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	<p style="text-align: center;"><u>LESSON PLAN :FC & BC 5</u> <u>OBSERVATION, CAMOUFLAGE AND CONCEALMENT</u></p> <p>Period - Two</p> <p>Type - Lecture/Practice</p> <p>Code - FC & BC 5</p> <p>Term - I/II</p> <hr/> <p><u>Training Aids</u></p> <p>1. Computer Slides, Pointer, Charts, Black board & Chalk.</p> <p><u>Time Plan</u></p> <p>2. (a) Introduction and Aim - 03 Min</p> <p>(b) Why things are seen - 05 Min</p> <p>(c) Demo of personal camouflage - 35 Min</p> <p>(d) Types of cover and correct use of cover - 35 Min</p> <p>(e) Conclusion - 02 Min</p> <p style="text-align: center;"><u>INTRODUCTION</u></p> <p>3. To observe is to penetrate the concealment of the enemy's observation. Visual training is training in observation and concealment which are two aspects of the same subject. The term camouflage comes from French word 'Camoufler' meaning 'to blind or veil'. Camouflage, also called protective concealment, means to disguise an object in plain sight in order to conceal it from something or someone. In the late nineteenth century an American artist named Abbot Thayer made an important observation about animals in nature that became a useful tool in developing modern camouflage. After studying wildlife, Thayer noticed that colouring of many animals graduated from dark, on their backs to almost white on their bellies. This is an important property that is very useful in modern camouflage. This graduation from dark to light breaks up the surface of an object and makes it harder to notice. The object loses its three dimensional qualities and appears flat. Camouflage, as we know it today, was born in 1915 when the French Army created a new unit called the Camouflage Division. Artists were among the first people the French Army called to development camouflage for use during WW I. Thereafter a lot of emphasis has been laid on camouflage. Camouflage is defined as action of misleading en by concealing or misrepresenting</p>

the identity of own troops, equipment, installations and activities. Good camouflage is possible only if you have a fair idea of skillful use of cover and you remember the principles as to why things are seen.

AIM

4. The aim of this lecture is :-

- (a) To teach the principles as to why things are seen.
- (b) To teach the cadets importance of ground observation.
- (c) To teach personal camouflage.
- (d) To teach the cadets the types of cover and to make correct use of cover.

PREVIEW

5. The demo shall be conducted in four parts as follows :-

- (a) Part I - Why things are seen.
- (b) Part II - Demo of personal camouflage.
- (c) Part III - Types of cover and correct use of cover.

(a)

PART - I : WHY THINGS ARE SEEN?

6. Before we study these factors I shall indicate the landmarks which shall be used during the course of this lecture.

7. Various factors responsible for things to be seen are as follows :-

(a) **Shape.** Many objects are instantly recognised by reason of their distinctive shape, particularly if they are in contrast with their surroundings. The round outline of helmet, square shape of haversack and the well defined and familiar outline of rifle can be spotted instantaneously because of their contrast with the surroundings. Therefore to camouflage an object, its shape and outline has to be broken. (Camouflage and uncamouflaged helmets and haversacks to be placed at a distance of 50 to 100m and the cadets asked to spot them).

(b) **Shine.** Any object which reflects light gives away its position. The objects on a soldier which can cause shine can be metal on his equipment and belt, rifle brl and body, magazine, map case, spectacles, watch, ring, binocular lenses etc. Infact all metal parts on personal weapon are susceptible to shine. Thus it is imperative to cover all shining surfaces like watches and map cases. Metal on the equipment should be blackened with paint or

tape. All shining surfaces of rifle should be covered with coal or garnish. While using binocular, care should be taken to shade them in case there is any chance of their reflecting sunlight and when not in use they should be kept in cover.

(c) **Shadow.** Shadow cast by an object in bright sun or moonlit night will reveal its position. A soldier may otherwise be well camouflaged but his dark shadow will attract attn. So whenever possible a soldier must remain in shade. This not only affords him cover but also avoids casting a shadow which is distinctive and conspicuous.

(d) **Silhouette.** Objects silhouetted against a contrasting background are easily seen. Any smooth and flat background such as water, sky is a dangerous background.

(e) **Surface.** If colour and texture of surface of an object or human contrast with its surroundings, that object will be conspicuous. Therefore surface resemblance to environment is one of the most important facets of camouflage. Hence troops op above snowline are dressed in white but disruptive in semi deserts, plains and jungle terrain. A fair skinned person should blacken all areas of exposed skin to avoid contrast between his skin and his dress.

(f) **Spacing.** Objects spaced regularly tend to draw attn even if they are well camouflaged. Eg, you would have noticed wire fencing covered by vegetation all along. Hence, the pillars of the fence which are regularly spaced are camouflaged by dense vegetation else en would be able to make out the loc of the pillars and therefore the fence.

(g) **Smoke.** Smoke has a quality of pillaring up in fair weather and hence gets noticed from a long dist. Due to this reason smoke is used to indicate targets to ac. Pillaring can be avoided by disintegrating smoke pillar at the very place where it is produced.

(h) **Sound.** Even if a man is otherwise not visible, noise will draw attn to the right spot facilitating his detection.

(i) **Movement.** Nothing catches the eye quicker than a sudden or violent movement. A man however well he may be camouflaged gives away his position by movement.

8. Cadets, you have seen as to why things are visible during day or in clear moonlit night. Now let us see why things are visible at night. In modern warfare night ops and movement have gained a lot of importance. There are two factors which need to be looked into:-

(a) **Sound.** Sound travels great dist at night especially on a still night. Disturbing foliage in a jungle terrain, crackling of twigs under your feet can give away your position.

(b) **Light.** Light can be seen from a great dist. A match stick or a cigarette which has been lit is visible from a great dist.

(b) **PART II - PERSONAL CAMOUFLAGE**

9. You have been taught the factors responsible for things to be seen in Part I. Keeping these factors in mind let us see how personal camouflage is done which include camouflage of equipment worn or carried by a soldier.

(a) **Use of Disruptive Pattern Clothing and Local Vegetation.** Disruptive pattern clothing is worn to remove contrast with the surroundings and to break outline of a body. Local vegetation is used to break the outline of the body and merge with the surroundings. Vegetation used should be changed regularly before it wilts and changes appearance. No outlandish vegetation should be used. Different types of clothing should be used for different kinds of terrain.

(b) **Camouflage of Face.** Surface and texture of disruptive clothing is different from the uncovered parts of body. To remove this contrast, blanko is applied over the naked parts of body eg forearms, face and neck. Mud can also be used in case blanko is unavailable.

(c) **Camouflage of Equipment.** Camouflaging a body will be of no use unless equipment worn on the body or carried by a person is also camouflaged. Equipment is camouflaged as follows :-

(i) **Helmet.** Helmet is made of metal or fibre glass and is painted with OG colour. The difference between surface and texture of helmet with surroundings is removed as follows :-

(aa) **Use of Hessian Cloth.** Helmets with smooth surface are covered with hessian cloth. The cloth eliminates shine from the helmet.

(ab) **Use of Camouflage Net.** Camouflage net is put on helmet. Branches of local vegetation are stuck in the net. Pieces of garnish may be tied to the net. This helps to break the outline, reduce shine and contrast with surroundings. Camouflage can also be used on Cap FS in a similar manner.

(ii) **Camouflage of Packs.** Packs have square outline. This outline is broken by tying thin ropes on the packs and branches of local vegetation are stuck in the ropes. It must be ensured that you are able to open or close the packs w/o disturbing the vegetation. (instructor to show camouflaged packs).

(iii) **Camouflage of Rifle.** Metal parts of rifles are phosphated and hence shine is reduced. Garnish of suitable colour should be wrapped over wooden parts/ plastic parts to contrast with surroundings. It must be ensured that moving parts are not hindered by the garnish and the user should be able to take aim and use his weapon freely w/o any obstruction.

(iv) **Camouflage of LMG.** The most important weapon in a sec is LMG. Wooden/plastic parts of the LMG should be covered by garnish. However it should be ensured that the moving parts are not hindered and that the barrel can be changed smoothly. In def, an LMG trench is camouflage by use of a net. We shall show you a camouflaged LMG trench at the end of this cl. You shall also learn how to camouflage other weapons subsequently during the course of your training here.

(v) **Camouflage of Equipment.** Equipment like binocular, map case, Radio Set should also be camouflaged by breaking its outline and preventing shine or reflection due to sun or artificial light. Vehicles are also camouflaged similarly.

10. Cadets, you have three examples of camouflaged cadets standing in front of you. Keeping in mind what you have just learnt in Part I and Part II, we will discuss the efficacy of these three examples of camouflage.

(a) **Shape.** Cadet Pandey and Cadet Trivedi have not successfully broken the shape of their helmets and equipment, whereas Cadet Kumar has done so. He has also done the same for his rifle which is important.

(b) **Shine.** Cadet Pandey and Cadet Trivedi have equipment, rifle, watches which are all susceptible to causing reflection while Cadet Kumar has blackened all metal parts, covered his watch, binocular and has also ensured that his map case is carried the correct way.

(c) **Surface.** Colour and texture of Cadet Pandey makes him stand out straight away. In case of Cadet Trivedi, his skin is still contrasting with his comb dress. Cadet Kumar has darkened all exposed areas of his skin with OG Blanko.

(c)

PART III - TYPES OF COVER AND CORRECT USE OF COVER

11. There are two types of cover. They are :-

(a) Cover from view.

(b) Cover from fire.

12. **Cover from View.** In this type of cover, a person is concealed only from view or from being seen and not from fire. If you look to your front you can see a soldier taking position behind a

bush. The bush hides him from view but will not protect him from fire. He is therefore covered only from view.

13. **Cover from Fire.** This implies that the concealed person is protected both from view and fire of weapon. Take your attn to the White Stone towards your front. The construction in front protects the occupants both from view as well as from fire. Therefore the soldiers are covered from fire.

14. A soldier may be perfect in his personal camouflage but he cannot fully deceive the en unless he knows the correct use of cover/ground. Now we shall study the guidelines for correct use of cover.

15. **Look Through or Around Cover.** Whenever possible look through or around the cover but not over it. It is like somebody observing through a slit with his eye close to the slit. Such an observer can observe everything without being observe. If it is not possible to look through the cover then look around the cover.

16. **Avoid Breaking a Straight Line.** Any permanent fixture if disturbed will attract attention.

17. Skyline/light coloured background is the worst background as the object against it will be found out because of contrasting background and shape. You must always avoid skyline for observation and movement.

18. When firing from inside a bldg, keep well back making use of shadow. The darkness provided by the shadow will blend you with the shadow.

19. A rough, dark and irregular background which matches your clothing provides considerable cover. For movement use clothes which blends with terrain and the surroundings as this would provide natural camouflage.

20. Isolated cover is dangerous. Eye catches isolated cover easily especially if there is any movement near it.

21. Cross gaps as a body of troops at irregular intervals and on the double. This will ensure that the movement is not easily detected. The en will not be able to detect the movement of next group.

22. By now you would have realised the important of camouflage and correct use of cover. Cover is the gift which the ground gives you and you must use it to the best of your advantage.

CONCLUSION

23. To conclude, the importance of camouflage can be realized from the following:-

(a) In earlier days it was said "If it can be seen, it can be hit, if it can be hit it can be killed".

(b) But now in the modern warfare "If it can be seen it will be killed".

24. Therefore, Cadets, camouflage needs greater emphasis and the art of camouflage and concealment reduces the different varieties of soldiers into two main categories viz, "The good and the dead." Concealment is an aid to tactical deception and misinforms the enemy as to our intentions and strength.