Allied armament contracts including those of immediate payment through the lend-lease agreements.

31.3 TECHNOLOGICAL INNOVATIONS FOR MASS-SLAUGHTER

The nineteenth and twentieth centuries witnessed the application of industrial and technical means for devising weapons which could kill and destroy more accurately and efficiently over a longer range and anywhere on the globe.

31.3.1 Artillery

By the end of the nineteenth century, black powder was supplanted by nitrocellulose based propellants popularly known as 'gun-cotton'. It produced three times as much energy as black powder for the same weight of charge, was not destroyed by exposure to moisture and the products of combustion were substantially gaseous which reduced fouling of the gun bore. Apart from this, artillery saw improvements in guns as well as projectiles. Alfred Krupp (1851) built an all steel gun drilled out of a single block of cast metal. Breech-loading mechanism used in 1860s and 1870s helped in cutting spiral grooves into the bores of artillery pieces or solved the problem of rifling. Its advantages were immense. By imparting spin to the projectiles, rifling produced greater accuracy. It also imparted stability to an elongated projectile, which was aerodynamically much superior to a round ball, and therefore, able to better sustain its velocity in flight. Another technical device solved the recoiling problem by absorbing the shock of discharge and leaving the gun in approximately same position after firing as before. The trench warfare of World War I gave an impetus to the production of heavier guns in greater number with longer ranges and better fire-control. Shooting became based on map coordinates and carefully calculated ballistic parameters without a forward observer. Artillery communications also improved aided by field telephones and radios. In World War II, anti-aircraft guns became more improved and lethal. The role of field and naval artillery declined - the tank partly relieving its field role and the tactical bomber aircraft its bombardment role. Light and mobile guns were more in demand during World War II. Some important anti-aircraft guns used during World War II were - the Bofors 40 mm gun of US and UK, Soviet M-1939, 37 mm gun and German 88 mm guns. Arrival of Tanks was countered by the development of armour-piercing ammunition.

31.3.2 Infantry

American Gatling gun and the French Mitrailleuse were early machine-guns. The World War I witnessed development of heavy machine-guns. The first successful automatic machine-gun was invented by Hiram Stevens Maxim. These were first used by the British army in 1895 and employed on a much larger scale in Russo-Japanese War (1904-05). They were used as defensive fire due to bulk and weight during World War I. French (Hotchkiss) were gas-operated, air-cooled heavy machine-guns, While Austrians used Schwarzlose. After 1915, lighter machine-guns such as British Lewis guns, French Chauchat and US Browning automatic rifle (BAR) were used for greater mobility and portability. In 1918, a German named Louis Schmeisser first developed a sub-machinegun. In the World War II, still heavier machine guns were used. The lighter variety of machineguns such as German MG-34/42, the Soviet Degtyarev, British Bren and US BAR fired 350-600 rounds per minute. The sub-machineguns such as German MP-38/ 40 series, popularly known as 'burp' guns, Soviet PPD and PPsh, American Thompson and the British Sten were also used extensively. After World War I, fully automatic weapons

in the rifle weight class or the Assault Rifles were developed which combined the burst-fire capability of the sub-machineguns with the range and accuracy of the infantry rifle. The better known were German MP-44, and after World War II, the Soviet Kalashnikov and AK-47.

31.3.3 The New Forces of Modern Mechanised Warfare

Some new forces of mechanised warfare such as tanks, aircrafts (fighter and bombers), submarines, aircraft carriers were discovered during World War I but their destructive potential was realised only in the Second World War. Tanks had their roots in the development of wheeled armoured vehicles during the early 20th century. Then attempts were made to develop tracked armoured vehicles capable of breaking trenches. First tanks - 'Little Willie' and 'Big Willie' were designed in Britain in 1915. French developed the Schneider. Later, lighter and faster tanks as support to infantry were attempted during 1917-18 in France, US and Italy. The fighting tank or heavily armed tanks emerged during the Inter-war period. Soviet Union took lead during the Inter-war years, producing about 20,000 tanks between 1930-39, heavily armed with 75-76 mm guns. Germans had only 3,195 tanks in 1939, but instead of their dispersal in various units, German forces concentrated and used them in massed formations in the Panzer divisions, which proved formidable for the first two years of the war. The war saw drastic increase in their production in the USSR, Britain, Germany and USA. The tanks set the continuous front between the belligerent countries in motion, the rapid penetration merely rolling back the defence zone much deeper, with disastrous consequence for the civilians.Submarines became a major factor in World War I. Germany employed them to destroy surface merchant ships by using a self-propelled underwater missile or torpedo. They were used on a larger scale in the World War II in the Atlantic by Germany and in the Pacific by the US navy. The German U-boats (Underseaboot) became notorious during World War I. The US navy's Agronaut during Inter-war period and Gato and Balao submarines during World War II played decisive role in the naval warfare. As the control of seas became vital for logistical and strategic reasons, warships played decisive role. British Royal navy built heavy ships - Dreadnoughts. However, with the coming of military aircraft, the range of naval warfare also widened. In World War I itself, it extended the ship's ability to scout or reconnoitre large areas of oceans. Thus, begun the age of Aircraft carriers, although battle ships were not totally replacable. In modern naval warfare, the control of sea also meant control of air over the sea and under sea waters. The US 27,500 ton Essex Carriers with a carrying capacity of 100 aircrafts were the principal US fleet carriers in the Pacific during World War II. Similarly Japanese carriers played a key role in attacks on Pearl Harbour (1941) and the Battle of Coral Sea (May, 1942).

31.3.4 Military Aviation

In the epoch of total war, possibility of any potential invention, capable of being put to military use, was immediately realized. German Zeppelins were early military aircraft used during World War I. Their use did not prove very effective. German Zeppelins made 51 raids between January 1915 to August 1918 and dropped 5,806 bombs totalling 196.5 tons. In these raids only 557 people were killed and 1,358 were injured. However France, Britain, Germany, Italy and USA built big contingents of aircraft during the war. In the Inter-war period, engines were improved considerably, generally substituting aircooled with liquid-cooled engines. There was also switch over from wooden-covered to metal-construction. The four main concerns capable of designing and mass-producing engines for fighters were: Daimler-Benz in Germany, the Allison-division of General Motors in the USA, Rolls Royce and Napier in the Great Britain. The bombers were also improved, with Boeing Aircraft Company producing B-9 bombers in 1931 - the progenitor of all modern combat aircrafts. In the World War II, fighters, bombers (light, medium and heavy) and aircrafts for carriers all were produced in huge quantities. The bombers were used to achieve decisive level of destruction. The civilian mass bombing, through very terrifying, merely developed into an aerial version of trench warfare as only 3% of total killed in the World War II died of it and it completely failed to give decisive blow to armament production industries of the opponents and soon became a very costly affair. Between April 1942-45, 593,000 Germans were killed and 3.3 million homes were destroyed in Germany.

Atomic bomb became militarily only a more cost-effective way of attaining a goal that was already a central part of strategy.

During the World War II, European war economies also adopted the American system of mass-production. Standardized interchangeable parts were produced in bulk and the end product was put together on the assembly line. It is ironical to note that this malevolent god - the modern assembly line (based on mechanical conveyance of the product from one operation to the other) had emerged via the slaughter houses in Cincinnati and Chicago in 1860s.

31.3.5 Chemical Warfare

Germany used chlorine along a six kilometers front at Ypres on 22 April 1915 against French and Algerian territorial army. Later phosgene and mustard gas were also used during the World War I. However, introduction of better gas masks, protective clothing reduced the effects of chemical warfare. More than 100,000 tons of various chemical agents were used during the First World War. During the Second World War, chemical weapons were stockpiled but were not integrated into military planning. Military ineffectiveness and fear of retaliation prevented their use.

Check Your Progress 1

Note : i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

1) What do you understand by total war? How did it affect military strategy? Answer in 100 words.

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2) List some major technological innovations in the field of mechanical warfare. How did they change the nature of war? Answer in about 100 words.

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3) Which of the following statements are correct? Mark ✓ or ✗.

i) Trench warfare of the World War I symbolized total war on land.

ii) Industrialization did not affect military strategy.

iii) The distinction between `civilian' and `military' targets evaporated with modern mass wars.

iv) The civilian mass bombing proved decisive in the World War II.

v) The limited use of chemical weapons during world wars was because of moral/ legal considerations.

31.4 NUCLEAR WEAPONS:ACHIEVING TECHNICAL FEASIBILITY FOR TOTAL ANNIHILATION

The development of atom-bomb was made possible by the discoveries of modern physics such as the discovery of artificial radioactivity in 1930s and Enrico Fermi experiment of bombarding different nuclei with low-velocity neutrons. Uranium, Thorium and Plutonium were found to produce new elements in the process (fission). US entered the World War II in December 1941 and started the Manhattan Project to make atom bomb a practical reality. Colonel Leslie Groves became the head of the Manhattan Engineer District. In October 1942, after reorganisation, J. Robert Oppenheimer became the director of Project Y, the group that actually designed the bomb. They were working on the principle that assembly of a sufficient amount of fissile material (Uranium 235 or Plutonium 239) was necessary to make it go `subcritical', i.e. for neutrons (which cause fission and are in turn released during fission) to be produced at much faster rate than they can escape from the assembly. By 1944, the Manhattan Project was already spending 1 billion per year. A plutonium weapon - Trinity was tested in July 1945 in South Central New Mexico. On 6 August 1945 at 8.15 a.m. local time, a US B-29 bomber named Enola Gay flew over Hiroshima. The untested U-235 bomb nicknamed Little Boy was air-burst 1900 feet above the city to maximize destruction.

It released energy equaling 15,000 tons of chemical explossive T.N.T. from less than 130 pounds of Uranium. The effects were devastating - about two-thirds of city was completely destroyed and 140,000 persons died by the end of the year (out of a population of 350,000). It was more miserable for those who survived. A second weapon, a duplicate of plutonium-239 implosion assembly which was tested as Trinity, and nicknamed Fatman was planned to be dropped at Kokura on 11 August 1945, but schedule was moved up two days to avoid bad weather, to 9 August . The US bomber, unable to sight Kokura, dropped it on the secondary target of Nagasaki. The results were no different.

During the World War II, Germany developed V1 and V2 missiles (1944-45) nicknamed in German as `Vergeltungswaffen' (or Vengeance weapons) which became the precursors of modern ballistic missiles. Hence, the total war had already perfected means of total annihilation as well as `safest' possible efficient means of delivering them anywhere on the globe.

31.5 TRANSFORMATION OF MILITARY INSTITUTION AND ADMINISTRATIVE MACHINERY

Mass war required mass production and hence organisation and management - even if its aim was the rationalized destruction of human lives in the most efficient fashion, as in the German extermination camps.

The new military establishments took on many of the features of great industrial enterprises. Modern business methods, office organisation, system of record keeping, the use of duplicating, sorting and communication equipment and all such paraphernalia for carrying on large industrial operations and emergence of a kind of corporate leadership in the management of military strategy gave military institutions many characteristics of a large business corporation. Mechanical warfare and instantaneous communications - the

technological and logistical elements of warfare made military affairs more and more amenable to bureaucratic regulation reducing them to routines, rules and regulations. The army officers became, in its true sense, "the managers of violence".

The enormous scale of mobilization in the armed forces also affected the ratio of combat and non-combat personnel in the forces as the component of 'service support', i.e., persons employed in procurement, supply and communications, etc. increased. By 1945, for instance, 45% of total strength of US army was comprised of such staff. In addition, the huge armies of civilian workers and specialists were required to run depots, arsenals and factories in a modern society at war. New administrative control measures became necessary to give direction to resources and factors of production.

In most of the belligerent countries, there was suspension of market mechanism in favour of controls and direction designed to ensure the restructuring of national economies according to the needs and priorities of war production. War was no longer matter predominantly of purely financial costs - but assumed the form of mobilization of all economic resources. Financial control mechanisms based on prices, wages, taxes and credits were still used, but more and more branches of production came to be covered by administrative planning and controls. Production priorities had to be decided by central administrative agencies [such as the War Production Board (1942) or the Office of the War Mobilization (1943-45) in the United States, the Ministry of Munitions (1940-42) and the Ministry of War Production (1943-44) in Germany, and the Ministry of Munitions in Japan after November 1943]. There was also need for new type of expertise - economists, scientists, statisticians and engineers and businessmen in the government administration.

There was need for elaborate administrative organizations to implement the priority decisions and to acquire precise and accurate information about the economy. The centralization of control over priorities resulted in the sway of unelected bureaucracy even in countries where democratic institutions survived. There were common administrative solutions to similar economic decisions.The war also reinforced the development of the 'military-industrial complex' - a conglomerate of elites belonging to military, industrial, banking, labour and academic fields whose functions was to guarantee global economic expansion to guarantee markets and supplies for weapons production. Such a close cooperation and mutual dependency of the interests of the military, industry and politicians in the most industrialized states was discernible since 1900. The Military strength gave politicians muscle in the international arena, the industrialists secured huge profits and a share in power, the scientists found funds forthcoming for their research projects as part of a military programme which would have been unavailable elsewhere. The military personnel demanded new products and the availability of new technology provided the opportunity to devise new battle plans, and lastly, a strong defence industry provided a substantial proportion of the workforce with secure employment even in the depression years. The wars were a stimulus to the juggernaut that has moved under its own momentum to finance and build large programmes of weapons manufacture.

31.6 THE RESULTS OF TOTAL WAR

The war brought about unprecedented misery and destruction for mankind. Never before so many people had died in a single event. The war also led to mass destruction, genocide and apartride like never before.

31.6.1 Mass Destruction

The total war involved mass destruction of physical resources, productive capacities and human resources of both the victors and vanquished. In the World War I, the total number of people killed and dying for other war-related reasons was well over 8 million. The estimated deaths in the World War II were between 3-5 times the estimated figures for the World War I. Statistical exactitude is meaningless, in the case of such astronomic figures. In the Second World War, it included about 5.1 million Jews. About 20% of total population of the USSR, Poland and Yugoslavia was wiped out in the second war. The percentage for Germany, Italy, Austria, Hungary, Japan and China was between 4 to 6%.

It was only 1% for Britain and France The loss of productive capacities was also enormous. About 20% pre-war capital assets of USSR 13% pre-war assets in Germany, 8% in Italy, 7% in France and 3% in Britain were destroyed during the World War II. However, US economy grew at the rate of 10% per annum in the Second World War aided by its remoteness from the war theatre and growing demand of arsenals from the Allies. Depopulation and devastation was the most severe in the Soviet Union where 17,000 towns and 70,000 villages were completely or partially destroyed, along with factories, railroad tracks, hospitals, schools, libraries and collective farms. Infrastructure was also heavily damaged in Europe and the Far East.

31.6.2 Genocide

The total war saw the first modern attempt to eliminate an entire population. In the First World War, Turkey killed an uncounted number of Armenians (an estimated 1.5 million). The term Genocide was invented to describe such attempts, the systematic extermination of national, political, ethnic or religious groups by organized groups, usually government.

The night of 9 November 1938, 'the night of broken glass' (Kristallnacht in German) inaugurated the Holocaust (or the mass murder of about 5.1 million European Jews by the Nazis). On the night of 9 November 1938, a number of Jews were killed and about 20-30,000 were sent to concentration camps and their synagogues and businesses were destroyed. The German occupation of Poland, Belgium, Czechoslovakia, France and large tract of USSR etc. brought more and more Jews under Nazi control. They perished in gas-chambers and factories of slave-labour under the impersonal cruelties of remote decision, a rational bureaucratic system of rules and routines.

31.6.3 Apatride

The total war was not only an age of massacre, it was also an age of mass flight. The aftermath of World War I saw a large number of homeless and stateless people, including the two millions who fled from the Russian Revolution and accompanying civil strife. 13 million Greeks were repatriated to Greece mainly from Turkey. In all, the period 1914-22 created roughly 4-5 million refugees. The League of Nations set up a Refugee organization headed by F. Nansen to help these people who had no bureaucratic existence in any state, in an increasingly bureaucratized world. A new document, a certificate delivered by national authorities on the recommendations of League of Nations High Commissioners for Refugees in 1920s, the so-called 'Nansen passport' was accepted as a travel document by over 50 countries.

In the World War II, the number of stateless, the uprooted people in Europe was 40.5 millions, excluding non-German forced labourers in Germany and Germans who fled before the advancing Soviet armies. About 13 million Germans were expelled from the parts of Germany annexed by Poland and the USSR, from Czechoslovakia and parts of South-Eastern Europe. Other major byproduct of war, partition of India and the Korean war produced 15 million and 5 million displaced persons. The Establishment of Israel - another war-effect, uprooted about 1.3 million Palestinians.

Check Your Progress 2

Note : i) Write your answer in the space given below.

ii) Check your answer with the answers given at the end of this Unit.

1) How did the total war affected economic organization? Explain in 100 words.

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2) What do you mean by the military-industrial complex? Describe in about 100 words.

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3) Explain the terms 'genocide' and 'apatride' in about 100 words.

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31.7 LET US SUM UP

We have seen how modern warfare centered around mass mobilization, ideological motivation and its ruthless prosecution (i.e. the idea of absolute war) brought about changes in techniques and technology of warfare. We also analysed the institutional and policy changes as a result of demands of such large scale social mobilization. In this Unit we also learnt how total war depended not on state's willingness to mobilize the entire people but its actual organizational ability to do so. We also hinted at the results of modern warfare especially around the issues of allegiance and identity thrown up by war. War's unparalleled capacity for forcing individuals and groups to take sides before and during the war became as important as the attempt of many 'stateless' people to search and seek new administrative identity after the war.

31.8 KEY WORDS

Apatride	:	Stateless or uprooted people created by mass wars.
Fission	:	The process of breaking heavy elements like Uranium, Thorium and Plutonium into simpler new elements.
Fissile material	:	Elements like Uranium 235 or Plutonium 239 which can undergo fission.
Genocide	:	Systematic extermination of national, political, ethnic or religious groups by organised group especially the state.
Military-Industrial Complex	:	A complex group of elites belonging to army, industrial, banking, labour and research fields whose interests lie in weapons production on a large scale.
Total War	:	The term first coined by German General Erich Ludendroff in 1918 which came to mean mobilization of all material as well as moral energies in the process of waging a modern war.

War of attrition	:	A war of material, of industrial strength and supply capacity of the belligerent states.

31.9 ANSWERS TO CHECK YOUR PROGRESS EXERCISES

Check Your Progress 1

1) See Sections 31.1 and 31.2

2) See Section 31.3 (especially 31.3.3)

3) (i) ✓ (ii) × (iii) ✓ (iv) × (v) ×

Check Your Progress 2

1) See Section 31.5 for changes in the nature of economic controls, production methods etc.

2) See Last para of Section 31.5.

3) See Section 31.6.