



Centre for Distance and Online Education

Punjabi University, Patiala

Class : B.A.II (Defence and Strategic Studies)

Paper : Evolution of Warfare

Semester : 3

Medium : English

Unit : I

Lesson No.

- 1.1 : BATTLE OF ARBELA - 331B.C.
- 1.2 : BATTLE OF CANNAE - 216 B.C.
- 1.3 : BATTLE OF HASTINGS - 1066 A.D.
- 1.4 : THE MONGOL ART OF WAR UNDER CHANGEZ KHAN AND
TAIMUR

Department website : www.pbidde.org

**B.A. PART-II
DEFENCE AND STRATEGIC STUDIES**

SEMESTER – III

(Syllabus for 2022-23, 2023-24 and 2024-25 Sessions)

Note – There will be two theory papers one for each semester comprising 85 marks and one practical examination comprising 30 marks. The practical examination will be held once in a year in the Fourth Semester.

EVOLUTION OF WARFARE

INSTRUCTIONS FOR DISTANCE EDUCATION CANDIDATES

Maximum Marks: 85

Time Allowed: 3 hours

Pass Marks: 35 per cent

(Theory and Practical separately)

INSTRUCTIONS FOR PAPER-SETTER

The question paper will consist of three sections: A, B and C. Sections A and B will have four questions each from the respective sections of the syllabus and A section will carry 12½ marks and B section will carry 12 marks each. Section C will consist of 12 short answer type questions carrying three marks each covering the entire syllabus and will be compulsory.

INSTRUCTIONS FOR THE CANDIDATES

Candidates are required to attempt any four questions selecting at least two questions from each Section A and B and the entire section C.

OBJECTIVES –

- This paper attempts to familiarize the students with evolution of art of warfare in India.
- It is to establish that the art of warfare changes with changes in political governance, nature of threat, and weapon systems.

SECTION - A

- i. Military organisations and techniques of fighting of Macedonians and Persians with particular reference to the Battle of Arbella 331 BC:**
 - a. Introduction - Opposing forces and their deployment
 - b. Description of the battle
 - c. Analysis (Strategy, tactics, application of principles of war and causes of defeat and victory).
- ii. Military organisations and techniques of fighting of Romans and Carthaginians with particular reference to the Battle of Cannae 216 B.C.:**
 - a. Introduction - Opposing forces and their deployment
 - b. Description of the battle
 - c. Analysis (strategy, tactics, application of principles of war and causes of Defeat and victory).
- iii. Military organisations and techniques of fighting of the English and Normans with particular reference to the Battle of Hastings, 1066 A.D.:**
 - a. Introduction - Opposing forces and their deployment
 - b. Description of the battle
 - c. Analysis (Strategy, tactics, application of principles of war and causes of defeat and victory).
- iv. The Mongol art of war under Changez Khan .**
 - a. Organisation of Mongol Armies.
 - b. Mongol Art of War.

SECTION - B

- i. Industrial Revolution and its impact:**
 - a. Impact on Society
 - b. Impact on Weapons of land and naval warfare
 - c. Impact on means of communications
 - d. Impact on tactics of land and naval warfare.
- ii. Napoleon's Art of Warfare:**
 - a. Elements of Napoleonic Warfare.
 - b. Principles of Napoleonic Warfare.
- iii. Naval warfare with particular reference to the Battle of Trafalgar 1805 A.D.:**
 - a. Background of the English and Franco-Spanish rivalry for naval supremacy.
 - b. Introduction - Opposing forces and their deployment
 - c. Description of the battle.
 - d. Analysis (Strategy, tactics, application of principles of war and causes of defeat and victory).
- iv. American Civil War (1861-65).**
 - a. Introduction
 - b. Causes
 - c. Events in brief
 - d. The character of Civil War.
 - e. Tactical developments.

SUGGESTED READINGS

Das, S.T.(1970)	An Introduction to the Art of War , Sagar Publishers, New Delhi.
Dupuy, R.Earnest(1970)	The Encyclopaedia of Military History, Macdonold, London.
Fuller, J.F.C.(1960)	Conduct of War, Army Publishers, New Delhi.
Fuller, J.F.C.(1959)	The American Civil War, Natraj Publishers, Dehradun.
Fuller, J.F.C.(1958)	The Generalship of Alexander The Great, Natraj Publishers, Dehradun.
Fuller, J.F.C(1971)	Armament and History, Sagar Publishers, New Delhi.
Fuller, J.F.C.(1954)	The Decisive Battle of the Western World Vol.I & II, Eyre and Spottiswoode, London.
Montgomery, Viscount (1968)	A History of Warfare, William Collins, London.
Ropp, Theodore(2000)	War in the Modern World, The John Hopkins University Press Baltimore.
Sarkar, J.N.(1960)	Military History of India, M.C,Sarkar, Calcutta.
Sheppard, E.W(1966)	The Study of Military History, Natraj Publishers, New Delhi.

Course Objective:

The course attempts (a) to expose the students to the development of art of war through the ages in India (b) to make understand role of politico-military interaction in India's national life (c) and to study some very significant battles and wars in India's history

Learning Outcome

After having done this course students would become familiar in evolution of art of warfare in India. Through this, a student shall be in a position to appreciate and understand evolutionary changes in the art and science of war in India through ages.

THE BATTLE OF ARBELA - 331 B.C.

- 1.1.1 Objectives of the Lesson
- 1.1.2 Introduction
- 1.1.3 Alexander's Campaign
- 1.1.4 Darius's Preparations
- 1.1.5 Alexander Crossed Tigris and faced Darius
- 1.1.6 Relative Strength
 - 1.1.6.1 Persian Army Under Darius III
 - 1.1.6.2 Macedonian Army under Alexander
 - 1.1.6.3 Self-Check Exercise-I
- 1.1.7 Order of Battle i.e. Dispositions or Deployment for Battle
- 1.1.8 Macedonian Army under Alexander
- 1.1.9 The Battle in Detail
- 1.1.10 Causes of Alexander's Success and Failure of Persians under Darius
- 1.1.11 Summary
- 1.1.12 Long Questions
- 1.1.13 Suggested Readings

1.1.1 Objectives of the Lesson

In the last year of defence and strategic studies, students got to know about international relations and its various concepts. In this semester, they will achieve the knowledge about the great historical warfares of the world specially in this semester and get a chance to read famous European wars and the strategies and tactics used in these wars and their impact on the world scenario. The battle of Arbela is one of those wars.

1.1.2 Introduction

The Battle of Arbela was fought in 331 B. C. This battle is also called the Battle of Gaugamela. This battle was fought between the Macedonian forces led by Alexander and the Persian forces led by Darius III.

1.1.3 Alexander's Campaign

Alexander in his campaigns, bridged the Nile river in Egypt and marched back with his Macedonian force to Tyre on the Mediterranean Sea (between Beirut and Haifa) in the spring of 331 B.C., when he found his fleet had already arrived. From Tyre, Alexander sent a strong force to the Peloponnese to counter-act the intrigues of the Spartans and then, the way to the Valley or the Orontes. He had intended to cross the Tigris river near Nineveh (now Mosul), but when he learnt that the Persians Army under Darius-III was located in this region with his large army, Alexander decided to cross the river Tigris North-West of the old Assyrian capital and to march down its left bank towards Arbela (Erbil).

1.1.4 Darius's Preparations

In this meanwhile, Darius III had reunited a large number of soldiers to form a strong army after his defeat at Issus. He had armed his some divisions with swords and longer spears to cope up with the 'Sarissa' of Alexander's army. Darius III with his strong Persian army marched northwards from Babylon, crossed to the left of the Tigris river, and proceeded to Arbela (the city of four gods) where he established his magazine and harem. From these, he moved to Gaugamela (Mound of Tel Gomel) on the river Bumodos (Khafir), a tributary of the Greater Zab river. This place i.e. Gaugamela is about 18 miles northeast of Mosul and thirty-five miles west of Arbela. Darius's selection of Gaugamela was that it consisted on an extensive plain (near Keramlais) and therefore, favoured the deployment and manoeuvre of large forces of cavalry. Darius had levelled the land and removing obstacles, he had converted the plains of Gaugamela into a levelled ground like a parade ground; where he formed his army into the battle position.

1.1.5 Alexander Crossed Tigris and faced Darius

Alexander crossed the Tigris river on the 20th September 331 B. C. He rested his army on the Eastern bank of the river and sent his Scouts forwards as was the practice. A few days later, Alexander's Scouts informed him that the Persians were approaching. Alexander with his Macedonian army prepared for battle and, at the head of a picked force of cavalry marched with all speed towards the enemy i.e. Persian forces led by Darius. Having ordered the rest of his army to follow him with speed but at a walking pace. From the captured prisoners enroute, Alexander learnt that the Persian King Darius was at Gaugamela with his forces deployed for the battle.

After Alexander ascertained the dispositions of his enemy, he rested his army for four days and strengthened his camp with a Ditch and Stockade. On the second watch on the fourth night Alexander with his forces crossed the Tigris river, broke his camp and marched to face Darius "so as to meet the enemy at day". When about 3½ miles short of the Persian position, he halted and assembled his generals. Parmenio, Alexander's second-in-command, suggested that they should encamp and reconnoiter the ground as well as the enemy positions. The Macedonian Army thus encamped, fortified the camp while the infantry and cavalry companions surveyed the battle field minutely.

Alexander again held a conference of his generals on his return from reconnaissance and discussed the strategy and tactics for the battle.

On 30th September 331 B.C., the night before the battle, when Darius was holding a kind of midnight tattoo, Alexander's army rested. Gaugamela suggested night attack, but Alexander refused to consider it. In the forthcoming battle Alexander had already planned to deliver a decisive blow to the Persians, and he had visualised the problems of night attack operations.

1.1.6 Relative Strength

1.1.6.1 Persian Army Under Darius III

	As per Arrian	As per Justin	As per Curitons
- Cavalry	40,000	1,00,000	45,000
- Infantry	10,00,000	4,00,000	2,00,000
- Scythe bearing Chariots	200		
- Some war elephants			

1.1.6.2 Macedonian Army under Alexander

- Cavalry 7,000
- Infantry 40,000

1.1.6.3 Self-Check Exercise-I

Q.1 What is phalanx system ?

Ans. -----

Q.2 What was the strategy of Alexander to cross the river

Ans. -----

1.1.7 Order of Battle i.e. Dispositions or Deployment for Battle

Refer to the sketch for the order of battle of Alexander's and Darius's armies.

A. Persian Army under Darius

The Left Wing of the Darius army was held by the Bactrian Cavalry and with them were the Dahan Cavalry (a Schythian tribe) and the Arachotian infantry. Next to them were arranged the Persian Cavalry and infantry mixed. After the Persians were Susians and after the Susians were the Cadusians. This was the disposition of the Left wing up to the Centre of the entire 'Phalanx'. The Right Wing troops from Lowland Syria and Mesopotamia were marshalled. Next to the Left were Medes, Parthyeans and Sacians, then Tapurians and Hyrcanians, and then Alebanians and Sacesinians right upto the centre of 'Phalanx'.

In the centre with king Darius were the Kings Kinsmen deployed. Behind them were the Indians, Carians and the Mardian bowmen. The Uxians, Babylonians, Red Seatribes, the Sitacenians were in deep formation behind them.

In the advance of the Left wing facing Alexander's right were the Scythian Cavalry, some thousand Bactrians cavalry and 100 scythe-chaiots.

The elephants were posted i.e. deployed ahead of Darius's Royal Squadron and 50 chariots.

In the front of the Right Wing, were deployed the Cappadocian and Menian cavalry and 50 Scythe-chariots.

The Greek mercenaries were deployed closeby, by Darius alongwith his Persian troops on either side and were facing the Macedonian Phalanx, these being the only troops to match the Macedonian Phalanx.

1.1.8 Macedonian Army under Alexander

Alexander deployment is called the "Grand Hollow square" to ensure greater mobility. The deployment of Macedonian Army was as follows:-

- (i) **Right Wing:-** The Right Wing was held by Companions, the Hypaspists and presumably by three rows of the Phalanx. Thus to the Right front stood the Royal squadron of Clitus, to the left of him stood the squadrons of Glaucians, Aristo, Sopolis, Heraclides, Demetrius, Meleager and Hegelochus. The whole of cavalry was under the command of Philotas.
- (ii) **Centre:-** Next came 'Agema' and then Hypaspists under Nicanor.
- (iii) **Left Wing:-** (From Left to Right). The left wing was formed with

the Thessaltian cavalry under Philips and Greek cavalry under Eriguius/ Then came the Phalanx which was deployed, Craterus who as usual commanded the infantry of Left wing, Siminians, Polysperchon, Meleager, Perdicas and Coenus brigade.

(iv) Flying Columns in the Rear at an Angle

(a) Right:- Half the Agrianians under Attaus, half the Macedonians under Briso and Vatevras Mercenaries under Cleander - all infantry. In front of these units were deployed the Light Cavalry under Aretes and Paeonian cavalry under Aristo and in front of all was the Grecian (Greek) cavalry under Menidas.

(b) Left:- On the left was deployed in three up the Tharcian Infantry under Sitocles, then came the Grecian Allied cavalry under Coeranus and then the Grecian Mercenaries infantry under Andromachus.

(v) Infantry to the Right:- In front of the left of Alexander and Clitus cavalry were the half javelinmen of Balarus, half archers of Briso and half Agrianians of Attalus were drawn up in front of Companion cavalry to oppose the Charge of Persian Scythe-charge.

The baggage camp of Alexander's army located in the rear was guarded by the Thracian infantry. Instructions had been given to Menidas and troops under him to wheel round and attack the enemy in flank from Right, if the enemy try to ride round their wing. The Left column was similarly marshalled at an angle to the front. This was to ensure greater mobility and give the flying columns the freedom to face the enemy from flank, front to rear. Infact, the whole of Alexander's army was so arranged that it could meet all eventualities especially with the troops on the flanks.

1.1.9 The Battle in Detail

(a) Phase-I of Battle

The battle of Arbela or Gaugamela started on the 1st October 331 BC, when Alexander's forces marched and approached the Persians. Instead of moving straight, Alexander inclined towards the Left Wing of the Persians i.e. where 100-Chariots were positioned. Seeing this, Darius marched along parallel with him. His i.e. Darius's Scythian Cavalry galloping forward to attack. Alexander continued his oblique approach to the left flank of Darius and gradually got beyond the ground cleared by and levelled by the Persians. Darius ordered his front units of the Left Wing to move round the Right wing of Alexander and compel him to halt. Alexander in order to meet this

attack, moved his Greek Mercenaries Cavalry under Menidas, but they were driven back. Next Alexander ordered Paeomans cavalry under Aristo and Cleander's mercenaries infantry were ordered forward, which were encountered by Persian army's Bactrian and Scythian horsemen and these broke the ranks of Alexander's Companion with heavy losses to the Companions. The Scythian with their horses were being better protected by defensive armour. In spite of this, the Macedonian (under Alexander) discipline and valour began to fall on enemy as squadron after squadron of cavalry charged home and the Persian attack was beaten back. Seeing the confusion in the Alexander's Companions, Darius launched his 100 Chariots to throw the Companion Phalanx into disorder. But these Chariots on approaching near Alexander's position were fired upon with arrows and Javelins from the Agrianians and the men of Balanocrus who were guarding the far most forward Right flank of Alexander's army. This ended the Phase I of the battle of Arbela or Gaugamela on the Macedonians Right Wing.

(b) Phase-II of the Battle

The second phase of the battle opened when Alexander ordered the Light cavalry under Aretes to attack those Persians who were riding round the Right wing of Alexander's army. Then Alexander heading i.e. leading the Companion Cavalry wheeled round from right and formed a wedge, and with four right taxies of the Phalanx, led his personal horse he was riding in the gap formed by Persian front and galloped straight for Darius which became a decisive point of the battle. This was supported by the dense array of bristling pikes of Phalanx, which made Darius run from the battlefield. Meanwhile the Persian cavalry finding their rear threatened by the Light Cavalry under Aretes, took flight from the battle field. The Macedonian army followed and pursued them and slaughtered them.

When the battle on Alexander's Right Wing was in progress, his Left Wing was attacked by the Indian and Persian towards Alexander's Baggage Camp. To face the Persian attack on the Left Wing, Alexander's reserve Phalanx turned to face (as per previous orders) the Persians and slew a large number of them. The Persian cavalry of Darius Right Wing rode round the Left Wing of Alexander and attacked the cavalry and infantry of Parmenion in the flank which surrounded Permenion who, informed Alexander of his critical situation of battle. Alexander on getting this information wheeled round with his Companion Cavalry and led them against the Persian Right. The Persian Cavalry now started falling back, when they found their retreat blocked by Alexander, fought stubbornly. They kept on fighting till they were routed by

Alexander with his Companion Cavalry.

This now freed Parmenio troops who were surrounded by the Persian earlier. Permenio now pursued the Persians till midnight, where a forced march was made on Arbela. But Darius III had escaped even after pursuing him for 35 miles. This pursuing ended on to Babylon and thence onto Susa.

Casualties

Different authors have made different guesses about the casualties suffered by Persian forces and the Macedonian forces which are as follow:

Persian Forces

A. Pesian Forces

		Killed	
Caprued			
-	As per Arrian	- 3,00,000	More than 3,00,000 captured
-	As per Curitius	- 40,000	-
-	As per Diodorus	- 90,000	-

B. Macedonians Forces

-	As per Arrian	-	100 and 1000 horses lost
-	As per Curtius	-	300
-	As per Diodorus	-	500

1.1.10 Causes of Alexander's Success and Failure of Persians under Darius

1. The battle formation of Alexander's army in the battle of Arbela was unique. He had kept his cavalry and infantry intact in front while he had kept his cavalry and infantry mixed for all eventualities. He had kept his Archers, Javelinmen and Agrarian in two halves to exploit the situations arising in any direction during the battle.
2. The Alexander had kept his reserves of cavalry and infantry well poised.
3. Alexander's Macedonian Phalanx were the time tested infantry units which stood the onslaught of Darius chariots and other army elements.
4. Alexander made the Right Enveloping manoeuvre to unhinge the enemy and then employed his cavalry including light cavalry effectively.
5. Alexander, led his Companions cavalry with Infantry to attack Darius direct, which made Darius flee the battle field.
6. Alexander's positioning of Archers, javelinmen in the front on the Right

wing was tactically sound to deal with enemy cavalry, Chariots and infantry effectively causing numerous casualties.

7. Alexander had very able and experienced Generals under his command.
8. Alexander had studied the ground where the Persian army was deployed and the area where he had to fight minutely and most of his men had seen the battle ground during reconnaissance of the area.
9. Alexander had studied the enemy deployment on the ground for the battle of Arbela and had deployed his forces accordingly to deal with them. He got the required information about enemy deployment from prisoners also.
10. Alexander, after he crossed the river Tigris, had sent his advanced guard ahead to gather information and warn him of enemy intentions.
11. Alexander had rested his army well, before the attack on Persian army led by Darius was launched, whereas Darius and his army was merry-making on the previous night on battle.
12. Alexander himself was a leader 'par excellence'. He led his troops in the battle of Arbela.
13. Alexander's army was very well organised and trained. His Royal army consisted of Companion cavalry. Hypaspists (i.e. Phalanx), Territorial Army, and other contingents like Thessalin Cavalry, Thracian Lancers, Cretan Archers, Agrarian Javelinmen, Macedonian Archers etc. They were best armed and equipped.
14. Alexander was tactically very sound. The tactics used by him in the battle gave him mobility. He used the tactics of envelopment by right flank moves of his to go behind the Persian rear thus causing confusion in the enemy ranks.
15. Throughout the battle of Arbela, Alexander exercised full command and control over his army. When Parmenio was surrounded by the Persian Right Wing, Alexander responded to the SOS call of Parmenio and saved the situation by flanking round the Persian rear.
16. This battle presented the coordination and cooperation of Cavalry and infantry. When one arm failed, Alexander employed the other arm to supplement and complement the task of each other.
17. Persian army and especially their king Darius showed cowardice and fled the battle field in the thick of the battle when he found being surrounded by Alexander's forces.

1.1.11 Summary

The battle of Arbela was itself a decisive battle which represented the collapse of old system of battle and brought a new style of battle through phalanx system and in this battle, some principles of war such as morale, concertation of forces, mobility of forces etc. helped to achieve desirable goals.

1.1.12 Long Questions

1. Give the deployment and battle account of Battle of Arbela.
2. Write a note on the relative strength of both armies, casualties suffered during the battle as also the causes of success of Alexander's army.

1.1.13 Suggested Readings

- J.F.C Fuller : Decisive Battles of the Western World and their influence on History
- J.F.C Fuller : Generalship of Alexander the Great

BATTLE OF CANNAE - 216 B. C.

- 1.2.1 Objectives
- 1.2.2 Introduction
- 1.2.3 Organisation of Roman Army
- 1.2.4 Weapons & Equipments of Roman Army
- 1.2.5 Carthaginian Army
 - 1.2.5.1 Self-Check Exercise-I
- 1.2.6 Battle Formations
- 1.2.7 The Battle of Cannae
- 1.2.8 Analysis of the Battle of Cannae
- 1.2.9 Summary
- 1.2.10 Questions
- 1.2.11 Suggested Readings

1.2.1 Objectives

As we read in the last chapter, an intelligent general can achieve victory with small armed forces through the implementation of plan and strategy of war in the battle field and can utilize the principle of the wars beautifully. In this chapter of the battle of cannae, the students can learn about another concepts of war and tactics through which Carthaginain Army encircled the roman forces to surrender in front of them and the students will know about the uses of another principles of wars.

1.2.2 Introduction

The Battle of Cannae was fought between the Romans and Carthaginians in August 216 B.C. at Cannae. The Roman forces were led by Tarentius Varro, the Consul who was a businessman and who had become a general for the battle of Cannae. On the other hand, the Carthage army was led by their most able, experienced and dashing General Hannibal. Though the Roman Army's strength was far greater than the Carthaginians in the battle of Cannae, but the stupidity of the Romans and the superior leadership of Hannibal with trained and most physical fit army ensured victory for the Carthaginian army.

1.2.3 Organisation of Roman Army

The Roman army was consisting of a citizen's levy and paid only when called upon for active service. The main component of Roman army was based on Legions with each Legion having Heavy Infantry (consisting of Hastati, Principes and Triarri), Velites (Light infantry) and cavalry as under:-

1. Heavy Infantry

The mainstay of the Roman army was the Heavy Infantry. The heavy infantry was divided into three lines as follows:-

(a) Hastati

This type of infantry was to be deployed in the front facing the enemy for the battles. Hastati was divided into ten companies called 'Maniples' (i.e. handfuls). Each company (Maniple) had strength of 120 men and the strength of Hastati 1200 men.

(b) Principes

This type of infantry was to be deployed behind the Hastati but ahead of Triarri. It was also divided further into 10 companies (Maniples) each of 120 men like the Hastati with strength of each Principe at 1200 men.

(c) Triarri

This type of infantry was to be deployed behind the Hastati and Principes i.e. in the 3rd row of infantry in battle i.e. in the rear with a strength of 600 each Triarri with ten companies (Maniples) of 60 each.

2. Velites (i.e. Light Infantry)

The Romans army Legions also had Velites i.e. light infantry. The light infantry battle deployment was to be interspersed within the maniples of heavy infantry.

3. Cavalry

The Roman Legions had cavalry too. The total strength for the battle of Cannae was probably 6000. The cavalry was used in the wings and was divided into squadrons.

1.2.4 Weapons & Equipments of Roman Army

The weapons and equipment used by the Roman army in the battle of Cannae were as follows:-

1. Hastati and Principes (Heavy infantry)

- Bronze Helmet
- Breast Plate

- A semi-circular rectangular shield (semi cylindrical)
- Two javelins
- A dagger
- A pointed double edged 2 feet long sword.

2. Triarii (Heavy Infantry)

The Triarii were also similarly armed as the Hastati and Principes, but they used thrusting spear in place of Javelin.

3. Velites (Light Infantry)

Velites were armed as follows:-

- a sword
- two javelins
- a round shield 3 feet across
- Headdress of wolf's skin.

4. Cavalry

Cavalry was armed with:-

- a leather shield
- a lance, and
- a sword.

For the battle of Cannae the whole infantry force of Legions was drawn up in a chequered formation and the Maniples (companies) of the second rank covering the intervals between the first, and those of the second being covered by the third. Each line of the components Hastati and Principes were 4 lines deep, 1200 each or 120 to Maniple (company) and each Triarii of 600 strength. The strength rose towards 6000 for the battle of Cannae and the troops were increasingly recruited from the Italian allies. The Roman force was commanded by two Consuls and for the battle of Cannae it was under the command of Tarentius Varro.

1.2.5 Carthaginian Army

The Carthaginian Army was under the able command of very experienced the Carthaginian general Hannibal. The Carthage army consisted of Infantry (Light infantry, Spanish infantry, Celtic infantry and African infantry) and Cavalry. The Carthage army consisted of following elements for the battle of Cannae in 216 B.C.:-

1. Infantry

Carthaginian infantry consisted of:-

(a) Light Infantry

The troops of light infantry were armed with:-

- a sword
- a shield
- little body armour

(b) Spanish Infantry**(c) Cellic Infantry****(d) African Infantry****2. Cavalry**

The cavalry consisted of normal cavalry and also the Numidian mounted Javelinmen. The Carthage cavalry was being commanded a brilliant cavalry commander-Maharbal.

D. Comparative Strength of Roman and Carthage Armies

The Romans had a strength of eleven Legions and those of the Carthage army to the tune approximately 40,000 infantry troops with 6000 cavalry.

1.2.5.1 Self-Check Exercise-I

Q. What is Hastati and Principes ?

Ans. -----

Q. What is legion ?

Ans. -----

1.2.6 Battle Formations**1. Roman Army**

The Roman army was drawn up in the conventional parallel formation. The battle formation was as follows (Refer to the sketch):-

- a) The Hastati, the Heavy infantry was in the front row in Maniples (companies) or handfuls of 120 men each Maniple. The Hastati was interspersed with the Maniples of Velites i.e. light infantry amongst the Maniple. Cavalry was deployed on flanks.
- b) The Principes, the heavy infantry was in the second row and deployed like Hastati but more spread on the ground. The Velites (Light infantry) was also interspersed with the Principes.
- c) The Triarii was deployed in the rear of Principes alongwith the

light infantry - with cavalry on the flanks.

- d) As mentioned above, the Velites were interspersed among the Maniples of heavy infantry.
- e) The whole infantry of the Legions was drawn up in the chequered formation i.e. parallel formation with Maniples of the second rank covering the interval between those of the first and the Maniples of the third rank covering the interval between those of the second. Each line was four files deep.
- f) The cavalry was deployed on the wings of Hastati and Triarii and was deployed in squadrons.

2. Carthage Army

Hannibal drew up his army i.e. the Carthage army in a convex crescent formation, with Spanish and Gallic infantry deployed in the centre and the African infantry deployed on both sides of Spanish and Gallic infantry. On the wings of infantry, powerful detachments of cavalry were deployed in the front along with infantry and also in the rear. The best troops of Hannibal were the cavalry units comprising of Numidian mounted Javelin-men.

The Carthage cavalry was commanded by a brilliant cavalry commander, Maharbal. The Carthaginian army was being led by one of the most able generals of the Carthage army i.e. Hannibal who was well experienced, very efficient and very confident in spite of the numerical superiority of Romans.

1.2.7 The Battle of Cannae

The battle of Cannae was fought in August 216 B.C. For the field formation and battle, refer to the attached sketch.

Hannibal began the battle of Cannae by routing the Roman cavalry which was deployed on the wings of Roman infantry. Hannibal allowed the Roman infantry to advance and press the Carthaginians Infantry crescent back (formed by the Spanish and Gallic Infantry) till it became concave. At that time Hannibal moved his African infantry (deployed on both sides of Spanish and Gallic Infantry) from Left and Right and turned them towards Roman infantry flanks.

The Roman army was now attacked from all the four sides by the Carthaginians army. The Roman army vanished from the battlefield. As Fuller writes about this encirclement by the Carthage army "the Roman army was swallowed up as if by an earth quake".

The battle was thus over with Hannibal with his Carthaginian army as the winner and the Romans the vanquished.

In the battle of Cannae in 216 B. C., a large part of Roman Army of 70,000 men was destroyed because of the sound leadership of Hannibal and the stupidity of Roman commander Consul Tarentius Varro was a businessman by profession and whose turn it was to be a general. The Battle of Cannae was considered a crowning disaster for the Roman army. After the battle of Cannae and as a result of the battle, most of the Southern Italy went over to Carthaginians which included the important city of Capua (modern Caserta). Though Hanibal's cavalry commander urged Hannibal to march on to Rome straight after the battle of Cannae, but General Hannibal refused to do so, as his strategy was not to prosecute a war to the death of Rome, other than bringing Rome to terms.

1.2.8 Analysis of the Battle of Cannae

The outcome of the battle in favour of Hannibal and his Carthaginian army is attributed to the following reasons:-

1. Command of the Carthage army was in the hands of a vary able, reliable, experienced and confident general i.e. Hannibal.
2. The Carthage army under Hannibal was a very well physically efficient and highly effective Carthaginian army.
3. The command of the Carthaginian cavalry was under a very brilliant commander i.e. Maharbal.
4. The field formations adopted by the Carthaginian army were very good i.e. the convex crescent formation for the battle of Cannae to draw up the Roman infantry till the formation becomes concave and then assaulting from front and sides with Spanish and Gallic infantry (from front) and with the African Infantry from both sides and cavalry attacking from the sides and the rear.
5. Use of Carthaginian Cavalry in the initial stages of the battle to route the Roman Cavalry was sound.
6. Better fire arms were possessed by the Carthaginian army.
7. Battle Technique of Carthaginian army as against the Roman army battle technique was far superior in the battle of Cannae.
8. Above all, the Carthage army had all the fantastic leadership and generalship of Hannibal who was an experienced, efficient, capable and effective leader. Hannibal was full of confidence in the battle of Cannae. He had the mastery of the battle and kept on influencing the battle throughout. Hie actions were bold, whereas the Roman army

was led by Consul Tarentius Varro who was a businessman and had become a general in his turn. Tarentius Varro had no experience of battlefield. Nor was the deployment of the Roman army superior to that of Carthaginian army. Tarentius Varro being inexperienced and an unsound general could not influence the battle. Because of the stupidity of its commander and in spite of numerical superiority of the Roman army, the Romans lost the battle in Cannae with very heavy losses in men (70,000 men) and material besides losing prestige and the southern part of Italy including the important city of Capua to the Carthaginians.

9. Hannibal did not pursue the Romans on their defeat in the Battle of Cannae with the result, the Romans reorganised themselves in a short span of time, avoided pitched battles, took advantage of their fortresses, and with greater numbers started wearing Hannibal down.
10. Though the Romans were defeated on the ground in the battle of Cannae, their navy remained untouched and dominant.
11. The Roman cavalry was weak as compared to efficient cavalry of Carthaginians i.e. Numidian mounted Javelin-men, whereas the Romans were greatly handicapped by their cavalry. Hannibal's use of cavalry was in the classic pattern set by Alexander. Also the classic crescent formation of his army was unique and very good for a defensive - offensive battle. The Romans used this formation in the Battle of Illipa in 206 B.C.

1.2.9 Summary

In spite of the numerical superiority, Romans lost the battle of Cannae with heavy casualties i.e. 70,000 men. The Romans lost their prestige for a while. The Carthage army was led by their ablest commander Hannibal who also had a very able and well disciplined army under him. On the other hand the Roman army was poorly led by their Consul General Tarentius Varro, who was a businessman by profession, but had become the consul of Rome. The result of the battle was but evident.

1.2.10 Questions

1. Give detailed account of organisation and weapons of Roman and Carthage armies in the battle of Cannae 216 B.C.
2. Give the account of battle of Cannae by drawing the sketch. Also carry out analysis of the battle.

1.2.11 Suggested Readings

- | | | |
|------------|---|-----------------------------------|
| Montgomery | : | A History of Warfare |
| S.T. Dass | : | An Introduction to the Art of War |
| W.N. Weech | : | History of the World |

BATTLE OF HASTINGS 1066 A. D.

- 1.3.1 Objectives
- 1.3.2 Introduction
- 1.3.3 Causes of the Battle
- 1.3.4 Preparations of Williams and Beach Landing of His forces in England
 - 1.3.4.1 English Forces
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- 1.3.5 Battle Techniques and Deployment for the Battle of Hastings 1066 A.D.
 - 1.3.5.1 Self-Check Exercise-I
- 1.3.6 British Battle Technique, Deployment and the Battle
- 1.3.7 Strategy and Tactics used by Normans and British in the Battle of Hastings 1066 A.D.
- 1.3.8 Summary
- 1.3.9 Long Questions
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1.3.1 Objectives

In this chapter, the major objective is to gain the knowledge of war techniques and tactics in different military organizations. Another objective is to learn about the development of war techniques, strategies, weapons and methods of fighting during major revolutions. One more objective is to gain the information about battle of Hastings and military organization of English and Norman forces and their principles of war.

1.3.2 Introduction

Britain or Great Britain or England is now called United Kingdom is an island country though situated on the western edge of the European continent, but at the same time separated from the main land of European continent by the English Channel. Thus, England/Britain/United Kingdom is an isle (i.e. Island) country. It was and still is very important for Britain that it is located away from the European mainland as it helped her to form many aggressions from the Europe mainland. That is why England had laid more importance to maintain and strengthen her naval forces than the ground forces i.e. the

Army.

The battle of Hastings in 1066 A. D. had proved beyond doubt that England had ignored her land forces i.e. the Army, thus suffered defeat at the hands of Normans. Normans are the descendants of those North-men to whom the France monarchy had granted the Duchy of Normandy as a feudal holding in 911 A. D. These people under their head started confronting the Vikings. North-men were basically the infantry soldiers, but the Normans over a period of time became famous as horsemen.

1.3.3 Causes of the Battle

The Normans of France had started their policy of expansion of the French Empire. Over a period of time they had become the exponents of heavy cavalry and strategic fortification. Under their expansionist policy, the Normans under Williams invaded England and defeated the England's forces under their King Harold at Hastings in October 1066 A. D.

1.3.4 Preparations of Williams and Beach Landing of His forces in England

The expedition of Williams of Normandy to invade England was well planned, prepared and well practiced when he crossed the English Channel. Williams had been working for this invasion since January 1066. To accomplish his task Williams acquired a fleet of 450 transport vessels (ships). Williams had secured volunteers and mercenaries for this operation. He had secured them i.e. soldiers not only from Normandy, but also from other parts of France. He had raised 2000 to 3000 Knights, of whom at least 1200 were the Normans being the hard core soldiers (Knights) of his army. To supplement the Knights, Williams had enlisted 3000 to 4000 infantry men consisting of bowmen and possibly cross-bowmen.

On 28 September 1066, his army using the 450 transport vessels (ships) landed on the empty beach of Pevensy Bay, a few miles from Hastings. On 29 September 1066, his army marched on to Hastings, where the battle ensued a few days later.

1.3.4.1 English Forces

Infantry also called the "Fyrd" was the main strength of the English army. The "Fyrd" was recruited on the basis of one man for every 600 acres of land and he (the man) could be called out only for two months at a time. Thus, "Fyrd" were the militia of the realm. These were the aristocracy class of people.

Another class known as "Thegn" (who was rated below the aristocracy) were recruited and owned military service under the King. The English Army fought on foot and the foot soldiers were equipped as under:

- A Spear
- Javelin
- Two edged sword
- Massive Danish axe
- Round/Kite shaped shield.
- Steel Helmet and Coat of mail (only used by the rich enough).
- Though Archery was a popular sport in England, but it was seldom used in fighting.

The king had a force of professionals called the "House Carts"

1.3.4.2 French Forces

The French forces under Williams consisted of following:-

1. Knights

The Norman army had 2000-3000 Knights which included 1200 Normans. The Knights or heavy cavalrymen were protected by a long mail shirt, a peaked or conical helmet with a nose guard, a kite shaped (round at the top and pointed at the bottom) shield 3-4 feet high. The principal weapon of Knight was a lance with an untapped wooden shaft 8-9 feet long and tipped with a broad iron head, a medieval sword which was two edged, tapering to a point, 44 inches long from pommel to tip. Besides these Knight also carried on his saddle a broad-blade battle-axe or iron headed mace.

2. Infantry

The Norman infantry was 3000-4000 consisting of bowmen and possible cross-bowmen foot soldiers, armed with pike and sword. Norman bow was 5 feet long and to fire it, the arrow was drawn back to chest. The crossbow was a great deal more powerful than any previous bow. It was derived from both 'ballista' and the ordinary bow. The foot soldiers were protected by mail shirt.

1.3.5 Battle Techniques and Deployment for the Battle of Hastings 1066 A.D.

Deployment of Normans for the Battle of Hastings on 14 October 1066

The Normans were drawn up in three divisions as follows:-

- A - On the Left, the Britons commanded by Count of Allan of Brittany.
- B - On the Right, the French and other mercenaries under Eustace of

Bonlogne, and

C - In the centre, the Normans under William's personal command.

There were three lines in each division as follows:-

A - In front, the bowmen

B - Next the heavy infantry, and

C - Lastly, the Knights mounted on their horses.

The Papal banner was carried in front of the army. Before joining the battle, the Knights had put on their heavy armour, having preserved their strength till the last moment. Williams was accompanied by his half brother Robert, Count of Mortani and Odo, Bishop of Bayeux and by his friends William Giffard and William Malet. When the Norman advance began from Telham Hill, their ranks deployed outwards so as to cover the full line of the English force.

The battle formation of Normans for the battle of Hastings on to October 1066 under Williams was as shown in the chart.

1.3.5.1 Self-Check Exercise-I

Q.1 What was the main cause of the war ?

Ans. -----

Q.2 Who were the knights ?

Ans. -----

1.3.6 British Battle Technique, Deployment and the Battle

The British naval fleet in the English Channel had made the return journey to London for repairs and supplies on 8th September 1066 as the fleet had run out of supplies and had suffered damages due to the August rough weather. Thus, watch of British over the English Channel for naval defence diminished, with the result the English with their forces left their coasts undefended. On 28th September 1066, William of Normandy landed on the south coast of England unopposed at night. William of Normandy had been preparing for the battle, whereas there were hardly any preparations from the English side to meet the challenge of William of Normandy. On hearing the landing of Norman's forces on the English coast, England army under their King Harold started from York to meet the invaders at the south coast. Harold's strategy at Hastings, where he were to contest the Normans led by Williams, was to wait till his forces fetch up. He had taken up defences on a ridge (a piece of tactical importance)

overlooking the area around. Before the British forces could assemble, Williams surprised the Britishers by attacking them on 10 October 1066. The Britishers though fought well, but were overwhelmed by the William's forces as William had used his personal leadership and the ruse to defeat the Britishers. He succeeded in separating the British army from the main position and destroying the British infantry. Confusion in the British ranks and files created havoc for them, which resulted in the disintegration of British army and victory to Williams. Harold had exercised less control on his forces and he could not control the battle effectively in Hastings. Harold himself got killed in the battle. Thus, the Battle of Hastings showed the faulty fighting techniques of the British as compared to the intelligent use of forces by the Normans, their high fighting spirit, better arms, superior army and the use of ruses to confuse the British army. The leadership displayed by Williams was of a very high order as against that of Harold's.

The battle deployment of British Army is shown on the sketch. In this battle, the British technique of infantry deployed as a shield was sound so far as they stood the ground. Once the Norman forces started withdrawing temporarily and as part of ruse, the infantry being used in the pursuit of the Norman's horsemen rather looks absurd, and it amounted to the disaster of infantry-men. Normans employed the archers very well, firing arrows vertically into the sky to cause casualties to the English infantry in the open. Harold did not use his navy, when the Normans invaded and landed in South England. A British threat against the Norman's ships would have been disturbing to the Normans and had definitely lowered their morale. Harold pursued the strategy which best suited Williams and played into his hands.

1.3.7 Strategy and Tactics used by Normans and British in the Battle of Hastings 1066 A.D.

1. Williams crossed the English Channel and landed on the English coast of Pevensey Bay unopposed on 28 September 1066 when King Harold was 250 miles away.
2. Williams forces had a major portion of army comprising of mounted Knights who could exploit flanks, attack and pursue the enemy.
3. Williams forces were well-equipped, organised and practiced for the battle.
4. Had the English dominated the English Channel throughout, it would have dissuaded Williams or at least lowered the morale of Normans to cross the Channel.

5. Williams had been preparing for the war since January 1066.
6. Harold's forces were unprepared and exhausted when the battle started. His forces were pouring in the battle area and had not slept and rested for the battle, whereas Williams' forces were fresh, had been rested and were fit for the battle.
7. Williams used ruses in the battle to deceive the English by showing withdrawal, but attacking immediately thereafter.
8. Williams' bowmen and cross bowmen used their arrows skillfully firing vertically and causing casualties to the British. English forces lacked the archers.
9. Heavy cavalry Knights were the best forces Williams had for this battle. They were well armed and equipped.
10. Williams had well coordinated the functioning of his forces and controlled their movements, throughout the battle, whereas Harold's infantry could not be controlled when the British infantry started chasing down the slope without order in the tactically withdrawing Normans. Then at the bottom of slope, Normans' horsemen savagely attacked the isolated British infantry, they started withdrawing up the slope.
11. Personal leadership of William's was better than the British ruler Harold.
12. Weapons of Normans were superior of those Britons.
13. Williams had studied the strategy to be used by Harold. Based on the anticipated strategic moves of Harold, Williams moved his troops and attacked, retreated and counter attacked, thus catching the British infantry in the most disadvantageous position down the hill and then counter-attacking them with his Knights and destroying them completely.
14. As far as the British forces were concerned, the army of Britain was dominated by infantry (Fyrd). The infantry though was well equipped and armed could not stand against the Knights (Horsemen). The British army though had archery as a good sport, but archers did not play any role in the British infantry, whereas the Norman archers played a very decisive and vital role in the battle of Hastings. Similarly, the British Navy was though well organised, but did not play any significant role in the battle.

1.3.8 Summary

England, though separated from the European continent through the

English Channel, was invaded by the Normans under Williams in 1066 A. D. and defeated the British King Harold and his British forces handsomely. The British did not protect their coasts properly thus enabling Williams to land safely on the British coast of Pevensey Bay on 28 September 1066. Norman forces were well equipped, well organised and well rehearsed for the attack on Hastings. The brilliant leadership of Williams and bravery of his Norman army thus defeated the British in their own land at Hastings on 14 October 1066 A. D.

1.3.9 Long Questions

- Q.1 Give detailed account of organisation and weapons of English and Norman armies in the battle of Hastings.
- Q.2 What is an analysis of the battle of Hastings ?
- Q.3 What were the Strategy and Tactics used by Normans and British in the Battle of Hastings 1066 A.D. ?

1.3.10 Suggested Readings

1. J.F.C. Fuller (1971) : Armament and Histor, Sagar Publishers, New Delhi
2. आर्थक विर्नी : युद्धकला (हिंदी)

The Mongol art of war under Changez Khan and Taimur

- 1.4.1 Objectives
- 1.4.2 Introduction
- 1.4.3 The Yasa
- 1.4.4 The Military Organisation
- 1.4.5 Discipline
- 1.4.6 Body-Guards
- 1.4.7 Arms and Equipment
 - 1.4.7.1 Self-Check Exercise-I
- 1.4.8 Methods of Warfare
- 1.4.9 Mobility
- 1.4.10 Taimur
- 1.4.11 Summary
- 1.4.12 Long Questions
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1.4.1 Objectives

The major objective of this chapter is to learn about the military organisation of Mongol army and their methods of warfare. Even it is to be learnt about the war tactics and strategies of Changez Khan's armed forces and their morale to win the war.

1.4.2 Introduction:-

Mangolia is the most easterly part of the Eurasiatic belt of steppes. These steppes have always been inhabited by various nomadic tribes-such as the Turks,the Mangols and the Tungus. These tribes in many ways related to each other,were members of the same national and linguistic community,i.e the Altic. There is very little known about the tribes in Mangolia that first became famous with the rise of Changez Khan . The history of the Mongols before Changez Khan is unknown. The Changez had known them as 'Hiung-nu' and under the Han dynasty (207 BC to 39AD) their attempts into China were repelled by the Chinese. In the west, they were feared with loathing and revulsions and were called them barbarians. Huns were the lineal

descendants of Mangols who became Moguls, also called Mughals. Over a period of time they ruled and established themselves in Europe.

The Mangol tribes consisted of two groups :the pastoral-nomads, who moved from one steppe pasture to another, and the forest hunters , who also engaged in fishing. These contrasting ways of life explain why the most important region for the Mangol tribes lay on the border between the Siberian forests in the north and the steppe stretching south to the Gobi Desert.

There are conflicting accounts of the events of the year when Changez Khan was born. Chinese and Mangolian sources give 1162, which is currently accepted in Mangolia to be the official year of birth. On the right bank of Onon River. His father Timuchen was a minor Mangolian chief. He succeeded his father at the age of 13 only, and he had to fight hard for his survival and for his inheritance. Physically he was tough, resourceful, confident, ambitious, eloquent and soon had gathered devoted followers with him. In 1206, he gained the title of Khan over the other tribes and assumed the name of Changez Khan. He made Karakorum (in Mangolia) his capital.

As described earlier, Mongol people were primitive and barbarians. In the past, victory of one tribe over the other had normally been followed by destruction, slaughter and plunder. It was Changez Khan who used his victories constructively to unify the Mangol people. Under his leadership, his victims became his subjects, thus they became proud of their status. He unified all the nomads of Mangolia by will power as well as fear of strength too. He offered them great rewards. Thus, he organised the whole nomad fraternity for war.

1.4.3 The Yasa

The organisation of the Mangol state rested upon the feudal relationship of Mangol and Turkish society which had been established by Changez Khan . One of the most important decisions taken by Changez Khan was the introduction of the 'Uighur' script as the official language. His decisions served as models for others. The Yasa was codification of ancestral traditions, customs, laws and ideas of the Mangols , to which Changez Khan added further laws of his own devising. Civil and military disobedience were equivalent to common crime. Through the Yasa, Changez Khan had a profound effect upon the morality of the Mangol people.

The Mangols knew very much cruel punishments, which were often nothing other than forms of torture. The Yasa was applied with merciless rigour,

affected daily life of Changez Khan's empire to a considerable degree. Changez Khan's aim was to make the Yasa inviolable. In order that it should be kept intact and maintained after his death, he appointed his second son, Chaghatai, as its guardian. Chaghatai was a stubborn and severe supporter of the principles of his father's system.

1.4.4 The Military Organisation:-

The organisation of the army was based on the decimal system. The largest unit of 10,000 men (Tuman) was divided into 10 mingghan, each consisting of 1,000 men. These in turn contained 10 Jaghun each of 100 men, while the last unit was divided into 10 arban. This method was based upon the ancient Mangol Military Organisation. Foreign models also influenced the form of the Mangol army. However, Changez Khan himself played an important role in creating it. The main element of the Changez Khan's army was that commander and subordinate should serve each other loyally and obediently. The solidarity of the unit was achieved by an absolute prohibition against transfers from one unit to another. Any man who attempted to do this was given death penalty; the commander who accepted him was also heavily punished.

The various clans and tribes were divided in such a way that the Jaghuns and mingghans could be formed in the shortest possible time. At the head of each unit he appointed men whom he knew personally and trusted. Men, who were loyal to the ruler were placed at the head of the clans. The Jagghuns, the mingghans and the Tumans were commanded by the highest members of the Mangol aristocracy i.e the noyans (commanding officers) and the baghaturs. Changez Khan's youngest son Tolui had great military qualities so he was appointed as one of his father's supreme military advisers. Tolui had the title of noyan.

1.4.5 Discipline:-

Discipline in the Mangol army was maintained by the most uncompromising methods. Superior officers were obliged to carry out without reservation every order brought to them by Changez Khan's runners. Execution was not unknown as punishment for neglect. The plundering of enemy territories could only begin when Changez Khan or one of his generals gave permission.

In accordance with a long-standing custom in the steppes, the troops of Changez Khan were divided into three main groups. The centre, in which the guard was positioned, was under the orders of naya'a; the left flank was commanded by Muqali and the right flank was commanded by Bogorju. Quibilai was charged with all matters concerning the army.

1.4.6 Body-Guards:-

Changez Khan took the first step in the organisation of the guards. The bodyguard was formed of 70 men for the day-watch and 80 men for the night-watch. Archers, table servants and sentries were included in this. The Khan's household was conducted by 'Charbi'. A unit of 1,000 elite guards (Baughters) was deployed for the safety of Changez Khan during battles. In 1206, the number of bodyguards was increased. The night-watch was raised to 1000 men; the day-watch to 1,000 and the archers first to 400 then to 1,000. The elite guard was strengthened by 6,000 men. In the later formation the total guard was 10,000 men strong. All the members of his guard had to be of aristocratic birth. These men were given various tasks according to their abilities. The sons of the commanders of the different units formed the basis of the guard.

The bodyguard was divided into four sections, each of which in turn was responsible for the three day watchers and three night watcher. The off duty sections had at all times to remain in the vicinity of Changez Khan.

1.4.7 Arms and Equipment:-

Every man in the Mangol army was a cavalry man. Some were heavily armed than the others, and their equipment improved as they gained experience and became rich. There was hardly any protective equipment to use by them. Soldiers wore sheep skins, loose tanned jackets and armour of lacquered leather plate. In battle he wore a helmet, of which upper part was made of metal; the part falling over the neck and ears was made of leather. His armour consisted of strips of strong but supple buffalo leather; the garment had a front and back part, two shoulder plates and protective pieces for arms and legs.

The Mangol cavalryman carried on his mount a large number of weapons and tools. Two bows, three quivers (these were two kinds of arrows, light ones for use over long distances and heavy ones for close combat), and a lance with a sickle-shaped hook. The commanders had a slightly curved sabre, sharp on one side. Each rider carried an axe, a kettle, a sharpening stone for the arrowheads and a whipstock used to strike the horse's legs. Each one had a bag to carry reserve water, clothing and weapons dry during river crossings. Emergency ration consisted of about 10 pounds of curdled milk dried in the sun. In emergency Mangol cavalryman opened the horse's jugular vein, sucked out the blood out and then closed the wound.

1.4.7.1 Self-Check Exercise-I

Q.1 What is Yasa ?

Ans. -----

Q.2 What is Tuman and Jaghun ?

Ans. -----

1.4.8 Methods of Warfare:-

The Mangols had learnt riding and archery as small children. They could hit a target at distance of between 200 and 400 meters . Each man had one reserve horse and sometime as many as three or four. This is the secret of the speed with which Mangols could cover very great distances. The horses were accustomed to the harsh climate and environment. It had a strong neck and a thick skin. The steppe could produce horses in great numbers.

The Mangol army mainly consisted of cavalry. Later Khan and his successors used infantry. The method of warfare had been developed from raids and robber expeditions against the border territories.

The light cavalry was put on the flanks and in the vanguard. Its task was to inflict casualties on the enemy using archery. The group which had shot its arrows rode off to the flanks, to be replaced by the next group which repeated the manoeuvre. The Mangols used this technique while retreating. During attacks the warriors obeyed signals and advanced at a trot, maintaining a terrifying silence. As soon as the enemy had been put into an awkward position, the heavy cavalry hurled itself with loud shrieks upon the enemy. To make their numbers appear greater the Mangols made man-size puppets which they mounted on the reserve horses. The Mangols frequently spread rumours ahead of their advancing armies, giving the impression that they were twice as numerous as they really were.

Mongol used to occupy the undefended areas of the enemy during wars. The mostly defenceless inhabitants were robbed off all their wealth and many were taken prisoners. This was done to drive prisoners forward in front of the attackers. They had learned the use of siege machines, such as catapults, battering-rams, naphtha-bassel throwers from the Chinese and also how to undermine fortress walls. After the capture of the town artisans were first set apart; large number of people were killed and young men and those fit for combat had to accompany the army as prisoners. If the number of prisoners

increased then some of them were killed. This was done to psychologically harm the enemy forces.

1.4.9 Mobility:-

The rapidity of the marches carried out by the Mangol army were remarkable. A distance of 700 kms could be covered in a fortnight and if necessary 300 kms in three days . In emergency, the mangols were able to march for ten days without any cooked food. Before war, Changez Khan tried to gather as much information as possible about the political and military situation of the enemy country. However the Mangols never won their battles by numerical superiority. They owed their impressive victories to the shrewdness with which Changez Khan led his people and with which he discerned and exploited his enemy's weaknesses. His conquests were the fruits of an extraordinary military genius. Changez Khan conquests came to an end in 1227 on his death. At the time of his death, his empire stretched from the Persian Gulf to the Pacific, from the Siberian Taiga to the Himalayas. But after his death the Mongol empire disintegrated.

1.4.10 Taimur:-

Taimur had crossed the Indus on September 24, 1398. He knocked on the outskirts of Delhi on December 9. Three days later he had a small fight with about 4,000 Horse of Delhi. They were completely routed . Taimur had started with an army of 92 Tumans. In the battle of Delhi he had about 60,000 horsemen. Taimur had divided his army into five divisions: the centre (Kul or ghol), the right wing (baranghar); the left wing (jaranghar); the rearguard (chandawal); and the vanguard (harawal).

Taimur rose to be Asia's world conqueror two centuries after Changez Khan . He belonged to a more civilised age and a more stable political system than those of his Tartar predecessor. He was the chief of the Chagtai or eastern branch of the Turks. He had first-rate military genius. He was also fortunate in gathering round himself a band of lieutenants of the highest capacity. Timur's ruthless massacres of defeated enemies and civil populations and atrocities on the helpless people created a terror which cowed all thoughts of opposition to him.

Taimur's army could march 150 miles in one day and night and march an average of 80 miles daily for a week. This speed made their tactical dispersion and concentration for action an easy problem for their general while it disconcerted all the defence plans of their enemies. Flooding rivers, during Indian Monsoon months, formed no obstacle to these turks. Taimur also built bridges of wood or of boats over the larger Indian rivers. His incredibly swift movements and sharp decisive blows paralysed his enemies and confounded all their plans of battle and evacuation alike. Discipline was maintained with the greatest strictness.

1.4.11 Summary

Eventually it can be understood how Changez Khan became great general and ruler by establishing firm discipline in his armed forces and innovating war techniques to win over the enemies. Even he strongly preferred mobility in the battle field and used the psychological war methods during his methods.

1.4.12 Long Questions

- Q.1 What were the methods of warfare in Mongol army ?
Q.2 Explain the military organisation of Mongol armed forces.

1.4.13 Suggested Readings

- Sir Jadunath Sarkar (1960) : Military History of India, Orient Longmans
R.Earnest Dupuy (1970) : The Encyclopaedia of Military History, Macdonald, London
E.W. Sheppard (1966) : The Study of Military History, Natraj Publishers, New Delhi

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