

Unit 9 arms race and the

[War](#), [Cold War](#)



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Useful Books Answers to Check Your Progress Exercises 9. 0 OBJECTIVES This

unit deals with Arms Race and the Nuclear Threat in the present day world.

After studying this unit, you will be in a position to: understand the

background to the nuclear arms race; explain how the nuclear arms race is

different from all the previous arms races; discuss the different phases of the

nuclear arms race in the post-war period; and emarnine the nuclear arms

race in the Third World and especially in South Asia. 9. 1 INTRODUCTION This

unit on 'Arms Race and Nuclear Threat' is part of Block 3 which deals with what is called the 'Cold War Period'; i. e., after the Second World War and the emergence of what is termed as Superpower Dominance. In Unit &'World War 11: Causes and Consequences (Emergence of Super Powers)' you have read about how the USA and the USSR emerged as Superpowers in international politics after the end of the Second World War. In Unit 7 : 'Cold War: Meaning, Patterns and Dimensions', you have learnt how the collapse of Germany and its allies in 1945 led to the emergence of what has been termed as 'Cold War' between the-two main powers of the post-1945 international order * i. e. USA and USSR. The Non-Aligned Movement (NAM) which was dealt with in Unit 8 of this block was a consequence of the cold war power bloc politics. One thing common to the post-1945 international order as well as the pre-1945 world was the arms race. When studying about World War I and 11, you would have surely read about the arms race which was both quantitative and qualitative in character. It would also have been noticed that the arms race in its qualitative dimension in both the world wars was itself one of the greatest causes of the two wars. From the invention of dynamite by Sir Alfred Nobel of the Novel Industries in the First World War period, to the invention of rockets by Germany in the Second World War, it is the search for the ultimate weapon which could win all wars that constituted the greatest push for the arms race. In this madness scientists, nations, people, soldiers, politicians all fell prey and ended up only killing greater and greater number of civilians. In the present unit, we will concentrate on the arms race in the post-1945 international order. As has been stated before, this quest for a qualitatively more destructive weapon was the greatest

motivating factor in bringing the world a step closer to war, be it the First or the Second World War. The key difference in the arms race before 1945 (i. e. in the interwar period) and after 1945 was the nuclear dimension. Prior to 1945, all the arms races in human history never confronted what is now popularly known as the 'Nuclear Threat'. After 1945, the arms race that humanity got engaged in became the greatest living threat to life itself as known on this planet. The difference lies in one single qualitative step in the arms race, and that step was the creation of the Atomic or Nuclear bomb in 1945. Thus, from 1945 the arms race we discuss in this Unit, remained no longer 'conventional' but acquired a nuclear character and from then till today, man is engaged in an arms race that puts both parties who engage in it, under a perpetual 'Nuclear Threat'. 9. 2 B

ACKGROUND TO THE NUCLEAR ARMS RACE 9. 2. 1 The Beginning : Birth of the Nuclear Arms Race The nuclear arms race between the superpowers began initially in the pre-second world war period between the Germans and the Allied Powers. It was in the context of this conflict prior to the Second World War that in 1938, at the Kaiser William Institute in Germany, Otto Hann and Dr. Fritz Steersman first split the atom. Lise Meitner and Otto Hann later declared this successful splitting of the atom amounting to a nuclear fission. It was a matter of coincidence that at this juncture in history, the greatest minds working on the 'atomic problem' were Jews and that too, German. Hitler's rapid anti-Semitism during the period sent most of these great minds in Germany rushing to the USA where they were welcomed. These fleeing scientists informed the American military who were closely monitoring events in Europe. There was widespread apprehension that Germany might

be the first to produce the nuclear bomb as the knowledge of splitting the atom was already available to it. Albert Einstein too was one of the refugees and he knew fully the significance of this discovery, for it was he who first unlocked the secret power of the atom to the modern world. He warned the President of the United States about it.

9. 2. 2 The Manhattan Project

The Americans under President Roosevelt were fully aware of the international implications and so began the race to build the bomb first. Roosevelt commissioned what was the top secret 'Manhattan Project', the biggest scientific effort ever made costing 2 billion dollars under Maj. Gen. Leslie Groves to construct the atomic bomb in a record time. Robert Oppenheimer, Enrico Fermi, Herbert York, Edward Teller, Hans Beth and a host of other scientific luminaries were involved in the production of the first three nuclear bombs. The interesting aspect of this bomb construction was that though the initial enemy was Germany, slowly the real enemy for whom the bomb was constructed turned out to be the Soviet Union. In fact, Gen. Leslie Groves stated that he had no illusions that Soviets were the real enemy.-This fact is critical to an understanding of the post 1945 world.

Arms Race and Nuclear Threat

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9. 2. 3 Rationale for the Arms Race in the Post War Period

Germany, the first nation with whom the US engaged in the N-Arms race surrendered in May 1945 and all its nuclear facilities were destroyed, thus ending the first phase of an incipient nuclear arms race. Despite this the arms race had to continue once the weapons had been built. A new enemy across the horizon was discovered Communist Soviet Union. The fear of communism was ideologically fueling the furious pace of the A-Bomb construction. In that sense the emerging U. S. military-industrial complex

was not wrong. Communist USSR was definitely the biggest power confronting USA and its western allies once Germany collapsed. The world was definitely getting divided into two camps, the capitalist and the socialist and Europe including Germany was its first victims. The Allies could not do anything about it. Something had to be found, a new ultimate weapon which could stop and possibly destroy the march of communism. That something designed initially for fascist Germany and used for experimentation in Japan was to be probably used later against the Socialist Soviet union. This was the underlying ideological war cry in the American establishment and the subtle reason for continuing the arms race into the post-Second World War world era. The discovery of the split atom gave confidence to the United States that it could fight the 'cold war' or 'iron-curtain' that Winston Churchill said had descended over Europe. It was an indication that the new war after 1945 would be fought against the USSR. Check Your Progress 1 Note : i) Use the space given below for your answers. ii) Check your answer with the model answers given at the end of the unit. 1) Examine the background to the nuclear arms race. 2) What are the rationale for the arms race in the post-war period?

..... s 9. 3 THE NUCLEAR ARMS RACE : HOW IT IS DIFFERENT FROM ALL PREVIOUS ARMS RACES IN HISTORY 9. 3. 1 The 'Trinity Test' Of the three bombs constructed, the first was tested on July 16, 1945 at Alamogordo, New Mexico. It is known as the Trinity Test. The successful Trinity Test heralded the birth of the Nuclear-Bomb in human history and the dawn of the nuclear age. Neils Bohr, the famous Danish Physicist,

prophetically observed the insatiable arms race and its qualitative difference. In a letter to President Roosevelt on 3 July 1944 he mentioned that a weapon of unparalleled power was being created which would completely change all future conditions of warfare. Some scientists anticipating the arms race between the US and the USSR urged the American Government to share the nuclear secrets with Soviet Union and thus prevent an arms race. However, it is obvious that the scientists were too naive of the game of politics as well as the intensity of international politics. Such advice was never heard, and the race was continued in the hope of victory. To the military desperately looking for a way to deal with the Germans, the Japanese and finally the Soviets, the Trinity Test held out hope that they could win.

9. 3. 2 Hiroshima and Nagasaki Bombings Two more historical events, however, finally sealed the destiny of mankind. They were the dropping of the two remaining untested nuclear devices, i. e., the 5 ton uranium bomb on Hiroshima on August 6 and on Nagasaki on August 8, 1945. Over 250, 000 people died in both the cities and the 'living corpses' who survived bled incessantly and were blackened with their skins hanging in shreds, their hair scorched to the roots. Most were totally naked, their clothes burnt from their bodies. George Bernard Shaw observed in 'Man and Superman' about the art of killing that man, "out does nature herself ... when he goes out to slay, he carries a marvel of mechanism that lets loose at the touch of his finger all the hidden molecular energies and leaves the javelin, the arrow and blow pipe of his fathers far behind". Hiroshima and Nagasaki exemplified that.

9. 3. 3 'New York Times' and the 'Trinity Test' It would be easier to comprehend the qualitative significance of nuclear arms race if we take note of two observations made at the time of

the Trinity Test. The 'New York Times' reporter who witnessed the test observed "... a light not of this world, the light of many suns in one. It was a surprise such as the world had never seen, a great green super can climbing in a fraction of a second to a height of more than 8, 000 ft, rising even higher until it touched the clouds, lighting earth and sky all round with a dazzling {uminosity. Up it went, a great ball , of fire about a mile in diameter, changing colours, as it kept shooting upward, from deep purple to orange, expanding, growing bigger, rising as it was expanding, an elemental force freed from its bonds after being chained for billions of years. For a fleeting instant the colour was unearthly green, such as one only sees in the corona of the sun during a total eclipse. It was as though one had been privileged to witness the birth of the world to be present at the moment of creation when the Lord said: " Let There Be Light". Robert Oppenheimer perhaps summarized in one line the destiny of modern man's predicament vis-a-vis his own creation, when he quoted the Gita to exclaim " I have become death, destroyer of worlds". The roar created by the explosion at Alamagordo could be heard 50 miles afar and the pillar of fire that the New York Times reporter talked about rose 6 miles into the sky. These observations of the Trinity Test and the dropping of the bomb at Hiroshima and Nagasaki sum up why the arms race mankind got caught in after 1945 is totally different in its complexion from all the previous arms races in human history. The sad part, however, for any idealist scholar of international relations is that despite these evidences of destruction, the arms race continued with greater vigour and vengeance. Arms Race and Nuclear Threat Cold War Period Check Your Progress 2 Note : i) Use the space given below for your answers. ii) Check

your answer with the model answer given at the end of the unit. 1) What is the Trinity Test? 9. 4 DIFFERENT PHASES OF THE NUCLEAR ARMS RACE IN THE POST-WAR PERIOD 9. 4. 1 Fear of the Soviets and Communism It was the Trinity Test on July 16, 1945 that truly sparked off the nuclear arms race between the US and the Soviet Union. Despite the horror of Hiroshima and Nagasaki the race never stopped. 'The second fact that fuelled the nuclear arms race was the Soviet Communist enemy. This was, in fact, testified to by Gen. Leslie Groves who said he had no illusions as to whom the bomb was really being built for, i. e., the Soviets. The ideological, political and military threat to capitalism by rising communism had to be dealt with. The discovery of the nuclear bomb was truly the biggest boost to the arms race. United Kingdom followed US-Soviet acquisition of the bomb in 1952, France in 1960 and China in 1964. The nuclear arms race passed through the following phases, they cannot be clearly distinguished from each other. 9. 4. 2 1945 to 1953: Period of US Monopoly During this period, the United States first enjoyed a total monopoly until 1953 and then, nuclear superiority. In this phase, the US territory was regarded as a sanctuary because the Soviets did not have any reciprocal delivery capability to reach the American targets from USSR. The United States, on the other hand, could attack the Soviet targets from American bases in Western Europe. 9. 4. 3 1957 to 1968 : Period of 'Missile Crisis' and the ICBM Race The monopoly enjoyed the US during the first phase was broken when the Soviets successfully tested the ICBM in 1957 creating what has been called the 'Missile Crisis' in America. The advent of ICBMs shifted the focus of the nuclear arms race to strategic weapons; i. e. Inter-Continental Ballistic Missiles (ICBMs), Sea Launched

Ballistic Missiles (SLBMs) and strategic or inter-continental bombers which provided the strategic tripod. In 1967, USSR tested what is called a Fractional Orbital Bombardment System. This accelerated the qualitative dimension of the nuclear arms race further into space.

9. 4. 4 1968 to Late 1970's : Period of MIRV and ICBM Race

The third phase in the nuclear arms race began when the American delivery technology took a gigantic leap by introducing what is called the Multiple Independently Targetable Re-entry Vehicle (MIRV) capability in their ICBMs in 1968. This meant that now one single ICBM could carry many small nuclear warhead fitted missiles which on reentering Soviet airspace would go in different directions hitting many targets. MIRV marked a tremendous exponential upgradation of the arms race. This sent shivers down the Soviets who, however, mastered the technology by 1974. During this phase, the Soviets deployed two other weapon systems. First, the Anti-Ballistic Missile (ABM) system in 1968 and second, the first Anti-Satellite (ASAT) missile and warhead, thus ensuring that the arms race went on.

Check Your Progress 3 Note : i) Use the space given below for your answers. ii) Check your answer with the model answers given at the end of the unit.

1) Briefly examine the period of US Monopoly in the Arms Race. . 2) Describe the efforts made by the erstwhile Soviet Union to break the US Monopoly in armaments.

9. 4. 5 1981 : Regan's Strategic Modernization Plan

The next major technological tussle took place between the two Superpowers over the MX-Missile. On October 2, 1981 President Regan announced a strategic modernization plan at an estimated cost of \$ 160 billion. The weapons systems planned included : (i) Missile Experimental or MX missile : 100 of these were to be built; (ii) B-IB Bombers : 100 of them

to be built; (iii) STEALTH Bombers that are radar resistant by 1990s; (iv) TRIDENT-II D-5 missiles-one per year between 1983 and 1987; (v) Command Control and Intelligence system (C, I) to be modernized; (vi) NAVSTAR Satellite global positioning system; (vii) Encapsulated dormant missiles; (viii) TERCOM for precision guided cruise missile; an advanced communication system; (ix) Global Positioning System (GPS) for guidance of the ICBMs during the boost phase; (x) Route encrypted communications to missiles or launchers; (xi) slackwire buoys radio reception by submarines; (xii) Fuel-Cell propulsion.

9. 4. 6 1983: Militarization of Space-Reagan's Star Wars Programme

The militarization of space began from 1958 and since then, over 2219 satellites-military and civilian have been launched by the superpowers and other nations, and 75% of the satellites launched have been for surveillance and military use, thus clearly violating the Space Treaty of 1967. On March 23, 1983 President Reagan announced the Strategic Defence Initiative (SDI) popularly called 'Star Wars' Programme costing 1 trillion dollars to raise the militarization of space to a qualitatively higher level. The aim being to build both a ground based and space based Ballistic Missile Defence (BMD) to protect US territory against Soviet strategic missile attacks. Theoretically, the SDI programme, was supposed to be an alternative to the Mutual Assured Destruction or MAD dogma as it would provide Mutual Assured Survival. It was thought to render nuclear weapons obsolete by relying on three new types of nonnuclear weapon systems. These were :

- Arms Race and Nuclear Threat Cold War Period
- i) Kinetic Energy Weapons
- ii) Directed Energy Weapons
- and iii) Microwave Energy Weapons

All these weapons were based on various types of chemicals,

electromagnetic forces, and x-rays and lasers. The SDI programme did not take off for many reasons. They being: a) It was too expensive. b) It was not a sure technological venture, in the sense that it was far too complicated and thus not feasible. c) The Soviets could easily render SDI ineffective by building a counter SDI. d) Reagan never consulted his European NATO allies and in fact, surprised them by his announcement thus creating opposition to the programme in Europe. e) Reagan by signing the Intermediate Range Nuclear Forces Treaty (INF) completely ended the political rationale of the SDI programme. f) In the USA itself, in the Congress and the Senate Foreign Relations Committee, both the Republicans and the Democrats were of the opinion that they would not allow SDI to pass at any cost and thus, damage the Anti-Ballistic Missile (ABM) Treaty of 1972. Thus, they rejected SDI as otherwise it would have meant that the ABM Treaty along with SALT I and II would be nullified. Same would be the fate of START negotiations thus destroying the whole edifice of arms control and the start of an unbridled nuclear arms race. Added to this, many important scientists in USA, important people like James Schlesinger, former Secretary of Defense McGeorge Bundy, cold warriors like George F. Kennan and Robert McNamara, former Secretary of Defence Harold Brown and a host of other people opposed the very fundamental logic of SDI that it would make the world safe of USA by removing the stability provided by the MAD capability of both the superpowers. Later on, the sweeping changes initiated by Michael Gorbachev within the USSR via 'Glasnost' and 'Perestroika' and allowing democracy in Eastern Europe ended the whole logic of SDI. Check Your Progress 4 Note : i) Use the space given below for your answers. ii) Check your answer with the

model answers given at the end of the unit. 1) What were the main components of US President Ronald Reagan's Strategic Modernisation Plan?

..... 2) What were the reasons for the criticism of Reagan's SDI Programme; ~ , ~ ! 9. 4. 7 1984-1991: Nuclear Arms Race in the Gorbachev Era and the Last Days of Collapsing Soviet Union By January 1985, due to the damage already done by SDI of Ronald Reagan, massive rearmament programmes were on the both the sides, and the future direction of the arms race was dependent upon the two superpowers. The arms race was on at three levels of nuclear weaponry, i. e.,-space weapons, intercontinental weapons, and intermediate nuclear weapons. The US position on militarization of space through SDI really put the arms negotiation in difficult state. The Soviet Foreign Minister Andrei Gromyko said, " If there were no advancement on the issues of outer space, it would be superfluous to discuss the possibility of reducing strategic armaments." The US in 1984 had a massive programme for rearmament of many types of weapon systems. The rearmament programme of USA consisted of more Sea Launched Ballistic Missiles (SLBMs); about 800 more nuclear warheads to be fitted on sea and air delivery systems; MX missile testing; Midgetsman Missiles; the eighth Trident submarine fitted with more accurate SLBMs and 100 B -1B bombs. On the Soviet side, in 1984-1985 the rearmament meant rearmament of all Soviet SS-17s SS-18s and SS-19s into the MIRV ed mode, a new TYPHOON class submarine and testing a new type of more accurate SLBM. There was a reported attempt to make 40% of Soviet ICBMs on the

movable mode instead of the existing 25% and all 243 Intermediate Range Ballistic Missiles (IRBMs) were to be deployed. All in all, 1984-85 was a period of massive rearmament of all weapon systems. In 1985-86, the picture as regards arms race was the same. There was no restraint. The only hope that some kind of arms control was possible was generated by the November 1985 summit meeting at Geneva between President Reagan and General Secretary Gorbachev where both in a joint statement stated that, " The sides have agreed that a nuclear war cannot be won and must never be fought." They also agreed to hold summit level meetings in 1987 and 1988. These words were an indirect admission by USA that the SDI was not workable. In other words, it recognised as unfeasible that the MAD doctrine could be replaced and a limited nuclear war waged by militarizing space was recognised as unfeasible. Apart from this, there was little progress in the talks on arms reduction in Europe. As regards the nuclear arms race in 1986-87, the situation was still more or less the same except that there was a little movement towards arms control. The US put its first MX ICBM and B-1B bomber on operational position and on a 24 hour alert. Deployment of Pershing II missiles and SS-20s continued in Europe. However, certain positive developments took place which definitely halted the arms race in the long run. First, the 27th CPSU Congress in February 1986 decided on Perestroika (Restructuring of Economy), Glasnost (Openness and Democratization) and reversal of military confrontation in Europe and opening up of Eastern Europe. Second, the Reykjavik summit on 11 and 12 October 1986 declared that a nuclear war could never be won and should never be fought. Third, within the USA a tattered Reagan's economy and the

Senate's opposition to SDI hit US arms race plans. Fourth, there were differences between USA and its NATO Allies who were never consulted on SDI. Thus, though the arms race went on in 1986-87 it was definitely going to end soon. As regards 1987-88, on December 8, 1987 the Intermediate Range Nuclear Forces Treaty (INF) was signed for the elimination of all intermediate and short range missiles. The agreement required the USA and USSR remove 2695 intermediate range GLBMs with a range of 1 000 to 5500 kms. It also envisaged the removal of GLBMs short range i. e., 5 00 to 1000 kms. USSR agreed to remove 1836 missiles while USA removed 867 missiles. The INF Treaty saved the ABM Treaty from being neutralised by SDI, because with this treaty the rationale for SDI became even weaker and Reagan found it very difficult to push the matter in the Congress as well as with US public. In this sense, it saved the world from another dangerous dimension of arms race i. e., the space opening UP. 1988-89 was another significant year as it too had something to show in terms of peace. Arms Race and Nuclear Threat Cold War Period 1988-83 can be characterised as the year of settlement of disputes in Afghanistan, Namibia, Iran-Iraq War, Israel-PLO and South Africa. It was also the year Gorbachev announced at the UN, unilateral reduction of Soviet troops and armaments in Europe amounting to 40% reduction of Soviet tank divisions and 50% of Soviet tanks deployed in GDR, Czechoslovakia and Hungary. This was a very significant political and military move as regards the continuation of conventional and nuclear arms race in Europe. 1989-90 can be characterized as the Year of Europe. By the end of 1989, almost all Soviet Allies in Eastern Europe and Central Europe except Rumania and Albania were free. In August 1989, the first non-communist

government got elected in Poland. By November 9, 1989, the Berlin Wall had crashed. Elections also took place in Hungary, GDR and Czechoslovakia. On 29 December 1989 Vaclav Havel took over as the President of Czechoslovakia. At the Malta summit in December 1989, President Gorbachev showed readiness to regulate further and move ahead on the START process. George Bush, the US President, hesitated a bit though he committed US towards a Chemical Weapon Ban and the required agreement in the future. 1990 was a year full of events. While Europe and the two superpowers were moving towards peace the Gulf was in flames with the invasion of Kuwait by Iraq on August 2, 1990. Apart from this, in 1990, the WARSAW Pact was dissolved on 3rd March. On June 1, 1990, US and USSR signed a treaty on the destruction of and non-production of chemical weapons and on multilateral measures to ban chemical weapons. It was decided that by 31 December, 1992, all chemical weapons in the world would be destroyed and only 5000 tons of agents would be kept. Then, the membership of the Missiles Technology Control Regime (MTCR) expanded. On November 20, 1990 there was the Treaty and a Joint Declaration of Conventional Armed Forces (CFF) forever reducing the nuclear threat in Europe. Check Your Progress 5 Note : i) Use the space given below for your answers. ii) Check your answer with the model answers given at the end of the unit. 1) What were the salient features of the Nuclear Arms Race in the Gorbachev era? 9. 4. 8 1991 to 97 : Nuclear Arms Race after the Collapse of Soviet Union 1991-92 was a historic year in the sense that due to the collapse of USSR, the enemy that fueled the arms race for US militarists broke up into 14 new states. Yugoslavia also broke up and in one stroke the

enemy in so far as the US was concerned was gone and so, the whole political ideological basis of the nuclear arms race. The Iraqi invasion of Kuwait on 2nd August 1990 led to the launch of US and Allied coalition attack under UN auspices against Iraq on 17th January, 1991. It ended on 28th February, 1991 with the complete defeat of Iraq. Arms trade as a result showed a down-ward trend. In 1991 the total value of global arms trade touched \$ 22, 114 million. This was 20% less than in 1990. In 1992-93 USA, the Russian Federation, France, and Britain all agreed to halt the nuclear arms race totally except vis-a-vis R & D. At the regional level, there was further concretization of Europe's complete demilitarization by the signing of the Helsinki Document by all Eastern and West European countries. Added to this, there was the world summit on environment at Rio and UN Secretary General's declaration of the 'Agenda for Peace'. The period between 1993 and 1997 saw two other significant events taking place in the nuclear arms race. First, in 1995 the NPT review Conference took place for an indefinite extension of the treaty and on 24th September 1996, the Comprehensive Test Ban Treaty (CTBT) was up for signature. US and the other nuclear weapons states and 60 other non-nuclear states signed the CTBT. India did not sign either the NPT or CTBT. The government argued that it did so to keep the nuclear weapons option open. This position taken by India brings us to the question of nuclear arms race in the Third World, dealt with in the following section. ; Check Your Progress 6 L Note : i) Use the space given below for your answer. ii) Check your answer with the model answer given at the end of the unit. I) Examine the nuclear arms race after the collapse of the USSR. 9. 5 NUCLEAR ARMS RACE IN THE THIRD WORLD

AND SOUTH ASIA r r T he nuclear arms race that went on in the First World throughout the Cold War definitely had its impact on the Third World. The quest of the German Bomb fueled the American 'Manhattan Project' initially, and as the Second World War came to a close it was the Soviet ideological and military power manifest in the occupation of Eastern Europe that really put Americans firmly on the track of nuclear bomb making. However, at that time the Allies needed the Soviet Communists to destroy fascist Germany, Italy and Japan. Stalin's intelligence agencies were well aware of the secret American nuclear programme and at Postdam, his suspicions were confirmed when President Roosevelt informed Stalin of a secret weapon. This knowledge fueled the Soviet desire to build the bomb at a feverish pace to counter the threat from capitalist west. The bombing on Hiroshima and Nagasaki, though not really necessary were also a veiled threat to Soviets of the American resolve. These events in a way led to the nuclear arms race. After 1949, when Communist China emerged under Mao, it is believed that the Chinese through Soviet help (prior to Sino-Soviet split) too got the nuclear capability and tested in 1964. China was considered a Third World state and one can see how the ideological and political nature of nations deeply affected their decision to develop a nuclear capability. Arms Race and Nuclear Threat Cold War Period 9. 5. 1 Acquisition of Nuclear Capability by China and start of Arms Race in South Asia Thus, the acquisition of nuclear capability of China in 1964 signalled the beginning of a nuclear arms race in South Asia. The Indo-Pak conflict was not actually the factor responsible for India's quest for nuclear capability as many scholars claims, though it came in much later. The Kashmir conflict and partition and the three subsequent

wars in 1948, 1965 and 1971 did fuel the conventional arms race. 9. 5. 2 India, Pakistan and the Nuclear Arms Race The nuclear arms race in South Asia however was not of India's making. It rather came after the massive defeat India suffered at Chinese hands in 1962, which hit our whole defense and foreign policy. This followed by the news of Chinese exploding the nuclear device in 1964 shook the Indian political and military establishment and they decided to develop India's nuclear capability. The decision was also influenced, perhaps, by the Chinese collusion with Pakistan in the 1950s prior to the 1962 war. It brought home to the Indian strategists the real possibility of Chinese and Pakistanis joining hands against India. After 1962, there was thus no looking back and the nuclear arms race reached South Asia. When India conducted the Peaceful Nuclear Explosion (PNE) in 1974, the Pakistanis too decided to go for a nuclear programme. The onset of the Second Cold War with the Soviet invasion in Afghanistan 1979 put Pakistan on the high priority zone of US in its fight against communism. It signalled deeper military cooperation and aid to Pakistan and some say, the beginning of some help even in fledgling Pakistan nuclear weapons programme. As of now, the South Asian region, is definitely a zone of nuclear competition with India consciously 'keeping its option open' and not exercising its capability. This is expressed in its refusal to sign both the Nuclear Proliferation Treaty in the 1995 Review Conference and the Comprehensive Test Ban Treaty (CTBT) on 24th September, 1996. 9. 5. 3 'Domino Theory' in South Asia The South Asian case amply demonstrates the 'Domino Theory' which fuels nuclear arms race or any arms race. First, it was the German threat to Europe which made the US go for the bomb. Then, the Soviet threat made US go in for the

bomb again. The bombings in Hiroshima and Nagasaki led Soviets to acquiring the bomb. The common threat to world communism led to Soviets helping the new communist state of China in 1949 with nuclear technology which helped China to conduct a nuclear test in 1964. The Soviets, however, had refused to give nuclear weapon design to China, which became the cause of Sino-Soviet rift. The Indian defeat in 1962 and Pakistan's collusion with the Chinese led the Indians to develop the nuclear capability by 1974. The Indian explosion coupled with successive defeats in wars with India led the Pakistanis onto the bomb. The cases of other third world countries acquiring the bomb in similar; e. g. the Iraqi and Iranian nuclear programmes. The South African case too is due to perceived survival threats. The other nuclear capable states are Argentina and Brazil-two major States in, Latin America.

9. 5. 4 General Complexion of Arms Race in South Asia

Overall one can say that the third world nuclear arms race is definitely a product of the nuclear arms race in the first world and the many conflicts within the Third World sustain it. The cold war military alliance system helped this process. Now, after the collapse of Soviet Union and the massive reduction prior to it and after it in Western nuclear arsenals, nuclear peace has been brought to the world in the sense that we aren't always 'living on the edge' of a nuclear holocaust. However, the non-resolution of conflicts in the Third World, e. g. Indo-Pak conflicts, Arab-Israeli conflict is a definite reason for the continuance of nuclear arms race in the Third World. - - -

Check Your Progress 7 Note : i) Use the space given below for your answers. ii) Check your answer with the model answers given at the end of the unit.

1) What are the factor propelling the arms race in South Asia? 2)

Briefly comment on India's stand on the nuclear proliferation issue. 9. 6 LET US SUM UP We can conclude this unit by recalling a few pertinent points. Thus: i) The discovery of the power of the 'atom' in both its creative and destructive senses was possibly the greatest event in 20th century history. The creation and blasting of the nuclear bomb by the US demonstrated its power with telling effect. ii) The ideological conflict between capitalist West and socialist East was the single biggest factor instigating the nuclear arm race until the collapse of one side i. e., of the USSR in 1991. iii) However, despite the demise of Socialist Soviet Union nuclear weapons still remain the basis for military power and their quest continues by many third world countries e. g. India, Pakistan, South Africa, Israel, Iran, Iraq and North Korea. iv) The nuclear threat to humanity remains even today and there is very little hope of complete disarmament. The only possible way is probably to reduce the number of warheads and number of nations acquiring this technology for settling their disputes. KEY WORDS ABM-Anti-Ballistic Missile System : It is a weapon system designed to defend against a ballistic attack by intercepting and destroying ballistic missiles and their warheads in flight. Arms Race and Nuclear Threat Cold War Period BMD-Ballistic Missile Defense : Systems capable of intercepting and destroying nuclear weapons in flight for defense against a ballistic Missile attack. CFE Treaty : The Treaty on Conventional Armed Forces in Europe : Negotiated in the Conference on Security and Cooperation in Europe (CSCE), a process which began in 1973 and was signed in 1990 by NATO and WTO countries and came into force on 9 November, 1992. NATO-North Atlantic Treaty Organisation : Created by the US and its allies in Western Europe after the Second World War to counter

USSR. WTO-Warsaw Pact Organisation: Created by Soviet Union in 1955 to counter NATO military alliance. Dissolved in 1991. ICBM-Inter Continental Ballistic Missile: Ground launched Ballistic Missile capable of delivering a warhead to a target at ranges in excess of 5500 km. INF-Intermediate Range Nuclear forces: are nuclear forces with a range of from 1000 km. up to and including 5500 kms. MIRV-Multiple Independently Targetable Re-entry Vehicles: Re-entry vehicles, carried by a nuclear ballistic missile, which can be directed to separate targets along separate trajectories (as distinct from MRVs). A missile can carry two or more RVs. MRV-Multiple Re-entry Vehicles: Re-entry vehicle, carried by a nuclear missile, directed to the same target as the missile's other RVs. MAD-Mutual Assured Destruction: Concept of reciprocal deterrence which rests on the ability of the nuclear weapon powers to inflict intolerable damage on one another after receiving a nuclear attack. Open Skies Treaty - A Treaty signed by 25 CSCE states in 1992, permitting flights by unarmed military or civilian surveillance aircraft over the territory of the signatory states, in the area from Vancouver to Vladivostok. SLBM--Submarine Launched Ballistic Missile: A ballistic Missile launched from a submarine, usually with a range in excess of 5500 kms. START I TREATY : Strategic Arms Reduction Treaty : Between USA and USSR to reduce strategic nuclear weapons. Strategic Nuclear Weapons : ICBMs, SLBMs and bomber aircraft carrying nuclear weapons of inter-continental range of usually over 5500 kms. Doctrine of Deterrence : It theoretically means that the most appropriate way to prevent your enemy employ atomic weapons against you is to put a counter threat by also possessing the atomic bomb. Doctrine of Massive Retaliation: Was a strategy of employing nuclear

weapons and outlined by US Secretary of State John Foster Dulles after President Eisenhower took over from President Truman in 1954. The massive retaliation doctrine was founded on responding to any communist inspired aggression, however marginal the confrontation, by means of a massive nuclear strike against major centres in the Soviet Union and China. Doctrine of Limited War : Was propounded by Captain Basil Liddel Hart in the late 1940s. He argued in his book 'The Revolution in Warfare' in 1946 that " When both sides possess atomic power 'total warfare' makes nonsense... Any unlimited war waged with atomic power would be worse than non-sense, it would be mutually suicidal". He argued that war should, therefore, be a controlled affair and without barbarous excess. However, many US strategies criticized his concept of limited war as practically impossible. Doctrine of Flexible Response : Adapted by NATO in 1967 and based on a flexible and balanced range of appropriate responses, conventional and nuclear, to all levels of aggression or threats. These responses, subject to appropriate political control, are Arms Race and Nuclear Threat designed first to deter aggression and thus preserve peace; but, should aggression unhappily occur, to maintain the security of NATO area within the concept of forward defense.

9. 8 SOME USEFUL BOOKS Lawrence Freedman: The Evolution of Nuclear Strategy. P: M. S. Blackett: Atomic Weapons and East West Relations. Hedley Bull : The Control of the Arms Race. Morton Halperin : Limited War in the Nuclear Age. Freed Ikle : Can Nuclear Deterrence last out the country? Robert Jervis : Perceptions and Misperceptions i n International Politics. Herman Kahn : O n Escalation : Metaphors and Scenarios. Henry Kissinger : Nuclear Weapons and Foreign Policy. Thomas Shelling : Arms and Influence.

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