**CHAPTER-V**

**MILITARY HISTORY**

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# SECTION-1

**BIOGRAPHY OF INDIAN HISTORICAL LEADERS**

**BIOGRAPHY OF CHHATAR PATI SHIVAJI**

**Early Years**

1. On 10th April 1627 Shivaji was born at Shivneri, some 50 miles, North East of Pune. At that time his father , Shahji Bhonsle was being pursued by his father–in–law Lukhuji Jadhav with the borrowed might of the Mughals. Leaving his pregnant wife Jijabai at Shivneri fort, Shaji was eluding his pursuers. Jijabai’s loyalty was to Shahji and she was naturally very disturbed by the fact that it was her own father who was in hot pursuit of her husband. Jijabai vowed that if she were blessed with a son, she would name him after the God. Thus when the son arrived, he was named Shivaji.

2. When Shahji was exiled from Maharashtra, he left his wife Jijabai and Shivaji in the care of a shrewd and able Brahmin, Dadaji Kondadev whom he had appointed Administrator of his Pune jagir. Dadaji Kondadev took particular care in the up bringing of his illustrious ward. He initiated Shivaji in to the art of administration and ingrained in him a love for his country. From his mother young Shivaji imbibed a deep religious spirit. An inner urge kept taking him to the remote countryside which in those days was extensively covered with jungles. Mavles (locals) were pleased to see their Sirdar’s son visiting them so often despite hazards and hardships of movement in that difficult terrain.

3. Shivaji did not relish the idea of service under his father’s overlord, the Sultan of Bijapur. He wanted to become an independent and sovereign ruler so that he could protect his people from the depredations of the Muslim rulers. The legitimate aspiration of the son of a Hindu Chieftain was supposed to be advancement in service under a muslim overlord, but Shivaji was cast in a different mould and nursed ambitions of attaining “Hindu Swaraj”.

4. By 1645 when he was only 18 years old, Shivaji gathered a band of one thousand Mavles. He took possession of Fort of Rohida near Pune. The Deshpande of Rohida was asked by the Sultan to explain why he had allowed this act of indiscipline. On his referring this enquiry to Shivaji, the latter wrote to him on 17 April 1645, “We are not disloyal to the Shah. The God whose abode is on the hills of your valley has given us the inspiration and He will fulfill the wishes of all of us to establish our own Raj. It is God’s wish that we establish our own rule and be independent”. This shows that Shivaji had already begun to harbour thoughts of independence.

5. Shivaji’s small beginning at territorial expansion received a setback as Sultan Adil Shah imprisoned Shahji for alleged disloyalty and rebellious activity of his son Shivaji. Adil Shah tried to secure Bangalore, Kondana from Shahji’s son, however his armies were defeated by Shambhaji and Shivaji. This was first major success in battle for Shivaji. Shahji was later released from jail and invested with a robe of honour.

6. Shivaji attended to his army’s organisation and training. Troops were trained to march long distances and to scale perpendicular heights with the help of gharpeo (Lizzards). Shivaji defeated Chandra Rao in a clever move and captured Javli on 15 Jan 1656 and brought surrounding areas under his control. Shivaji renamed the stupendous hill fort of Riari as Raigad and it became his capital later. In Sep 1656 Shivaji paid a friendly visit to his uncle Shambhaji, who was not administering the Pargana of Supe in satisfactory manner and took him prisoner. The whole of Pune District was now under Shivaji’s rule.

7. His early clash with two powerful adversaries was epitomized by two dramatic personal encounters with the Commanders-in-Chief of the enemy’s forces Afzal Khan in 1659 and Shaista Khan in 1663. In both encounters, he came out successful. This helped him in establishing a charismatic control over his people. In Nov 1656 Sultan of Bijapur died and this gave Shivaji an opportunity to raid Bijapur territory. He took over Dabhol and his forces crossed the Bhima River and plundered Mughal territory in Ahmednagar District. In the later half of 1657 Shivaji entered Konkan, by middle of 1658 Shivaji secured whole of North Central Konkan, Kalian, Bhivandi, Mahuli and forty forts were captured.

**Encounter with Afzal Khan**

8. Famous General of Bijapur Army Afzal Khan was sent on strong punitive expedition to bring Shivaji to book. However, Shivaji realising that his adversary was too powerful agreed to one to one meeting, with Afzal Khan who was notorious for treachery and cruelty. Afzal Khan arrived first at the pavilion erected for the meeting at Pratapgad. Shivaji soon followed him arriving seemingly unarmed. The Khan embraced Shivaji and held his neck with his strong arms. Shivaji being much shorter barely came up to his shoulder. Having got Shivaji in a stranglehold, the Khan drew his dagger and hit his side. This blow turned out to be harmless. Shivaji’s body armour protected him. The wiry Maratha retaliated by tearing open the Khan’s bowels with his steel tiger claws he has hidden in his left sleeve and with his right hand he stuck into Afzal Khan’s side. The Khan fell down shouting, “ Treachery, Murder, Help”. The attendants rushed from both sides. One Sayyid Banda attacked Shivaji with his long sword and cut his turbun making a deep dent on the steel beneath. One of Shivaji’s attendants quickly came up hacked the right hand of Banda who was later killed. Shambjaji Kavji cut off Afzal’s head and carried it in triumph to the Fort.

9. Within a few moments the Marathas rushed upon the confused Bijapur Army. Leaderless and surprised, they broke and fled. Supe and Shirwal were captured the same day but the remanents of Afzal Khan’s army and his son Fazal Khan escaped to Bijapur. Shivaji advanced 100 miles along a different route to Kolahpur and captured the fort of Panhala on the night of 28/29 November 1659.

10. Thus ended the battle of Pratapgad. The khans army lost over 3,000 men killed and many prisoners including certain prominent Sirdars. Among the booty captured were 65 elephants, 4000 horses, 1200 camels, 2000 bundles of clothing and rupees ten lakhs. Fazal Khan swore revenge . Hurriedly another force of 10,000 men was concentrated under the Rustam-i-Rahman. Shivaji did the unexpected and on 28 December 1659 suddenly attacked the Bijapuri Army, East of Kolahpur. Already demoralized at the news of Afzal Khans debacle these soldiers could not hold ground when surprised. Shivaji’s men fell upon this force with full fury and soon this Army also disintegrated . This spread great alarm and consternation in Bijapur. The Sultan felt his existence threatened. An appeal to Aurangzeb was made to send a large force to attack Pune and take possession of Shivaji’s dominion. Aurangzeb was looking for this opportunity and he readily responded.

**Encounter with Shaista Khan**

11. A combined offensive of the Mughals and Bijapur was now planned against Shivaji. The Mughal Viceroy in the Deccan since 1659 was Aurangzeb’s maternal uncle Shaista Khan who held the title of Amir-ul-Umrao. He left Aurangabad on 28 January 1660 with a force of 1,00,000 men comprising 70,000 cavalary and 30,000 infantry and 4,000 elephants, 100 camels and a large number of ordanance pieces. Adil Shah of Bijapur gathered a force of 20,000 cavalry and 1,50,000 infantry under Salabat Khan. Shivaji realised that he could not give battle to these forces in the open. He therefore took refuge in Panhala fort on 2nd March 1660. Salabat Khan laid siege to Panhala and this dragged on for nearly five months. Shaista Khan enterd Pune on 9th May 1660. He occupied Shivaji’s house, the Lal Mahal. Shivaji decided to escape from Panhala. Prior to escaping, he lulled the Bijapuris by an offer of submission. In view of this meeting, the Bijapuri Army was a little off its guard on the previous day. Moreover, it was raining heavily on the night of 12th July. Taking advantage of this, Shivaji escaped and reached Vishalgad with some 600 men.

12. In the North, further reverses awaited Shivaji, Shaista Khan advanced from Pune to the strategic fort of Chakan. He captured this fort on 15th August 1660 despite the stout defence put up by the garrison. Shivaji spent the next few months quietly at Raigad maturing his plans. Shaista Khan turned his attention to Kalian District and North Konkan. He dispatched Kartalab Khan to advance into North Konkan. Shivaji had got scent of this move and with lighting speed had come up with his Army to lay an ambush near Umbre. The Mughals could not manoeuvre and there was complete confusion in their ranks with the Marathas showering arrows from all sides. Kartalab sent an emissary to Shivaji and agreed to surrender all his arms and equipment provided he and his men were allowed to return to Pune.

13. Shivaji now proceeded South towards Rajapur some 100 miles from Umbre. The townsmen surrendered to Shivaji and gave him traditional gifts. Shivaji spent the next two years consolidating his rule over the Konkan and keeping the large Mughal Army around Pune at bay. This was the best he could do under the circumstances as he could not match the strength of the Mughals and evict them from his territory . The Mughals on their part chose to co-exist with Shivaji and did not attempt to cross the Sahyadri Range in to the Konkan after the battle of Umbre.

14. Shaista Khan had been in occupation of the Pune region for nearly three years and his large army was living off the land. Shivaji could not face Shaista Khan’s large army in battle. He therefore conceived a very bold and audacious plan to raid Shaista Khan in his palace and kill him. Shaista Khan was living in Lal Mahal with a large guard around the palace. A little down the road from Lal Mahal towards Singhgarh was a contingent of 10,000 men. It was therefore a very difficult task to raid Shaista Khan in his palace. Shivaji handpicked 400 of his trusted followers for this raid. On the night of 5 April 1663 which was the sixth day of Ramzan, the month of fasting, Shivaji choose to strike. Shivaji with his band gained entrance into the camp, Marathas pretended to be a marriage procession with Shivaji acting as the bride groom. Hacking his way Shivaji entered Shaista Khan’s bedroom. He stuck the Khan with sword. Shivaji thought he had killed Shaista Khan but in actual fact that the Khan lost only three fingers of his right hand and managed to escape from the room.

15. The raid having been accomplished, Shivaji got his men together and promptly withdrew along the main route. In this raid the Mughals lost 43 killed including one son and one son-in-law of Shaista Khan who himself had been wounded. These losses were negligible but the loss of prestige was tremendous. When Aurangzeb heard of this, he immediately removed Shaista Khan from the Deccan to Bengal and sent Prince Muazzam as the next Mughal Viceroy of the Deccan.

16. While the change of Viceroys was going on at Aurangabad, Shivaji raided Surat, the richest port of the West Coast. Governer of Surat fled from the city into the fort. The plunder of Surat yielded cash and valuables worth over one crore of rupees. The city was ransacked for four days from 6th to 10th January 1664. This was Shivaji’s retaliation against the Mughals for desolating his territory for three years.

**To Agra and Back**

17. Aurangzeb decided to throw the full might of the Mughal Empire against the “mountain rat”. The emperor appointed his ace general, Mirza Raja Jai Singh to put down Shivaji. In January 1665 Shivaji returned to Raigad where he received the news of Jai Singh’s expedition. Shivaji realized that Jai Singh would take some time to reach Deccan. He decided to utilize this time to carry out a naval expedition to Basrur, a rich coastal town and collect tribute. He accordingly embarked with 6000 troops in 3 large and 85 small ships. He moved some 180 miles by sea and appeared before Basrur. The rich merchants of the town gave him a handsome tribute. He then returned to his capital in March 1665.

18. Jai Singh advanced with speed and on 3rd March 1665, he entered Pune. He started sending troops to capture important centers of communication and to plan capture of Shivaji’s forts. The first fort chosen for capture was Purandhar. The siege of Purandhar commenced on 1st April 1665 and by the end of May 1665 the siege lines had come closer to the outer wall of the fort. Realising that further resistance at Purandhar was futile, he sued for terms and sought an interview with Jai Singh. This meeting was arranged and a treaty concluded whereby Shivaji was to surrender 23 of his forts and surrounding area yielding an annual revenue of 4 Lakh huns to the Mughals. 12 forts with an annual revenue of 1 lakh huns were to be retained by Shivaji on condition of service and loyalty to imperial throne.

19. The terms of Purandhar Treaty were confirmed by the emperor. A royal firman was issued to Shivaji and he was given robes of honour. Jai Singh now set out for an invasion of Bijapur and Shivaji agreed to accompany him with a contingent of 9000 men. Shivaji led the advance and the Bijapur forts enroute were either evacuated in terror or they surrendered. It is interesting to note that in this campaign Shivaji fought alongside the Mughals . However. Jai Singh was concered about the loyalty of Shivaji . He there fore, persuaded Shivaji to visit the Emperor at Agra. Although Shivaji agreed to go to Agra, he fully realized the danger he was facing.

20. On his reaching Agra, the Emperor appears to have decided to either kill Shivaji or confine him in a fortress. A large force was placed around Shivajis camp and he was made a prisoner. Shivaji feigned illness and began to send out several huge baskets of sweetmeats for distribution to Brahamins as an act of religious piety. Shivaji and Shambhuji got into two baskets and on 19th August 1665 went out along with several other baskets of sweet-meats.

21. On escaping from Agra, Shivaji first proceeded to Mathura which is in opposite direction. He shaved off his moustaches and beard and smeared ashes on his body. On 12 September he reached Raigad having covered about 1000 miles in 25 days riding approximately 40 miles a day. There was great jubiliation throughout Maharashtra at the miraculous escape of Shivaji. Ballads were composed praising his ingenuity and superhuman qualities. His escape from captivity caused lifelong regret to Aurangzeb.

**Consolidation and Coronation**

22. During the period 1669, Shivaji stayed quietly at Raigad avoiding giving any provocation to the Mughals. This period of peace was essentially a hollow truce. The year 1670 saw the renewal of conflict between the Mughals and the Marathas. Shivaji opened his offensive in January 1670 with great vigour and immediate success. He plundered Mughal territory and attacked several of the forts he had ceded to Aurangzeb by the Treaty of Purandar. One after the other, forts began to fall to the Maratha and in a few months, Shivaji recovered almost all the 23 forts he had ceded to the Mughals . Alarmed by Maratha raids, the Emperor ordered his trusted general Diler Khan, to proceed from Nagpur to Aurangabad.

23. On 3rd October 1670 for the second time Shivaji plundered Surat. Later on he plundered the rich city of Karanja collected cash and gold and returned to Pune with his booty loaded on 4000 bullocks and donkeys. In 1671 Shivaji captured Ahivant. On 24 November 1672 Sulatan Ali Adil Shah of Bijapur also died. Shivaji declared war on Bijapur and recaptured Panhala Fort. In January 1674 while the Marathas were engaged with Bijapuri’s in Panhala region, Diler Khan tried to descend into the Konkan and create a diversion. This attempt was foiled by Shivaji and Diler Khan had to withdraw having lost 1000 Pathans killed.

24. Having defeated both the Mughals and Bijapuris and finding both his enemies peoccupied, one with uprising in the North-West and the other with internal squabbles, Shivaji considered this an opportune moment to coronate himself. Coronation was a necessary formality to give him the legal and formal status of an Independent Sovereign. Shivaji’s coronation took place on 6th June 1674 and was one of the most fabulous events of that time. A magnificent throne of gold and other precious gems and a richly embroidered canopy were made for the occasion. His mother, Jijabai was alive to see her son at the height of his glory. She died a few days after the coronation.

**Karnatak Campaign and After**

25. Shivaji had set his eyes on the rich Karnatak Coast for some time and was waiting for a suitable opportunity to undertake a campaign in that theatre. Mughal camp of Padgaon was plundered in July 1674 and all tents were burnt. The Marathas carried away booty worth one crore rupees as also 200 fine horses. Padgaon raid was followed by other raids into the Deccan plateau. Shivaji also wanted truce with the Mughals so that he could conduct operations on the Kanara Coast. While negotiations were being carried out with the Mughal, Shivaji marched into the Konkan with force of 30,000. Shivaji’s navy joined in the siege and intercepted Portgugese ships carrying rations, fodder and gunpowder to the besiged garrison. Fort fell to repeated Maratha attacks on 6th May 1675. Shivaji also captured Karwar, Aukola and Shiveshwar and annexed the entire coast except the enclaves held by European traders. A treaty of friendship was signed between Shivaji and Adil Shah of Bijapur whereby Krishna was recognized as the

boundary between the two kingdoms. In December 1676 a treaty of friendship was signed with Mughals.

26. Shivaji was now ready to proceed on his long cherished campaign to the Karnatak Coast in the South. This was to be his longest and greatest campaign. To find finance for this campaign, Shivaji chose to seek the assistance of Abdul Hasan Qutb Shah of Golconda. Bijapuri Karnatak was to be conquered in the name of the Sultan of Golconda and for his efforts Shivaji was to get all the spoils of war and the territory in the uplands of Mysore. Shivaji headed for the Karnatak via Kurnool, Maratha invasion was very different. No temples were being desecrated, nor any idols were being broken. Instead the King was halting en route at important places of pilgrimage like Srisailam and Tirupati to worship and distribute alms to the Brahmans.

27. Jinji surrendered to Shivaji without a fight. Shivaji next proceeded to Vellore. After fourteen months of heroic defence the garrison ultimately surrendered to the Marathas on 22 July 1678. From Vellore, Shivaji proceeded further South to deal with Sher Khan Lodi. Sher Khan fled first to the fort of Tiruvadi and from there escaped to another fort at Bonagiratam. The Marathas now systematically started capturing one fort after another and ultimately on 5th July 1677 Sher Khan made terms with Shivaji giving up all his territory. In August 1677 Shivaji captured the entire Bijapuri territory North of Cauvery covering an area of 10000 square miles. Shivaji was back in Panhala by February 1678. He rested for some time at Panhala and in June he reached his captal, Rajgad. As 1679 drew to a close, Shivaji’s men were also drawn into a naval battle, first with the English then with the Siddi Janjira.

28. The events of 1679 had showed that Shivaji had become invincible on land. Even the greatest military land power on the sub-continent had to yield before him. His superiority at sea was not so complete. Although his forces could defy the English and force them to give up their aggressive posture against Khanderi and Underi. Against this backdrop of events of 1679 was ushered 1680. And this was the year in which the Chhatrapati’s health began to falter. Worn out with constant campaigning of over thirty years, Shivaji’s health deteriorated. On 23 March 1680 he fell seriously ill at Raigad, suffering from fever and blood dysentery. Twelve days later at noon on Sunday the 4th April 1680, he breathed his last. Thus ended the scintillating career of this great Indian, whose memory was to guide and inspire his countrymen for centuries to come.

**Shivaji as Military Leader**

29 The achievements of the neglected son of the exiled jagirdar of Pune and his rise culminating in his becoming of Chattrapati is fascinating. A study of his life clearly brings out that he was by all standards, a great and unique figure of Indian history. There have been few insurgent leaders in the history of mankind who can match his genius as a guerilla captain.

30. Few military leaders have led their armies by their personal example to the same extent as Shivaji. He enforced strict discipline and set a personal example before his men. Unlike the Mughal and other armies of that time, he did not permit woman or ostentatious equipage to accompany his army in any campaign. He himself set the pace in this regard. An English visitor to his camp was struck by his austere living and has left a record of it. He noted that there were only two tents in the camps one of the King and the other of his Minister. An army unencumbered with heavy baggage obviously achieves greater mobility and this was a major factor contributing to Shivaji’s success.

31. Another factor that helped Shivaji to maintain discipline in his army was the system of regular payment to soldiers which was rigidly enforced by him. Their pay was not allowed to fall in arrears as was the practice in other contemporary armies. No soldier, irrespective of his rank was allowed to retain any booty. It had to be surrendered to the State. Discipline was also enforced through an efficient organization of the army with clearly defined chains of command and making promotions on the basis of merit. The system of granting hereditary military rank was discontinued.

32. Shivaji realised the importance of the infantry in battle. This was remarkable because in all contemporary armies of that time infantry was no more than a “ragtag force” which used to be ill-trained and ill-equipped. They used to be like pioneers or militia who carried loads and performed other such duties. The real fighting in battle was the prerogative of the cavalry .Shivaji was quick to perceive the fallacy of such an approach particularly for fighting on the hills. He trained his Mavle hillmen into an efficient and disciplined infantry. The infantry was organized in sections of ten , each under a Naik, a Havildar commanded five sections and a Jumledar had three Havildars under him. There was one Hazari in charge of ten Jumledars and a Panch Hazari commanded 5,000 troops. The cavalry was also similarly organized with a little variation. There were two types of soldiery in the cavalry - the Bagirs who were provided horses and equipment by the state and Shiledars who brought their own horses and saddlery.The latter received higher rates of pay. A Havildar commanded 25 horses, a Jumledar five Havildar, a Subedar ten Jumledars and a Punch Hazari had ten Subedars under him. Although Shivaji’s army also had an artillery arm, it was not so well organized. The technique of manufacturing ordnance pieces had not been developed and he depended more upon captured guns or getting guns from European traders for equipping his army.

33. Shivaji had a keen eye for ground and he fully appreciated military realities. He knew that he could not match the well equipped and large Mughal armies in the open. He, therefore generally avoided fighting pitched battles with his enemies on the plains. He realized that his forte lay in the mobility of his army, in achieving surprise and in fighting in mountainous terrain. He fully exploited these aspects in all his campaigns . Travelling light and hardened by continuous training and fighting, his army could advance with lightning speed. His sudden attack of Baji Ghorpade at Mudhol or his fleeting raids to Surat and other parts of Mughal possessions were good examples of the mobility achieved by his army. He fully realized the value of surprise in battle . He repeatedly succeeded in surprising his enemy. His legendary assault of Sinhgah across the Donagiri precipice or the Maratha attack on the camp of the Mughal Viceroy at Padgaon showed how Shivaji could achieve success by surprising his enemy. The annihilation of Afzal Khan’s army in the narrow Koyna Valley and the defeat of Kartalab Khan in the Ampa Valley was achieved not only through surprise but by the masterly use of ground . It may also be recalled that he was always prepared to stake his personal safety on the battlefield and repeatedly faced grave risks. His decision to have a personal encounter with Afzal Khan or to personally raid the living quarters of the Mughal Viceroy , Shaista Khan show the extent to which he was prepared to go.

34. Like all great generals, Shivaji always exploited success. Victory in battle was followed up by a vigorous pursuit. Thus after the battle of Pratapgad where he defeated Afzal Khan’s forces, he launched a pursuit to Bijapur territory capturing Kolhapur. Similarly at Tiruvadi his pursuit turned the retreat of Sher Khan Lodi into a rout.

35. Shivaji’s strategy was based on securing a chain of forts in the hills to provide security for his operations. From the firm base provided by these forts, he used to sally out for raids into enemy territory. When operating against his enemy he generally adopted the strategy of indirect approach. Instead of going directly for enemy’s main strength, he preferred to attack where the enemy was weak. In 1671 he forced Diler khan and Badadur Khan to withdraw from Pune on account of the success of his army against the Mughals in the North. Similarly in 1679, be relieved the pressure on Bijapur and forced Diler Khan to lift the siege by plundering Jalna and other Mughal possessions.

36. While dealing with enemy forts, Shivaji preferred not to lay long sieges. The sieges of Phonda in 1675 or of Vellore in 1677 lasting fourteen months were exceptions . He normally captured forts through surprise night attacks as at Singhgarh in 1670 or Panhala in 1673. Another method often employed by him was to secure forts through bribing the enemy fort commanders. This process started with his securing of Torna in 1646 and continued almost throughout his career.

37. There is no doubt that Shivaji was a great military leader as he relied primarily on hit and run tactics, his fame to military greatness rests essentially in his success as a guerilla leader. His exemplary exploits as a guerilla captain have remained unique in the history of mankind.

**MAHARANA PRATAP**

**Introduction**

**1. Maharana Pratap was born on May 9th 1540 in Kumbhalgarh, Rajasthan. His father was Maharana Udai Singh II and his mother was Rani Jeevant Kanwar. Maharana Udai Singh II ruled the kingdom of Mewar, with his capital at Chittor. Maharana Pratap was the eldest of twenty-five sons and hence given the title of Crown Prince. He was destined to be the 54th ruler of Mewar, in the line of the Sisodiya Rajputs.**

**Ascending the Throne**

**2. In 1567, when Crown Prince Pratap Singh was only 27, Chittor was surrounded by the Mughal forces of Emperor Akbar. Maharana Udai Singh II decided to leave Chittor and move his family to Gogunda, rather than capitulate to the Mughals. The young Pratap Singh wanted to stay back and fight the Mughals but the elders intervened and convinced him to leave Chittor, oblivious of the fact that this move from Chittor was going to create history for all times to come.**

**3. In Gogunda, Maharana Udai Singh II and his nobles set up a temporary government of the kindom of Mewar. In 1572, the Maharana passed away, leaving the way for Crown Prince Pratap Singh to become the Maharana. However, in his later years, the late Maharana Udai Singh II had fallen under the influence of his favorite queen, Rani Bhatiyani, and had willed that her son Jagmal should ascend to the throne. Pratap Singh, in deference to his father's wishes, decided to let his half-brother Jagmal become the next king. However, knowing this to be disastrous for Mewar, the late Maharana's nobels, especially the Chundawat Rajputs, forced Jagmal to leave the throne to Pratap Singh. Unlike Bharat, Jagmal did not willingly give up the throne. He swore revenge and left for Ajmer, to join the armies of Akbar, where he was offered a jagir - the town of Jahazpur - in return for his help. Meanwhile, Crown Prince Pratap Singh became Maharana Pratap Singh I, 54th ruler of Mewar - founded in 568 AD by Guhil - in the line of the Sisodiya Rajputs.**

**Blockade of Mewar by Mughals**

**4. The year was 1572. Pratap Singh had just become the Maharana of Mewar and he had not been back in Chittor since 1567. His old fort and his home beckoned to him. The pain of his father's death, and the fact that his father had not been able to see Chittor again, troubled the young Maharana deeply. But he was not the only one troubled at this time. Akbar had control of Chittor but not the kingdom of Mewar. So long as the people of Mewar swore by their Maharana, Akbar could not realize his ambition of being the Jahanpanah of Hindustan. He had sent several emissaries to Mewar to get Maharana Pratap to agree to sign a treaty but the latter was only willing to sign a peace treaty whereby the sovereignty of Mewar would be intact. In the course of the year 1573, Akbar sent six diplomatic missions to Mewar to get Maharana Pratap to agree to the former's suzerainty but Maharana Pratap turned down each one of them. The last of these missions was headed by Raja Man Singh, the brother-in-law of Akbar himself. Maharana Pratap, angered that his fellow Rajput was aligned with someone who had forced the submission of all Rajputs, refused to meet Raja Man Singh. The lines were completely drawn now - Akbar understood that Maharana Pratap would never submit and he would have to use his troops against Mewar.**

**5. With the failure of efforts to negotiate a peace treaty in 1573, Akbar blockaded Mewar from the rest of the world and alienated Mewar's traditional allies, some of whom were Maharana Pratap's own kith and kin. Akbar then tried to turn the people of the all-important Chittor district against their king so they would not help Pratap. He appointed Kunwar Sagar Singh, a younger brother of Pratap, to rule the conquered territory, However, Sagar, regretting his own treachery, soon returned from Chittor, and committed suicide with a dagger in the Mughal Court. Sakta Singh, Pratap's younger brother now with the Mughal army, is said to have fled the Mughal court temporarily and warned his brother of Akbar’s actions.**

**Preparation for the War**

**6. In preparation for the inevitable war with the Mughals, Maharana Pratap altered his administration. He moved his capital to Kumbhalgarh, where he was born. He commanded his subjects to leave for the Aravali mountains and leave behind nothing for the approaching enemy - the war would be fought in a mountain terrain which the Mewar army was used to but not the Mughals'. It is a testament to the young king's respect amongst his subjects that they obeyed him and left for the mountains. The Bhils of the Aravalis were completely behind him. The army of Mewar now raided Mughal trade caravans going from Delhi to Surat, on their way to Europe. A section of his army guarded the all important Haldighati Pass, the only way to get into Udaipur from the North.  
  
7. Maharana Pratap himself undertook several penances, not because his finances forced him to do so, but because he wished to remind himself, and all his subjects, why they were undertaking this pain - to win back their freedom, their right to exist as they wished. He foreswore that he would eat from leaf-plates, would sleep on the floor and would not shave. In his self-inflicted state of penury, the Maharana lived in mud-huts made from mud and bamboo.**

**Battle of Haldighati**

**8. In 1576, the famous battle of Haldighati was fought with 20,000 Rajputs against a Mughal army of 80,000 men commanded by Raja Man Singh. The battle was fierce though indecisive, to the Mughal army's astonishment. Maharana Pratap's army was not defeated but Maharana Pratap was surrounded by Mughal soldiers. It is said that at this point, his estranged brother, Sakta Singh, appeared and saved the Rana's life. Another casualty of this war was Maharana Pratap's famous, and loyal, horse Chetak, who gave up his life trying to save his Maharana.**

**Subsequent Events**

**9. After this war, Akbar tried several times to take over Mewar, but failed each time. Maharana Pratap himself was keeping up his quest for taking Chittor back. However, the relentless attacks of the Mughal army had left his army weaker, and he barely had enough money to keep it going. At this time, one of his ministers, Bhama Shah, came and offered him all this wealth - a sum enabling Maharana Pratap to support an army of 25,000 for 12 years. It is said that before this generous gift from Bhama Shah, Maharana Pratap, anguished at the state of his subjects, was beginning to lose his spirit in fighting Akbar. In one incident that caused him extreme pain, his children's meal - bread made from grass - was stolen by a dog. It is said that this cut into Maharana Pratap's heart deeply. He began to have doubts about his resolute refusal to submit to the Mughals.**

**10. In one of these moments of self doubt - something each and every human being goes through - Maharana Pratap wrote to Akbar demanding "a mitigation of his hardship". Overjoyed at this indication of his valiant foe's submission, Akbar commanded public rejoicing, and showed the letter to a literate Rajput at his Court, Prince Prithiraj. Prithiraj was also a gallant warrior and a longtime admirer of the brave Maharana Pratap Singh. He was astonished and grieved by Maharana Pratap's decision, and told Akbar the note was the forgery of some foe to defame the Mewar king. "I know him well", he explained, "and he would never submit to your terms". He requested and obtained Akbar's permission to send a letter to Pratap, ostensibly to ascertain the fact of his submission, but really with a view to prevent it. The now-famous letter led to Pratap reversing his decision and not submitting to the Mughals, as was his initial but reluctant intention.**

**Freedom of Mewar**

**11. After 1587, Akbar relinquished his obsessive pursuit of Maharana Pratap and took his battles into Punjab and India's Northwest Frontier. Thus for the last ten years of his life, Maharana Pratap ruled in relative peace and eventually freed most of Mewar, including Udaipur and Kumbhalgarh, but not Chittor. He swore his successor, Crown Prince Amar Singh to eternal conflict against the foes of his country's independence. Maharana Pratap was never able to win back Chittor but he never gave up fighting to win**

**it back.**

**Maharana’s Last Days.**

**12. In January 1597, Maharana Pratap Singh I, Mewar's greatest hero, was seriously injured in a hunting accident. He left his body at Chavand, aged 56, on January 29, 1597. He died fighting for his nation, for his people, and most importantly for his honour.**

**Maharana’s Other Side**

**13. Maharana Pratap displayed great love for Arts and became a patron of the Arts. During his reign Padmavat Charita and the poems of Dursa Ahada were written. Palaces at Ubheshwar, Kamal Nath and Chavand bear testimony to his love of architecture. These buildings, built in the dense hilly forest have walls adorned with military-style architecture**

**AKBAR THE GREAT**

**Introduction**

1. Jalaluddin Muhammad Akbar also known as Akbar [the Great](http://en.wikipedia.org/wiki/The_Great) (Akbar-e-Azam) ([October 15](http://en.wikipedia.org/wiki/October_15)th , [1542](http://en.wikipedia.org/wiki/1542)-[October 27](http://en.wikipedia.org/wiki/October_27)th , [1605](http://en.wikipedia.org/wiki/1605)) was the son of [Humayun](http://en.wikipedia.org/wiki/Humayun) whom he succeeded to become ruler of the [Mughal Empire](http://en.wikipedia.org/wiki/Mughal_Empire) from 1556 till 1605. Akbar was born at Umarkot in Sind. He was brought up in the rugged country of Afghanistan rather than in the splendor of the Persian court by his uncle Askari and his wife. Humayun had been drive into exile following the decisive battle by the Afghan leader Sher Saha.

**Early Years**

2. Akbar was born at [Umarkot](http://en.wikipedia.org/wiki/Umarkot) in [Sind](http://en.wikipedia.org/wiki/Sind) to the Mughal Emperor [Humayun](http://en.wikipedia.org/wiki/Humayun) and his first wife, [Hamida Banu Begum](http://en.wikipedia.org/w/index.php?title=Hamida_Banu_Begum&action=edit) on [October 15](http://en.wikipedia.org/wiki/October_15)th, [1542](http://en.wikipedia.org/wiki/1542). In [1540](http://en.wikipedia.org/wiki/1540), Humayun had been driven into exile following decisive battles by the [Afghan](http://en.wikipedia.org/wiki/Afghan_people) leader [Sher Shah](http://en.wikipedia.org/wiki/Sher_Shah). Akbar did not go to Persia with his parents, and was raised for a time instead by his uncle Askari and his wife in the rugged country of [Afghanistan](http://en.wikipedia.org/wiki/Afghanistan) rather than in the splendor of the [Persian](http://en.wikipedia.org/wiki/Persian) court. He spent his youth learning to hunt, run and fight, but he never learned to read or write, the sole exception in Babur's line. Nonetheless, Akbar matured into a well-informed ruler, with refined tastes in the arts, architecture and music, a love for literature, and a breadth of vision that tolerated other opinions.

3. Following the chaos over the succession of Islam Shah (Sher Shah's son), Humayun reconquered Delhi in [1555](http://en.wikipedia.org/wiki/1555). Only a few months later, Humayun died from an accident. Akbar succeeded his father on February 14th, [1556](http://en.wikipedia.org/wiki/1556) and was proclaimed "Shahanshah" ([Persian](http://en.wikipedia.org/wiki/Persian) for "King of Kings").

**Clash with Hemu**

4. Early into Akbar's career, he decided that he should eliminate the threat of [Sher Shah](http://en.wikipedia.org/wiki/Sher_Shah)'s dynasty, and decided to lead an army against the strongest of the three, [Sikandar Shah Suri](http://en.wikipedia.org/wiki/Sikandar_Shah_Suri), in the [Punjab](http://en.wikipedia.org/wiki/Punjab_region). He left the city of Delhi under the regency of [Tardi Beg Khan](http://en.wikipedia.org/wiki/Tardi_Beg_Khan). [Sikandar Shah Suri](http://en.wikipedia.org/wiki/Sikandar_Shah_Suri) presented no major concern for Akbar, and withdrew from territory as Akbar approached; however, back in Delhi [Hemu](http://en.wikipedia.org/wiki/Hemu), a low-[caste](http://en.wikipedia.org/wiki/Caste) Hindu warrior, succeeded in launching a surprise attack on the unprepared Tardi Beg Khan and appointed himself ruler.

5. Word of the capitulation of Delhi spread quickly to the new Mughal ruler, and he was advised to withdraw to [Kabul](http://en.wikipedia.org/wiki/Kabul), which was relatively secure. However, Bairam Khan urged Akbar to fight the invaders and reclaim the capital. On the march forward, he was joined by Tardi Beg and his retreating troops, who also urged him to retreat to Kabul, but Akbar refused; later, Bairam Khan had the former regent executed for cowardice.

6. On [November 5](http://en.wikipedia.org/wiki/November_5), 1556 Akbar's Mughal army defeated the numerically superior forces of General [Hemu](http://en.wikipedia.org/wiki/Hemu) at the [Second Battle of Panipat](http://en.wikipedia.org/wiki/Second_Battle_of_Panipat), fifty miles north of [Delhi](http://en.wikipedia.org/wiki/Delhi). The victory also left Akbar with over 1,500 [War Elephants](http://en.wikipedia.org/wiki/War_Elephant) which he promptly used to re-engage Sikhander Shah at the siege of Mankot. Sikhander surrendered and was as such spared from death, and lived the last remaining two years of his life on a large estate granted to him by Akbar. In [1557](http://en.wikipedia.org/wiki/1557) the only other threat to Akbars rule, Adil Shah, brother of Sikhander, died during a battle in [Bengal](http://en.wikipedia.org/wiki/Bengal). Thus, by the time Akbar was 15 his rule over Hindustan was secured.

**Bairam Khan**

7. Akbar was only 13 years old when he became emperor, and so his general ruled on his behalf till he came of age. The regency belonged to [Bairam Khan](http://en.wikipedia.org/wiki/Bairam_Khan), a [Shia](http://en.wikipedia.org/wiki/Shia) [Turkoman](http://en.wikipedia.org/wiki/Turkoman) noble and who successfully dealt with pretenders to the throne and improved the discipline of the Mughal armies. He ensured power was centralised and was able to expand the empires boundries with orders from the capital. These moves helped to consolidate Mughal power in the newly recovered empire.

8. However, during Bairam Khan's Hajj journey, he was encoutered by an Afghan whose father had been killed five years earlier in a battle led by Bairam. The Afgan saw a chance to reap vengeance, and promptly stabbed Bairam, who died on [January 31](http://en.wikipedia.org/wiki/January_31)st, [1561](http://en.wikipedia.org/wiki/1561).

**Restoration**

9. While previous Muslim rulers, in particular the Mughal founder [Babur](http://en.wikipedia.org/wiki/Babur), allowed freedom of worship for Hindus and other religious groups, Akbar engaged in a policy of actively encouraging members of the varying religious groups to enter his government. In one instance, he persuaded the [Kacchwaha](http://en.wikipedia.org/wiki/Kacchwaha) Rajput rulers of [Amber](http://en.wikipedia.org/wiki/Amber)(modern day [Jaipur](http://en.wikipedia.org/wiki/Jaipur)) to a matrimonial alliance: The King of Amber's daughter, Hira Kunwari, became Akbar's queen. She took the name [Mariam-uz-Zamani](http://en.wikipedia.org/wiki/Mariam-uz-Zamani) was the mother of Prince Salim, who later became the Mughal emperor [Jahangir](http://en.wikipedia.org/wiki/Jahangir). Further, while other Muslim rulers had married Hindu wives, he was the first one to allow to fully practice their religion, not just without hinderance but with everything they needed in that regard. During his reign more Hindus than in any other Mughal ruler, or in any previous Indian administration, were employed in the [Civil Service](http://en.wikipedia.org/wiki/Civil_Service).

10. The other Rajput kingdoms also married daughters to Akbar, until only two Rajput clans remained against him, the [Sisodiyas](http://en.wikipedia.org/wiki/Sisodiya) of [Mewar](http://en.wikipedia.org/wiki/Mewar) and [Hadas](http://en.wikipedia.org/wiki/Hada) ([Chauhans](http://en.wikipedia.org/wiki/Chauhan)) of [Ranthambore](http://en.wikipedia.org/wiki/Ranthambore). Entering into an alliance with these groups helped to secure Akbars control, as for the next 100 years Rajput soldiers served on behalf of the Mughal empire.

He went on to expand the Mughal empire to include [Malwa](http://en.wikipedia.org/wiki/Malwa) (1562), [Gujarat](http://en.wikipedia.org/wiki/Gujarat) (1572), [Bengal](http://en.wikipedia.org/wiki/Bengal) (1574), [Kabul](http://en.wikipedia.org/wiki/Kabul) (1581), [Kashmir](http://en.wikipedia.org/wiki/Kashmir) (1586), and [Kandesh](http://en.wikipedia.org/wiki/Kandesh) (1601), among others. Akbar installed a governor over each of the conquered provinces, under his authority.

11. Akbar did not want to have his court tied too closely to the city of [Delhi](http://en.wikipedia.org/wiki/Delhi). He ordered the court move to [Fatehpur Sikri](http://en.wikipedia.org/wiki/Fatehpur_Sikri), near [Agra](http://en.wikipedia.org/wiki/Agra), but when this site proved untenable, he set up a roaming camp that let him keep a close eye on what was happening throughout the empire. He tried to develop and encourage commerce. He had the land accurately surveyed for the purpose of correctly evaluating taxation; and he gave strict commands to prevent extortion on the part of the [tax](http://en.wikipedia.org/wiki/Tax) gatherers.

**Personality of Akbar**

12. Akbar is said to have been a benevolent and wise ruler, a man of new ideas, and a sound judge of character. As a ruler, he was able to win the love and reverence of his subjects.

13. According to [Abul Fazal](http://en.wikipedia.org/wiki/Abu%27l-Fazl_ibn_Mubarak), his chief adviser, Akbar had a commanding personality. He was fearless in the chase as well as in the field of battle, and, "like [Alexander](http://en.wikipedia.org/wiki/Alexander) of Macedon, was always ready to risk his life, regardless of political consequences". He often plunged his horse into the full-flooded river during the rainy seasons and safely crossed over to the other side. Though a mighty conqueror, he did not usually indulge in cruelty. He is said to be affectionate towards his relatives. He pardoned his brother Hakim, who was a repented rebel. However, on some rare occasions, he dealt cruelly with the offenders, as was shown by his behavior towards his maternal uncle, Muazzam, and his foster-brother, Adam Khan. He is said to have been extremely moderate in his diet. According to records, he was fond of fruits and had little liking for meat, which he ceased to take altogether in his later years.

**Views on Religion**

14. At the time of Akbar's rule, the Mughal Empire included both [Hindus](http://en.wikipedia.org/wiki/Hindu) and [Muslims](http://en.wikipedia.org/wiki/Muslim). Profound differences separate the Islamic and Hindu faith. When Akbar commenced his rule, a majority of the subjects in the Mughal Empire were Hindus. However, the rulers of the empire were almost exclusively Muslim. In this highly polarized society, Akbar fostered tolerance for all religions. He not only appointed Hindus to high posts, but also tried to remove all distinctions between the Muslims and non-Muslims. He abolished the pilgrim tax in the eighth year and the [jizya](http://en.wikipedia.org/wiki/Jizya) in the ninth year of his reign, and inaugurated a policy of universal toleration. He also enjoyed a good relationship with the [Catholic Church](http://en.wikipedia.org/wiki/Catholic_Church), who routinely sent [Jesuit](http://en.wikipedia.org/wiki/Jesuit) priests to debate.

15. Akbar built a building called Ibadat Khana (House of Worship), where he encouraged religious debate. Akbar encouraged Hindus, [Catholics](http://en.wikipedia.org/wiki/Catholic) and even [atheists](http://en.wikipedia.org/wiki/Carvaka) to participate. He tried to reconcile the differences of both religions by creating a new faith called the [Din-i-Ilahi](http://en.wikipedia.org/wiki/Din-i-Ilahi) ("Faith of the Divine"), which incorporated both versions of Islamic Sufism and 'bhakti' or devotional cults of Hinduism. Even some elements of [Christianity](http://en.wikipedia.org/wiki/Christianity) - like crosses, [Zorosastrianism](http://en.wikipedia.org/w/index.php?title=Zorosastrianism&action=edit)- fire worship and [Jainism](http://en.wikipedia.org/wiki/Jainism) were amalgamated into the new religion.

**Patron of the Art and Literature**

16. Although Akbar was [illiterate](http://en.wikipedia.org/wiki/Illiteracy), he had a fine literary taste. He took interest in [philosophy](http://en.wikipedia.org/wiki/Philosophy), [theology](http://en.wikipedia.org/wiki/Theology), history, and politics. He maintained a library full of books on various subjects, and was fond of the society of scholars, poets and philosophers, who read books to him aloud, and thus enabled him to be conversant with [Sufi](http://en.wikipedia.org/wiki/Sufi), Christian, [Zoroastrian](http://en.wikipedia.org/wiki/Zoroastrian), Hindu and Jain literature. He used to invite scholars from different [religions](http://en.wikipedia.org/wiki/Religion) for discussions with him.

17. Akbar also possessed a fair taste of art, architecture and mechanical works. Many pieces, including the magnificent [Hamzanama](http://en.wikipedia.org/wiki/Hamzanama), was produced under Akbar. Akbar is also credited with many inventions and improvements in the manufacture of [matchlocks](http://en.wikipedia.org/wiki/Matchlock). He erected a vast administrative machinery on a comprehensive plan.

**Navratnas**

18 As with many Indian rulers Akbar's court had [*Navaratnas*](http://en.wikipedia.org/wiki/Navaratnas) ("Nine Jewels"), a term denoting the group of nine extraordinary people. Akbar's Navratnas were:

* [Abul-Fazel](http://en.wikipedia.org/wiki/Abu%27l-Fazl_ibn_Mubarak) - Akbars's chief advisor and author of [Akbarnama](http://en.wikipedia.org/wiki/Akbarnama), Akbar's biography

[Faizi](http://en.wikipedia.org/wiki/Faizi)

* [Mian Tansen](http://en.wikipedia.org/wiki/Tansen) - known for his voice and music
* [Birbal](http://en.wikipedia.org/wiki/Birbal) - known for great wit
* [Raja Todar Mal](http://en.wikipedia.org/wiki/Raja_Todar_Mal)
* [Raja Man Singh](http://en.wikipedia.org/wiki/Raja_Man_Singh)
* [Abdul Rahim Khan-I-Khana](http://en.wikipedia.org/wiki/Abdul_Rahim_Khan-I-Khana)
* [Fakir Aziao-Din](http://en.wikipedia.org/wiki/Fakir_Aziao-Din)
* [Mullah Do Piaza](http://en.wikipedia.org/wiki/Mullah_Do_Piaza)

**Final Years**

19. The last few years of Akbar's reign were troubled by the misconduct of his sons. Two of them died in their youth, the victims of [intemperance](http://en.wikipedia.org/wiki/Alcoholism). The third, Salim, later known as [Emperor](http://en.wikipedia.org/wiki/Emperor) [Jahangir](http://en.wikipedia.org/wiki/Jahangir), was frequently in rebellion against his father. [Asirgarh](http://en.wikipedia.org/wiki/Asirgarh), a fort in the [Deccan](http://en.wikipedia.org/wiki/Deccan), proved to be the last conquest of Akbar, taken in [1599](http://en.wikipedia.org/wiki/1599) as he proceeded north to face his son's rebellion. Reportedly, Akbar keenly felt these calamities, and they may even have affected his health and hastened his death, which occurred in Agra. His body was interned in a magnificent mausoleum at [Sikandra](http://en.wikipedia.org/wiki/Sikandra), near Agra.

**SECTION-2**

**FAMOUS BATTLES /WARS OF INDIA**

**INDO PAK WAR 1971**

**EASTERN SECTOR**

**Introduction**

1. 1971 war was thrust upon us by an arrogant and aggressive neighbour who bullied, terrorised, and bled it’s own constituent partner in the East to the extent that ten million refugees fled to India resulting in a situation that was unsustainable to India politically, economically and militarily .

2. When repeated attempts to find a reasonable solution with Pakistan failed, India sought the assistance of the international community to help Pakistan to come to it’s senses. Unfortunately the world was indifferent and Pakistan’s brutal atrocities against it’s own citizen continued unchecked . Instead, it was able to drum up support from China and the USA. The rest of the World looked the other way stating that this was an internal matter of Pakistan.

3. For India however, it was an outrage against humanity and also a matter of it’s own survival. The influx of 10 million refugees with the attendant problems of housing, food, water, medical care, hygiene and sanitation imposed an unsustainable burden on her people. It also had-dangerous security and law and order implications.

4. India stood alone in it’s predicament against the studied indifference of an essentially partisan world and the malevolent machinations of an insolent and high-handed neighbour. Immense pressure by an agitated public began to build-up demanding immediate action against Pakistan-but the time was not ripe. There were factors against early intervention-political, military and climatic that demanded a self- imposed delay.

5. A proper appreciation was carried out that took into account the state of arms and ammunition, equipment, training, commerce and industry, road and rail communication, world opinion, climate, weather, morale, enemy options and likely course of action. All this indicated a particular time-table for war that would be favourable to India. Indian leaders held their hand and adhered to this time-frame and used the intervening period to gear up for the expected Pakistani offensive. When it did come on the 3rd of Dec 1971, the nation was well prepared.

**Origin of the Conflict**

6. Ever since the creation of Pakistan, political power had always been wielded by West Pakistan and most of the resources of the entire country had been used for the benefit of West Pakistan.

7. In the elections held on 07 Dec 1970, the Awami Leage led by Sheikh Mujibur –Rahman won against Bhutto’s People’s Party and it thus emerged as the majority party. Bhutto had no intention to see political power slipping from his hands and threatened to plunge Pakistan into a civil war if Mujib was allowed to form the government. Yahya Khan the President of Pakistan also did not relish the idea of power being transferred to East Pakistan, and readily fell in with Bhutto’s wishes and postponed the Assembly session. When this happened, East Pakistanis who had all along been treated as inferior citizens of the State felt cheated.

8. The infuriated Bengalis rallied round Mujib and the functioning of the government in the Eastern province came to a halt. All government and semi-government offices, central and provincial, were closed, students and agitated crowds took the law into their own hands and indulged in open plunder of non-Bengali property and killing of non-Bengalis.

9. This in fact was an outburst of the simmering discontent that prevailed in the Eastern Wing of Pakistan. Except for religion, there was nothing common between the two wings. The West had exploited the Eastern wing’s economic resources for the benefit of the Western wing. The West took 70% of foreign aid the country received and 70% of it’s imports, and monopolized 85% and 90% of all posts in the bureaucracy and the army respectively. No attention was paid to protecting and improving living conditions of disaster prone East Pakistan.

10. By 03 Mar 1971, Mujib’s writ ran wide in East Pakistan. Curfew had been imposed in Dacca on 02 Mar 1971. Troops moved into the city and resorted to firing, causing casualities. Mujib at a big rally asked the army to go back to barracks. Lt Gen Sahabzada Yakub Khan the Governor General and Marshal Law Administrator, withdrew the troops. This was hailed as a victory for Mujib. At a huge rally Mujib made his four demands. These were:-

(a) Withdrawal of martial law.

(b) Return of troops to barracks.

(c) Enquiry into army killings.

(d) Transfer of power to duly elected representatives of the people.

11. It seemed that Mujib and his associates had already become the rulers of East Pakistan. Pakistan however did not take it lying down. Yakub Khan was recalled and replaced by Lt Gen Tikka Khan who was later to become notorious as the “Butcher of Bangla Desh”.

12. Yahya Khan did not accept Mujib’s four demands, and the civil disobedience movement had turned the situation out of control. Negotiations between Yahya Khan and Mujib dragged on but led nowhere. It appeared that these were delaying tactics to permit the induction of additional troops for the final crackdown.

13. Negotiations between Yahya Khan and Mujib dragged on, but led nowhere. It appeared that these were delaying tactics to permit the induction of additional troops for the final crack-down.

14. On 25 March Tikka Khan launched `Operation Blitz’ against the resistance. Tikka Khan did not hesitate to use artillery and machine guns against unarmed civilians Operation blitz resulted in a mass exodus of terrified civilians pouring into India which finally totalled to more than 10 million refugees that became India’s responsibility..

15. Five East Pakistan Rifle (EPR) battalions revolted and they organized the Mujahids, the Ansars, the police and ex-sevicemen to resist West Pakistan army rule. Overall coordination however was lacking. EPR detachments concentrated on attacking Pakistani border outposts and surrounding isolated garrisons. Tikka Khan got two more divisions flown in via Sri lanka.

**The Indian Response**

16. The exodus of terrified refugees to India however continued unabated. The burden of refugee relief was estimated at about half of India’s defence budget. Besides this intolerable economic burden, it created grave security problems. These consequences-economic, political, and military were unsustainable for India.

17. Boarder incidents multiplied and Pakistani troops made forays into Indian territory against Mukti Bahini forces who had their bases in India. As these clashes grew in number and intensity, our boarder posts had to be reinforced by the army. This brought Pakistani and Indian Army units in direct confrontation with each other. By end Oct 1971 these boarder clashes became more violent. Both sides strengthened their positions on the borders in the East.

18. India decided to call upon the world powers to persuade Pakistan to come to terms with Mujib and install the legitimate government in Dacca so that the refugees could go back. The USA however maintained that the issue was an internal matter of Pakistan & instead counseled restraint. President Yahya Khan became more arrogant & declared “War with India is very near, and in case of war, Pakistan will not be alone”. He was banking on support from the USA, China and the Muslim Middle-East countries. India signed a treaty of Peace, Friendship and Cooperation with the USSR in August 1971.

19. On 23 Oct 1971, Prime Minister Indira Gandhi in a last minute attempt to avert war proceeded to France, West Gemany, Belgium, the UK, the USA and Australia. She pointed out to them the genocide being carried out by Pakistan in it’s Eastern constituent, the unbearable burden that the refugees had imposed on India and urged them to advise President Yahya Khan to settle with Mujib. This they could not, or would not do. Meanwhile pressure by the opposition, the public and the press was building up for immediate military action against Pakistan.

**Reservation by the Army Chief**

20. Gen Manekshaw has his own reservations about early action. He was against half-baked, inconclusive involvement and had the moral courage to withstand pressures that went against his convictions. His reasons were :-

(a) A reorientation of operation plans needed to be carried out along with necessary administrative infrastructure and backing.

(b) The quantum of force needed for this operation would take time to collect and by the time this was done, the monsoon would be imminent and that left an impossibly tight schedule for the operations.

(c) There was a shortage of reserves of armoured and specialized vehicles and of bridging equipment.

(d) Climate and weather imposed their own restrictions. Adequate time was not available to complete operations before onset of the monsoons. It was desirable to time our operations in such a manner that China would not be able to help Pakistan even if wanted to. This was only possible after the snow had set in and the passes in the Himalayan border regions would then be closed.

21. General Manekshaw felt that December would be the best for launching of an offensive by either country.

**Options Open to India**

22. By March 71 it had become apparent that war with Pakistan was a distinct possibility. The first major consideration was choosing the time of the offensive-should such a choice be available. One choice was to launch an offensive straight away and relieve the misery of million of East Pakistanis, or to launch the offensive after the monsoon. The former option had the advantage of putting an end to the suffering of the citizens of East Pakistan-but the big disadvantage was that we might be caught by the monsoons and get caught and bogged down in the riverine delta region of East Pakistan without being able to achieve our objectives. Also, in summer, the mountain passes leading from Tibet into India were open and that would permit Chinese intervention. It would also permit easy infiltration from POK into the higher reaches of Kashmir.

23. Gen Manekshaw felt that the Indian army was not quite ready and that there were much better chances of success if we could wait till December both from the point of view of better preparedness and also because speedier operations were possible in December well after the monsoons.

24. Other than the consideration of time , the following options were open to India :-

(a) To attack on both fronts simultaneously.

(b) To carry out a holding attack in the West and to attack in the East.

(c) To encourage and assist the Mukti Bahini in East Bengal in their guerilla warfare against West Pakistan, thus slowly drawing more and more Pakistani troops to that region, and then to hold in the East and carry out the main offensive in the West.

25. The aim of the government was to create conditions by political pressure and persuasion if possible for the installation of the legitimate government in East Pakistan and for the 10 million refugees to return home. Considering the above it was therefore decided to hold in the West and to carry out the main offensive in the East.

**The Mukti Bahini**

26. By the end of Apr 1971, most of the revolting Bengali troops had been flushed out into India. For all practical purpose the insurgency that started on 26 Mar had virtually died and something was needed to be done to bring it back to life again.

27. **Causes of Failure of the Insurgency**. Although the rebellion and consequent insurgency by the East Pakistani military elements of the Pakistani army started well, the revolt did not achieve results. The failure of the insurgency could be attributed to the following causes :-

(a) The revolt was not properly planned. There was total lack of coordination in the rebel’s operations.

(b) The intensity of Operation Blitz demoralized the Mukti Bahini.

(c) The rebels instead of going in for guerilla warfare, chose to fight pitched battles. In consequence they suffered heavy casualties.

(d) Operations were conducted by comparatively junior officers who failed to plan systematically for long term results.

(e) Shortage of junior leaders especially in JCO and NCO ranks.

(f) Failure of the organizers to draw up and implement an integrated plan laying down aims, objectives and proper priorities.

(g) No effort was made to establish a countrywide and regional system of command and control by nominating leaders and defining areas of responsibility.

(h) No link had been established between the military elements and clandestine militant organizations raised by various political parties during the period of political uncertainty. As a result the revolt lacked a strong political base. It had no organized infrastructure to sustain a prolonged insurgency.

28. **Organising the Mukti Bahini**. Two types of support were thought of at this stage by the Indian Government:-

(a) A limited supply of arms together with facilities for training in guerilla warfare.

(b) **Diplomatic Support**. Although the Indian Government had not yet recognized the provisional government of Bangladesh, this government was functioning from Mujib Nagar near Calcutta.

29. On 14 Apr, the provisional government of Bangladesh appointed Col Osmani Commander-in-Chief of it’s armed forces. On 30 Apr the Indian Army was asked to take over the guidance of all aspects of guerilla warfare for the Mukti Bahini.

30. **Preparation for War.** Important issues that were attended to by the Army Chief in preparation for an Offensive by Pakistan:-

(a) Reserve holdings of stockpiles of equipment and ammunition.

(b) Making units and formations fit for war.

(c) Rationalisation of Equipment.

(d) Rationalisation of location of ammunition and equipment.

(e) Critical shortages in unit holdings.

(f) Unit turnovers.

(g) Manpower hortage.

(h) Leave.

(j) Courses.

(k) Command of Units.

(l) TA Units.

(m) Road communication.

(n) Communication facilities.

(o) Telegraph.

(p) Mobilisation Schemes.

(q) Movement of strike corps.

31. **Operations in Support of the Mukti Bahini.** In view of the training being given to the Mukti Bahini and Indian support to Bangladeshi guerillas, Niazi strength- ened his border defences at the expense of his depth areas and his reserves.

32. Niazi apparently did not anticipate a major attack from India and felt that Indian efforts would be confined to capturing a large chunk of territory adjacent to it’s own base for establishing a Bangladesh government. Niazi therefore surrendered depth for strength of forward defence. He tried to seal the border by establishing a large number of BOP. Troops meant for depth defences of Dacca, and reserves were strung out on border posts. This was a fatal mistake made by him but eminently suitable to our plans.

33. Mukti Bahini activities against these border outpost increased and Niazi reacted to them violently. He kept telling his troops that not an inch of territory would be allowed to be lost. Gradually the whole border became alive against the nibbling attacks by the Mukti Bahini. By the middle of November Pakistani troops were provoked to such an extent that they began crossing into India.

34. The Mukti Bahini operated inside Pakistan territory supported by Indian artillery deployed on our side of the border. The biggest action was fought at Bayra in the Jessore Sector North East of Calcutta. Indian troops pursued Pakistani intruders across the border. A fierce battle took place near the village of Garibpur about 5 Km inside Pakistan territory in which Pakistan lost 13 Chaffee tanks and three saber-jets against Indian troops loss of 6 tanks.

35. Crossing over of Pakistani troops into India gave licence to Indian troops to likewise cross over into East Pakistan. Pakistan BOPs and strong points were captured all along the border. Whenever the Indian troops attacked fortified positions the Pakistani troops fought back. It was increasingly realized that for speedy victory, by-passing of fortified positions was imperative.

36. Mukti Bahini operations helped the Indian army which got to know the Pakistani pattern of fighting. It also helped in the following ways:-

(a) In some instances the initial ingress helped to cross start lines well ahead of the opening of hostilities.

(b) By passing the Pakistani defensive positions completely threw Niazi’s forward posture off balance, and he was never able to recover from it.

37. Yahya Khan opted for all out war against India . On 03 Dec 1971 Pakistani aircraft attacked Indian airfields at Srinagar, Pathankot, Amritsar, Halwara, Ambala, Sirsa, Faridkot, Jamnagar, Jodhpur and Agra.

**The Battle for Dacca**

38. From 03 Dec 1971, when Yahya Khan formally declared war on India by attacking our airfields in the Western Sector , the situation in East Pakistan was already getting out of control. By 07 Dec 1971, the Indian Army was well beyond it’s planned start lines and in some Sectors nearly half way towards it’s objectives. In the North Western Sector Pirganj was captured and Bogra was being threatened. In the South Western Sector Jessore and Jhenida had been captured. In the Central Sector Indian Troops had reached the line of the local Brahmaputra river. In the Eastern Sector, a heliborne operation had been mounted on Sylhet, Ashuganj was being threatened and Mudaffarganj had been captured. Thereafter the situation deteriorated badly in all sectors with the Indian army moving with great speed and determination towards it’s given objectives. The Army Chief had been repeatedly calling upon Pakistani forces to surrender. The Governor of East Pakistan had been sending messages to Yahya Khan asking for a Cease-Fire and a political settlement but nothing happened. Yahya kept assuring Niazi that the Chinese and the USA would intervene on their behalf. Although nothing happened in the North as far as the Chinese were concerned, on 13 Dec information was received that a Task Force of the United States Seventh fleet had entered the Bay of Bengal. On 14 Dec, information was received that the Governer was going to hold an important meeting. Indian Air Force attacked Government House the same day and rocketed the roof of the building. The Governor resigned and went over to the International Red Cross.

39. On the military side, the Pakistanis had got into a panic, Maj Gen Jamshed who was responsible for the security of Dacca was ordered to speedly organize the defence of Dacca Bowl, the reason for this was that no order had been given and no action taken to organise a planned and systematic withdrawal. Thus when the crisis developed all the divisional commanders were either out of touch or refused to send any troops back for fear of being intercepted and destroyed. Even Inf Bde which had been tasked with the defence of Dacca had broken up and only remnants were falling back. Pak tried to organize some semblance of a defence of Dacca by mustering soldiers belonging to different arms and services and rear parties in Dacca with all sorts of weapons from the Ordnance Depot. It was however a hastily organized affair and lacked cohesion, and leadership. The morale of it’s troops was at it’s lowest ebb. Indian Forces by this time were on on the outskirts of Dacca in all sectors.

40. Early in the morning of 16 Dec, a message was intercepted from Niazi to his commanders asking them to cease fire. Gen Nagra exploited the situation by sending a message to Niazi asking him to surrender. It was learnt that Yahya had instructed Niazi to obtain a ceasefire and Niazi in turn had approached the American Consul General in Dacca to arrange the Cease Fire on Dec 15. The USA in turn approached the Indian Government for the Cease Fire on the same day.

41. On the same day, 16 Dec 1971 General Manekshaw conveyed the Indian decision to the Pakistani High Command that cease fire would be acceptable provided the Pakistani Army in the East surrendered to the Indian Forces.

42. Niazi agreed to immediate Cease Fire. As decided by both sides, Indian troops entered Dacca on the morning of 16 Dec. Messages were sent by the Pakistani command at Dacca to all it’s formations to surrender. At about 0430 PM General JS Aurora, GOC-in-C Eastern command took the surrender of the Pakistani Army from Gen Niazi on the Dacca Race Course. A total of over 90,000 troops with a large amount of weapons, ammunition and equipment surrendered to the Indian Army. The surrender brought to an end the tyranny of Pakistan over its Bengali consitutent and liberated it finally from it’s military shakles giving birth to a new nation- Bangladesh.

**Conclusion : War in the East**

43. The most remarkable aspect of this campaign is the speed with which the Indian Army brought to a successful conclusion the campaign in East Pakistan fought across a land that was literally interspersed with a thousand rivers.

44. The Indian Armed Forces executed in the short span of 12 days an impossible task and decimated in most difficult terrain a formidable enemy taking 93,000 prisoners. Although the sympathy and support of the people of the world were with the people of Bangladesh and the people of India, the governments of these countries failed to even condemn the barbarous acts of a dehumanized Government of Pakistan.

45. Bangla Desh was liberated in 12 days, well before the American Task Force ordered by President Nixon and headed by the nuclear powered USS `Enterprise’ arrived in the Bay of Bengal. It however arrived too late to be of any assistance, moral or material, to their pampered protégé. The war was over, and Bangladesh was born.

**Lessons Learnt-War in the East**

46. **General**. There are always more lessons to learn from defeat than from victory. Victory engenders a feeling of complacency. This needs to be guarded against. The high level of leadership in the 1971 Indo-Pak war engendered a great feeling of confidence in ourselves that encouraged certain leadership styles and functioning. These are discussed in following paragraphs.

47. **Unconventional and Unorthodox Tactics**. When the Indian Army was helping the Mukti Bahini in it’s initial struggles against Pakistan, the army was forced to adopt unconventional and unorthodox tactics. The successes gained, encouraged leadership at all levels to adopt the unconventional and the unorthodox.

48. **Risk Taking**. The need to achieve decisive results in a short time frame was necessary because of the fear of international intervention. This prompted leaders at all levels to take calculated risks which paid off.

49. **Sound Administrative Infrastructure and Sound Planning** Without sound planning and a sound administrative infrastructure success in the war in the East would not have been possible.

50. **A Sound National Aim** For once we had a clear national aim which is the start point of all planning of war.

51. **Inter Service Cooperation** Although we did not have a Chief of Defence Staff or a Combined Service Headquarter the cooperation between the Services was of a high order.

52. **Civil Military Cooperation.** Cooperation between the Civil and the Military with Central and State Government and essential services like Railways, Telegraph, Docks and ports and Transport agencies was of a high order. This cooperation helped ensure flawless moves and communication.

53. **Good Handling of the Press** The press was well briefed and they behaved with a responsibility.

**WAR IN THE WESTERN SECTOR**

**General**

54. As the crisis in the East deepened , more and more Indian formations were moved there. For a long time the Western border lay unguarded and reserves for the Northern and North Eastern borders were depleted. A Pakistani attack at this time combined with a Chinese threat would have had very serious consequences.

55. To ensure this, India had to be careful not to give any reason to alarm Pakistan to launch a pre-emptive offensive in the West. For this reason , movement of troops was not permitted to the very end.

56. By the first week of November, forces in the western sector were in position and had completed their defences sufficiently to withstand any attack. On 03 Dec 1971, Yahya Khan opened hostilities by an air-strike at 5.40PM. against our air fields at Srinagar, Pathankot, Amritsar, Halwara, Ambala, Sirsa, and Faridkot in Western command, Jamnagar, Jodhpur and Uttarlai in Southern Command and Agra in Central Command.

**Conduct of Operations**

57. Till 1965, Pakistan believed that Indian reaction to any Pakistani military action in J & K which she claimed was disputed territory would be confined to J & K itself, and would not spill over. However, in 1965, when she mounted a divisional attack on Chhamb from Gujarat in Pakistan, India crossed the international Border and threatened Lahore, thereby indicating that India meant what she said that “J & K was an integral part of India and any threat to J & K was a threat to India”. Conduct is discussed in succeeding paras very broadly section wise i.e. operation in J & K and Punjab.

58. **J & K** The state of J & K was divided into six sectors:-

(a) The Ladakh Sector.

(b) The Kargil Sector.

(c) The Kashmir Valley.

(d) The Rajauri Sector.

(e) The Chhamb Sector.

(f) The Jammu Sector.

59. **Ladakh Sector**. Partapur Headquarter had in 14 days advanced 22 kms and captured approximately 804 sq kms. A feat possibly un-equalled in the history of warfare, considering the appalling conditions under which these troops had to fight.

60. **Kargil Sector**. Kargil is a strategically important town located on the banks of the river Shingo, a tributary of the Indus, It is located on the road connecting Srinagar to leh. To ensure security of the road and to prevent infiltration both sides of the road are guarded by piquests on the high hills dominating the road. During the war all Pakistani posts that observed and dominated the Srinagar-Kargil-Leh road were eliminated.

61. **Kashmir Valley**. Some gains were made in Lippa Valley and all along the line of control Pakistani posts were captured.

62. **Rajauri Sector**. Pakistan’s major offensive in Poonch was repulsed with heavy casualties and Indian Army was able to capture some of enemy’s post.

63. **Chhamb Sector**. Partial success was achieved by Pakistanis in Chamb Sector

64. **Jammu Sector** (**Chicken’s Neck Action)**. Chicken’s Neck is the name given by our troops to a wedge of Pakistan territory between the Chenab and it’s tributary close to Akhnur. It is an area that affords a good base for the enemy to launch attack. Indian army captured Chicken neck area by achieving total surprise. Enemy positions were bypassed and attacked from the rear.

65. **Operations in Punjab**.

(a) In Sial Kot Sector, our forces had broken through the enemy network of minefields and crossed Basantar River and were poised for further advance when ceasefire was declared.

(b) Enemy was thrown out of Dera Baba Nanak and Shejra Bulge and we gained territory North of Ravi. South of Ravi also positions of enemy were over run.

66. Thus, in beating back all Pakistani offensive in the West, Western Command played an important part in the collapse of Pakistan’s military regime, and the Liberation of Bangladesh.

**Lessons Learnt -War in the West**

67. **Need for Integral Armour for Plains Divisions.** Use of armour ‘en masse’ can be very effective. Piece meal use should be avoided. It is imperative that plains infantry divisions have their own integrated armour.

68. **Co-Location of Headquarters**.It is desirable that Headquarters of Air Formations be located close to Army Formations for closer cooperation and better results in combined operations.

69. **Problems of Short Wars**. Short wars give great advantage to the side which attack first. It is always with the attacker who makes initial gains and waits for the Cease Fire to be in a better bargaining position to obtain political and military objectives. Our nation is always at a great disadvantage in this respect. The only way to minimise this aspect is to ensure adequate hard hitting mobile forces to quickly redress the situation and go on the offensive.

70. **Cease Fire**. In all Indo-Pak wars ‘48’, ‘65’ and ‘71’ our Government has responded to Pakistani calls for cease-fire without properly assessing the military implications. Invariably Pakistan has gained over us in timing of Cease Fire and invariably we have lost by agreeing too early to such requests when the situation on ground needed a little more time to redress military imbalances.

71. **Intelligence.** The lack of coordination between various intelligence agencies has always been drawback in all conflicts. This also applies to inter-Services intelligence agencies.

72. **Army Air Corps.** The need for integral air resources for reconnaissance, casualty evacuation, tactical interdiction, counter air operations in tactical battlefield, direction of artillery fire, and most of all close air support to it’s troops is crucial.

73. **Integrated Command**. Need for Combined Service Headquarters and Chief of Defence Staff is critically important. Failure to do so can only be detrimental to the nation’s security.

74. **Loss of Territory**. Loss of territory in a particular sector can be accepted to achieve major gains in some other area/sector.

75. **Counter Attack.** Every war has highlighted the need for quick counter attacks when objectives are lost and the need to be prepared for a quick counter attack by the enemy when objectives in his area are captured.

76. **Leadership** Good leadership is a battle winning factor. India was fortunate to have good political and military leaders. Leadership in units and formations was of a very high order.

**THE KARGIL WAR**

**General**

1. Nothing has threatened India’s territorial integrity as seriously since 1971 as Pak’s ill-conceived intrusion across the Line of Control (LOC) into the Kargil District of J&K in the summer of 1999. By infiltrating its soldier in civil clothes across the LOC to occupy large tracts of ground on the Indian side, Pak created a new dimension to the 10 year old proxy war against India. This grave provocation resulted in a firm but measured and restrained operation to evict the transgressors. Operation VIJAY was a finely tuned operation by the Indian Army and IAF in synergy to regain the territory occupied by the Pak intruders. In what was acclaimed internationally to be a very mature and restrained action in the face of extreme provocation, the primary aim of India’s military action was to regain ground and conclude the military action against Pak forces without enlarging the scope of the conflict. The last of the intruders was unceremoniously evicted on 26 July 1999.

2. India and Pak have been in conflict with each other over J&K since 1947. None of these conflicts have ended decisively and the 1999 conflict in Kargil was but a continuation of the fostering problem. This time however there were some differences. These were : Pakistan occupied a sizeable piece of Indian territory across the LOC, the conflict took place between two democracies which are declared nuclear powers and could have escalated out of control. To this extent it was unique.

3. **The First Three Wars** Pak’s first three wars had failed to achieve its central objective of annexing J&K. The first war was started on 20 Oct 1947 with irregulars and tribal raiders led and supported by the Pak Army. The second war started on 06 Aug 1965 with the launching of the 6000 strong Force Gibraltar followed by a full scale invasion spearheaded by the armoured division. The third war was fought in 1971 on two fronts. The war on Eastern Front resulted in the liberation of East Pakistan and creation of Bangladesh. The war on Western Front ended with limited gains.

4. **The Kargil War**  Often termed `the Fourth War’ Kargil war was a war with a difference. A series of fundamental factors appear to have propelled Pak towards the fourth war for J&K. These may be summed up as :-

(a) Continuing ideological conflict with India.

(b) Deepening a self perpetuating belief of Kashmir being the core issue and

the unfinished agenda of partition.

(c) Tension in the internal power structure of Pak.

(d) Deep desire to take revenge against India for previous defeats.

(e) The military aggressive ethos.

5. The Kargil conflict was different to the usual hostilities across the LOC. Earlier each spring Pak intensified the cross border firing to facilitate infiltration, but there was no physical occupation of Indian territory. The Kargil episode was entirely different in that it involved the intrusion of regular Pak troops across the LOC, interspersed with mujahideen of Pak and other foreign origin. They succeeded in occupying and fortifying a number of critical locations on the Indian side of the LOC

**REASONS OF WAR**

6. **Internationalisation of Kashmir**. The three possible reasons underlying Pak’s attempt to internationalise the Kashmir issue are as under:-

(a) **Internal Situation in Kashmir**. After the election, Kashmir was fast retuning to normalcy due to the Indian Governments proactive policy comprising a four tiered strategy:-

(i) Defeat the ISI’s design in J&K.

(ii) Better coordination between the various int agencies in the state.

(iii) Economic development.

(iv) Rehabilitation of the Kashmiri Pandits.

(b) **Declining Global Support for Kashmir.** Contrary to Pak’s expectations, major nations did not want to intervene in the Kashmir question, but expected India and Pak to resolve it bilaterally. Thus Pak felt unless something dramatic was done, Kashmir would become a non-issue internationally.

(c) **Nuclear Capability and the Strategic Environment**. Both India and Pak became nuclear powers in 1998. Pak thought this made India’s conventional superiority redundant and irrelevant, if not obsolete. Thus Pak perceived it could now take on India in Kashmir without the threat of a full scale war.

7. **Pak Reasoning**. The likely line of Pak reasoning for the internationalization of the Kashmir problem are:-

(a) Kashmir had become the ‘Nuclear flashpoint’ in the region. If the issue was not resolved it could lead to nuclear war.

(b) The international community should understand the grave implications of Kashmir on the security situation in the region and globally. Thus India must be pressured into a just and final solution on Kashmir.

(c) There was a need for a third neutral force to monitor the LOC and why was India not allowing the United Nations Monitoring Group for India and Pakistan (UNMOGIP) to monitor violation of the LOC ?

8. Thus it appears, that the primary objective of the infiltration was to internationalise the Kashmir problem. The second part of the strategy was linked with the first- provoke India to retaliate so that the issue would get automatically internationalized.

**PAK ARMY PLAN FOR KARGIL INTRUSIONS**

9. The essentials of this plan were to use the Pak army to occupy important heights in the Dras-Kargil-Batalik-Turtok area and thus cut off troops in Ladakh and Siachen. By doing so, the Indian Army would be forced to move troops out of the valley to face the challenge, thus enabling Pak to induct a wave of foreign mercenaries into the valley to give a fresh impetus to the flagging insurgency. This would cause the overstretched Indian security forces to lose control and Pak would be able to internationalise the J&K issue.

10. **Pak Military Aim**. To capture maximum territory here and elsewhere along the Indo- Pak border, to isolate the state from the rest of India and be in a position of advantage to bargain and settle issues subsequently . In doing so, it must not lose any territory of significance to India.

11. **Indian Army Assessment**. India assessed the military aims of Pak as:-

(a) Cut NH 1A.

(b) Alter status of the LOC.

(c) Give a boost to military in the Valley and elsewhere in J&K.

12. **Objectives**. The main objectives of Pak offensive are likely to have been as under:-

(a) Choke the strategic Srinagar-Leh road and prevent winter stocking for troops in Ladakh.

(b) Occupy Dras and Kargil thereby opening the LOC issue.

(c) By occupying heights in Turtok and Batalik areas, choke access to Siachen Glacier and force India to back down on the issue.

(d) Control the Mushkoh Valley near Dras and use it as a major route for infiltration.

(e) Spread insurgency in Kargil district to ease pressure on insurgent groups in the Kashmir Valley.

(f) Negate the Simla Agreement by altering the LOC and bring back the Kashmir issue to international attention.

13. **Preparations by Pak**. Even through the intrusions took place in the spring 1999, it is clear that preparations had been going on for quite some time. The operational task had been allotted to Force Commander Northern Areas (FCNA). The troops employed were the Northern Light Infantry (NLI) suitably augmented and supported by well trained Islamic fundamentalist mercenaries from POK and other Islamic countries. The latter had been trained, funded and equipped by the ISI. Their presence in the area was to deceive the international community into thinking that this was an ‘indigenous freedom movement’ and that the Pak army had no part in it.

14. The Kargil operation was approved by Gen Musharraf when he took over as COAS in Nov 1998. During the period from Dec 1998 to Mar 1999 when the upper reaches of Kargil District were inaccessible due to winter, preparations were made on the Pak side of the LOC. Essentially these preparations consisted of :-

(a) Roads and mule tracks extended upto the LOC.

(b) Administrative bases were established to support the impending intrusions.

(c) Heavy weapons and their ammunitions were stocked.

(d) Telephone cable were laid.

(e) Material for constructions of “sangars” (fortifications) was moved forward.

(f) Artillery was readjusted to be in position to support the intrusions as well as interfere with Indian reinforcements along NH 1A. Additional artillery was inducted from neighbouring formations.

(g) Additional helipads were constructed.

(h) Throughout the winter months the designated troops carried out training in high altitude warfare.

(j) The Northern areas were placed under Army rule so as to facilitate optimal use/exploitation of resources as well as deny access to the media.

15. **Nature of Intrusions**. The nature of intrusions are as under:-

(a) The extent of intrusions varied in depth depending on the area.

(b) Each major ridge was held by approximately 40 to 60 NLI soldiers under an officer, supported by adequate personnel of the Scouts and some fighting porters.

(c) Each post was equipped with support weapons like machine guns, rocket launchers, automatic grenade launchers, mortars, anti-aircraft guns and missiles.

(d) Anti-personnel mines were laid along approaches.

(e) A degree of mutual support was ensured between adjacent posts.

16. **Surprise and Deception**. The Pak Army took the following steps to ensure surprise and maximize deception:-

(a) **Additional Troops**. There was no induction of fresh troops into FCNA for the proposed operation.

(b) **Artillery**. Additional artillery inducted in 1988 for trans- LOC firing was not de-inducted.

(c) **Reserve Formations**. No movement of reserve formations into FCNA until after the Indian Army’s response.

(d) **Logistics**. No additional stocking was done or new bases established, stores from existing defences were utilized. Logistic lines of communication followed concealed routes away from Indian Army positions.

17. We need to acknowledge that the deception plan was successful and that initially India was caught by surprise. This was perhaps also enhanced by the following:-

(a) This sector had not been the focus of any earlier attempt to disturb the LOC.

(b) The apparent absence of militant infiltration through this sector.

(c) The high altitude and difficult terrain may have introduced complacency on the Indian side, thinking that no viable military operations could be launched in such terrain. Indian patrols may have become predictable and routine.

(d) The Indian Army’s focus on internal security (IS) duties for more than 17 years had possibly caused officers and soldiers to think that Low Intensity Conflict (LIC) was the primary threat to India and thus the logical task of the Army. Initial responses to the intrusions were more in the nature of LIC response rather than eviction of Pak regulars as it turned out.

**The Indian Response**

18. **Development in Kargil Prior to Operations**. The Indian deployment in Kargil was based on one Infantry Brigade. The area was divided into four sub-sectors and battalions spread thinly along the LOC. In early 1999 the brigade had four infantry battalions and one BSF battalion under command.

19. There were substantial gaps between the battalions and the brigade. The brigade received two additional battalions in summer to block routes of ingress of militants in the

Mushkoh-Dras and Batalik sub-sectors.

20. **Patrolling.** Regular patrolling was carried out in summers. In winter due to heavy snow and harsh weather, patrolling was limited. In the winter of 1998- 99 there were large gaps in period between patrols.

21. **Detection of Intrusion and Immediate Reaction**.On 03 May 1999 three residents of Garkhun Village were the first to spot the intrusions in the area of JubarLangpa when they saw some armed men in Pathan attire digging bunkers. They informed the nearest military unit. Patrols on subsequent day by various units confirmed the intrusions.

22. On confirming the intrusions, Opertion VIJAY was launched to evict all intruders from Indian territory, it covered all actions from 01 May 1999 onwards.

23. The Indian Government stipulated that the LOC was not to be crossed so as to avoid escalation.

24. The initial assessment was that about 200-300 Pak Army regulars and trained mujahideen had infiltrated and occupied unheld areas. By 18 May it became apperent that the strength was greater, 600 to 800 Pak regulars and not mujahideen had infiltrated. The Defence Minister visited forward areas on 12 to 14 May, he was accompanied by the GOC-in-C Northern Command and the 15 Corps Commander. The PM was then briefed on India’s plan to evict the intruders.

25. **Initial Aim**. The initial aim of Indian forces was to establish contact, assess the extent of the intrusions and contain the enemy.

26. **Establishing Firm Bases and Patrolling**. Consequently a series of attacks were launched on features held by the Pak troops. In the face of heavy fire and intense oppositions our troops established viable firm bases and carried out intensive patrolling to find out exact deployment and strength of the intruders. It gradually emerged that a large number of the enemy were well entrenched and it would require a deliberate effort to evict them.

27. On 26 May the IAF joined Operation Vijay and air strikes were begun. MIG-21, MIG-27 fighters and MI-17 helicopter gunships were used out of Srinagar and Awantipur airfields.

28. On the subsequent two days two fighters and a helicopter were lost, two due to enemy action and one due to mechanical failure.

29. **Indian Plan of Operations**. The Indian plan of operations was to- first evict the enemy from those areas where he was dominating NH 1A and then from other areas. Priority for capture of objectives were as under:-

(a) **Priority 1**. Dras Sector

(b) **Priority 2**. Mushkoh Valley Sector, initially to be encircled.

(c) **Priority 3**. Batalik Sector.

(d) **Priority 4**. Kaksar Sector. This area was not held in strength by Pak

Troops and areas held did not dominate Indian lines of communication.

30. **Use of Troops**. Important aspects of use of our troops were:-

(a) The Indian Army used about 17 battalions to evict the intruders.

(b) During conduct of actual operations troops were moved from one sector to another to achieve concentration of force at the required place.

(c) Many of the troops employed were from out of the area of operations and hence had to be acclimatized before being committed to battle.

(d) Time would be required to move and acclimatize troops; dump ammunition, fuel and supplies, hence the operation could not be time bound.

31. **Crossing the LOC**. It was a major dilemma on whether to permit troops to cross the LOC, and in the process lose all the international goodwill earned through restraint, or continue to lose brave men as the intruders continued to fire from positions of advantage. Crossing the LOC would have resulted in escalation and could have had two major negative outcomes:-

(a) It would have made Pak insecure and thus threaten the use of nuclear weapons. This would have led to rapid international intervention.

(b) India has had major problems in its international PR battle over Kashmir, crossing the LOC would have further worsened the situation.

32. The decision not to cross the LOC, though at high military cost, was a mature and diplomatically astute move which showed the world that we demonstrated a high degree of restraint and acted responsibly in managing the crisis.

**Defeating the Enemy**

33. A number of very important battles were waged throughout the four section i.e. Dras, Mushkoh, Batalik and Kaksar. A few of them are `Battle of Tololing’, ‘Battle of Tiger Hill’, ‘Battle of pt 4875’, ‘Battle of Batalik’, Capture of pt 5203 etc. ‘Battle of Tiger hill’ only is being discussed here.

**Battle of Tiger Hill**

34. Tiger Hill is the most dominating features in the Drass Sector. From here, well entrenched intruders had directed precise artillery fire on the Srinagar-Leh highway for over a month.

35. **The Plan**. It was estimated that the enemy had about a platoon plus located on Tiger Hill itself and some additional troops were seen moving in the area. However there was limited knowledge of enemy defences. A Mountain Brigade was tasked to clear the feature and was allotted 4 x Inf Bn. It was also felt by the GOC of Mountain Division that ideally Point 4875 and Tiger Hill should be attacked simultaneously to keep enemy attention diverted. However, the paucity of artillery precluded this option, thus it was decided that Tiger Hill would be attacked one day prior to Point 4875.

36. The plan was for GRENADIERS Bn to launch a three pronged attack on Tiger Hill from South, East and North East, from the firm bases provided by SIKH Bn. Thus GRENADIERS established a fire base at Point 4460 and an administrative base at Huliyal in preparation for the attack.

37. **Conduct**  The attack commenced as planned at 2000 hrs on 03 July 99. Due to bad weather and poor visibility progress was very slow. By 0200 hours on 04 July, the Ghataks got a foothold and against fearful odds managed to hold on. During this action **Sepoy Yogendra Singh**, part of the Ghatak platoon, showed inordinate heroism and indomitable spirit. Despite being grievously wounded he continued climbing the sheer cliff face and destroyed two enemy bunkers that were holding the assault, killing the enemy in fierce hand to hand combat. For this act he was awarded the PARAM VIR CHAKRA (PVC).

38. D Company from the East also managed to come close to the Top. Throughout 04 July our troops were around Tiger Hill Top from three sides and continued a fierce exchange of fire. Apprehending that the enemy would be able to reinforce Tiger Hill along the ridge from the West the Brigade Commander ordered the reserve company of SIKH to be located at Helmet. After a steep climb under intense fire the SIKH managed to get a foothold on India Gate and Helmet in the early hours on 05 July. This foothold was further reinforced on 06 July.

39. Realising that the SIKHs had interposed themselves in between, at 0600 hours on 06 July, the enemy launched a series of counterattacks supported by heavy artillery fire. Fierce fighting continued throughout the day and the SIKH being in the open, suffered heavy casulities and were forced back from Helmet to India Gate. But, with great grit and determination, they held on and then in a brave riposte they turned the tables on the enemy by retaking Helmet.

40. On the night of 07/08 July , GRENADIERS launched an attack on areas of Reverse Slope and captured them by 0800 hours 08 July. On 11 July C Company GRENADIERS captured Rocky Knob and Rhino Horn. This brought an end to the Tiger Hill operations and effectively defeated Pak’s Kargil adventure.

41. **Unit Citations**. The COAS awarded unit citations to SIKH for `West of Tiger Hill’ and GRENADIERS for `Tiger Hill’.

**Military Leadership Lessons**

42. **Leader-Ship**.This conflict re-emphasised the importance of military leadership at all levels for successful conduct of war. Of particular importance are:-

(a) Professional integrity.

(b) Ability to lead by personal example.

(c) Training of one’s command, particularly for the unforeseen.

(d) Knowledge of terrain and troops in the area of command.

(e) Physical fitness, particularly in terrain such as this.

**The Media**

43. This has often been referred to India’s `first media war’ as for the first time the media was so pervasive on the battlefield and war reporting so much in real time. The media brought the war into every Indian’s home by the regular coverage of the fighting, the trials and tribulations of the Indian soldier fighting in such harsh conditions. The media was possibly the single most important factor in generating intense patriotism.

44. Initially the Army was not well prepared to handle this massive media attention and banned entry of the media into the region. This policy was however soon reversed and better engagement of the media resulted. Detailed briefing arrangements were made in Kargil and in Delhi. In Delhi the organizational face to the media consisted of the spokesman of the Ministry of External Affairs (MEA), and representatives of the Army, Navy and Air Force of the equivalent rank of Colonel. A Liaison Cell under a Major General was created at Army HQ to prepare media kits and press releases in real time. The outcome of this concerted effort to engage the media gradually resulted in high credibility of the governments and the military’s actions to evict the intruders.

45. Internationally too, the media was invaluable in conveying India’s restraint and measured response to the world, quickly swinging world opinion in India’s favour.

46. It cannot be said that the media obediently reported everything that the official spokesmen gave out. Government policy and military actions were questioned, generating a healthy debate about national security in the country.

**Conclusion**

47. Dras is reputed to be one of the coldest places in the world and from the heights of Tololing and Tiger Hill bitter winds sweep down on the men that dare to tread here. The indomitable men of the Indian Army braved enemy action and terrain to make previously little known places like Mashkoh, Kaksar, Bimbat, Batalik, Yaldor and Turtok household names synonymous with courage.

48. This was no mere border war or another artillery exchange that characterizes the LOC and Actual Ground Position Line (AGPL). The `Fourth War’ for Kashmir was an extraordinary war, likely to be recorded in history as being fought in the most inhospitable battle ground in the history of warfare.

**SECTION-3**

**BIOGRAPHY OF SUCESSFUL GENERALS**

**PATTON**

**Introduction**

1. Patton was born in 1885 in affluent circumstances. His father was a wealthy rancher, but his grandfather was a Colonel in the Confederate Army and was killed in the American Civil War. In 1904 he entered West point through the Virginia Military Academy . He took five years to commission having failed in mathematics and hence relegated for a year .He was commissioned into the Cavalry in 1909. In 1912 he was selected as ADC to Chief of Army Staff and where he came to know many who later came into prominence, including Stimson, the future Secretary of State of War in World war II. In 1912 he represented the USA in the Olympiad games at Stockholm in the Modern Military Pentathlon.

**Patton’s Military Career**

2. In 1916 he took part in Punitive Expedition into Mexico in pursuit of Panch Villa, a Mexican bandit as Headquarters Commandant and acting ADC to General Pershing. He experienced almost a year of active service, full of speed with dash and adventure. Patton’s military career covers a period from before World War I, until the end of Word War II in Europe. He had started his active service career under General Pershing in Mexico, even before the US entered World War I. Even at that time, he had made his impact as a dashing, bold and unconventional officer showing great promise.

3. Patton is still a most controversial military figure of World War II. His military career is enveloped in controversies.

**World War I**

4. In 1917 he went over with the American Expeditionary Force to France as General Pershing’s aide. He rose from the lowly rank of Captain in 1916 to a Colonel Commanding the US Ist Brigade Tank Corps in 1918 having distinguished himself in Argonne battle, been wounded and decorated for gallantry in action, with Distinguished Service Corps (DSC). It is typical of the man, that he had also been admonished for taking too many risks.

**Between the World Wars**

5. Between the two World Wars, he had gone through the normal professional training indicative of higher promotion. World War II found him a keen and active student of mobile warfare. Well imbued with the teaching of Liddell Hart and equally well in military history, covering the past many centuries of warfare, he was convinced that American required well trained forces capable of large scale operations, using armour and mobility, in both of which the Americans would have an advantage over their allies as also the Germans. It was with this end, that he trained his armoured division for carrying out what appeared to be at that time, impossibly long maneuvers in the deserts of California.

6. Patton’s entire back-ground pointed the way for his advancement to high rank. He had important connection to sustain him on the one hand; and on the other, he had trained himself to be thorough professional, whose job was to get the best results fastest. At one time he had feared that he would be considered too old to command a division, but that was overlooked due to his competence, assisted, needless to say, by his connections. He had, also established a style for himself by which he felt he could get across to his troops, imbue them with his own galvanising fervour for military perfection.

**World War II- North Africa**

7. He started his armoured career by taking command of a Brigade of the 2 Armoured Division, ultimately rising to its command. The division acquired a great reputation and served to be the breeding ground of many of America’s armoured commanders. He therefore, can be said to have made a deep and important impact on the moulding of many of America’s armoured commanders.

8. In August 1942, Patton was appointed the Commanding General (CG) of the Western Task Force landing in Morocco- North Africa. He was at that time a Major General. Although the landing operations in Morocco did not involve any major operations, they did indicate enormous problems pertaining to command and control and in dealing with the allies. Patton with his characteristic aplomb came through with flying colours, although unconventional approach to the problem did raise many an eye brow.

9. Pattern recalls that one of the most important things he did during this landing, was to remain on the beaches for 18 hours at a stretch to quieten the nerves of raw troops and bring order to the confusion which prevailed. “People say that Army Commanders should not indulge in such practices. My theory is that Army commanders should do what is necessary”. During the fighting as also the negotiations which took place in Morocco, Patton made a great impression on those who came in contact with him. The landing itself presented many problems, not the least of which was the greenness of the American Troops. It required Patton’s personality and presence on the beaches to get the troops to move in and extend the beach head.

10. Patton, however, caught the eye of Churchill and Roosevelt when they came to attend the Casabalanca conference. Patton was the host. Churchill described the management of this Conference as “beautiful”. Roosevelt reviewed 40,000 troops fresh from battle, but immaculately turned out, each man the epitome of discipline and self respect. But behind this exterior show went the serious business of transforming Morocco into a first class base to take more US troops for North Africa. At the same time serious training started, and strict discipline including the wearing of neckties, legging and helmets.

**Tunisia**

11. On 1 February 1943, Fredendall was removed and Patton was moved over from Morocco to replace him as Cdr US II Corps. Patton’s immediate task was to galvanise II Corps into an efficient fighting formation for battle of Gafsa. This he did by his characteristic insistence on discipline, turn out and leadership, with himself being the driving force. In Patton’s own words, “ I have been here for 43 days, fought several successful battles, commanded 95,800, men lost about 10 pounds, gained the third star and a hell of a lot of praise and confidence otherwise I am the same.

**Sicily**

12. The attack on Sicily, was the first major amphibious operation of world War II designed to attack Hitler’s Fortress Europe. Two Armies, Montgomery’s Eighth and Patton’s Seventh were to be employed. Patton insisted that American troops should continue to be dressed formally, with neck- ties and leggings in sharp contrast to the British, who were more comfortably and casually attired. This aspect of Patton’s discipline caused far greater heart burning amongst his troops and his Commanders. But he was determined to make the civilian turned into soldier Americans to realize the value of these outward symbols of discipline. He felt that discipline was a precursor for valour and he over and over again thought that without disciplined valour, there could be no success. The initial landing of Patton’s army were chaotic. Once again, by his personal dash and drive, he aided the troops on their initial objective and inspired his commanders to heroic action.

13. At the end of the Sicilian campaign, Seventh Army as a formation was second to none in the allied armies with an identity of its own, and Patton had won a reputation as an aggressive, exuberant personality with a will to win.

**North West Europe**

14. Patton’s career as a Commander in the North West European Campaign falls into some distinct compartments. In time-frame it extends from August 1944 to April 1945.

**Birth of the Third Army**

15. By the time the Sicilian campaign came to its end. The Germans were well aware of the military potentials of Patton. In fact he was the only American General who had any reputation. News of his and of his command were therefore, of utmost importance to them. For the same reasons, the secrecy which was to surround this army was of paramount importance to the allies. The Third Army was most lavishly equipped with tanks and transport. It is said that when planning, Patton personally always used the Michelin tourist map. He considered that details should be left to be wrestled with on large scale maps by his staff. He was satisfied with the broad perspective, and he had full confidence in his staff which had been trained to carry out his orders.

**Dash Across France**

16. In the fluid campaign which ensued, Patton using his strong mechanized forces as also the offensive spirit inculcated in his Army, surprised the German Generals, when his columns covered 50 miles a day. Although the Third Army was halted between 16 and 18th of August, Patton’s Forces were on the Seine by 25th August. Third Army by passed Paris leaving it to Free French formations to take its surrender.

17. German counter attacks began but Patton with some sixth sense had expected this and they were blunted. However even during this temporary phase of defensive the Third Army made more spectacular gains and cleared the eastern region of France right upto the formidable fortress of Metz it is said that during this period Patton and his Third Army resorted to some shady dealings in obtaining petrol, ammunition supplies allotted to other formations and by not declaring when they captured large quantities of petrol from the enemy.

18. Patton’s dash across France was the culmination of a lifetime devoted to being ready for this supreme moment. The soldiers of the Third army were freeing the countryside from the German yoke. The soldiers were cheered and greeted with flowers in every town where they passed, for they were the saviours of France.

**Epilogue**

19. Patton went on to receive hero’s welcome in the United States soon after World War II. He had finally to relinquish command of his beloved Third Army. He was posted to the Fifteenth Army, a “paper” posting to a “paper” Army with little to do except compile the record of the operations since the D Day.

20. Death came to Patton shortly thereafter when on 9th Dec 1945 he was involved in an automobile accident. Paradoxically, he who dreamt of a soldier’s sudden death in battle, lingered on for 12 days.

**Patton as a Military Leader**

21. The strongest impression of Patton which prevails today is that of a leader. He comes out as one of only two striking military leaders of the United States Army from World War II, the other being McArthur. In the American military legend, he is eulogized and Hollywood (Paramount) has made a full length film of him which shows him even larger than life. It is worth examining Patton as a leader.

22. Right at the very onset it must be pointed out that Patton was made in the heroic mould of the dashing military leader . He had aimed for this right from childhood. From the very beginning of his military career he had dreamt of leading an army and at the same time had prepared himself for doing so. All the conventional qualities required of a military leader were in him . He was an impressive personality by any standards, athletic, well-built, imposing in all respect except for his high-pitched voice and somewhat small beady eyes.

23. Patton believed in the effect of the spoken word on his audience. Right from his young days he had found he had verbal facility for the picturesque phrase. He believed that attention of troops could be riveted to what he was saying if it was said in the most earthy if not a profane manner. At times this was carried to a ludicrous extreme. A senior officer in the position of Corps and Army Commander using blasphemous profanity in his speech becomes counter productive and irritating rather than striking. For the media. however, he became “Good Copy” instantly and his quotable quotes got him headlines .

24. If in a matter of appearance and speech there were elements of the theatrical, in other aspects of his leadership traits, he was genuinely sound. He had vision, ability, courage, drive and confidence. His vision was responsible for enabling him to see far earlier than any other American field commander the value of mobility which armour and mechanized forces provided.

25. His courage was legendary. Right from his earliest days he had shown this. He believed that the best way to command was from the front end and as he rose in rank, he was convinced that irrespective of rank, the leader had to exercise his influence where things were at there stickiest. In the bargain, if there was an element of danger involved,

that had to be taken in his stride.

26. Patton firmly believed that any action taken quickly and executed violently was sure to achieve results far out of proportion to more deliberate and sedately carried out ones. He used to say that in the military field that “the best was often the worst enemy of the good”. Temperamentally he was impatient, but he also knew that when there was a plentitude of material it was possible to steam roller through, if the action be carried out vigourously and violently. He used these tactics to the best advantage and trained his command accordingly. He had found from experience that the personal drive and zest of the Commanding General would often produce desired results and there are numerous examples from his campaigns to illustrate this. His personal example on the beaches at Morocco and Sicily, his personal reconnaissance’s and pushing troops forward over rivers and obstacles are indicative of this.

27. There is one other quality of leadership which appeared at that time strange to the American soldier and public. That was Patton’s religious belief, it would appear that they were not aware of many other dashing Captains of war who have been moulded thus. In other countries also religion has given great support to military leadership, their faith was further sustained by religion. Thus religion was in no way incompatible with the profanity of his speech, which was a veneer which had formed itself into a habit.

28. There is one other aspect in the leadership qualities of Patton which need emphasis, his loyalty to his commanders and staff. It is known how he became subordinate to Bradley in North West Europe after having been his superior in the Sicily campaign. Seniority wise Patton was the senior. Bradley had doubts about having Patton serving under him in Europe but these were soon dispelled , because Patton “joined him eagerly, as a friend, without peak, rancour or grievance”. Their association together was one of the highlights of such associations in World War II. In the same way, Patton was loyal to his subordinates. His Headquarters staff consisted of average men but he had been able to weld them into a well-knit team delegating responsibility which in return begot trust. As the war progressed, his Third Army had an elan and pride not only in themselves but in the commander, they nick-named him “Georgie”.

29. We must also examine the elements of instability in Patton’s make up. It was this, which led him to this screening range at minor misdemeanours. In a way it could be said that he let off steam to make up for the stress and strain he was under when working at such high pressure. The well known slapping incidents in Sicily could have emanated from such a situation. However, this was a facet of his make up which was a weakness. Great leaders have perforce to keep themselves under great control and not permit their emotions to surface in any manner which would be derogatory to the functioning of their Command.

30. Having seen the leadership traits of Patton, it is worth examining whether it was the situation which created this leadership image. In World War II, the press and to an extent radio had begun to emerge as important factor for the maintenance of morale not only of fighting troops but of the public at home. The Americans had no outstanding public figure in the military field in the Western Theatre until the advent of Eisenhower and Patton. Whereas Eisenhower was the kindly father figure at the highest level of the military echelon, Patton was the dashing hero on the battle field.

31. As we have noted earlier, the character traits were ideal for the purpose. In some cases the exaggerated manner in which these were projected were excellent copy. As such it may be said that Patton was made to appear the larger-than-life-hero to meet the situation for consumption of the home population. In a way, this was also his undoing, because such publicity will often tend to raise animosities based on factors other than the capability or otherwise of military leadership in the field. As Bradley says “Few Generals could surpass Patton as a Field Commander, but he had one enemy he could not vanquish and that was his quick tongue”.

32. In conclusion, while discussing Patton’s leadership qualities, it is worth noting that his command was up to that of a Field Army numbering some hundred thousand men or more. Except for the brief period in Morocco and another in military government he was basically only a Field Commander. Problems of State as such, hardly came his way. It is therefore, difficult to say how he would have been measured up to as one of the “Great Captains” who have to deal with major strategic as also national and international problems. As a Field Commander, he was indeed great and the tradition he laid down for this type of leadership is without doubt of a high order to be followed by all Military Commanders who are in direct contact with troops. The pitfalls of publicity are, however, a warning, as also the need for emotional balance.

**BIOGRAPHY OF GENERAL MACARTHUR**

**Early Years**

1. Douglas MacArthur was born on 26 January 1880 in Arsenal Barracks at Little Rock. His father, Lieutenant General Arthur MacArthur was at that time commanding a company of the 13th Infantry. Born in a family steeped in martial traditions, he became associated with the Army from his birth. This was only in the fitness of things as he was in later years to become the greatest General of his country.

2. Douglas MacArthur’s grand father and father had migrated from Scotland to America. His grandfather joined militia attaining rank of Captain and later of Judge Advocate General of Western Military District. He became Governor of his state for a short period and later on served as Judge of Supreme Court for 18 Years. His father (Arthur MacArthur) was only 16 year old when the civil war broke out. Even at that tender age, he was keen to answer the call to arms and join the Army. His father took him to President Lincoln to get him a Presidential vacancy at the United State Military Academy. The President put his arm round the young boy and told him that all Presidential vacancies had been filled for that year but promised to get him one the following year. Arthur however, could not wait that long and joined 24th Wisconsin Volunteer Infantry as its Adjutant in the rank of Lieutenant. He saw action in several battles during the Civil War. In his first battle he was cited for gallantry in action and given the brevet rank of Captain. In those days except for Medal of Honour there was no other gallantry award. Later at the battle of Missionary Ridge he led a remarkable charge. Against withering fire he scaled the ridge and planted the regimental flag on top when other members of the colour party had been killed or wounded. The regiment rallied and followed him to the top of the ridge. For this supreme act of gallantry, he was awarded the Medal of Honour. He was also given command of the regiment and he led it throughout the war attaining the rank of Colonel at the age of 19. He became the youngest officer of this rank in the Union Army. After the Civil War, he joined the regular army and slowly worked his way up the promotion ladder. For 23 years after the Civil War, he served as a Captain as promotions in the Army were slow. On promotion to the rank of Major, he served in the Adjutant General’s Branch at Washington and after some time was promoted Lieutenant Colonel.

3. In 1898 war broke out with Spain and Arthur MacArthur, father of Douglas Mac Arthur, attained the rank of Brigadier General. He was assigned for service in the Philippines where he distinguished himself, earning promotion to the rank of Major General, the highest rank in the US Army in those days. After the war he was appointed Governor General of the Philippines. Although he was a successful administrator, some misunderstanding arose between him and the Administration at home. This cost him the appointment of the Chief of Staff of the Army, However, after his assignment in the Philippines, he was promoted to the rank of Lieutenant General by a special act of the Congress with a provision that this rank be abolished after him. He thus became the only officer in the US Army to attain this rank until the ban imposed by the Congress was lifted during the First World War. He was asked to carry out a tour of the Russo-Japanese battle fields and of the Far East. After completing this tour, he retired from the Army and died some years later in 1912 while addressing a reunion of the veterans of his old 24th Wisconsin Regiment.

4. Douglas Mac Arthur spent the early years of his life living with his father in various frontier posts. He saw the life of the Wild West. In his early upbringing he was not only influenced by his parents but also by the regimental sergeant major. It was only natural that he should aspire for a career in the Army. When his father was posted to Texas after his tenure at Washington, young Douglas joined the West Texas Military Academy. Good at both studies and sports, he appeared for the competitive examination to West Point and came out first. He joined West Point in 1899.

5. War with Spain had broken and Douglas wanted to skip his cadetship to enlist in the Army so that he could see active service. His father advised him against this saying, “ My son, there will be plenty of fighting in the coming years and of a magnitude far beyond this , Prepare yourself”. Douglas took his fathers prophetic advice and stayed on at West Point to complete his cadetship.

6. While Douglas MacArthur was at West Point, his father General MacArthur had become a national hero for his role in the Spanish American War and for combating insurgency in the Philippines. This gave Douglas a certain amount of prominence at West Point and he had to suffer more then the normal share of “ragging” from the seniors. A little before MacArthur had joined West Point, a “fresher”  had been made to leave the institution because of ragging and he subsequently died of tuberculosis. This sparked off a controversy and the President ordered an inquiry into the practice of ragging at West Point. MacArthur was an important witness before the court of inquiry and he was required to divulge the name of his seniors who had ragged him. His parents had taught him never to lie and never to tattle. He was therefore determined not to disclose any names even though his refusal to do so might result in his expulsion. The whole incident passed off without the authorities taking the extreme step against him for not disclosing any name. It was a period of trial for MacAruther in which he amply showed his moral fibre.

7. MacAurthur distinguished himself at West Point in all spheres-at games, in studies and in his profession. He was appointed First Captain on the basis of his military performance and he also stood first in scholarship. He scored the highest marks registered for a century at West Point. As First Captain he led the line of 93 graduates when he passed out from West Point in 1903, proudly watched by both his parents. He was commissioned in the Crops of Engineers. In those days top ranking cadets were given the choice of the branch and they generally opted for the Engineers because of better promotion prospects. MacArthur also volunteered for service in the Philippines where his father had won laurels and there was some chance of active fighting against insurgents. Within ten days of joining his Engineers battalion at San Francisco, he sailed for Manila in September 1903.

8. Soon after landing in the Philippines, MacArthur was engaged in various engineering duties. He was employed in constructing piers and docks at the harbour. He went out with a detachment to cut timber in the nearby jungle. Despite his early frontier training, he allowed himself to be waylaid by two guerillas in the jungle .One of them fired antiquated rifle and the slug tore the top of his hat. MacArthur was quick with his pistol and shot both the guerillas before his men joined up with him. What his men saw on arrival only helped to build their confidence in their young leader.

9. In 1904 General MacArthur was appointed Military Attache to the American Legation at Tokyo and Chief US Military adviser for the Russo- Japanese War. His Son Douglas Mac-Arthur was appointed as his ADC. Soon after his return from the Far Eastern tour, he was appointed ADC to President Theodore Roosevelt. Mac Arthur was posted to Fort Leavenworth with the Third Battalion of Engineers. He served with this unit for three years and was promoted Captain in 1911. In 1913 he was selected for the General Staff, the brains of the Army in planning operation and deciding matters of highest importance.

**First World War and Inter War Years**

10. First World War broke out in 1914 but America was initially not involved in the hostilities. She joined the war only in 1917. MacArthur was detailed as a military aide to Mr. Baker, Secretary of War. MacArthur suggested to have an adhoc division with elements of National Guard from all States which would “stretch over the country like a rainbow” for sending to France. General Mann was appointed Commander of 42 Division, popularly known as the Rainbow Division, and Douglas MacArthur became the Chief of Staff of the Division.

11. MacArthur sailed with the Rainbow Division for France in October 1917. On arrival in France after an initial period of training and reorganization, Rainbow Division moved into a combat sector. He accompanied a French riding party to bring German prisoners. He acquitted himself extremely well in the savage fighting that took place in this raid into German lines. He was awarded the Silver Star for extraordinary heroism and gallantry in action. In March 1918 the Rainbow Division was ready for the acid test- the attack. It had withstood an enemy raid and endured a night gas attack. MacArthur obtained his commander’s permission to accompany the leading troops. The Division despite its mounting casualties secured its objective. For his gallantry in this action MacArthur was awarded the Distinguished Service Medal. The last and biggest German attack of the war was launched in July 1918 and the Rainbow Division again acquitted itself well. MacArthur was promoted Brigadier General and given command of 84 Brigade in the Division. Position at Cote de Chatillon held by German in strength was holding up the advance of the Rainbow Division.

12. MacArthur was ill and suffering from gas wounds. He, however next morning led the attack capturing Cote de Chatillon after heavy fighting in which his troops suffered many casualties. When the war ended, MacArthur temporarily took over command of the Rainbow Division. General Pershing the C-in-C of American Forces in France referred to him as the bravest of the brave in a brave division. For his outstanding qualities of leadership and personal gallantry he was awarded the Distinguished Service Medal, three silver stars and many foreign decorations including the French Legion of Honour. He, however, again could not get Medal of Honour, the highest US award for gallantry even though he had been recommended for it. On return to the USA in 1919 he was appointed Superintendent of the West Point, a post reserved for an officer expected to reach the highest rank in the American Army. At 39, he became the youngest officer to hold this coveted appointment.

13. In 1922, MacArthur was posted to the Philippines as Commander of the Military District of Manila and later of the Scout Brigade. In 1925 he was promoted Major General in command of the Philippines Division and two years later as Commanding General of all American troops on the islands. Soon after his arrival for this tenure in the Philippines he set about demolishing the concept of colonial theory of racial superiority

in his own way. He found that on the three-decker boats, only American officers and their families could travel on the upper deck. Fillipinos had to travel on the lower decks with the enlisted men. He had this arrangement changed at once. Little stories like this endeared MacArthur to the Fillipinos.

14. In October 1930 MacArthur was appointed Chief of Staff with the four stars of a General. MacArthur’s major contribution during the five years that he was Chief of Staff was to reorganize the American Army, keeping in view the nature of the coming war. MacArthur completed his tenure as Chief of Staff in 1935 and was appointed as Military Adviser to the President of the Philippines. A few days before MacArthur left President Roosevelt spoke to him “ Douglas if war should suddenly come, don’t wait for orders to return home. Grab the first transportation you can find. I want you to command my armies”. It was gracious of the President to so speak to him. It showed his recognition of the patriotic motives of MacArthur.

**Second World War**

15. War broke out in Europe in September 1939 but America kept out of it for two years. By 1941 it became increasingly clear that America would soon be involved in the war. Japanese threat loomed large over the Pacific. To guard her interests in the Pacific, America based a large fleet with supporting Air Force at Pearl Harbour in Hawai Islands.

In July 1941 MacArthur was recalled to service in the rank of Lieutenant General and appointed Commanding General of the United States Army Forces in the Far East. The strategic importance of the Philippines in preventing Japanese advance to the South or the West was obvious. The forces available on the island were not adequate to meet the Japanese challenge.

16. The Japanese struck at Pearl Harbour on 7 December 1941 and in a surprise attack wrote off the US Pacific Fleet. Eight heavy battleships, two cruisers and several destroyers were either sunk or put out of action in an hour or two. The strike at Pearl Harbour not only damaged the US Pacific Fleet but also crippled US Air Power and eroded its ability to put up effective defence of the Philippines. On 8 December the first Japanese air attack came over the Philippines. With the ground forces denied effective air and naval support, the stage was set for Japanese invasion of the Philippines. The invasion commenced on 10 December with the Japanese Fourteenth Army. The situation was grim for MacArthur. His two Corps, one in the North and the other in the South had to steadily yield ground. Japanese combat strength on the ground was almost double. MacArthur was quick to perceive the Japanese plan of closing on the plains of Central Luzon around Manila and annihilating his Army in a two pronged offensive. He carried out a masterly withdrawal by side-stepping out of Central Luzon in to the Jungles of Bataan Peninsula.

17. Bataan was organized for protracted defence. Savage fighting continued on the peninsula for nearly five months when the defenders were forced to surrender. This gained valuable time for the Allies and stood in the way of further Japanese expansion. By February, through heavy casualties and lack of supplies, the situation was desperate. The Japanese sent a message to MacArthur to surrender but he was determined to fight it out till the bitter end. He was already making plans for starting a guerilla war against the Japanese on Mindano island after Bataan was lost. Japanese record of unbroken success in Indo-China, Malaya, Indonesia and Philippines posed a grave danger to Australia. Australian Cabinet decided to request US government to depute MacArthur as the Supreme Commander. President Roosevelt agreed and issued a personal order as his country’s Commander-in- Chief asking MacArthur to leave the Philippines and proceed to Australia. MacArthur was reluctant to comply because he did not want to desert his troops at Bataan. He was persuaded to leave because by doing so he would be able to organise a relief operation from Australia to rescue the Philippines.

18. The Japanese had got to know of MacArthur attempting to break through their cordon. Their radio announced that if captured, he would be publicity hanged on the Imperial Plaza in Tokyo. This threat did not materialize, but five years later, MacArthur as Supreme Commander took the salute of the Occupation Troops at the Imperial Plaza from the precise spot, where his execution had been so confidently predicted. The US Government awarded MacArthur the medal of Honour, its highest award for gallantry, for his outstanding leadership in the Philippines. The citation for his award read “He mobilized, trained and led an army which has received world acclaim for its gallant defence against tremendous superiority of enemy forces in men and arms. His utter disregard of personal danger under heavy fire, his calm judgment in each crisis inspired his troops, galvanised the spirit of the Fillipino people and confirmed the faith of the American people in their Armed Forces”.

19. MacArthur found a spirit of defeatism rampant in Australia. Plans were being made for holding the Brisbane line which meant giving up two thirds of Australian territory in the North. The newly appointed Supreme Commander decided completely to abandon the Brisbane Line plan and chose to defend Australia a thousand miles forward in the mountains of New Guinea. The battle for Australia was to be fought beyond her borders. If successful, he would not only save Australia but switch over from the defensive to the offensive for eventually liberating the Philippines. After his victory in New Guinea, he started his island-hopping operations. He leap-frogged from one island to the other which was hailed as something new in warfare. He opposed the idea of direct attack on the strong bases of the enemy. Instead he chose to bypass these bases and in the process secured lightly held islands. The Japanese strongpoint at Rabaul was bypassed. This meant bypassing 60,000 Japanese troops and leaving them for mosquitoes, hunger and disease to finish off.

20. In October 1944 MacArthur redeemed his promise of returning to the Philippines. In a series of brilliant operations on the ground MacArthur neutralized eight Japanese armies on these islands. At the end of this campaign the Japanese lost 80,000 counted killed. The campaign on the Philippines lasted nine months. Soon after the liberation of the Philippines, atom bombs were dropped at Hiroshima and Nagasaki in August 1945. Japanese surrendered and this ended the second World War.

**Japan, Korea and After**

21. On 15 August 1945 the Emperor of Japan in a dramatic broad cast to his prople announced the capitulation of his country. On the same date President Truman appointed MacArthur as the Supreme Commander of Allied Powers in Japan. MacArthur took the formal surrender of Japan on board US battleship Missouri on September 2, 1945. Apart from disarming and demobilising seven million Japanese soldiers, MacArthur was now entrusted with the responsibility for administering a war-ravaged country of 80 million people. MacArthur wanted to carve a place for himself in history not as a conqueror but as a protector of Japan. He planned to introduce reforms in Japan to bring it abreast of modern progressive thought.

22. After disarming the Japanese forces, one of the first tasks facing MacArthur was to abolish militarism in Japan. This was achieved in many different ways. Apart from punishing war criminals, introducing equality among people, emancipating the Japanese women, liberalizing the system of education and separating the State from the Church, MacArthur steadily divested the Emperor of his divine halo and decentralized political power. Based on the new constitution, general elections were held in April 1946 which were the first completely free elections in the history of Japan. Another far-reaching achievement of MacArthur’s administration in Japan was the land reforms introduced by him. The education system was liberalized and the previous militaristic ultra-nationalistic approach discarded.

23. MacArthur’s role as Pro-consul of Japan for five years was a great achievement of history. When he left that country two million people lined his route to the airport and bade him an affectionate farewell. Many years after his official association with Japan had ended, the Japanese Government awarded him the Grand Cordon of the Order of the Rising Sun- Japan’s highest award reserved for monarchs and heads of Government. Towards the later stages of MacArthur’s stay in Japan he was again to answer the call of his profession and be engaged in war. His last campaign was fought in Korea. Till Japan was defeated, Korea was her colony. In the summer of 1950 North Korean Communists were threatening to attack South Korea. On 25 June 1950 the expected North Korea assault started. They soon captured Seoul, the capital of South Korea. MacArthur was suddenly given the task of defending South Korea. MacArthur mobilized his forces with lightning speed and airdropped one division around Pusan. The presence of American ground troops imposed caution on the North Koreans and they halted their advance to bring up their heavy artillery and other equipment. This enabled MacArthur to gain ten precious days for bringing in his remaining ground forces from Japan. The battle for Pusan continued for two months in July and August during which the offensive potential of the North Korean Army was blunted.

24. In September, MacArthur was planning a counter-stroke. He planned an amphibious landing at Inchon, the second largest port in Korea and only 20 miles from Seoul. The seizure of Inchon and Seoul would cut the enemy’s supply line and seal off the entire southern peninsula. The brilliant landing at Inchon on 12 September, personally supervised by the Supreme Commander, was a complete success. Seoul was quickly captured and the enemy’s supply and communications were completely cut off. Within a month over 1,30,000 prisoners were taken and the North Korean field army was virtually destroyed. MacArthur now raced towards the North capturing Pyongyang the capital of North Korea on 20 October. On 27 November Communist Chinese started their massive invasion of Korea across the Yalu bridges. Against the massive Chinese onslaught and because of hampering restrictions from Washington, MacArthur was forced to withdraw. The Chinese offensive having outrun its initial impetus, MacArthur now launched a limited counter-offensive. He established the front on the 38th parallel.

25. On 11 Apr 1950 President Truman relieved Gen MacArthur of his command in Far East. MacArthur left Tokyo at day break on 16 April 1950 to return home to America. There was a hero’s departure for him at Tokyo with 2 Million Japanese lining his route and a still greater welcome for him on return to America. The period of MacArthur’s retirement ended after 14 years. At last the final roll call came in 1964 and the great soldier faded out of life leaving behind a legacy of un paralleled greatness.

**MacArthur as Leader**

26. The wide and varied canvas of life of MacArthur establish him as a unique figure of modern history. Seldom has any soldier been an heir to such a rich family heritage and made it so much richer, by his own achievements. From his earlier days, he stood out as a man of destiny to whom rank and honours would come if merit could bring them to any man. His life was one long record of unbroken and outstanding success. Even during adversities, whether during the siege of Bataan or on dismissal from Japan, success appeared to smile on his fortunes, adding luster to his name and fame.

**Personal Qualities**

27. A deeply religious man, MacArthur upheld a high sense of values. His faith in God always remained unshaken and he made constant reference to the Supreme Being on all important occasions in his life-on the fall of Bataan, at the liberation of the Philippines, at the surrender of Japan and in his address to the American Congress. Whether as a cadet at West Point or in later life while dealing with several heads of State, MacArthur’s personal conduct was always unimpeachable. On a matter of a principle he was not prepared to make any compromise. As a cadet, at the risk of his career he refused to disclose to a Presidential Enquiry Committee, the name of senior cadets guilty of ragging. And again as the Army Chief, he staked his career with President Roosevelt on the issue of retrenchment of the officer cadre.

28. Intensely devoted to his family, MacArthur had a human approach to his fellow being. He was deeply attached to his mother who lived with him after his father’s death. As Army Chief, he avoided social functions in Washington to be able to spend his evenings with his old and ailing mother. He would not accept the assignment of Military Adviser in Philippines till he was assured that his mother could accompany him. His father died in 1912 while addressing a veteran’s rally. Half a century later when he himself was nearly 80 years old, he wrote about his passing away with a pang, “My whole world changed that night. Never have I been able to heal the wound in my heart”. He was also deeply attached to his wife Jean and their only son Arthur. They went through the siege of Bataan with him and later shared in his glories. In 1943 he was named as the father of the year in the USA for his devotion to his son. On receipt of intimation conferring this distinction on him, he wrote, “By profession I am a soldier and take pride in that fact, but I am prouder, infinitely prouder to be a father. A soldier destroys in order to build; the father only builds never destroys. The one has the potentialities of death; the other embodies creation and life. And while the hordes of death are mighty; the battalions of life are mightier still. It is my hope that my son when I am gone will remember me not from the battle, but in the home, repeating with him our simple daily prayer -Our Father thou art in Heaven”.

29. His attitude to his fellow beings was commendable. Even during the colonial era of pre-second world war days, he realised racial superiority was an outmoded concept. His treatment of Fillipinos on equal terms won him their love and regard. With his long experience of service in the East, he realized that the people of the Orient wanted to shake off the shame of subjugation and demanded the dignity of equality. This realisation stood him in good stead while ruling over Japan.

30. MacArthur had a remarkable style of speaking and writing, The language used by him on important occasions was truly sublime, expressing great and noble ideas in the most appropriate manner. His speech after the Japanese surrender on board the Missouri was hailed as the greatest speech after Lincoln’s Gettysburg address. His address to the American Congress on being relieved of command in Japan, is a unique piece of literature. Similarly his farewell address to the Cadets at West Point bore the hall mark of his genius. In the same class may also be ranked his speech to the Philippine Congress at the fifteenth anniversary of their Independence. He spoke, “The tide of world affairs ebbs and flows in and out. Old empires die, new nations are born, alliances arise and vanish. But through all this confusion the mutual friendship of our two countries shines like a beacon in the night. Together we suffered in war. Together we seek the peace. And in this long twilight era, that is neither war nor peace, we stand as firmly as before, together”.

**Military Leadership**

31. His military leadership can be viewed from different angles-personal bravery, combat leadership in battle, strategic direction of campaigns and breadth of vision. In all these spheres, he showed a touch of genius. His encounter with Fillipino guerillas, the deep reconnaissance carried out by him at Vera Cruz, his leading the attack at Cote-de Chatillon in France when he was suffering from gas wounds, his response to a hold up while on the road to West Point, his landing at airfield in Japan and his reconnaissance of the Yalu river in an unarmed aircraft were all examples of personal bravery of an outstanding nature. The young subaltern in the Philippines was just as much regardless of physical danger as the 70 years old Supreme Commander of the United Nations in Korea.

32. He was the guiding force of the Rainbow Division in the First World War both as its Chief of Staff and later as one of the Brigade Commanders. He repeatedly displayed skill and bravery of the highest order in combat leadership. He led his troops in battle by his personal example and won several gallantry decorations. Both American and The French Army Commanders referred to him as the finest and bravest officer they had ever seen. His divisional commander said that he had commanded larger bodies of troops in the battle line than any other officer of the American Army. It was primarily on the basis of his achievements as a leader in battle that even before the Second World War, President Roosevelt referred to his record in war and peace as a brilliant chapter of American history.

33. The Second World War gave MacArthur an opportunity to show his genius in the strategic sphere. His decision to side-step into Bataan avoiding the Japanese trap closing on him in Central Philippines, his decision to defend Australia in the mountains of New Guinea, his concept of island hopping operations leading to the destruction of several Japanese armies with comparatively much less casualties of his own forces , and finally his brilliant landing at Inchon destroying the North Korean field army prove that he was a great master of war. Many renowned world authorities have acknowledged his military greatness. Lord Alanbrooke the famous British Chief of Staff who had been critical of American commanders wrote of him, “MacArthur was the greatest General and the best strategist that the war produced. He certainly out shown Marshall, Eisenhower and all other American and British Generals including Montgomery. As a fighter of battles and as a leader of men, Monty was hard to beat, but I doubt if he would have shown the same strategic genius had he been in MacArthur,s position ………….. I am convinced that, as the war can be viewed in better perspective, it will be agreed that the strategic ability shown by MacArthur was in a class of its own”. Similarly, that great military analyst and thinker, Liddel Hart wrote, “MacArthur was supreme among the Generals. His combination of strong personality, strategic grasp, tactical skill, operative mobility and vision put him in a class above other allied commanders in any theatre”. MacArthur,s personal bravery, his leadership in combat and his conduct of campaigns were brilliant in every way. He also combined with all these a rare breadth of military vision. After the first world war, he was quick to perceive the requirements of a modern officer in a citizens’ army and accordingly oriented the training of cadets at West Point. He also realized the importance of the air arm in the inter-war years and was its strong exponent. He foresaw the coming of the Second World War as the US Army Chief, and did his best to prepare his country and his army for it.

34. MacArthur was a legendary figure with varied and outstanding achievements in different spheres. He served his country as an active soldier for over half a century participating in numerous campaigns and battles on three continents. If awards and honours can be measure of judging his achievements, then he easily stands head and shoulders above any other soldier of this century. Philippines made him a Field Marshal, Australia awarded him the Pacific Star, Japan conferred upon him the Grand Cordon of Rising Sun, France decorated him with the Legion of Honour and Britain made him a Grand Knight Commander. His own country gave him the Medal of Honour, the highest award for personal gallantry. Besides this supreme award he won the Distinguished Service Medal for gallantry five times and the Silver Star for gallantry seven times. The US Congress presented him with a vote of thanks of the nation and had a gold medal struck in his honour bearing his effigy and with the following words inscribed on it:

“ Soldier of America ; Protector of

Australia; Liberator of the Philippines;

Conqueror of Japan; Defender of Korea.”

**BIOGRAPHY OF FIELD MARSAL SAM MANEKSHAW**

**Early Years**

1. Sam Hormusji Framji Jamshedji Manekshaw was born on 3 April 1914 into the Manekshaw family at Amritsar. His father Captain Hormusji who saw service with the Royal British Army as a "Medical Officer" in the Middle Eastern region of Messopotamia during the "First World War," had come to Amritsar from Bombay where his medical practice did not flourish too well! At Amritsar, Dr. Hormusji started a medical practice and a chemist shop/pharmacy, where his prescriptions were formulated, so that his patients could have easier access to medication especially when pre formulated patented drug formulations were few and far between!

2. Although he had promise, Dr Manekshaw felt that this son, Sam, who had passed the Senior Cambridge examination with distinction from "Sherwood" in Nainital at the age of 15 years, was not yet ready to be on his own in England for further studies. He was therefore admitted to the Hindu Sabha College, Amritsar. In 1931, when the practice of training Indian Officers at "The Royal Military Academy" at Sandhurst in England came to an end and India had its' own Military Academy set up in Dehra Dun, Sam was amongst the first batch of Indians to qualify in the examination to gain admission and enroll into the "Indian Military Academy" at Dehra Dun. He joined the Academy on 30th September, 1932. Being a good tennis player, he was appointed the Captain of the "Academy Tennis Team" and was awarded the "Tennis Blue" on 12th October 1933.

3. On passing out from the Academy he was commissioned into the Indian Army as a Second Lieutenant in "The Frontier Force Regiment" on 4th February 1934. The "First Course" with which Sam passed out, gave three chiefs to three Armies! They were, General Sam Manekshaw-Indian Army, General Mohammed Musa-Pakistan Army and General Smith Dun- Burmese Army. On completion of his attachment, as was customary then, with a British Infantry Battalion, the 2nd Battalion the Royal Scots, he joined the 4th Battalion, 12 Frontier Force Regiment, also known as the 54th Sikhs. After partition of India, this Regiment opted to join the Pakistan Army.

**Second World War**

4. In the Second Great War, he saw service with his unit on the Burma front as a part of the famous 17 Infantry Division. On 22nd February 1942, Sam was wounded while gallantly leading his company to capture a vital enemy position, when he took the impact of a burst fired from a Japanese machine gun in his stomach and body. He was taken to the "Regimental Aid Post" from where the regimental medical Officer, Captain GM Diwan, evacuated him to the Hospital at Pegu. Here the surgeon who examined him asked him what had happened. Sam told him, "I was kicked by a bloody mule!" Hearing this response, the surgeon laughed and said "Given your sense of humour, it will be worth saving you!" After being operated upon, he was evacuated to Rangoon, from where he sailed for India in one of the last ships to leave that port before it fell to the Japanese. For this act of gallantry he was awarded the "Military Cross".

**Various Appointments**

5. Once discharged from the hospital and reunited with his family after a long separation, Sam was detailed to attend the "8th Staff Course", at the Staff College Quetta (In Pakistan) from 23 August 1943 to 22 December 1943 in the rank of a temporary Major. On completion of the Staff College Course, he was posted as the "Brigade Major", (BM) a critical appointment, to the "Razmak Brigade" in Waziristan close to the North Western Frontier Province, now in Pakistan. He remained in this job from 13 January to 22 October 1944 whereafter he was posted to 9/12 Frontier Force Rifles (FFR) in Burma (now known as Myanmar) who were then on the move astride the Rangoon-Mandalay highway as a part of the victorious 14th Army under General Slim. During the closing days of the war, he went as a staff officer to General Daisey to Indo China, where, after the Japanese surrender, he helped in the rehabilitation of over 10,000 Japanese prisoners of war. He was then posted to the Staff College Quetta as General Staff Officer, Grade -2 (GSO-2). Before he could take up this assignment, he was selected by Field Marshal Lord Claude Auchinlek, the Commander-in-Chief of India to go on a lecture tour to Australia for a period of six months in 1946. The main purpose of this tour was to bring home to the Australians, India’s war effort and the achievement of its' Armed Forces since it was perceived that this was not too well known in that region!

6. On his return from the Australian lecture tour, he was promoted to the rank of a local Lieutenant Colonel and while continuing to be on the panel of Frontier Force Regiment, he was posted to General Headquarters at New Delhi as General Staff Officer, Grade-1 (GSO-1), Military Operations-3 (MO-3) till then the sole preserve of the British Officers. He was the first Indian posted to the MO Directorate. In December 1946 when the division of assets and regiments between Pakistan and Indian Armies crystallized a little, and it became clear that the Frontier Force Regiment would remain with Pakistan, Sam was empanelled on the panel of 16th Battalion of The Punjab Regiment, and posted as GSO-1, MO-1. Here he served from 1st January 1947 to 21 July 1947. On 15th August 1947, when India became independent, Sam was transferred to the panel of the 5th Royal Gorkha Rifles, (FF) and was posted to command the 3rd Battalion of the 5th Gorkha Rifles. However, before he could proceed to take over this Battalion, Pakistani tribals with the help of Pakistan Army had attacked parts of Kashmir and managed to reach close to Srinagar. Considering the operational situation, his posting to command the Battalion was cancelled and he continued to serve with the MO Directorate as GSO-1 (Ops) at Army HQ. It was thus that the future and first Field Marshal of the Indian Army was denied a chance to command a Battalion in the Army! This has always been disappointing for him.

7. At the time of these operations, Sam Manekshaw , had a ringside view of events. Then a Lieutenant Colonel, he accompanied V P Menon on his historic mission to Kashmir, to get the then ruler of the State of Jammu & Kashmir, Maharaja Hari Singh to sign the "Instrument of Accession" and accede to the Indian Union. Later he was granted the acting rank of a Brigadier and appointed Director, MO (OPS). Sam continued in this assignment till 10th March 1952. During this trying period, Sam had numerous opportunities to interact with Sardar Vallabh Bhai Patel who was the Home Minister in the Union Government. The Sardar was constantly in touch with Sam seeking update on the operations in Kashmir, Hyderabad and so on and in the process both got to know each other well.

8. In 1948, Sam and Thimayya, then a Major General, were a part of the Indian Delegation to the UN, led by Sir BN Rau, as military advisors. It was here that he first met Mrs. Indira Gandhi, who was on board the same ship along with her father, Pandit Jawahar Lal Nehru, the Prime Minister of India, sailing to Paris.

9. In March 1952, Sam was posted to Ferozepur in command of 167 Infantry Brigade. It was his first command assignment after the war. In 1953, he was appointed Colonel of the 8th Gorkha Rifles. Having finished with the command of the brigade, Sam was posted to the Army HQ as "Officiating Director of Military Training" (DMT) from April 1954 to January 1955. In May 1955, Brigadier Sam Manekshaw was posted as Commandant to the Infantry School. He was the first Indian to be posted to that Institution.

10. In November 1956 Sam left for the UK to attend the course at the "Imperial Defence College" (IDC) till December 1957. On completion of this course and his return in December 1957, he was posted to command 26 Infantry Division at Jammu. He took over the Division from Major General PP Kumaramangalam, DSO, who was posted to the Staff College at Wellington as Commandant. It was here, at Jammu, that a life-long friendship developed between Sam and Mr DP Dhar, who was then a minister in the State Cabinet of the State of Jammu & Kashmir. After command of the Division Sam was posted to the Staff College at Wellington to replace General Kumaramangalam. While commanding the Staff College, he was cleared for his next rank. Sam was appointed to command 4 Corps after General Kaul resigned in the walk of the Chinese war.

11. General Manekshaw was appointed GOC-in-C Western Command with it’s Headquarters at Simla after the tragic death of Gen Daulat Singh in a helicopter crash in Poonch in J&K, in November 1963. He assumed command of Western Command on 4th December 1963, and moved to replace Gen Kumaramangalam in Eastern Command in 1964 yet again. On 8th June 1969, Sam took over as the Chief of Army Staff, once again from General Kumaramangalam, where apart from other contributions his finest hour was the surrender of the Pakistan Army in Dacca in 1971. In recognition of his service to the nation, he was appointed as the first "Field Marshal" in independent India on 1st January 1973.

**Highlights of His Career**

12. In 1942 at the height of the World War II a fierce battle was raging in Myanmar, then Burma, at the Sittang Bridge. A company of the Indian Army was engaged in hand-to-hand combat with the invading Japanese forces for the capture of a position, which was critical for the control of the bridge. The young company commander was exhorting his troops when his stomach was riddled by a machine gun burst. Afraid that his company would be left leaderless if he were evacuated, he continued fighting till he collapsed. His company won the day and the general commanding the Indian forces arrived at the scene to congratulate the soldiers. On seeing the critically wounded commander, he announced the immediate award of the Military Cross-the young officer was not expected to survive much longer and the Military Cross is not awarded posthumously. Thus began a historic military career that spanned the Indo-Pak wars and the Sino-Indian conflict, the wounded captain surviving to become India's first Field Marshal.

13. In 1947 when Pakistan invaded Kashmir, Sam Manekshaw was the Colonel in charge of operations at the Army Headquarters. His incisive grasp of the situation and his acumen for planning instantly drew the attention of his superiors and Manekshaw's rise was spectacular, though not without controversy. He was outspoken and stood by his convictions. This, coupled with his sense of humour, often got him into trouble with politicians.

14. In 1961, for instance, he refused to toe the line of the then defence minister V.K. Krishna Menon and was sidelined. He was vindicated soon after when the Indian army suffered a humiliating defeat in NEFA the next year, at the hands of the Chinese, resulting in Menon's resignation. Prime minister Jawaharlal Nehru rushed Manekshaw to NEFA to command the retreating Indian forces. This had an electrifying effect on the demoralised officers. In no time, Manekshaw convinced the troops that the Chinese soldier was not "10 ft tall". His first order of the day characteristically said, "There will be no withdrawal without written orders and these orders shall never be issued". The soldiers showed faith in their new commander and successfully checked further ingress by the Chinese.

15. The Indo-Pak war of 1965 saw Manekshaw as Army Commander, Eastern Command. When India was forced to launch operations in the West, Manekshaw was against attacking in the East since the main sufferers would be the people of East Pakistan. The wisdom of his advice dawned when the Indian forces fought the Pakistan army in East Pakistan in 1971.

**Victory in 1971 War**

16. Victory in the 1971 War was Manekshaw's finest hour. As Army Chief and Chairman, Chiefs of Staff Committee, he planned the operation meticulously refusing to be coerced by politicians to act prematurely. His strategic and operational finesse was evident when Indian pincers cut through Pakistani forces like knife through butter, quickly checkmating them. When the Prime Minister asked him to go to Dacca and accept the surrender of the Pakistani forces, he declined, magnanimously saying the honour should go to his Army Commander in the East. He would only go if it were to accept the surrender of the entire Pakistan Army.

17. Manekshaw's competence, professional standing and public stature was such that the politician and the bureaucrat alike crossed his path only at their own peril. On one occasion, he found that the Defence Secretary had penned his own observations on a note he had written to the Prime Minister and Defence Minister. Infuriated, Manekshaw took the file and walked straight into Mrs Gandhi's office. He told her that if she found the Defence Secretary more competent than him to advise her on military matters she did not have a need for him.

18. As a commander, he was a hard taskmaster. He encouraged his officers in the face of adversity but did not tolerate incompetence. That is perhaps Manekshaw's greatest contribution, to instil a sense of duty, efficiency, professionalism in a modern Indian army and to stand up to political masters and bureaucratic interference.

19. In a way, he was following the path of army chiefs, Gen K.S. Thimayya and Gen K.M. Cariappa. A humane but strict General, there are many tales of the power of his whiplash. Following Pakistan's surrender in the east, Manekshaw flew into Calcutta to compliment his officers. The ceremonial reception over at Dum Dum airport, he was escorted to a car - a Mercedes captured from the enemy. Manekshaw refused to sit in it, leaving the officers red-faced. On another occasion, a general accused of misusing funds was marched up to him. "Sir, do you know what you are saying?" asked the general. "You are accusing a general of being dishonest”. Replied Manekshaw: "Your Chief is not only accusing you of being dishonest but also calling you a thief. If I were you I would go home and either shoot myself or resign. I am waiting to see what you will do". The General submitted his resignation that evening.

20. **Land Marks**

1914: Born in Amritsar.  
1933: Joins the Indian Military Academy.  
1934: Commissioned into the army.

1947: Pakistan invades Kashmir. Is Colonel in charge of operations.

1962: Sent to NEFA to check further Chinese intrusion.  
1965: Commander, Eastern Command during the Indo-Pak war.

1969: Appointed Chief of the Army staff.  
1971: Indo-Pak war. Steers India to victory, and Bangladesh is created.

1973: Given the rank of Field Marshal.

**CHAPTER-VI**

**COMMUNICATION**

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**SECTION-1**

**IMPORTANCE OF COMMUNICATION IN ARMY**

**Introduction**

1. The information age is experiencing dramatic increase in Technology. Any kind of information can be conveyed within second to the concerned. In modern warfare the organization of the army has became so complex and its mobility so enhanced that commanders and staff officers have to depend primarily upon signal communications for exercising command and control of the forces. Efficient signal communications are therefore vital.

**Importance**

2. Battle field activities require frequent communicating between commanders and troops to achieves the desired result. Importance of communications is becoming a imager ingredient of modern warfare and it is important in army for the following reasons:-

(a) Communicating between deployed troops and commanders.

(b) Convey the details of enemy troop movements and their activities.

(c) To change the mode of battle activities.

(d) To implement emergency instruction in battle field.

(e) To convey specific orders in terrain and snow bound area.

(f) For effective operational changes in battle field.

(g) To acquire and decipher the information and misinformation of enemy.

(h) To prepare the troops for further operational activities.

(j) To assess grounds level effect of operational activities.

(k) To improve infrastructure facilities in battle field.

(l) To carry out secure and effective communications with precaution and privacy.

(m) Communication supply of food and evacuation of casualties.

**SECTION-2**

**METHOD OF COMMUNICATION**

**Introduction**

1. Communication is the easy transportation and transmitting of thought, idea and action from one individual to another and his reception and understanding of the same in the same form. Human beings with their higher intellect have successfully developed and evolved various forms of communications like, sign language, voice, written script, line transmission, radio wave, space wave and highly complex digital communication forms. The human race have been able to make the unthinkable possible and made the world a smaller place in terms of communications. There are various method of communications which have been discussed in the succeeding paragraphs.

**Sign Language**

2. The oldest form of expression was the sign language. This would have been understood and communicated even before the various forms of written scripts were developed. In conjunction with the sign language is the body language which even today has formed a part of psychological studies.

**Voice Medium**

3. The development and graduation of sign to voice has also evolved, as voice is a very powerful means of communication, however this had its own disadvantages of limited reach. This was further restricted because of the loudness, pitch and ability of the speaker/ transmitter and the hearing ability of the receiver. It is also effected by other factors such as interference of surrounding sounds, noise pollution, echoing and attentiveness of the listener.

**Written Script**

4. Once languages were formulised and some commonality in understanding of each other had been achieved, it appears that written script made a beginning. The earliest form of written expression can be found on the rock engravings of ancient scritpures in pictorial form. This gradually developed into alphabetic form and written script.

**Runners and Message Bearers**

5. Once the script had been evolved, messages could be communicated from the one person to another in written form. These messages were delivered by human runners or also by means of animals like pigeons, monkeys horse, parrots etc.

**Line/Cable**

6. The invention of telephone by Graham Bell revolutionised the world of communications as individuals were able to speak directly to each other. The voice being passed through a mouth piece converted into electronic means and passed down on a cable / line and received at the other end and converted back into voice and heard through an ear phone.

**Wireless**

7. Marconi invented the wireless and discovered that sound could be transmitted by sound waves through space. He invented the Morse code for passing messages in code which were first coded into Morse code and transmitted through a transmission devise and sent into space and received at the other end by a reception device. The person receiving the message decodes it back into message form and the message is delivered. Along with this the use of radio sets were as also developed and this became the basic means of communication for the army in mobile warfare and being used in places where static means of communication is not possible.

**Electronic and Digital Analog**

8. The rapid development and progress in electronics brought about the concept of digital analogs, and today communication can be done by transmission and by use of digital technology with a click of a mouse.

**SECTION-3**

**TYPES OF COMMUNICATIONS,**

**ADVANTAGES/DISADVANTAGES**

**Introduction**

1. There are two types of communications - Line communication and Radio communication. These are discussed in succeeding paras.

**Line**.

2. This is the basic means of signal communications for a force which is static. A telephone is by far the best means of signal communication between individual officers, and telegraph circuit is the best means of clearing of messages. Line communication is provided by use of field cable, permanent lines and underground or submarine cables. Use of carrier and voice frequency telegraphy equipment provides more than one speech and / or telegraph channel with one pair of line.

3. **Advantages**

(a) Reliable and practically free from electrical interference.

(b) Relatively secure.

(c ) Number of circuits and message carrying capacity is more but limited only by availability of material and manpower.

4. **Disadvantages**

(a) Vulnerable to physical interference and enemy interception along the entire length of the route.

(b) Takes time to construct.

(c ) Inflexible once it is laid.

(d) Expensive in men and material.

**Radio Communication**

5. Radio communication involves Net Radio and Radio Relay.

**Net Radio**.

6. Net radio is the basic means of signal communication for any mobile force. It provides facilities for the following:-

(a) Radio Telephony – Simplex, depending on the type of equipment available.

(b) Radio telegraphy for transmission of message and key conversations.

(c ) Use of Tele printers over radio transmission.

7. Efficiency of net radio communication is appreciably affected by factors such as weather, terrain, power out put of the set, state of training of operators and equipment maintenance.

8. This can be operated in the High frequency (HF) or Very High frequency (VHF). VHF band is the most common form of field radio equipment in use in many armies today.

9. **Advantages**.

(a) Is vulnerable only at terminal and is therefore reasonably protected from enemy action except by a direct hit.

(b) Is very flexible, can be rapidly re-arranged in the event of regrouping.

(c ) Is rapid in establishing communication.

(d) Can work on the move although range obtained will be much less than when stationary.

(e) Is economical in personnel and equipment.

10. **Disadvantages**

(a) Is inherently insecure and susceptible to enemy interception which necessitates the use of codes and ciphers with a consequent delay in clearing traffic and overall increase in operating personnel.

(b) Net radio being inherently insecure demands a considerable degree of security consciousness on the part of the users. This means adherence to standard procedure and security codes.

**Radio Relay**

11. Radio relay implies that a series of radio transmitters and receivers normally spaced between 20-35 Kms apart and are used to provide point signal communication. Radio relay transmission and reception at each terminal take place on separates frequencies and therefore no send/ receive switching is necessary. It is duplex link and can therefore be connected to link ordinary line circuits to telephone or telegraph exchanges.

12. **Advantages**

(a) Replace line with considerable economy of manpower and stores.

(b) It can be operated over area where for reasons of ground or enemy activity use of line may not be possible.

(c ) Provides greater flexibility than line.

(d) Quick to set up and move except in mountainous country.

(e) Is vulnerable physically only at terminal.

(f) By its ability to employ multichannel equipment radio relay provides more teleprinter circuits over one link than can normally be provided over the average field cable. Thus it has much greater traffic handling capacity.

13. **Disadvantage**

(a) Liable to interception and hence insecure. Has relatively greater security than net radio, depending upon the siting and direction of the beams.

(b) Liable to interference from enemy jamming although not as much as in the case of net radio.

(c) Terrain between stations must be reasonable suitable to get a ‘quasi optical path’, this presents difficulty in siting.

(d) Location of terminal and intermediate stations may not suit tactical layout and may, therefore, create additional protection requirements.

(e) Can not work on the move.

(f) Slightly more expensive in men and material than in the case of net radio.

(g) Needs critical siting.

**SECTION-4**

**COMMUNICATION MEDIA**

**Introduction**

1. The mode of transmission is chosen depending upon the frequency and application. These can be transmission lines or propagation through free space.

**Transmission Lines**

2. The line is a means of guiding electric energy from one place to another i.e. transmission (Tx) to reception (Rx) or powerhouse to consumption point etc. It comprises of two conductors so arranged so as to transfer electric energy with maximum efficiency. These can be of three types namely:-

(a) Parallel Wire type

(b) Coaxial type

(c ) Wave Guide type

3. **Parallel Wire Type.**  Also known as open wire line. These can be used up to the frequency range of 200 MHz.

4. **Coaxial Type**. It consists of one conductor as a hollow tube and second conductor located inside it. These are used at UHF, Microwave frequency up to 18 GHZs.

5. **Wave Guide Type.**  These are hollow conducting tubes of uniform cross section used for UHF transmission by continuous reflection from the inner walls of the wave guides. These are used for frequencies above 1 GHZs.

**Propagation of Wave**

6.The mode of propagation of electromagnetic waves (EMW) from transmitter to receiver depends upon the frequency employed . These can be of following types:-

(a) **Ground Wave Propagation**. Used for long and medium waves, limited range is 30 Kms.

(b) **Sky Wave Propagation**. Used for HF range up to 30 MHz communication, range is 100 km to 1000 Kms. These make use of ionosphere layer existing to a height of 150 -200 kms from the surface of earth.

(c ) **Space Wave Propagation**. The propagation of VHF and UHF frequency takes place in straight lines. The range is limited by curvature of earth and so distance between two neighboring station is approx 50 Kms.

(d) **Tropospheric Scatter Propagation**. Also known as tropo scatter or fwd scatter propagation, extended height up to 8-10 Kms from the surface of earth.

**SECTION-5**

**RS ANPRC-25**

**General Description**

1. Radio Set ANPRC-25 has been manufactured by Bharat Electronics Ltd, Bangalore. This is a VHF FM Radio set which can be used for communication.

**Facilities and Special Features**

2. Facilities are as follows :-

(a) It is a portable set.

(b) It has RT communication facilities.

(c) Can be used on ground and man pack.

(d) Facilities of remote operating and re- broadcasting is available.

(e) Power supply can be increased with booster unit to increase the communication range.

(f) Protection from Heat and Moisture.

(g) VHF is pre-tuned.

(h) Suitable for Para Dropping.

(j) Compatible with RS VA and VA Mk II and VC.

(k) Range will be doubled when it is used with GPA.

(l) Can be used in all type of geographical areas.



**Control Panel of ANPRC- 25 Set**

3. **Weight & Measure**

(a) Measurement

(i) Radio Set - 28 cm x 10 cm x 28 cm.

(ii) Battery - 24 cm x 7 cm x 5.5 cm.

(b) Weight

(i) Radio Set - 6.10 Kg.

(ii) Battery - 1.60 Kg.

(iii) Accessories - 3.08 Kg.

(iv) Complete Station - 10.78 Kg.

4. **Frequency Range**

(a) Frequency range of this set is 30 MHz to 75.95 MHz which is fixed with two

bands.

(i) Band I - 30 MHz to 52.95 MHz

(ii) Band II - 53 MHz to 75.95 MHz

(b) Its frequency range is connected with 920 channels. Channel spacing from one channel to another channel is 50 KHz.

**Communication Range**

5. (a) With antenna AT 892 - 8 Km.

(b) With Antenna AT 271 - 8 Km.

(c) With booster Unit - 25 Km

(d) With GPA with Booster - Range becomes double.

**Power Supply Consumption**

6. Battery Dry HT/LT 15/3 V IA. Life of this battery is in the ratio of 1:9 for 20 hrs, in which transmission can be done for one hour and message can be receive for 9 hrs.

**Construction**

7. The set is enclosed in a metal case. Bracket is provided on both sides to hold. Control panel is fixed with set case with the help of screw. Rubber gasket is provided to protect the set from dust, water and moisture.

**Control**

8. Control panel is shown in the figure above. The controls of this set are as under:-

(a) **Function switch**

(i) OFF : To switch off the set.

(ii) ON : To start communication

(iii) SQUELCH : To reduce the volume in absence of signal

(to minimise electricity consumption).

(iv) RETRANS : For re-broadcasting.

(v) LITE : Provide light on dial.

(b) **Band Switch.** There are two position:-

(i) Band I : Frequency 30MHz to 52.95 MHz.

(ii) Band II : Frequency 53 MHz to 75.95 MHz.

(c) MHz Tuning Control : To tune the set in MHz steps.

(d) Receive/trans Frequency Dial : To show the operating frequency.

(e) Present Levers : To present two frequencies.

(f) KHz Tuning Control : To tune the steps in KHz steps.

(g) Volume control : To control the volume.

(h) Audio connecters : To connect retransmission cable or hand set.

(j) Antenna socket : To connect small or big aerial.

(k) Power connector : To provide power supply from vehicle.

**Accessories**

9. The following accessories are also provided along with the set.

(a) Antenna AT 892/PRC-25.

(b) Antenna AT 271/PRC-25.

(c) Battery Dry HT/LT 15/3 Volts IA.

(d) Hand Set H138/UYL Hand Set 5A or Hand set 189/GR.

(e) Retransmission cable kit CX 4656/GRC/IB.

(f) Bag Cotton duck CW 503/PRC-25.

(g) Support Antenna AB 591/PRC-25.

(h) Carrying harness ST 138/PRC-25.

**Method to Close Down**

10. (a) Ensure the functioning switch is kept in off.

(b) Check battery record and connect.

(c) Provide aerial.

(d) Connect Hand Set.

(e) Put on given frequency.

(f) Fix the carrying harness with RS.

(g) To send message press to talk (PTT) press the switch and announce in mike. Turn off function switch to minimise external noise.

**Dismantling the Set**

11. (a) Switch off function switch.

(b) Place the volume switch to zero.

(c) Remove Hand Set.

(d) Remove aerial.

(e) Separate battery and note down the record.

(f) Place dust cap.

**Maintenance & Safety**

12. The following points should be kept in mind:-

(a) Keep the set neat and dry and protect it from moisture. Aerial socket and plug should be clean & dry. Protect the spare battery from moisture.

(b) Ensure that the all heads are in working condition.

(c) Check the position of switches.

(d) Report the matter if there is any breakage or defect in set.

(e) Check the set by connecting it to other set.

(f) Replace unserviceable batteries by checking.

(g) Do not open the set. Gasket is placed to protect the set from dust, heat and moisture.

13. **Safety**. The following points to be borne in mind to keep the Radio set in safe condition:-

(a) Do not press the PTT switch when the antenna is detached from RS.

(b) Place the dust cap when RS is not in use.

(c) Remove dry batteries from RS if the set not in use for next 24 hrs.

(d) While removing the multi section antenna first open upper portion.

(e) Place the dummy plug on power socket when internal battery is on use.

**SECTION -6**

**CHARACTERISTIC OF WALKIE TALKIE**

**RADIO SET GP 338 MOTOROLA**

1.  **Introduction**. Radio set GP 338 is a VHF/UHF Radio. It’s frequency range is 136 MHz to 174 MHz in VHF mode and 403 MHz to 470 MHz in UHF mode and it has been divided into 8 zone with 128 channels.

**Facilities**

2. (a) It is portable and light in weight.

(b) Can be operated easily.

(c) It can be operated in VHF/UHF and 2 way simplex mode.

(d) 128 channel of this radio set can be preset into 8 zone.

(e) 16 channels can be preset into single zone.

(f) Frequency of this radio set can be programmed in 25 KHz channel space with the range of 12.5 to 20 KHz.

(g) Option of selective call facilities available.

(h) Call alert can be given to receiver station.

(j) Can select required zone.

(k) Start/stop facilities of scan operation available.

(l) Add/Delete from scan list facilities available.

(m) Menu key facilities are available.

(n) Provision of receiving signal strength indicator(RSSI) are available.

(o) Provision of name/Tone Tagging facility available.

(p) Provision of talk around indicator facility available.

(q) Provision of 14 character Alfa numerical display LCD facility available.

(r) Provision of clock/reminder alarm facility available.

(s) Audible alert tone indicator is provided.

(t) Seven programmable buttons are provided.

(u) Facility of emergency siren top button is provided.

(v) Battery gauge indicator facility is provided.

(w) Accessory connectors is provided with radio set.

(x) Provision of DTMF key pad ( Duel Tone Mute Freq).

(y) Clock and alarm is provided.

(z) Time out timer facility is provided.

(aa) Provision of battery saver.

(ab) Power level can be adjusted.

(ac) Provision of MDC-1200 signalling encode/decode (Motorola digital code).

**Weight and Measure**

3. (a) Weight and measure of this radio set is as follows:-

(b) Dimension with NI MH high cap battery - 137 x 57.5 x 37.5 mm.

(c ) Wight with NI MH high cap battery - 420 gms.

**Frequency Range**

4. Frequency of this radio set is as under:-

(a) 136 MHz to 174 MHz on VHF mode.

(b) 403 MHz to 470 MHz on UHF mode.

**Communication Range**

5. Communication range of this radio set is 4 to 5 Km and 20 to 40 Km with repeater.

**Power Supply**

6. Power supply can be provided to this radio set by the following batteries.

(a) Ni MH high cap 7.2 volt.

(b) Ni MH ultra high cap 7.2 volt.

(c) Ni Cd High cap FM 7.2 volt.

(d) Ni Cd High cap 7.2 volt.

(e) Lithium 7.2 volt.

**Bty Charging Time**

7. 1 hr for NI CD /NI MH batteries.

**Power Out Put**

8. (a) Power out put (VHF) 1 to 5 Watt.

(b) Power out put (UHF) 1 to 4 Watt.

**Model (Shape)**

9. This radio set has been divided into four portion.

(a) Top Panel.

(b) Side Panel.

(c) Front Panel.

(d) Back Panel.

**Top Panel**

10. Names and functions of the control knobs on top panel are as follows :-

(a) **On/Off Volume Knob**. This knob helps to provide power supply to radio set and to control the volume.

(b) **Channel Selector Knob**. This knob helps to apply the channel as required.

(c) **Top Button**. This button can be programmed for alert tone.

(d) **Antenna Mount**. Antenna can be fixed on it as per requirement.

11. **Side Button**. Name and functions of the large control on side panel is as under:-

(a) **Side Button 1**. This button is programmable. Radio set will work on monitoring mode on short press and in normal mode on long press of this button.

(b) **Press to Talk Switch**. Radio set will work on transmission mode when this switch is pressed and in receiving mode when released.

(c) **Side Button 2**. This button is also programmable. The radio set will work in scan mode when the switch is short pressed and will come out from scan mode when the switch is long pressed.

(d) **Side Button 3**. This button is also programmable for option mode.

(e) **Right Side Accessory Mount**. IC cable is to be connected during computer programming on this mount. The microphone is connected with air phone head . IC cable is to be connected while scrambling from palam top secrecy key . Accessory mount should be covered with dust cap when not in use.

(f) **Front Panel Programming Button**. There are a total of six buttons:-

(i) **Exit Key**. This key helps the radio set to come out from program after programming function.

(ii) **Up Key**. This key helps to step up the programme by one step.

(iii) **Menu Select Key**. Helps to select the menu.

(iv) **P-1 Key**. This key helps to lift up the programme by one stag.

(v) **P-2 Key**. This key is used for scrolling and progammes on menu mode.

(vi) **P-3 Key**. To give right move to cursor and to provide space while editing.

12. **Front Panel Key Pad**. This is an alpha numeric key pad. There are 10 keys on this pad from 0 to 9 figure. One key star and one extract key. Every key is functions in multi roll. So every key is marked as A to Z. During programming frequency selection, preparation of secrecy key, recording phone number etc can be done with the help of this key pad. It is used while filling the radio ID.

13. **LCD Display**. This is a 14 character LCD display window and 14 types of indicators are displayed.

14. **Back Panel**. The battery is fixed on this back panel of radio.

**Equipment and Accessories**

15. (a) Radio GP 388 Motorola.

(b) 7.2 volt Lithium and NI MH high cap battery.

(c) Spring action 2” belt clip.

(d) Antenna.

(e) Tri chemistry Rapid rate charger.

(f) Multi unit battery charger.

(g) Base mount antenna with 5 mtr RF cable.

(h) Ear phone head set microphone.

(j) Water proof canvas carrying pouch for GP 338 Radio.

(k) UHB.

**SECTION -7**

**LINE COMMUNICATION**

**Introduction**

1. Ten/ fifteen telephone sets are connected with an exchange. The range of communication is from 8 to 10 Kms. The telephone cables are laid on the ground and various formations provided communication through a magneto exchange.

2. The telephone sets are ‘L’, ‘F’, ‘J’ , ‘EE, 8B’. The following are common to all telephone set :-

(a) **Parts**

(i) Leather case with carrying strap.

(ii) Generator handle.

(iii) L1 and L2 Terminals.

(iv) Hand Set.

(v) Microphone and Receiver.

(vi) Pressial switch.

(vii) Cord.

(viii) Terminals for hand set.

(ix) Socket for Hand set.

(x) Cable switch for CB Exchange.

(xi) Battery Compartment.

(b) **Function of a Telephone Set**

(i) It works on magneto signaling.

(ii) Calling is done by magneto.

(iii) CB calling and clearing is done.

(iv) It provides speech communication.

(v) It works in all weather conditions.

(c ) **Power Supply.** 3 Volt DC obtained from 2 torch cells, connected, in series having 1.5 Volts is used.

(d) **Make.** These are made of iron. Tele set’s EE, 8 B and F are kept in leather cases. Tele Set ‘L’ and ‘J’ in iron boxes.

(e) **Tests**

(i) **Bell Test** *–* Short the line terminals L1 and L2 and turn the generator handle, the bell will give a sound.

(ii) **Hand set Test**. Connected the Bty, Press the pressial switch and blow into the microphone, blowing sound should be heard in the ear phone.

(iii) **Out going Test**. Connect another telephone with the telephone, ring up from one end and talk to the other Speech from one another should be heard.

(iv) **Generator Test**. Lay two fingers on L1 and L2, turn generator handle, and a shock would be felt.

**Practical Connecting Up**

3. Take two telephones sets. Keep one telephone at one place and the other a distance. Connect L1 and L2 terminal of both telephones with a wire. Tell the cadets to ring up. The bell of the other telephone should ring.

**SWITCH BOARD TELEPHONE 15 LINES**

**General**

1. This switch Board has been designated to operate in field /Operational area with either magneto, CB, CBS or auto exchanges and has the following facilities.

(a) 15 Lines can be provided.

(b) Can work with either magneto, CB, CBS or auto exchanges.

(c ) Has got both internal and external ringer.

(d) Two exchanges can be linked up to provide 30 line facility.

(e) A lamp indicator has been provided to warn the operator about an in coming call.

(f) A ringing visual indicator has been provided.

(g) Facility exists for night alarm.

(h) Apart from the dry battery, power source can be provided by secondary battery also.

(j) Lighting facility for the switch board is provided by means of specially designed lighting unit.

**Power Supply**

2. The power supply is both internal and external.

(a) Internal Battery Dry 1.5 Volt No 6X6 Cells provide a total 9 Volt voltage.

(b) External Battery secondary portable lead acid 6 Volt has been divided for internal supply into two parts.

(i) 6 Volt for Ring Relay.

(ii) 3 Volt for Speech and buzzer.

**Dimensions**

3. The dimensions of the 15 Line switch board are given below:-

(a) 3 A – 49.8 cm X 39.2 cm X 19.8 cm.

(b) 3 B - 50.5 cm X 39.5 cm X 21.3 cm.

(c ) Weight – 22 Kgs. Dial unit weight 1 KG.

**Design**

4. The switch board for safety has been packed in a synthetic case and to protect various instruments for damage the switch board has a lid which opens in two parts. To protect it from dampness and dust a rubber gasket seals the packing material.

**Consumption of Electricity**

5. The consumption of electricity for different functions is:-

(a) 220 mA for ringer at 6 V DC.

(b) 30 mA for indicator at 6 V DC.

(c ) 180 mA for night lamp at 6 V DC.

(d) 30 mA for Night Alarm buzzer at 3 V DC.

**Name of Parts and Their Functions**

6. The switch board has been divided into two parts i.e. front panel and back panel.

7. **Front Panel**. On opening the front lid the panel is visible. The controls fitted in it are as under:-

(a) **SPK/Ring Back forward Key**. Used to ring the caller/ subscriber. To ring the caller the position of the SPK key is “back” and to ring the subscriber the position is “forward”.

(b) **Ring Ext/Ring Int.** To ring the caller is pressed downwards. In case internal ringer is not working external ringer is used but the position of the key will be set on external.

(c )  **Circular Hand Set Connector 4 Ways**. The socket is utilized for operating the hand set by firstly plugging it in and then tightening it like a screw.

(d) **Coupling Key**. Is utilized when two exchanges are linked up.

(e) **Cord Test Jack**. To check the cord of a unit this jack is used.

(f) **Light on /off switch**. For night use.

(g) **Ring Indicator lamp**. Reveals to the operator that the ring is being received by the subscriber by glowing.

(h) **Speak/Monitor Key**. Has three positions of speak, normal and monitoring. During attend, the call key position is in SPK. To monitor the call key position is on MON. When the call is through, key is in normal position.

(j) **L E D (Light Emitting Diode)**. LED is of red colour and it indicates incoming calls.

(k)  **Jack**. Is used to insert the plug.

8. **Back Panel**. Is visible after opening the back lid. The controls are as under:-

(a)  **Subscriber Line Terminal**. Utilised for joining outside lines. A total 30 pairs of lines can be joined.

(b) **External Ringer Output Terminal**. Is put on the terminal when external ringer is required to be used.

(c ) **Earth Terminal**. Used to earth the switch board.

(d) **Battery Switch**. Has two position External and Internal. Internal Battery is used as power supply when the position of the switch is on INT and in case external battery is used the position is on EXT.

(e) **Twin Jack Assembly**. Two jacks are used when two exchanges are coupled. One jack for coupling the exchange and the other for fitting the dial unit.

(f) **Parking Jack**. To Park auto call (available only in switch board 3 B)

**Essential Equipment to make the System Viable**

9. To make the system functional the following equipments is required:-

(a) Switch Board - 1 (one)

(b) Hand Set 5 A - 1 (one)

(c ) Braided copper lead - 1 (one )

(d) Cell dry 1.5 Volt No 6 - 6 (six)

(e) Dial Unit telephone 1 A - 1 (one)

(f) Pin earth small - 1 (one)

(g) Adjustable web strap - 1 (one)

(h) User hand Book - 1 (one)

**Supplementary Accessories**

10. The supplementary accessories are:-

(a) Power ringer - 1 (one)

(b) Telephone set - 1 (One)

(c ) Patch Cord 70 cm - 1 (one )

(d) Cell dry 1.5 Volt No 6 - 6 (six)

(e) Battery secondary lead acid 6 Volt - 1 (one)

**Functional Check**

11. After setting up the switch board, the following functional checks are to be carried out :-

(a) Check the operator’s lighting unit by switching ON the toggle switch marked ‘LIGHT’.

(b) Check that the COUP SW is in appropriate position (i.e. put on when internal telephone is used).

(c) Check the operator’s telephone circuit by putting any one spk/mon key to SPK position and by blowing into the microphone and listening to the side tone.

(d) Check all the SPK/MON keys, in turn by putting them to ‘SPK” position, blowing into the microphone and listening to the side tone.

(e) Test all the cords /line circuits, in turn by plugging into cord test jack in the operator’s unit and pressing down the Ring key. Indicator diode lights up if the cord /line circuits are all right in the relevant line-cum cord unit.

(f) Check the night alarm circuit by switching ‘ON’ the toggle switch parked ‘NA’ when performing the test mentioned under sub para (e) above. The buzzer shall Buzz.

(g) Test each extension for correct functioning by ringing them. Ringing visual indication confirms outgoing ring. When the subscribers answer, ask them to ring back, the LED should glow. If the subscribers answer and if the speech and ring are through both ways it proves correct functioning.

**TELEPHONE SET FIELD 5A/5B**

**General**

1. This is light weight instrument which when used on cable WB-1 (twisted) has an optimum range of 30 Kms with a line loss of 40db ‘L’ position 20 %.

**Characteristics and Functions**

2. The telephone set Field 5A/5B has the following functions and advantages:-

(a) Facility exists for installing a autodial and hooking with an auto exchange.

(b) Facility for line test exists.

(c ) A device has been installed in the micro phone for noise cancellation.

(d) In H position the range of the telephone is increased considerably.

(e) Facility exists on the both 5 A/5 B for remote operating.

(f) Made of superior magneto and can function with CB/CBS exchanges.

**Power Supply and Consumption.**

3. It is powered by 2 X 1.5 Volt No 3 cells or 3 V external batteries and the power consumption of set 5 A is 20 mA and set 5 B is 15 mA. It can receive and sent signal waves with a bell due to generator.

**Dimensions**

4. The sets are made of nylon fabric and designed to fit a soldiers pouch. The dimensions are given below:-

**Type**  **Length** **Width** **Height** **Weight**

Cm Cm Cm Kgs

5A 22.5 8.0 11.6 2.35

5B 23.0 9.5 11.5 2.50

**Parts and Function**

5. The name of parts and their functioning are given below:-

(a) **Hand Set.** It is linked with the main body

(b) **Cradle**. Has been designed to function with CB- CBS exchange. On lifting of the hand set from the cradle a ring is heard at the CBS exchanges.

(c ) **Line Terminal**. They are two in number and are used to join the outside lines with that of exchanges.

(d) **HLR Switch**. This is a system which has three position of High, Low and Remote.

(e) **Battery Compartment**. Is used to store and link 2 X1.5 V Cells.

(f) **TLR Screw**. 5 A - A total of 6 screws utilized when in use for auto dial or magneto exchange. This facility is not available with Telephone set 5 B.

(g) **Method of Line Test**. Put the R position on system switch (HLR switch) and put the hand set on the cradle. Link the line to be tested with the terminals and rotate the generator handle.

(h) **Broken Line**. If the line is broken the following will take place during line test :-

(i) Generator handle will move freely.

(ii) Bell will not ring.

(iii) Speech communication will not take place

(j) Short circuit can be detected by the following during line test:-

(i) Generator handle will move stiffly (Hard).

(ii) Bell will not ring.

(iii) Speech communication will not take place.

(k) **Earth**. In case of earthing during line test the generator handle will move a bit, will ring with pauses and communication will be faint.

**Maintenance**

6. Maintenance of the set has to be carried out daily and on weekly basis.

(a) **Daily Maintenance**

(i) Clean and protect from dust and dirt.

(ii) Check hand set and Generator for breakages.

(iii) Check batteries for leakage.

(iv) Check switches and cord.

(b) **Weekly Maintenance**

(i) Check battery voltage, if below 2.5 Volt, Change the battery.

(ii) Carry out function test.

**Difference between Set 5 A and Set 5 B**

7. The main difference between Set 5 A and Set 5 B is given below:-

**Telephone Set 5 A** **Telephone Set 5 B**

(a) Small in size Large in size

(b) Light in weight Heavier

(ci) Auto call can be attached Auto call can not be attached

(d) Bell is tubular type Bell is Gong type

(e) CB Loop resistance is CB Loop resistance is

200, 250, 300. from 200 to 350

(f) TRL switch exists TRL switch does not exists

(g) Threaded type of line terminal Push type line terminal

**EXCHANGE MAGNETO : OPERATING PROCEDURE**

**AND PRACTICAL WORKING**

**Setting up**

1. To set up the Exchanges :-

(a) Place the switchboard on a level surface, preferably not on the ground, It is important that the apparatus is leveled to ensure that the indicator shutters operate when a subscriber calls.

(b) Unscrew and raise the front and rear lids. See that each plug rests in its appropriate storage socket, i.e. the hole immediately above the cord.

(c ) Connect the cord marked TELE at the back of the switchboard to the operator’s telephone set. Lock the front lid in the required position by means of the knurled nut at night.

(d) Connect the braid to the EARTH terminal and to the earth pin provided.

(e) Connect the pairs of incoming telephone lines to the pairs of line, terminals at the back of the switchboard.

(f) If earth return circuits are used, connect the line to the upper terminal of a pair of terminal and earth the lower terminal.

(g) If necessary, moisten the earth around the earth pin to ensure a good earth.

(h) Better results will be obtained if each of the lower terminals is brought to a separate earth. Earth pins in this case should be widely spaced to reduce cross talk.

(j) If required, connect the buzzer and 3 volt battery connected in series to the terminals marked ‘Alarm’ at the back of the switch board.

(k) Release the indicators by sliding the guard strips upwards as far as possible.

2. **Packing.** When closing the switchboard, make sure:-

(a) The guard strip is lowered over the drop indicators.

(b) All plugs are inserted in their appropriate storage sockets and are pushed in. To facilitate storage of cords, divide them into two approximately equal group, one on either side of the centre of the switch board, place the loops of the left hand group towards the right hand side and the loops of the right hand group towards the left hand side.

(c ) The earthing braid is neatly wound round the brackets.

(d) All fixing screws are tightened securely.

**CONNECTING AND PUTTING THROUGH SINGLE AND MULTIPLE CALLS : PHRASES TO BE USED WHILE OPERATING**

**Phrase used while operating**

1. The following phrases are used while operating the exchange:-

(a) “ Number please , Sir”.

(b) “ You want number …….. Sir”.

(c ) “ Sorry , Sir Number is engaged , Sir”.

(d) “ I will ring you back , Sir”.

(e) “ Call for you from ……… Speak up, please”.

(f) “ Have you finished . Sir”.

**Normal Call or Single Calls**

2. The following procedure is followed while putting through Single Calls:-

(a) Insert the operator’s plug into the line jack under the indicator, the shutter of which has fallen. This restores the shutter. Give the name of the exchange.

(b) The subscriber then ask for the required connection. Repeat the demanded numbers to satisfy the caller that it has been heard correctly.

(c ) Transfer the operator’s plug into the line jack of the wanted number and call by turning the generator handle briskly several times.

(d) After the wanted numbers as above, put the plug connected to that line half way into the caller’s line jack. On hearing a reply, push this plug firmly home and say, “You are through, Sir”. As soon as conversation starts, take the operator’s plug out of the line jack of the wanted line. No clearing signal can be received unless this is done.

(e) On receiving the clearing signal (the falling of the shutter associated with the caller or the called ) ( no matter which subscriber is the first to ring off), insert the operator’s plug into the line jack below the fallen shutter (Thus restoring the shutter) and say, “ finished please ? - finished please?”

3. If nothing is heard remove the plugs from the line jacks of the connected subscribers. If it appears that conversation has finished but the subscribers have forgotten to clear, insert the operator’s plug in the wanted subscriber’s line jack and listen. If conversation is still in progress remove the plug; if nothing is heard say as in sub para (e) above . “finished please” ? etc and clear down if there is no reply.

**Multiple Calls or Bunching**

4. The following procedure would be followed for putting through multiple calls.

(a) A Subscriber wishing to be connected to several lines at the same time calls the exchange and asks for the required numbers. An in sub- para 2 (a) above, insert the operator’s plug into the line jack under the shutter which has fallen and give the name of the exchange. Repeat the demand and ask the subscriber to wait till the connections are made.

(b) Insert the operator’s plug into the line jack of the first wanted number and call by turning the generator handle briskly several times. Immediately after calling, put the plug connected to this line half way into the caller’s line jack and say “Multiple call for you, sir. One moment please”. But do not push the plug home.

(c ) Transfer the operator’s plug to the line jack of the next number to be called. After calling, put the plug connected to this line half - way into the line jack of the last number that was called, and on hearing reply, say, as before, “Multiple Call for you, sir, One moment please”.

(d) Repeat this for each of the wanted numbers until the last one has been told “Multiple Call for you, sir”, after which push all the plugs home and say. “You are through sir”.

(e) As soon as communication is satisfactorily established, remove the operators plug from the line jack of the last number called. No clearing signal can be received unless this is done.

(f) On receiving a clearing signal, plug into the line jack under the fallen shutter and ask, “Finished please” etc. If there is no reply remove all plugs from the line jacks concerned.

(g) If it appears that the conversation has finished but the subscribers have forgotten to clear insert the operator’s plug in the jack of the last subscriber called and listen. If conversation is still in progress remove the plug; if nothing is heard say “ Finished please” etc and clear down if there is no reply.

**SECTION -8**

**LATEST TRENDS AND DEVELOPMENTS**

**Introduction**

1. The field of communication has seen rapid growth during the last century, beginning with the discovery of radio telephony by MARCONI and GRAHAM BELLS the development has been speedy. Various forms of communication media have been discovered. The medium of space has acquired special importance and communication are been carried out using various layers of the atmosphere.

**Troposcatter**

2. **Troposcatter.** The lower layer of the atmosphere below 15 KM height, is called tropospheric region. Communication carried out in this layer use the principle of troposcatter. In this system micro waves are transmitted in the UHF and SHF Band to achieve Radio Communication over the horizon covering a range between 70 KMs to 1000 KMs .

**Application of Troposcatter**

3. (a) It is used for long range point to point communication.

(b) Ideal for rugged terrain / otherwise desert, mountain sea, etc .

(c) It has the following channel capacities:-

(i) Voice - 24 channel

(ii) Telegraph/ Telex -32

(iii) Data - 03

**MODEM (Modular-Demodulator)**

4. This device is used to convert computer generated output (Digital signals) that can be transmitted on a telephone line. Modem are required at both the sending and receiving computers.

**FAX**

5. This is common short form of FACSIMILE which is one of the memory type electronic mail and message systems with the following advantages:-

(a) Can transmit graphics as well as alphanumeric information (letters and numbers).

(b) Reduce time and eliminates transmission error.

(c) Can transmit information in any vernacular language.

(d) Use any transmission medium eg telephone, line, micro radio wave .

**TELEX**

6. This is the abbreviated form of TELEPRINTER EXCHANGE. As cable used in this type of communication devices to connect two such instruments it restricts its range of operation.

7. **Advantage**

(a) Re-generative repeaters in a network can increase range, however voice signal can not be re-generated.

(b) Can be used over a telephone network

(c) Can receive messages when unattended.

(d) Message is recorded in a printer form.

8. **Disadvantages**

(a) The Equipment is costlier than a telephone set.

(b) Key in error due to the need for a human operator to send-receive message.

(c) Lack of privacy since any one can read the printed out put.

**Satellite**

9. An object which revolves around another larger object whose motion is primarily and permanently determined by the force of attraction of the body is known as a satellite. Before the space age, planets and moons were the only known satellite. On 4th October 1957 the first man made satellite called the SPUTNIK was launched by the erstwhile USSR since then more complex and versatile satellites have brought about a revolution in the field of communications.

10. **Type of Satellite.**

(a) Weather Satellite.

(b) Scientific Satellite.

(c ) Communication Satellite.

(d) Navigational Satellite

(e) Military Satellite.

**Optical Fibre Communication**

11. Hollow tube made of corning glass with an outer protective coating of rubber/ plastic etc are what constitutes optical fiber. These fibers are very delicate and small in diameter.

12.  **Advantages**

(a) It has wide band width carrying different types of info from low speed voice signal to high speed computer data.

(b) Less power requirement.

(c ) Small cable size.

(d) No repeater station required.

(e) No electromagnetic interference.

13.  **Disadvantages**

(a) Jointing problem.

(b) Channel dropping not possible.

(c ) More expensive.

14. Based on number of modes which can be propagated through the febricity are classified as Single Mode or Mono Mode and Multi Mode optical fibers.

**Computer System**

15. Strictly speaking a computer is any calculating device. The name is derived from a Latin word “Computer” meaning to reckon or compute. However, the term computer has come to mean a special type of calculating machine having certain characteristics.

16. **Advantages**

(a) Speed of process and calculations.

(b) Accuracy of process and calculation once the programme is proved.

(c) Persistence - It will continue on the same job until the end, always working in the same way, each and every day.

(d) Mass storage of data.

(e) The ability to handle large volume of data.

17. **Disadvantages**

(a) Data loss if machine malfunctions.

(b) Back up hard data still required to be maintained.

1. Constant power source is required.

**Internet**

18. Millions of computers all over the world are interlinked through telephone lines, satellites, submarine cable and optical fiber network. This World Wide Web (www) is what is called the “Internet” it provides an instant trouble free and cheap means of communications. Internet is therefore a collection of individual data networks connected together in such a way that data can be exchanged back and forth between networks widely separated. The present form of the internet evolved from early beginning made by the US Defence Department about 20-25 years ago. Electronic Mail, Web- Browsing and Voice Mail are the main facility of internet.

**Cell Phone**

19. Cellular radio network was first introduced in 1980, it provides a mobile subscriber access to the global telephone network. It is a rapidly expanding technology with high rates of obsolescence.

20. **Advantages**

(a) More subscriber and traffic capability.

(b) No perceptible difference between mobile and fixed subscribers.

(c ) Better quality of service.

(d) Miniaturization using very large scale integration (VLSI ) technology which enables ever decreasing size and weight of the hand set.

(e) Higher speed of data exchange.

(f) Can be used in an integrated mode with computer network.

**Multimedia**

21. It is a computer technology that displays information using a combination of full motion video animation, sound graphics and text with high degree of user interaction.

**Video-Conferencing Systems**

22. These provide the full benefits of face to face communication with sound, graphics and simultaneous transmission of data. The system enables people widely separated geographically to inter- act without having to meet at one place.

**Videophone**

23. It is a system that enables us to transmit an image via digital tele network, making visual contact possible over great distances, apart from transferring speech.

24. **Facilities**

(a) Can transmit speech as well as colour video.

(b) Conduct of video conferences.

(c ) Called subscriber is seen on the monitor.

(d) High quality of voice.

(e) Speed of sending/ receiving can be adjusted by the user.

(f) Map over-lays can be transmitted.

**Information Technology**

25. Information Technology or IT for short, refers to the creation, gathering, processing, storage, presentation and dissemination of information, and also the processes and devices that enable all this to be done. IT stands firmly on the hardware and software of a computer and the telecommunications infrastructure. Computers, as we all know, have been in existence for over 50 years. For many of these years, they had been primarily used for information processing. It is well known that year-by-year, computers are becoming more and more powerful both in terms of their computational speeds and also their capacities for storing of data. What has made the big difference in recent years is not the fact that individual computers have dramatically improved in their capabilities, but that all those information islands are being connected by digital highways made possible through the use of the telecommunications infrastructure by the computers, which, which largely explains why the internet and the WWW have begun to play such a significant role in our use of computers.