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NEED OF MILITARY STUDIES TODAY

In the previous lesson, you have learnt the concept and evolution of military studies through the important periods of our history. The changes in military education from ancient ages to modern times was a result of improvements in weapons and changes in warfare techniques. Science and technology played an important role in this transformation of the armies.

Today we see modern weapons and newer forms of warfare. Powerful nations are trying to dominate the weaker nations. There is terrorism and insurgency, cyber warfare and natural disasters to deal with. In an anarchic world, armies have to be prepared all the time to fight a battle. Governments must understand use of force to overcome situations affecting national security.

Therefore the subject of military studies has not only become very important but also complex. In this lesson you will learn the changes in the army, its weapon systems and how it has impacted warfare.



Objectives

After studying this lesson, will be able to:

- assess the need for transformation of the armies;
- explain the transformation of training of the army and
- examine the modern system of training Armed Forces.

3.1 Transformation of Armies over the Ages

Armies changed with time. There were new discoveries and man understood the use of metals such as iron, copper, etc. He made an alloy called bronze. With the discovery of metal, he made weapons of metal which were more lethal and it could also be made in different shapes. Thus armies changed old methods & evolved new tactics and methods to fight their enemies. See figures below to learn the different types of weapons:



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Fig. 3.1 Weapons Through the Ages

3.1.1 Transformation in Warfare

A study of military history will tell you how warfare had changed with time. In the ancient age, it was the 'Chaturangabala' force consisting of Cavalry, Elephant, chariots and infantry. Warfare was a series of set piece battles at a pre defined battle ground. While armies used various strategies and tactics to win a war, the fighting per se was static in nature.

Over the years, as metallurgy improved, new weapons were introduced. The chariots were not seen in battle in the medieval age. Cavalry was the arm used for speedy movement of troops to surprise the army. It allowed attack from unexpected directions and therefore was the most used in this age. As science improved, we saw the introduction of wheeled vehicles, guns and ammunitions.

The Mughals used guns extensively to win battles. A soldiers personal weapon of sword, bow & arrow/spear were replaced by rifles and machine guns in the nineteenth century. World War I & II was the turning point for new forms of warfare when trench

war fare was introduced. See Table 3.2 below to get a perspective of the changes that have happened over different periods.

PERIOD	TYPE OF ARMY	TYPE OF WARFARE	WEAPONS
ANCIENT AGE	Chaturangabala	static or positional	swords, spears, bow & arrow etc.
MEDIEVAL AGE	infantry, cavalry, artillery	positional as well as manoeuver	swords, bow & arrow, guns
BRITISH ERA	cavalry, infantry, artillery, signals, engineers, Airforce, Navy	Maneuver, air and naval warfare	Tanks, Artillery, Rifles, Machine guns, Bombs, Torpedos, Missiles & Rockets.
MODERN DAY	Special forces, army, navy and air force	Diplomatic war, Terrorism, Insurgency Hybrid warfare not contact warfare	Drones, missiles, nuclear weapons, Helicopters, Air defence weapons

Table 3.2 - Transformation in Warfare

3.1.2 Impact of Technology on Warfare

Science changed the nature of warfare due to newer inventions. The important discoveries by man that revolutionised warfare were as follows:-

- Metals and wheel (Ancient age);
- Gun Powder (Medieval age);
- IC engines (motor cars, railway engines, tanks)
- Aircraft
- Naval battle ships, submarines, torpedoes;
- Missiles;
- Wireless communication;
- Nuclear bomb;
- Improvised Explosive Device (IED);
- Drones



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Military Studies



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What we saw was just the impact of technology on weapons. As part of the modernisation and changes in the armies, the organisation also changed. Some of the new branches in the army were the Engineers, Signals, Army Supply Corps, Army Ordnance Corps, Intelligence, Air Defence, etc. Obviously, each of these arms had its own specialisation.

The soldiers and officers had to be trained to handle the role and responsibility of that corps. Army, Navy and Air Force have to now fight together to win wars. This gave rise to Tri-Service organisations and Tri-Service training.



Intext Questions

3.1

1. Name any three weapons of a modern day soldier.
2. What was the type of armies in the British Era?

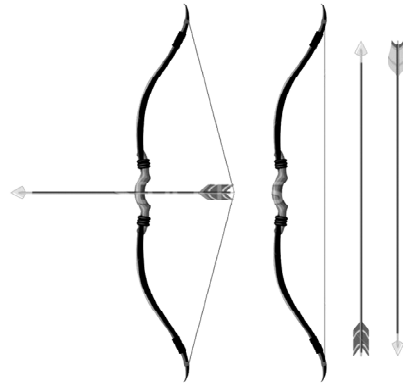


ACTIVITY 3.1

- a. Use the internet and see the link given to understand the history of weapons.
<https://www.theatlantic.com/video/index/393683/a-brief-visual-history-of-weapons/>
Download and print/draw at least two weapons each, used in ancient, medieval and modern India.
- b. From the diagrams given below differentiate between the skills that ancient soldier had to learn and those that a modern soldier has to master to fight a battle.



Source-<https://www.indianetzone.com/photosgallery/51/talwar.jpg>



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3.2 Transformation in Training

You have already learnt how a soldier was trained in the ancient age and in medieval era. During the British period, armies were modernised and became more mobile. The new methods of fighting and modern weapons made it necessary to change the subjects being taught. What aspects of the army changed during the period before World War II ?

- Army became Armed Forces with the raising of Air Force and Navy.
- Training in Military subjects became specialized to each of the three wings of armed forces - Army, Navy and Air Force.
- Re-organization of army was done to suit the new methods of battle. Army raised additional arms such as Combat Engineers (building bridges and roads, clearing obstacles, etc), Signals (telecommunication).
- The standard infantry had rifles, machine guns, guns, mortars, Anti Tank Missiles. Cavalry became an arm with battle tanks. Artillery had long-range guns and rockets, self-propelled guns.
- The basic soldier training of skill at arms was the same, except that the subject became complicated and intense. A rifle replaced the sword.
- All three services of Army, Navy and Air Force have to fight the war together. Hence Tri-service training was introduced.

3.2.1 Changes in Training the Army

You have seen in the previous lesson how soldiers were trained and taught military skills in the Ashrams and Gurukuls. As the armies transformed and acquired greater capabilities, the method of training also changed. Let us see in a tabular form what were the changes in the subjects taught to the soldiers.



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Subject	Ancient Soldier	Modern Soldier
Skill at arms	Fighting with a sword/spear/bow&arrow	Aim and shoot with a rifle, machine gun, pistol, sub-machine gun
Parts of weapon	Parts of sword/spear	Larger number of parts of rifle/machine guns/ guns/tanks
Maintenance	Sharpening swords and arrows, cleaning spears, swords, shield	Specialized cleaning of moving parts, maintenance of Metal, wooden/ plastic parts; safe storage of weapon; maintenance of ammunition etc.
Physical training, Sports and Games	Yes	Yes
Special subjects	None	Use of small arms weapons, different types of ammunition guns, machine guns, faults rectification, communication devices, construction of bridges.



ACTIVITY 3.2

- Look up the internet and list the type of weapons used by infantry soldiers in World War I.
- Compare the list with the infantry weapons of World War II.

3.3 Modern System of Training Armed Forces

3.3.1 School System

In the previous lesson you learnt about the Indianisation of military education wherein, the raising of Military schools was highlighted. The Sainik Schools were established after 1962 and one managed by the Sainik Schools Society under Ministry of Defence. as feeder institutions for National Defence Academy, Pune.

They were conceived by V. K. Krishna Menon, the then Defence Minister of India, to rectify the regional and class imbalance amongst the Officer cadre of the Indian Military, and to prepare students for entry into the National Defence Academy (NDA), Khadakwasla, Pune and Indian Naval Academy. Today there are 26 such schools covering all the states of the country.

3.3.2 National Cadet Corps (NCC)

Further, at the school and colleges, the system of NCC was established. The NCC in India was formed with the National Cadet Corps Act of 1948. It was raised on 15 July 1948. It is a Tri-Services organization, comprising the Army, Navy and Air Force, engaged in grooming the youth of the country into disciplined and patriotic citizens.

The National Cadet Corps in India is a voluntary organization, which recruits cadets from high schools, colleges and universities all over India. The Cadets are given basic military training in small arms and parades.

The officers and cadets have no liability for active military service once they complete their course but are given preference over normal candidates during selections based on the achievements in the corps. You would be surprised to know that, during the Indo-Pakistani war of 1965 & 1971, NCC cadets were responsible for the second line of defence. They organized camps to assist ordnance factories, supplying arms and ammunition to the front and were also used as patrol parties to capture enemy paratroopers.

The NCC cadets also worked hand in hand with the Civil defence authorities and actively took part in rescue works and traffic control. The NCC has a lady's wing, which gives equal opportunity to women to take part in all activities of the NCC.

3.3.3 Specialised Academies

As you have seen the transformation of the modern army with an airforce and naval component and superior weapons, the training also became specialised. Each wing of the armed forces had a set of academies to train their personnel.

- (a) **Soldier Training** - Army has regimental centres where the recruits and soldiers of a regiment are trained. In addition, training academies train personnel in specialised aspects of the respective corps/branch of the army. Unlike the army regimental centres, the Navy and the Air Force have various academies for training their personnel in each of its branch.
- (b) **Officer Training** - Officers of each of the three services undergo basic training after school at The National Defence Academy, Khadakwasala, Pune. Those who graduate from civil colleges are also trained at the Indian Military Academy



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(IMA)/ Naval Academy/ Air Force Academy and The Officers Training Academy(OTA).

A tabulation of some of the training establishments of the Indian Armed Forces is given below.

Feeder Institutions	
EDUCATION & TRAINING	<ul style="list-style-type: none"> • Sainik Schools • Military schools • Rashtriya Indian Military College (RIMC)
TRI SERVICE	<ul style="list-style-type: none"> • National Defence Academy • Defence Services Staff college • National Defence College
INDIAN ARMY	<ul style="list-style-type: none"> • Officers Training Academy • Army War College • College of Military Engineering • School of Artillery • Counter Insurgency and Jungle Warfare School • Indian Military Academy • Infantry School • Armed Corps Center & School
INDIAN NAVY	<ul style="list-style-type: none"> • Indian Naval Academy • INS Chilka (sailor training) • INS Satvahana (Submarine training) • INS Garuda (naval aviation training)
INDIAN AIR FORCE	<ul style="list-style-type: none"> • Airforce Academy • Airforce Technical College • Airforce Administrative College

Table 3.4 - Military Training Establishments of India

**Intext Questions****3.2**

1. In which year were the Sainik Schools started in India?
2. National Cadet Corps Act was promulgated in the year _____.
3. Name any three Military Schools in India.

**What You Have Learnt**

- Military studies changed over the ages due to changes in military organization, introduction of newer weapons and due improvement in science and technology.
- Method of warfare also changed due to the changes in weapon system and the organizational changes.
- Changes were made in the subjects being taught to a soldier. The curriculum of military studies adapted to the changes in warfare and weapons.
- There was a transformation in training a soldier in India.
- National Cadet Corps (NCC) was created in 1948 with the aim of training the youth of the country on basics of army training.
- Schools like Sainik schools and Military schools were established. Academies for specialized training, as per new organization of the Army, Air Force and Navy was created.
- Each wing of the Armed Forces had its own Academies as per their respective requirements to learn and train the soldiers and officers.

**Terminal Exercises**

1. Explain the impact of technology on weapons? Name any five changes in weapon system that changed the nature of warfare.
2. Describe the changes in the type of warfare from Medieval age to British and modern era.
3. What is meant by Specialised academies for training personnel of the armed forces?
4. Describe the modern system of schools for training students to enroll into the armed forces in India.
5. Explain the features of The National Cadet Corps.

**Note**



Answers to Intext Questions



Note

3.1

1. Machine guns, Missiles, Guns and Tanks.
2. Cavalry, Infantry, Artillery, Signals, Engineers, Airforce, Navy.

3.2

1. 1961
2. 1948
3. Sainik Schools, Military schools and Rashtriya Indian Military College or Chail Military School (oldest military school) was established in February 1922, Ajmer Military School, Belgaum Military School, Dholpur Military School

