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MILITARY TECHNOLOGY

LECTURE NOTES FOR SENIOR STAFF COURSE QUALIFYING EXAMINATION

Prepared under the direction of

Chief of Army Staff

2013

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NOTE

**Any Mistake, Omission and Advice on the
Module should be forwarded to:**

**THE COMMANDER
HQ TRADOC, NA
MINNA.**

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PART 1

**INFANTRY MILITARY TECHNOLOGY SYLLABUS FOR
SSCSE REVIEWED BY ICCS**

INTRODUCTION

1. The Infantry is, no doubt, the corps around which the Nigerian Army and indeed other armies are built. Apart from being the first corps ever to be organized by man, the Infantry has ever remained very relevant. It is also extremely indispensable to man in the prosecution of wars. It is out of necessity that man's efforts to either improve his mobility, fire power, security and protection of himself from the enemy and his weapons that the Infantry gave birth to other corps to complement it. Other corps have the long range, shock action, lethality and sophistication to Infantry's disadvantage. Even with these attributes, the Infantry still leads, commands, controls, and manages them in battles. The Infantry is therefore the mother of the armed forces and grand mother of all the corps not only the Queen of the Battle.

2. Military Technology as it affects the Infantry corps is therefore encompassing and all embracing. It will therefore involve all aspects of military technology. It will start from the man himself, his weapons local protection and support. It will also include tactics, and cooperation with other arms and services (corps). It will further involve the study of other corps whose efforts are complementary to the Infantry. This therefore calls for the Infantry man to have at least an elementary knowledge of other corps' capabilities and what they can do for him. He must know how to employ or harness them effectively to his own advantage. As the end user of their products, the Infantry must also know how to economize, deploy and manage the resources and support of combat and service support corps available to him.

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3. In drawing the Infantry Military Technology Syllabus therefore, the Infantry man and his environment must also be known. Again how he uses the ground, weapons, communication cover and in conjunction with other combat arms and services are also relevant. It will also be necessary to understand how the Infantry relates with them to achieve the ultimate aim of defeating the enemy.

AIM

4. The aim of this paper is to give guidelines to infantry candidates preparing for the mil tech paper during Senior Staff Course Selection Examination.

GUIDELINES FOR CANDIDATES

5. The syllabus for the military technology (Mil Tech) paper for the infantry is expectedly very wide. It covers about the whole syllabic for the SSCSE. As wide as the scope could be, it would however be unwise for candidates to restrict themselves to only a few areas. An infantry man is an embodiment of everything a soldier is supposed to be.

6. Candidates may wonder what could be unique about the syllabus for the infantry man. It is however to be realized that a more in – depth treatment of some technical areas would be expected. While the other candidates could be concerned with the tactics of warfare generally, the paper expects more from the infantry officer. It is assumed that all prospective candidates have served in the battalions or brigades.

7. **Special Area for Consideration.**

a. **Orbat and Equipment.** The most important thing about the infantry is how it is organized for battle, its versatility and the sort of firepower that gives

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it advantages over the supporting elements. Candidates are therefore expected to exhibit a thorough knowledge of the infantry organization and the equipment in a unit. It is not enough to know what these equipment are, but the role they play for the infantry in battle. The technical specifications of the equipment is also required.

b. **Cooperation with other Arms and Services.** With improvement in mobility and communications, the dependence of the arms and services on each other becomes more intricate. It is therefore important for the infantryman to know the type of support he is to get from all supporting elements.

c. **The Infantry Battalion.** The infantry man has the major responsibility of managing a large number of troops and their families in peace and war. Unit administration from platoon to battalion level is a prerequisite for the infantry. The candidate is therefore expected to be very conversant in such areas.

The above guide should be read in conjunction with the syllabus.

SYLLABUS

8. Although inexhaustible, the syllabus will however focus mainly on the following:

a. **Definition of Terms.** A fair knowledge of terms used in the army to include:

- (1) Tactics A and B terminologies.
- (2) Logistics and Administration.
- (3) Military Law.
- (4) Signals.
- (5) Information Technology.

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- (6) Military operations other than war (MOOTW).
- b. **The Infantry man.** The myth or legend surrounding the Infantry man should include:
 - (1) Characteristics of Infantry.
 - (2) Leadership qualities.
 - (3) Limitations of the Infantry.
- c. **Organization of Infantry.**
 - (1) Organization from section up to Div level of command.
 - (2) Combat and services support compliments or affiliations available at each level of command.
- d. **Weapons.** Weapons use by the infantry, their calibers, ranges, characteristics and weights to include:
 - (1) **All available small arms.**
 - (a) Personal Weapons.
 - (b) Section Weapons.
 - (c) Platoon Weapons.
 - (d) Bn Support Weapons.
 - (2) Ammunition Types.
 - (3) **Range Production.** Training the Infantry man:
 - (a) Range Duties and Orders.
 - (b) Marksmanship principles.
 - (c) Range Management/Security.
- e. **Equipment.** Characteristics and effects of weather:
 - (1) **Surveillance.** All surveillance equipment available to the infantry including RISTA assets, the ranges and effectiveness.
 - (2) **Map Reading Equipment**
 - (a) Compass marches.

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- (b) Methods of finding own position.
- (c) Inst procedure.
- (d) Keeping direction and memorizing routes.
- (3) Internal Security Equipment.
- f. **Veh.**
 - (1) All vehicles use by the Infantry.
 - (2) Classification A – F.
 - (3) Capacity and capability.
- g. **Tactics**
 - (1) All principles to include:
 - (a) War.
 - (b) Advance.
 - (c) Attack.
 - (d) Defence.
 - (e) Withdrawal.
 - (f) Internal Security.
 - (g) Military Operations Other Than War.
 - (2) Formation Battle Drills:
 - (a) Section Formations.
 - (b) Section Battle Drills 1 – 6.
 - (c) Platoon Battle Drill 1 – 4.
 - (3) Study of ground and Types.
 - (4) Indication and Recognition of Targets:
 - (a) Types of Targets.
 - (b) Infantry Indication.
 - (c) Infantry/Armour Indication.
 - (d) Infantry/Arty Indication.

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- (e) Adjustment and Correction of Fire up to neutralization.
 - (i) Infantry/Armour.
 - (ii) Infantry/Arty.
 - (iii) Fire Control Orders.
 - (f) Range Cards and Uses.
-
- (5) Deployment Drills in phases of war including low intensity operations and peace support operations.
 - (6) Marking of FUP and layout at all levels.
 - (7) Fire and Movement.
 - (8) Echelon systems and their uses or need.
 - (9) Infantry co-operation with Armr, Arty and Engr.
 - (10) Roles of Combat and Service Support in all phases of war.
 - (11) Why things are seen.
 - (12) Protection techniques against the following:
 - (a) Small Arms Fire.
 - (b) Arty fire.
 - (c) Anti-Armr.
 - (d) Air Raids.
 - (e) NBC.
 - (13) Obstacle Crossing techniques.
- h. **Basic First Aid**. Techniques for:
- (1) Prevention of diseases in the field.
 - (2) Stopping of bleeding in the field.
 - (3) Casualty Evacuation from the theatre of war.
- i. **Communication**

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- (1) Field and Hand Signals.
 - (2) Radio sets in use to include the following categories.
 - (a) Set radios, names, ranges and characteristics.
 - (b) Platoon radios/names, ranges and characteristics.
 - (c) Company radios, names, ranges and characteristics.
 - (d) Battalion radios, names, ranges and characteristics.
 - (3) Siting of antenna and establishment of radio communication.
- j. **Command Techniques**
- (1) Command.
 - (2) Administration.
 - (3) Maintenance in the Field.
- k. **Information Technology.**
- (1) Computer and its uses.
 - (2) Component of a computer and its peripherals.
 - (3) Softwares and Hardwares.
 - (4) Uses of spreadsheet in the military.

REFERENCE MATERIALS

9. The following are reference materials for the Infantry Military technology:
 - a.
 - (1) Tactics volume 1 – Infantry Platoon in Battle.
 - (2) Tactics 2 Infantry Battalion in Battle.
 - (3) General Conduct of Military Operations.
 - (4) ICCS – Tactics Wing précis on tactics.
 - (5) NDA – Field Craft and Field Training précis.
 - (6) AFCSC Précis on:
 - (a) Tactics 1 and 2.

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- (b) Counter Revolutionary Warfare.
- (c) Administration.
- (d) Logistics.
- (e) Organization.
- (7) Keeping the Peace II.
- (8) Armed Forces Act No 105 of 1993 (As amended).
- (9) ICCS – Signal Wing précis.
- (10) ICCS Special Warfare précis.
- (11) ICCS and NDA Map reading précis.
- b. **The Infantry/Organization Précis.**
 - (1) AFCSC – Organization Précis.
 - (2) ICCS – Tactics Wing Précis.
 - (3) ICCS Joint Instruction; Information Brief.
- c. **Weapons/Ammunition/Equipment**
 - (1) **ICCS Précis.**
 - (a) Platoon Weapon Wing.
 - (b) Support Weapon Wing.
 - (c) Signals Wing.
 - (d) Range Management précis.
 - (e) Map Reading précis.
 - (f) Skill at Arms précis.
 - (g) Précis on Peace Support Operation.
 - (2) **AFCSC**
 - (a) Staff Officers Hand Book.
 - (b) Organization.
 - (c) Foundation Tactics.
- d. **First Aid.** Tactics Wing (YOC) First Aid précis.

ADDITIONS TO THE MODULE

12. In line with Peace Support Operation (PSO) training, it is important that certain areas of PSO training be included in the syllabus. These may include the following:

- a. Operational tasks in PSO.
- b. Code of Conduct.
- c. Rules of Engagement.
- d. Personal Security Awareness.
- e. Mines Awareness Training.

13. The Senior Division has recently changed its syllabus to the Manouvrism Approach Concept. Consequently, the students are being prepared for this course, it is pertinent to include certain aspects of the new concept in the syllabus. This is considered necessary to prepare the intending student for the course. The suggested areas to be included are as follows:

- a. Defensive Operations.
- b. Offensive Operations.
- c. Transitional Operations.
- d. Resources available to formation for information gathering (ISTAR/RISTA assets).
- e. Fundamentals.
- f. Core Functions.

CONCLUSION

10. The study of the Infantry is in fact the study of war. Infantry activity encompasses all corps activities. It is also the study of crisis management, economy, employment and the management of men and material. In addition to the above, it is

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the study of how other corps could be harnessed, commanded and used by the Infantry to the best advantage and finally bring a war to a favourable conclusion.

11. The subject covered is indeed in-exhaustible. It is however believed that a fair knowledge of the syllabus will go a long way in improving the quality of not only the Infantry man, but also other corps and services. Prosecution of wars could become easier too.

PART 2

MIL TECHNOLOGY SYLLABUS
NIGERIAN ARMY ARMoured CORPS TACTICS

RECONNAISSANCE OPERATIONS

1. **FUNDAMENTALS OF RECONNAISSANCE**

- a. **Report all information rapidly and accurately.** Recce report should be timely and describes who (including how many), where, when and doing what.
- b. **Retain Freedom to Manoeuvre.** Recce units must move to survive. Recce Units obtain info by stealth when possible, but fight only when necessary to accomplish their mission. Manoeuvre is the catalyst which makes the recce team work.
- c. **Gain and Maintain Enemy Contact.** Contact reduces enemy's capability to achieve surprise. Recce units must quickly gain and maintain contact. Unless ordered to do so, contact is not voluntarily broken.
- d. **Develop the Situation Rapidly.** When contact is expected, recce units deploy ready for battle and move by caterpillaring. On gaining contact, recce units deploy into cover, maintain observation and report the situation.
- e. **Place Recce Power Forward.** If the enemy does not detect the initial contact, recce units continue observation until:
 - (1) It is detected.
 - (2) The mission is accomplished.
 - (3) Further development of the situation require combat action.
 - (4) The need for speed dictates sacrificing stealth.

2. **CATEGORY OF RECCE.**

- a. **Route Recce.** A route recce is assigned to obtain detailed info of a specific route and all the adjacent terrain from where the enemy could influence movement along that route.
- b. **Zone Recce.** A zone recce is a detailed recce of all natural and man-made features with specific boundaries. It is very thorough and time consuming.
- c. **Area Recce.** Area recce is usually assigned to a unit to perform on a single large area or conducted simultaneously on several widely dispersed objectives.

SECURITY OPERATIONS

3. Security missions include all measures taken to prevent observation, annoyance, surprise, espionage or sabotage. Aggressive and bold recce to reduce the unknown in terrain and enemy situation is the keystone of security.

4. **Reasons for Security Operation.** Security operations are carried out for the following reasons:

- a. As an economy of force measure when the main body comd requires time, space and information to concentrate force against the enemy.
- b. To provide info about the size, composition, location and direction of the movement of enemy forces and provide reaction time and manoeuvre space for the main body.
- c. As screening and covering force and rear area combat operations and may be to the front, flanks or rear of a moving or stationary main body.

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5. **Fundamentals of Security Missions.** Recce units conduct security operations according to 5 fundamentals:

a. **Orient the Main Body.** A security force operates between the main body and known or suspected enemy units. The security force comd must know the scheme of manoeuvre of the main body and manoeuvre to remain between it and the enemy.

b. **Perform Continuous Recce.** A security force performs continuous aggressive recce to gain all possible info about terrain and the enemy.

c. **Provide Early and Accurate Warning.** Early warning of enemy activities, composition, location and movement will enable the main body comd to retain tactical initiative.

d. **Provide Reaction Time and Manoeuvre Space.**

A security force operates far from the main body consistent with the factors of METT. It fights as necessary to ensure adequate time and space for the main body to respond to the enemy.

e. **Maintain Contact.** Contact, once made is maintained to ensure continuous information about the enemy activities. If contact is lost it is regained unless the enemy is withdrawing.

COVERING FORCE

6. Covering force missions are mostly undertaken by recce units. During offensive operations, covering force to the front and flanks has the task of preventing surprise, establishing contact with the enemy and protecting the main body from detection or engagement by enemy security forces.

7. **Specific Task.** Specific tasks of covering force are:

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- a. Deny the enemy info about the size, strength, composition and objective of the main body.
 - b. Destroy enemy recce and security forces.
 - c. Develop a situation to prevent enemy counter attacks.
8. Covering force operates beyond the range of artillery with the main body. The distance is a function of METT. A reinforced Bde as covering force may be at a distance as great as 50 – 60 km from the main body.
9. **Roles of Defence.** Roles of covering force in defence include:
- a. Destroy enemy recce and advance guard units.
 - b. Force the enemy to deploy and form for deliberate attack.
 - c. Deceive the enemy as to the location of the FEBA.
 - d. Reinforce the terrain with barriers and obstacles to space enemy units in distance, time and strength.
 - e. Identify the area of the enemy's main attack and strength.
 - f. Destroy air defence elements of the enemy first echelon.
 - g. Identify, disrupt and destroy enemy follow on forces within capabilities.
 - h. Trade space for time.

Note: For further reading refer to **Armoured Corps Centre and School Tactics Department Students Precis Volumes 1,2 and 3.**

AUTOMOTIVE

INTRODUCTION

10. Vehicle crews should ensure that they adhere to all the safety precaution as laid down in safety authority (Alarms Training, Standing Orders for the Safety of Crews of AFVs); however, the safety points outlined in this chapter are particularly important.

VEHICLE

11. The following safety points should be noted concerning AFV:
- a. An AFV is only to be driven by a trained and qualified driver, or by a learner driver under instruction.
 - b. Smoking is prohibited within 15 metres of an AFV or POL store.
 - c. Petroleum is not to be used for cleaning inside or outside of an AFV.

PERSONNEL

12. **Deafness**
- a. **Cause.** Any noise louder than heavy civilian traffic (85 decibels) can cause deafness.
 - b. **Prevention.** Wear crewman's helmet or ear defenders, on turbocharged vehicles. Amplivox must be worn while working in the area of the engine compartment when engine is running.
13. **Skin Disease.**
- a. **Cause.** Prolonged exposure to oil, grease, acid or fuel may cause dermatitis.
 - b. **Prevention.**

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- (1) Use barrier creams before starting or servicing any AFV.
- (2) Wash face and hands thoroughly after a dirty job.
- (3) Report sick immediately when you notice any change in your skin texture.

14. **Carbon Monoxide.**

- a. **Cause.** A deadly, colourless and odourless gas produced by engine exhaust fumes.
- b. **Symptoms.** Headache, drowsiness, nausea, loss limbs and unconsciousness.
- c. **Prevention.** AFV engines are not to be run in any garage or confined space unless all doors and windows are opened.
- d. **First Aid.**
 - (1) Remove casualty to fresh air.
 - (2) Lay casualty down and carry out mouth to mouth resuscitation.
 - (3) Summon medical personnel immediately.

15. **Handling of Anti – Freeze.**

- a. **Danger.** Anti-freeze, whether concentrated or mixed, is hazardous to health.
- b. **Prevention.**
 - (1) Remove clothing, wash hands before eating, drinking or smoking.
 - (2) Store anti-freeze in a safe place.
- c. **First Aid.** If anti-freeze (ethylene glycol) is swallowed or splashed into eyes, flush with clean water and seek medical attention immediately.

Note: For further reading refer to **Armoured Corps Centre and School Automotive Department Students Precis.**

WEAPONS

LAYING AND OBSERVATION

INTRODUCTION

16. This topic will cover the laying and factors affecting observation.

ENGAGEMENT SEQUENCE

Commander's Action

a. Target Acquisition.

- (1) Spotting and Identifying target.
- (2) Deciding on appropriate weapon, ammunition and technique.
- (3) Laying the gun onto target, issuing fire orders and selecting ammunition to be fired.

b. Fire Order – Commander's aspects.

- (1) "SABOT"
 - (a) Selection ammunition required.
 - (b) Gunner checks main armament selected.
 - (c) Loader loads first round and re-loads as soon as gun fires.
- (2) "TANK" - Target description.
- (3) " ON "
 - (a) MBS mark positioned on or near target.
 - (b) Commander has released control.

- (4) “ FIRE ” - When lay is correct on target.

17. **Gunner’s Action.**

a. **Fire Orders.**

- (1) “ ON ”
 - (a) Has Identified target.
 - (b) Lay MBS mark on centre of observed mass
- (2) “LASTING”
 - (a) Aiming mark appears when laser button is released.
 - (b) Range displayed in gunner’s sight and on control panel.
 - (c) Assisted lay – gun to target (Fine lay).
- (3) “FIRING NOW”
 - (a) Lay aiming mark on centre of target using controller.
 - (b) Press firing switch when lay is completed.

18. **Rules of Laying.**

- a. **Rule 1:** Lay unto the centre of the observed mass.
- b. **Rule 2:** End lay in depression.
- c. **Rule 3:** Remember your sight picture.

19. **Factors Affecting Observation**

a. **Consequence of Firing.**

- (1) Flash.
- (2) Blast.
- (3) Heat shimmer.
- (4) Platform rock.

- b. **Ground.**
 - (1) Gun position.
 - (2) Target position.
 - (3) False crest.
 - (4) Dead ground.
 - (5) Dusty ground.

**STATIC SHOOTING SFCS – SABOT
UP TO 3200M**

INTRODUCTION

20. FIN/SABOT is the main anti-tank ammunition carried on the Eagle VMBT. Under normal circumstance whenever an armoured vehicle is to be engaged bellow 3,200m FIN/SABOT will be used.

FACTORS

21. Factors that could cause first round to miss target include:
- a. Incorrect range – wrong range reading out.
 - b. Wrong lay.
 - c. Trunion tilt.
 - d. Cross wind.
 - e. Drift.
 - f. Loss of gun/sight relationship.
 - g. Ammunition dispersion.
 - h. Faulty servicing.
 - i. Head/tail wind.
 - j. Air density.

k. Charge temperature.

22. **Dispersion**

a. **Causes.**

- (1) Vibration of the mounting.
- (2) Mass production of ammunition.
- (3) Random variables present in any gun/ammunition fire control combination.

b. **Dispersion is Linked to Maximum Ranges.**

- (1) 90% chance of hit with SABOT at 3,000m.
- (2) First round - 60% chance of hit.
- (3) Second round - 84% chance of hit.
- (4) Third round - 93.6% chance of hit.

STATIC SHOOTING SFCS –HESH

INTRODUCTION

23. This topic covers techniques use when engaging static targets using HESH and the methods of correcting fire.

MAXIMUM EFFECTIVE RANGES

24. The following are recommended limitations and not maximum possible ranges for HESH.

- a. Direct fire - 3000m.
- b. Maximum range - 10000m.
- c. Armour Defeating:
 - (1) Static target – 5000m.

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- (2) Moving target – 1500m.
- (3) Shooting on the move – 1500m.

CORRECTION

25. The different types of correction that are available for use by the gunner are as follows:

- a. Fine correction.
- b. Target size correction.
- c. Standard correction.
- d. Combine correction.

LIMITATIONS IN THE USE OF CORRECTION

26. The following are the limitations in use for gunner's corrections:

- a. **Fine correction.**
 - (1) Line – 3000m.
 - (2) Elevation – 2000m.
- b. **Target Size Correction.**
 - (1) Line up to 3,000m – maximum 3 targets width.
 - (2) Elevation – up to 2,000m – maximum 1 target height.
- c. **Standard Correction.**
 - (1) Lased range – Add/Drop 50m.
 - (2) Estimated range –Add/Drop 200m.

Note: For further reading refer to **Armoured Corps Centre and School Weapons Department Students Precis.**

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COMMUNICATIONS

27. TYPES OF RADIOS IN NAAC AFVS

Serial (a)	AFV (b)	Radio (c)	Type (d)	Freq Coverage (e)	Range (f)	Remarks (g)
1.	Eagle MBT	VRC321	HF	1.5 - 29.9999MHz	Grd Wave – 50km + Sky wave - 100km +	
		VRC 353	VHF	30-75.97MHz	Min – 2km 1w - 5km 15w – 20km 50w – 32km +	
		Scimitar V	VHF	30-87.975MHz	0.1w – 1km 4.5w - 8km 50w - 40km	
		PRC 344	UHF	225-399.95 MHz	Grd - Grd-8km 100 ft ASL – 20km 500 ft ASL – 40km 5000ft ASL – 80km 20000ft ASL–160km	
2.	T-55	TRA 931	HF	1.6-29.999MHz	2.4m whip Ae – 25km Wire Ae - Unlimited	
		VRQ 301	VHF	30 – 76MHz	Low power – 15km High power – 20km	
3.	VBL	TRC 331/340	HF	1.5 – 29.9999MHz	1000km+ Veh borne – 40km Manpack – 20km.	
		TRC 577/579	VHF	30 – 79.975MHz		
4.	Scorpion	VRC 321	HF	1.5 – 29.9999MHz	Grd wave – 50km + Sky wave - 1000km +	
		VRC 353	VHF	30-75.975MHz	Min - 25m 1w - 5km 15 - 20km 50w - 32k +	
5.	AML 60	TRC 320	HF	2 – 29.999MHz	Veh role – 50km Wire Ae – 1000km +	
		TRVP 213	VHF	26 – 71.95MHz	Low power 5w – 10km High power 15w-40km	
6.	Sagaie ERC 90	TRC 570	VHF	26-75.975MHz	Low power (2w):(15-20km) High power (30w) : (40-50km)	

28. **TYPES OF ANTENNA**

SURFACE WAVE ANTENNA

- a. 3m rod antenna.
- b. 2m Whip antenna.
- c. Slopping wire antenna.
- d. T - shaped antenna.
- e. V – shaped antenna.
- f. Slopping rod antenna.
- g. Ground wave antenna.

29. **SPACE WAVE ANTENNA**

- a. 3m broad band Antenna.
- b. Yagi antenna.
- c. Discone antenna.
- d. Vertical rod antenna.
- e. Elevated rod antenna.
- f. “L” Inverted wire antenna.

30. **SKY WAVE ANTENNA**

- a. Horizontal dipole antenna.
- b. Folded dipole antenna.
- c. “L” Inverted wire antenna.
- d. “T” shape antenna.

Note: For further reading refer to **Armoured Corps Centre and School Communications Department Students Precis.**

ARMoured CORPS

AUTOMOTIVE

31. a. Define battle field day.
b. What is the ratio for calculating battle field day.
c. Your Tank Coy will soon be involved in 5 days exercise operating for 18hrs field day under the following conditions:
(1) On road at 30 km/hr at fuel consumption rate of 3 litres/km.
(2) On cross country at 15 km/hr at fuel consumption rate of 4 litres/km.
(3) Idling at the rate of 20 litres/hr.

As the Coy comd, calculate your fuel requirement for the exercise using the T55.

32. a. Modern petrol engines operate on the principles of Otto cycle. What are the 4 strokes cycles of an engine.
b. What are the properties of a good lubricating oil.
c. What are the factors that affect the life of tyres.
33. a. State 5 ways on how to use the Santana land rover steering.
b. Into how many compartments is the Eagle MBT is divided. State them.
c. Mention 4 special features of the T55.
34. a. State the objectives of the following systems:
(1) Cooling System.
(2) Lubrication System.
b. Define the following terms:
(1) Top Dead Centre.
(2) Bottom Dead Centre.
(3) Piston Clearance.

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- c. How is compression ratio of an engine increased?
- 35.
- a. How is the Turret of the Panhard AML 60 mounted?
 - b. Define Fording.
 - c. What are the reasons for tank halting under water during fording?
- 36.
- a. What are the variants of the VBL?
 - b. How do you know the Scorpion CVR (T) with a defective gear box?
 - c. What is the speed limit and distance when towing the CVR (T) with gear box?
- 37.
- a. What is vehicle servicing?
 - b. State the types of servicing that is normally carried out by the Armoured Corps.
 - c. Define convoy and how is convoy classified?
- 38.
- a. Differentiate between spark ignition and compression ignition engines.
 - b. Enumerate the factors that aid engine efficiency.
 - c. What is the firing order of the Sagaie ERC 90.
- 39.
- a. Mention 3 objects of the suspension system.
 - b. What are the uses of the Air Starting system of an AFV?
 - c. What is steering Self Centering effect.
- 40.
- a. What are the objects of the clutch fitted to Sagaie ERC 90.
 - b. Enumerate the abuses too the clutch during driving

WEAPONS

- 41.
- a. What is the calibre of the main armament of the following AVFs in the NA Inventory?
 - (1) Vickers MBT

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- (2) T-55
 - (3) ERC 90 Sagaie.
 - (4) Scorpion CVRT.
 - (5) VBL Comd Version.
 - (6) VBL Recce Version.
- b. Mention 2 components of GCE 620 in Vickers MBT
42. a. How are targets classified from tactical point of view?
b. Define hard and Soft targets respectively.
43. a. Define Kinetic energy and Chemical Energy ammunitions and give 2 examples of each.
b. List the Ammunitions that are fired from the main armament of Vickers Main Battle Tank.
44. a. Give five reasons why a first round may miss a target.
b. What are the characteristics of MG Fire?
45. a. What are the rules of laying?
b. How is the ammo of the Coaxial MG betted?
46. a. List the phases of effect of HESH round on a target.
b. What is the effective range of STATIC SHOOTING APDS from Vickers Main Battle Tank?
47. Mention the fire positions in AFV gunners and the type of fire from each of them.
48. a. What are the parameters upon which a tank is built?
b. What is the indirect range of HE in T-55?

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- 49. a. What is the type of range finding equipment fitted in the Vickers MBT and T-55 respectively?
- b. What type of armour plate provides protection against the following types of ammunition?
 - (1) HESH.
 - (2) APFSDS/APDS
- 50. a. What are the corrections open to the gunner in AFV gunnery?
- b. On what occasion does the commander order correction in AFV gunnery?

COMMUNICATION

- 51. What are the following radio equipment abbreviations and state their functions?
 - a. ARFAT.
 - b. RPU.
 - c. TURF 25 W.
 - d. TUAAM.
 - e. BITE.
- 52. Mention 5 antennae used in the NAAC and the types of radio sets they are used on, including the wave they propagate.
- 53. Fill in the following radio sets data.

Serial	Radio	Type (HF/VHF&UHF)	Frequency Coverage	Remarks
(a)	(b)	(c)	(d)	(e)
1.	Scimitar V			
2.	VRC 353			
3.	VRC 321			
4.	VRQ 301			
5.	TRA 931			

- 54. As an Armoured Officer, how do you solve the following problems?

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- a. When all the Harness system fails, as a comd, how do you communicate with your crew?
 - b. What are the solutions to the problem of co-located antenna?
 - c. Mention 3 occasions when unready tone will remain steadily on.
 - d. When using Scimitar V, what would you select on the MODE/FUNCTION switch of the Radio set to enable you communicate with a station/AFV equipped with VRC 353?
55. What are the qualities of a good receiver and their advantages/disadvantages?
56. What are the characteristics of the following waves:
- a. Space.
 - b. Sky.
 - c. Surface.
57. a. Define Antenna.
b. Mention the requirements of an antenna.
c. What do you understand by diversity reception?
d. Mention the layers of ionosphere.
58. a. State any set use for ground to air communication.
b. State the purpose of fuse fitted to any radio.
c. State the purpose of Earthing
d. What set is compatible to Scimitar V.
59. A charging source provides 51V, 16A. How many 12 V, 75 AHC batteries can be connected in series?
60. 2X12V, 75ACHC batteries are connected to work with a transceiver of 24V at current consumption of 6 AMPS. After 5 hours, the batteries stopped supplying current. What is the percentage efficiency of the batteries?

PART 3

THE ARTILLERY CORPS

INTRODUCTION

1. In preparing officers for comd and staff course, there is the need for them to know their Corps/Arms/Services thoroughly and others in general. The NACAS expects its officers to be sound in technical special to corps knowledge. The newly introduced Senior Staff College Selection Examination () provides a good platform to test and sort out knowledgeable Artillery officers.

2. Artillery is a combat arm. Its main function is to establish such fire supremacy in the battle area that the enemy can neither interfere with our operation nor develop his own effectively.

3. Field Artillery provides continuous and timely fire support to the manouvre comds by destroying or neutralizing those ground targets which will jeopardize the accomplishment of their mission. Air Defence Artillery provides air cover for specified Vulnerable Areas (VAs) and Vulnerable Points (VPs) from critical damage or destruction by enemy air attacks. Locating Artillery detects, identifies and acquires targets for timely engagements.

AIM

4. The aim of this paper is to give guidelines on how to answer special to corps questions on Arty in the SSCSE.

AMMUNITION

5. Candidates must be able to define an Arty ammo, give its various classifications and chemistry. Details are contained in NAA hand Book.
6. The term ammunition comprises that class of supplies usually containing a propellant, and/or explosive or chemicals. It includes small arms ammo. Arty ammo, mines, bombs and other contrivances charged with propellants, explosives, pyrotechnics, initiating composition or nuclear or chemical material. Ammunition for weapons greater than 60mm caliber is considered arty ammo.
7. A complete Arty ammo consist of:
 - a. Fuzes.
 - b. Projectiles.
 - c. Propellant.
 - d. Primer.
8. **Classification According to Use.** Classification of Ammo according to its use are:
 - a. Service.
 - b. Practise.
 - c. Blank.
 - d. Drill.
9. **Classification According to Types.** Classification of Ammo according to its types are:
 - a. Fixed.
 - b. Semi-fixed.

- c. Separate-loading.
- d. Separated.

GENERAL CHARACTERISTICS OF ARTY

10. The Arty may be of the following types:

- a. Field Arty.
- b. Air Defence Arty.
- c. Locating Arty.
- d. Seacoast Arty.
- e. Naval Arty.
- f. Aircraft Arty.

11. **Mission.**

a. **Field Arty.** Field Arty is to provide continuous and timely fire sp to the Infantry or Armour by destroying or neutralizing, in priority, those ground targets which jeopardize the accomplishment of their mission. This is fulfilled by:

- (1) Locating the enemy ground weapon and movement thereby acquire targets for engagement.
- (2) Engage ground targets to the effects desired by the supported Arms comd.

b. **Air Defence Arty.** Air Defence Arty is to preserve specified VAs and VPs from critical damage or destruction by enemy air attacks.

c. **Locating Arty.** Locating Arty is to detect, identify and acquire enemy location, pers and equipment in the battle field.

12. **Types Mobility.**

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- a. Auxiliary-Propelled Arty.
- b. Self Propelled.
- c. Horse-drawn.
- d. Railway.
- e. Mule.
- f. Arty installed in cargo body or in armoured carrier.

13. **Calibre**

- | | | | | | |
|----|-------------|---|-------|---|-------|
| a. | Light | - | 60mm | - | 100m |
| b. | Field | - | 101mm | - | 120mm |
| c. | Medium | - | 121mm | - | 160mm |
| d. | Heavy | - | 161mm | - | 210mm |
| e. | Super Heavy | - | 211mm | - | |

ORGANIZATION AND ROLES OF ARTILLERY

14. Candidates must be able to show the Org and roles of Arty at each level of operational comd, Arty comd and staff available at each level. Details as contained in CSC SOHB and Tactics Vol 1. Candidates should be able to explain the following terms:

- a. **Under Comd.**
 - (1) In Direct Sp.
 - (2) In Support.
 - (3) At Priority Call.

Note that Arty is not normally held in reserve.

15. **Types of Fire Support.**

- a. **In Attack.**

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- (1) Preparatory Bombardment.
 - (2) Covering Fire.
 - (3) Defensive Fire (DF) to cover period of reorganization on the obj.
 - (4) Interdiction.
- b. **In Defence.**
- (4) Defensive fire which includes:
 - (a) DF in depth.
 - (b) Close DFs.
 - (c) DF (FPF).
 - (5) Covering fire is sp of counter attack.
- c. **In Attack or Defence.**
- (1) Harassing Fire (HF).
 - (2) Counter Bombardment (CB).
 - (3) Smoke Screen.
 - (4) Indication of Targets.
 - (5) Battle Field Illumination.

16. It is important for the candidates to note that questions on organization, roles and functions are not always direct. It is the application that is very important. Prepare to show outline of the corps in general and that of the Arty bty in particular.

SURVEY

17. Questions on unit survey will require candidates to have thorough understanding of the following:

- a. Types of survey.

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- b. Survey principles.
- c. Equipment used for survey.
- d. Organization of a Survey Regiment.
- e. **Definition/Terms.** Candidates should be familiar with all the terms used in survey within the unit in general. Pay particular attention to the followings:

- (1) Orientation/fixation.
- (2) Resection.
- (3) Triangulation.
- (4) Transversing.
- (5) Bearing Pickets.
- (6) Linear Measurement.
- (7) Short Base Intersection.
- (8) Accuracy.
- (9) Change of Grid.
- (10) Probable Error (PE).

* Details as contained in the Pamphlet on Survey within the unit.

BALLISTICS

- 18. Candidates are expected to cover the following:
 - a. **Definition.** Study and be familiar with all the terms used in ballistics and particularly the following:
 - (1) Jump.
 - (2) Trajectory.
 - (3) Internal Ballistics.
 - (4) External Ballistics.

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- (5) Angle of Departure (A of D).
 - (6) Angle of Projection (A of P).
 - (7) Rifling.
 - (8) Calibre.
 - (9) Quadrant Elevation (QE).
 - (10) Tangent Elevation (TE).
 - (11) Angle of Sight.
- b. Study the Ballistic Characteristic of Arty Shell.

METEOROLOGY

19. Candidates are expected to cover the followings:
- a. Definition.
 - b. Simple calculation of met from Non-standard conditions.

FIRE PLAN

20. Candidates must be conversant with:
- a. **Types.**
 - (1) Quick.
 - (2) Deliberate.
 - b. **Responsibility.**
 - (1) Supported Arms Comd.
 - (2) Arty Comd/Offr.
 - c. **Classification.**
 - (1) Offensive.
 - (2) Defensive.

FIRE DISCIPLINE

21. Fire Discipline is the language of fire control. Thorough knowledge of the rules, conventions and phrases in fire discipline are what makes an Arty candidate a gunner officer. The three actors are the Observer, the Comd Post Officer (CPO) and the guns. The responsibilities of the 3 actors must be understood by the candidates. Master the following:

- a. Gun End Duties.
- b. Op End Duties.
- c. Gun Crew.

AIR DEFENCE

22. Questions on Air Defence are always designed to test the candidates understanding of the following:

- a. Characteristics of Air Defence.
- b. Equipment in use.
- c. Employment of Air Defence.
- d. Tasks.
- e. Terminologies:
 - (1) VAs/VPs.
 - (2) Air Defence Control Centre (ADCC).
 - (3) Air Defence Direct Centre (ADDC).
 - (4) Air Defence Artillery Fire Areas (ADAFAs).
 - (5) ADAFA Class A.
 - (6) Weapon Tight.
 - (7) Weapon Free.
 - (8) Emergency Order-Hold Fire.

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- (9) ADAFA Class B.
- (10) ADAFA Class C.

LOCATING

- 23. Candidates will be required to cover the followings in the locating branch:
 - a. Organization of a Loc Bty.
 - b. Roles.
 - c. Equipment in use.

OTHER ROLES

- 24. Candidates are expected to be conversant with the roles of Arty in the following:
 - a. **Mine Warfare.** Mine throwers.
 - b. **Weather Forecasting.** Met stn.
 - c. **Internal Security (IS).**
 - (1) To act in the Infantry Role.
 - (2) Flag Marches.
 - (3) Man certain essential service – Meteorological stn.
 - (4) Fire Support in the advance stages of Insurgency.

BOOKS OF REFERENCE

- 25. The following reference materials are recommended:
 - a. AFCSC SOHB.
 - b. AFCSC Tactics Vol 1.
 - c. NA Artillery Hand Book.
 - d. Fire Discipline Precis.

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- e. Pamphlet on Technical Shoot.
- f. Pamphlet on Op Duties.
- g. Survey Within the Unit.
- h. Pamphlet on Gun End Duties 1980.

PART 4

THE ENGINEERS CORPS

INTRODUCTION

1. Candidates sitting for the are required to be capable of commanding an Engr fd sqn in battle. In achieving this, they will therefore be reqd to know the employment of an Engr fd Sqn in battle. In addition to the capsulated roles of the NAE of assisting the NA to live, move and fight, the Sqn is expected to know the requirement of Engr Supporting all phases of war. Therefore, there is the need to review the existing reading materials and provide adequate guidelines to enable better performance for future examination.

AIM

2. The aim of this précis is to provide adequate guidelines required by candidates sitting for the Examination.

SCOPE

3. In preparation for these guidelines, references were made to the existing reading materials. These are the questions and answers as forwarded to TRADOC and the NASME Precis on the Sqn Comd's Course. The questions and answers forwarded to to TRADOC in 1992 were a fair attempt to cover the syllabi of the entire NAE Combat Operations.

4. This review however, is a deliberate attempt to rearrange and provide a self teaching guide, with detail explanations to all the questions that were postulated in

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that document. Some background précis were also considered necessary to the evolving questions and the highlights of the standards expected of the candidates were focused in all the segments of this précis.

5. Also for easier understanding and better assimilation of the subject, this précis is rearranged into the following modules to cover the entire facets of combat engineering in all the phases of war. The modules are as follows:

- a. The roles of the NAE in all the phases of war.
- b. Field Defence.
- c. Mine warfare.
- d. **Bridging**. Here all the bridging equipment and the NAE inventory were discussed. They were also treated in relation to their use for covering Dry and Wet obs/gaps. Design procedures and design calculations were adequately covered for each type of the bridges in the NAE inventory.
- e. Watermanship.
- f. Reserve Demolition.
- g. Bomb Disposal.
- h. Water Supply.
- i. Geology and Concrete Technology.
- j. Land Surveying.
- k. Roads and Airfields.
- l. Electric Power Generation
- m. Refrigeration and Air-conditioning.
- n. Welding.

6. In all the modules discussed above, précis were provided to precede theories, design and design calculations backed with relevant answers. The document could

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also be reproduced and distributed to candidates who may wish to make good pass marks. However, some areas are not exhaustively covered. In such areas users of the book may require further details.

PART 5

THE MODULE ON MILITARY TECHNOLOGY
SIGNALS CORPS

INTRODUCTION

1. This guide is intended to assist officers preparing for the Senior Staff Course Selection Examinations. This reviewed module is produced by NAS. Passing the paper on military technology requires officers using this guide to study the module and also to conduct in-depth reading of other materials to broaden their view on each topic. The guide covers the following areas:

- a. Roles and Functions of NAS.
- b. Equipment.
- c. Communication Security.
- d. Antenna and Propagation.
- e. Computer Appreciation.
- f. Electronic Warfare.
- g. Maintenance Culture.

REFERENCE MATERIALS

2. Candidates are advised to consult and study relevant NAS books and pamphlets.

ROLES AND FUNCTIONS OF NAS

3. The NAS is responsible for the following:
 - a. Providing communications support to the NA.
 - b. Formulating and implementing policies on EW.

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- c. Management of NA radio frequencies.
- d. Maintenance and repairs of all electronic equipment.
- e. Training of Officers and soldiers.
- f. Research and development of communications system.
- g. Advise the COAS, Arms and Services on communications matters.
- h. Liaison with civil institutions/establishments on communication matter i.e. Private Telecommunication Operators (PTO), NITEL, NIPOST etc.

EQUIPMENT

- 4. The candidate should be familiar with current equipment in use and should know the following:
 - a. Characteristics/features.
 - b. Deployment.
 - c. Standardisation policy.

- 5. Characteristics of HF radio to include:
 - a. Extensive range depending on the aerial.
 - b. Useful for long range communications.
 - c. Less susceptible to screening, since using skywave propagation.
 - d. Highly vulnerable Electronic Counter Measure (ECM).
 - e. Tremendous frequency congestion.

- 6. HF and VHF radio compared:
 - a. Advantages of each over the other.
 - b. Disadvantages.
 - c. Considerations for the choice of any of the radios (VHF or HF).

COMMUNICATION SECURITY

7. The candidates should cover the following areas:
 - a. Spectrum monitoring – Friendly forces and hostile nets, purpose of monitoring.
 - b. Relative security of means of communication.
 - c. Transmission security of radio messages.
 - d. Physical security of messages.
 - e. Breaches of communication security.
 - f. Measures to improve communication security.
 - g. Cryptography and Cryptanalysis.

ANTENNA AND PROPAGATION

8. At the end of studies, the candidate should have covered the following:
 - a. Types of antenna – whip, dipole, yagi, omni directional, directional, parabolic etc.
 - b. Antenna matching.
 - c. Antenna length.
 - d. Siting of aerials (vertical, horizontal, dipole).
 - e. Effect of vegetation and terrain on VHF signals.
 - f. Relationship between wavelength, velocity and frequency.

COMPUTER APPRECIATION

9. Students are to be familiar with the following:
 - a. Component units of a computer.
 - b. Understanding the terms – hardware, software, firmware etc.

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- c. Basic input and output devices.
- d. Storage devices.
- e. Listing of some application packages and programming.
- f. Network basic essentials eg **WAN, LAN, MAN**.
- g. Internet, Web Browser, search engines etc.
- h. Installation and Management.

ELECTRONIC WARFARE

10. Students should know the following:

- a. Definitions of electronic warfare (EW).
- b. Components of EW- ESM, ECM, ECCM (EPM).
- c. SIGINT: COMINT and ELINT.
- d. Defence against communication jamming.
- e. Types of jamming signals: spot and barrage.
- f. Scanners, monitoring equipment, DF and jammers.
- g. Remote piloted vehicles (RPV), beacons, chaffs etc.

11. In the 2 types of jamming (Obvious and subtle jamming) the more commonly used jamming signals are:

- a. Random noise.
- b. Stepped tones.
- c. Spark.
- d. Gulls.
- e. Random pulse.
- f. Wobbler.
- g. Recorded sounds.
- h. Preamble jamming.

HUMAN CONSCIOUSNESS IN A NEW ENVIRONMENT

12. To achieve a reasonable measure of combat success in an EW environment, there must be some consciousness that:
- a. The electromagnetic spectrum is free to both friendly and hostile forces, depending on EW asset employed.
 - b. EW could be an effective weapon of warfare if effectively employed.
 - c. All electromagnetic emissions are potential sources of information to the enemy.
 - d. Communication in plain voice over combat radio must be avoided as much as possible – codes, call-signs, nicknames etc to be used as appropriate.
 - e. Net discipline and correct procedures essential in a combat net.
 - f. Keep emission to the barest minimum – use data in HF communication.
 - g. Need to vet personnel involved in communications.
 - h. Combat communication assets should be physically secured against unauthorized persons.
 - i. Waste paper containing any service information must be burnt under supervision.
 - j. A potential enemy has the capability of always listening into all electronic transmissions.
 - k. Passive and active EW measures must not be ignored.
 - l. Combat communication must not be allowed to fall into enemy hands intact during operations.
 - m. Need for liaison with all services to ensure an integrated EW system.

MAINTENANCE CULTURE

13. After detailed study, a student should be familiar with the following:
- a. Maintenance Procedures.
 - b. Documentation.
 - c. Types of maintenance.
 - d. Maintenance Levels.

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PART 6

LOGISTICS MILITARY TECHNOLOGY
SYLLABUS FOR

NIGERIAN ARMY CORPS OF SUPPLY AND TRANSPORT

INTRODUCTION

1. The Nigerian Army Corps of Supply Transport and School (NACSTS) was the first in the logistics family. It was established to provide logistics support to the Nigerian Army. It started as a company and had Ordnance and Finance under her umbrella. With the growth and development of the NA the others under her control sprouted and formed their own separate Corps. Thus in the Nigerian Army today, there are four major logistics Corps. Out of all these, the NACSTS is the most senior and also occupies No 1 position in the field of logistics. With the various reorganizations of the Nigerian Army, the Corps also has her fair share in whatever direction the army moves.

2. The NACSTS is established to support the army. It is the same world over. Its major task is to provide mobility to the Nigerian Army principally at all times, anywhere in the world by land, air and sea. It also provides supply services of POL, catering services, fire management and control. These services are provided at formations and AHQ levels. In tri-services joint operation or exercises, over 70% of the logistics in the areas enumerated are handled by the Corps.

3. The ST personnel as a logistician is to support the infantry at all times not just in war. With the development of warfare, the Armour and Artillery Corps require such a high profile and prominence that they need to be supported by the Corps. In order to

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achieve her goals effectively, optimally and with utmost proficiency, the ST personnel is trained not just as a logistician but also as a psychologist, a tactician, and an infantry man. This is why most courses in ICCS are attended by the Corps personnel. The afore stated courses are addendum to his professional specialist course. With all these, he is trained in such a way that he knows with ease what the thinking of the battle commander is at all times and so can support him without ado.

4. The ST technology syllabus therefore was drawn taken cognizance of the people it is to support, the environment, the equipment and weapons needed to function effectively in war and peace time. He is prepared to read the mind set and psyche of the supported unit/fmn commanders. This being the case, the ST personnel must be well schooled not just in military field but how best to relate to any environment he finds himself, to exploit opportunities available in the overall interest of the NA and the tps and the civil society alike. Today warfare is logistics based and so the need for ST officers to keep pace with the technology of military need not be over emphasized.

AIM

5. The aim of this paper is to give guidelines to ST candidates preparing for military technology paper during Senior Staff Course Selection Exams (SSCSE).

GUIDELINES FOR CANDIDATES

6. The syllabus is to guide the candidates in the special areas as they affect the Corps. It covers all that are relevant for the SSCSE and should not be strange to the candidates having been schooled on them during Corps courses and in the field. A logistic officer is not just expected to know about his special fields but should be

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ahead of the supported commanders to be able to appreciate the situation on the ground, advise him correctly and support him effectively and efficiently. First and foremost, he is basically an infantry officer and could be deployed in an infantry role any time. This is because he is an infantry man, and a specialist in logistics which makes him a logistician.

SPECIAL AREAS FOR CONSIDERATION

7. **Organization/Roles.** It is imperative for any officer to know the ORBAT of his Corps, how it functions and its inventory for logistic support at all times. He must also be versatile with basic infantry weapons, infantry tactics, including infantry battle drills. He must be thorough with all ST Corps duties and roles. Equipped with all the above, he is better positioned to appreciate the battle requirement of the battle commander and support him optimally. He should also know about different types of driving, fire fighting and supply duties in the field which are his primary roles.

COOPERATION WITH OTHER ARMS AND SERVICES

8. The war today has shifted from what it used to be; hence the foundation of any war plan is logistics. Modern warfare is logistic based and of course logistic war. This means then that an ST officer should be able to do proper logistic staff check, make projections ie foresight, be able to adjust to vagaries of battle demand (Flexibility), minimize wastage (economy) see things from the comds genuine view point (Cooperation) etc. This being the case, he should not only know what is needed but ensure they are delivered safely in the right proportion, in good condition, timely and where and when required.

9. **The Div ST.** Generally ST operates a brick system and has the major responsibility of moving the army, all her logistics requirement, delivered safely, timely and in the right condition. The Div ST supports the Div while ST Coys supports the Bdes and other tri-services institutions. The 3rd and 4th lines Tpt are held by AHQ and HQ NACSTS respectively. The candidates are expected to know the vehicle holding of fmns and units including the roles of Corps HQs and AHQ ST.

10. **Syllabus.** The syllabuses under listed are areas most relevant to optimal operation of any ST officer in the field. Lacking knowledge of this means that the officer is not a logistician and so a non-performer. The implication of this is that an average ST officer for SSCSE should have all these at his finger tips.

a. **Definitions of Terms**

- (1) Vehicles classes.
- (2) Logistic Definition.
- (3) Principles.
- (4) Technical Logistic Terms.
- (5) ORBAT.
- (6) Military Law.

b. **The Logician.** The special things about him includes:

- (1) Understanding beyond his field.
- (2) Leadership qualities.
- (3) MT duties supplies and fire mgt.
- (4) Operations of the Corps/the infantry.

c. **Organization of the ST**

- (1) Organization at Bde, Div and AHQ level and Corps HQ level.
- (2) Operational procedure at all levels.
- (3) The brick system.

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- (4) Holdings of the Corps at all levels.
- d. **MT Operations.** These include:
 - (1) Types of driving.
 - (2) Duties of MTO.
 - (3) Tonnages of vehicles.
 - (4) Types of vehicle/capacity/capability.
 - (5) Grade classification.
 - (6) Convoy drills.
 - (7) Camouflage/concealment.
 - (8) Halt types/harbour.
 - (9) MT Forms.
 - (10) Ambush drills.
 - (11) Route recce/mov orders.
- e. **Supply Operations.** These include:
 - (1) Types of POL.
 - (2) Duties of supply officer.
 - (3) Supply forms.
 - (4) Maintenance in the field (DAA/BAA).
 - (5) Supply in the field.
 - (6) Communication zone.
 - (7) Different types of running (vehs). Reasons for that.
 - (8) Points in replenishment in maintenance in the field.
 - (9) Fuelling equipments in the field and in the barracks.
 - (10) Modes of conveyance.
 - (11) Types of packing.
- f. **Fire Operations**
 - (1) Meaning of the term fire/inferno.

- (2) The difference between them.
- (3) Classes of fire.
- (4) Types of fire extinguishers.
- (5) Cautionary orders.
- (6) Preventive orders.
- (7) Containment orders.
- (8) Routine order.
- (9) Fire Fighting Orders.
- (10) Equipment for fire fighting.
- (11) Fire man and fire fighters.

g. **Combat**

- (1) Bdes in Battle.
- (2) Gen conduct of operations (All phases of battle).
- (3) IS operations.
- (4) Bde in the fd (CPX).

h. **Information Technology**

- (1) Computer components.
- (2) Uses of different types.
- (3) Soft and hard wares.
- (4) Information network.

i. **References.** The references used are as listed below:

- (1) Logistic precis - AFCSC
- (2) Tactics Vol 1 x 2
- (3) Logistic precis - AFCSC
- (4) ST TOE
- (5) MT course precis (ST)
- (6) Supply course precis (ST)

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- (7) Fire course precis
- (8) Keeping the peace (IS operations)
- (9) Information Technology.

CONCLUSION

11. The Corps specialist areas that are necessary for the candidate of SSCSE have been enumerated. It covers the special areas for consideration which is all encompassing.

12. It details on roles/organization, co-operation with other arms and services with emphases on definition of terms. It also touches on the logistician himself, organization and operations of the Corps MT, and supply and fire operations others. Other areas considered imperative as combat and information technology are also highlighted.

PART 7

NIGERIAN ARMY MEDICAL CORPS

SYLLABUS

1. Essentials of good medical history taking/clinical examination:
 - a. **History Taking.** This includes:
 - (1) Patient identification.
 - (2) History of preventive, complaints.
 - (3) Chief complaints.
 - (4) Present illness.
 - (5) Past medical history.
 - (6) Development and antenatal history.
 - (7) Drug history.
 - (8) Family/social history.
 - b. **General Physical Examination.** These also include:
 - (1) General appearance examination (without touching).
 - (2) General physical examination (now touch).
2. **Casevac/Medevac from FEBA.** These should now be included:
 - a. Casevac flow chart.
 - b. Definition.
 - c. Difference between casevac/medevac.
 - d. Phases of casevac.
3. **First Aid/Assessment of situation.** These include:
 - a. Notification.

- b. Execution.
 - c. Report.
4. Casevac flow diagram.
5. Occasion for convening Medical Boards.
6. Approval of Medical Board proceeding.
7. **Medical Field Craft**. This includes:
 - a. Definition.
 - b. Method of carriage.
 - c. Loading into ambulance.
 - d. Transportation of injured person.
 - e. The field ambulance.
8. **First Aid and Triage**. These include:
 - a. Definition.
 - b. Basic principles.
 - c. Types of injuries.
 - d. Principles of Triage.
 - e. 1st, 2nd and 3rd priorities.
9. **Field Hygiene and Sanitation**. These include:
 - a. Definition.
 - b. Responsibility for field hygiene.
 - c. Factors to be considered in field hygiene.
 - d. The roles of field hygiene and sanitation.

10. **Medical Logistics in the field.** This includes:
 - a. Definition.
 - b. Major medical and surgical materials classified.
 - c. Supply and replenishment route.
 - d. Control.

11. **Health Record.** These include:
 - a. Definition.
 - b. Essential features.
 - c. Purposes of Health Records.
 - d. Use of Health Records in the field.

12. **Nuclear, Biological and Chemical Warfare.** These include:
 - a. Definition (Basic concept).
 - b. Chemical warfare.
 - c. Blister Agents.
 - d. Blood Agents.
 - e. Choking Agents.
 - f. Nerve Agents.

13. Biological Warfare Agents. E.g. Anthrax, Plague, Q Fever etc.

14. **Radio nuclear warfare.** This includes:
 - a. Thermal Radiation.
 - b. Blast.
 - c. Ionizing Radiation.

15. **Acute Gastroenteritis/Cholera** These include:

- a. Etiology.
 - b. Definition.
 - c. Clinical Manifestation.
 - d. Investigation/Diagnosis.
 - e. Treatment.
 - f. Prevention.
16. **Snake Bite**. This includes:
- a. Epidemiological.
 - b. Pathogenesis.
 - c. Clinical Manifestation.
 - d. Investigation.
 - e. Treatment.
 - f. Prevention.
17. **Bronchial Asthma**. This includes:
- a. Definition.
 - b. Types.
 - c. Presentation.
 - d. Investigation.
 - e. Management.
 - f. Prevention.
18. **Epilepsy**. This includes:
- a. Definition.
 - b. Types.
 - c. Causes of Convulsion.
 - d. Differential diagnosis.

- e. Treatment and Prevention.
19. **Heat Stroke**. This includes:
- a. Definition.
 - b. Aetiology.
 - c. Presentation.
 - d. Treatment.
20. **Wounds**. This includes:
- a. Classification.
 - b. Crushed and devitalized wounds – war wounds.
 - c. Difficulties associated with these wound.
 - d. Treatment.
 - e. Wounds with skin loses.
 - f. Practical techniques of wounds management.
 - g. Antibiotics in wound treatment.
 - h. Wound infection and treatment.
 - i. Special types of wounds.
21. **Fractures**. This includes:
- a. General classification.
 - b. Pathology of Tubular bone fractures.
 - c. Clinical and radiological features
 - d. Healing of fractures.
 - e. Treatment of fractures.
 - f. Fractures in children.
 - g. Complication of fractures.

22. **Burns**. This includes:
- a. Definition/Aetiology.
 - b. Factors in the management of burns:
 - (1) Shock.
 - (2) Healing.
 - (3) Scaring.
 - c. Treatment of burns.
 - d. Complications of burns.
23. **Acute Appendicitis**. This includes:
- a. Description of the appendix.
 - b. Etiology.
 - c. Pathology.
 - d. Clinical features.
 - e. Differential diagnosis.
 - f. Treatment.
24. **Internal Hemorrhage**. This includes:
- a. Definition.
 - b. Aetiology.
 - c. Clinical features
 - d. Management
25. **Head Injuries**. These include:
- a. Definition.
 - b. Injuries of the brain.
 - c. Clinical features.
 - d. Investigations.

- e. Treatment of closed head injuries:
 - (1) Drugs.
 - (2) Other techniques.
 - f. Complications of head injury.
26. **Malaria**. This includes:
- a. Definition.
 - b. Aetiology.
 - c. Clinical Features.
 - d. Investigation.
 - e. Treatment
 - f. Prevention.
27. **HIV/AIDS**. This includes:
- a. Definition.
 - b. Aetiology.
 - c. Clinical features.
 - d. Investigation.
 - e. Treatment
 - f. Prevention.
28. **Preventive Health**. This includes:
- a. Immunization.
 - b. Health Education.
 - c. Waste Management.
 - d. Control of Communicable/Non Communicable Diseases.

ESSENTIALS OF GOOD MEDICAL HISTORY-TAKING CLINICAL EXAMINATION

29. **History Taking.** The history is regarded as the most valuable part of the clinical examination in leading to a diagnosis. The history is also regarded not just as a narrative but a detective work. The following are the essentials of clinical history:

- a. Patient identification. Geographical/Occupational relevance. Age relevance.
- b. History of present complaints; which system(s) primarily?
- c. Chief complaint(s) is it suggestive of non-specific disorder:
 - (1) When was the patient last well?
 - (2) Duration; congenital; acute or chronic?
- d. **Present Illness.**
 - (1) When was the patient last well?
 - (2) Mode of departure from health; abrupt, insidious or dramatic.
 - (3) Progression. Implacably, static or complete at onset Regressed/improved/Remissions and exacerbations?
 - (4) Chief symptoms. Exhaust features e.g. pain – position provocation, palliation, quality, radiation, temporal profile and severity.
 - (5) Chronology of symptomatology.
 - (6) Relevant negatives.
 - (7) Referred from elsewhere.
 - (8) Earlier failed therapies.
- e. **Past medical history.**
 - (1) Is the condition a continuing saga of an implacably progressive illness? Is it an exacerbation?

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(2) Is there any other illness? Any previous surgery, blood transfusion, hospital treatment–date, year and where?

(3) Immunization-date and indication.

f. **Development and antenatal history**

(1) Gestation, antenatal care, apgar score.

(2) Perinatal-delivery mode, development milestones, regarded.

g. **Drug history**. Prescribed, when how much over the counter? For what? History of advance drug reactions.

h. Family/social history.

30. **General Physical Examination**. The purpose of general physical examination is to:

a. Seek confirmatory or rebutting evidence in relation to the historical presentation.

b. Identify specific signs indicative or pathognomonic of specific disease or systemic illness (spot diagnosis) which may not have been primary reason for presentation.

There are 2 components to physical examination: general appearance examination and general physical examination.

31. **General Appearance Examinations**. The patient is observed from head to toe.

Do not touch. Systematically look for specific habitus or facies:

a. Habitus – Marfanoid, Turners, sickle cell disease, obese, body build types cushingnoid?

b. Facies – Cushnignoid, thyrotoxicosis (proptosis), parkinsonia, Down’s syndrome? Facial palsy, acromegaly, sickle cell (gnthopathy, bossing of skull).

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- c. Mental status – consciousness level, drowsy, orientation?
- d. Cardiovascular system (CVS) – Fowlers position? Mitral facies, dyspnoeic, Abdominal/pedal swelling.
- e. Respiratory disease dyspnea, cough, sputum, haemoptysis?
- f. Gastrointestinal Tract (GIT) disease – Abdominal and parobid swelling? Spider naevi?
- g. CNS/MSS – limb position, wasting, involuntary movement?
- h. Non-specific – wasting, fluty hair, sygematic prominenee, hypermelanosis, halitosis, fetor (hepatic/renal/diabeters).
- i. Genitourinary tract disease – Facial puffiness, periobital halo, scratch marks.

32. **General Physical examination.** How to touch:

- a. Feel pulse and examine hands and arms.
- b. Examine head and neck.
- c. Proceed now to areas mainly affected or to anteri or chest (Heart, lungs and spine.)
- d. Examine abdomen, groins and external genitalia.
- e. Examine lower limbs.
- f. Record blood pressure.
- g. Ophthalmoscope examination.
- h. Rectal or vaginal examination if indicated.
- i. The temperature, height and weight can be recorded and a specimen of urine obtained at the beginning or at the end of the examination.

33. **ACUTE GASTROENTERITIS.**

- a. **Aetiology.** Gastroenteritis is caused mainly by the ingestion of contamination of food or drinks. Any food produce is a potential sources of

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human infection. The organisms that commonly cause gastroenteritis are salmonella, shigella and enteric viruses. Those that are less common in causing gastroenteritis include staphylococcus aureus, escherichia coli and clostridia. The source of infection may be asymptomatic human carriers or persons with active clinical disease.

b. **Clinical Manifestation.** Clinical manifestation occurs after an incubation period of about 8 – 48 hours. There is usually sudden onset of colicky abdominal pain, headache, and loose watery diarrhea, occasionally with mucus or blood. Nausea and vomiting are frequent but are rarely severe and protracted. Fever of 38 to 39°C common. Patients usually have mild to moderate abdominal tenderness on palpation. Peristalsis is usually greatly increased. Symptoms usually subside within 2 to 5 days and recovery is uneventful. Gastroenteritis is one of the commonest causes of childhood mortality in the tropics. Severe vomiting and diarrhea to dehydration are the cardinal features.

c. **Investigation/Diagnosis.** The investigation is done by the isolation often of the causative organism from the suspected food, drink or feces during the acute illness. Stool cultures can become negative for salmonella within 1 to 4 weeks, but occasionally patients continue to excrete organism for months. The diagnosis in febrile gastroenteritis produced by presumed viral agents and shigellosis can be distinguished from salmonella gastroenteritis only by appropriate stool culture. Many bacterial agents and drugs can produce diarrhea, nausea and abdominal pain, but fever is rarely a feature of these disorders, the diagnosis therefore depends upon a history of exposure or ingestion. Abdominal findings may be prominent in some patients and lead to confusion with certain intra-abdominal emergencies, such as acute appendicitis or acute cholecystitis.

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d. **Treatment.** The treatment of most gastroenteritis is supportive. Dehydration should be corrected by parenteral administration of fluids and patient takes nothing by mouth for 8 to 12 hours. Antimicrobial therapy, irrespective of type, does not appear to exert a beneficial effect on the clinical course. However, where symptoms are protected, sensitivity test of isolated organism and appropriate drugs can be used.

PART 8

NIGERIAN ARMY ORDNANCE CORPS

INTRODUCTION

1. The requirement for loading of equipments can be traced to when man identified the need to fend and protect himself. Almost everything that the Army needs to live, move and fight is provided by the Nigerian Army Ordnance Corps (NAOC).

2. This paper reviews the depot organization and the role of NAOC. It however, covers and outlines a large and complex group of topics as it has to be of a manageable length. Reference materials are available in most units, formations and libraries to consult for additional information.

AIM

3. The aim of this note is to provide revision topics for NAOC officers preparing for Senior Staff College Selection Examination (SSCSE).

ROLES OF NAOC

4. The NAOC Roles are:
- a. To provide Ordnance Stores and equip the Army.
 - b. To inspect and repair:
 - (1) Ammunition.
 - (2) General and Textiles including tentage.
 - (3) General stores including furniture.

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- c. To provide a range of specialist services:
 - (1) Printing.
 - (2) Laundry and bathing facilities.
 - (3) Disposal of Improvised Devices (IED) and ammunition.
 - (4) Salvage of metals and stores.

ORDNANCE MATERIAL

- 5. The items NAOC provides are:
 - a. Ammunition.
 - b. Clothing and general stores.
 - c. Vehicles (A,B,C, D & E).
 - d. Mechanical transport spares and technical stores.
- 6. After reading the above paragraphs, officers are required to know the following:
 - a. The roles of NAOC.
 - b. The material NAOC provides.

BASIC PROVISIONING

- 7. **Acquisition of Stores.** The acquisition of stores to equip and maintain the Army starts with provision which is defined below:
- 8. **Definition.** Provision is defined as the process of calculating and obtaining ordnance stores required for the initial equipping and subsequent maintenance of the Army.

9. **Objective of Provision.** The objective of provision is to provide the right store in the right condition, in the right quantity, at the right place at the right time and in the most economical manner. Provision is carried out at 3 levels:

a. **Primary Provision.** The primary provision takes account of Army and estimate customers. It is done at HQ DOAL, in conjunction with HQ NAOCS and the Central Depots concerned.

b. **Secondary Provision.** Secondary Provision is confined to the requirements of a specified dependency.

c. **Tertiary Provision.** Tertiary Provision is carried out by Ordnance Field Park (OFP) and store section attached to NAEMES Workshops.

d. **Provision Division.** There are 2 divisions of stores for provision purposes:

(1) Wastage Rate Provision Items.

(2) Usage Rate Provision Items.

e. Items for which wastage rate provisions have one or more of the following characteristics:

(1) They are maintained in the service by repair and overhaul.

(2) They are of high operational importance.

(3) They are expensive.

(4) They are difficult to procure from industry because of design, specification or due to small quantities involved.

(5) These are some of such items; Armament, engineering equipment and communication equipment.

MANAGEMENT DIVISIONS

10. The main divisions of the management of Ordnance Stores are as follows:

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- a. **MT Spares and Technical Stores.** This management deals with all spare parts related to mechanical transport and all stores, equipment of technical nature e.g. Armament, radios, optical equipments, and the spare parts to support them.
- b. **Clothing Stores.** Clothing Stores includes all items used by a service man from headgear to foot ware both inner and outer.
- c. **General Stores.** General Stores include non-powered tools and workshop materials.
- d. **Ammunition and Vehicles.** Ammunitions and Vehicles are the other divisions of the stock management.
- e. At this stage officers are required to know the following:
 - (1) Provision, definition, objective and level.
 - (2) The main divisions in the management of Ordnance Stores.

DEPOT ORGANIZATION AND LAYOUT

11. All the management divisions are carried out in the NAOC depots. The layout of a depot is mainly determined by the types and sizes of stores it holds. The depots are listed below:

- a. Central Ordnance Depots (CODs).
- b. Central Ammunition Depot (CAD).
- c. Central Vehicle Depot (CVD).
- d. Base Ammunition Depots (BADs).

12. Ordnance Field Park (OFP) and Workshop Stores section are field units. They carryout tertiary provision but mainly provide NAOC support to the formation they are affiliated. Officers are required to know the organization of the following:

- a. BOD.
- b. BAD.
- c. OFP.

STORES AND STORE HOUSE MANAGEMENT

13. The following functional procedure, takes place in all depots:
- a. Basic provisioning.
 - b. Receipt procedure.
 - c. Issue procedure.
 - d. Dues in and dues out procedures.
 - e. Stocktaking and reconciliation procedure.
 - f. Care, preservation and packaging of stores.
14. **Receipt Procedure (RP)**. The basic requirements of receipt procedure are as described below:
- a. Quick clearance of the transport which delivers the stores to the depot.
 - b. Efficient checks are made as to the designation, quality, quantity and condition of stores and packages against receipt document.
 - c. Maintenance of consignment identity while it awaits complete receipt.
 - d. Ensure that when stores are put into stock they are in condition fit for storage and issue.
 - e. Ensure that stores are located in such a way that no time is lost when they are required for issue.
 - f. Ensure that stores are properly brought to accounts.

ISSUE PROCEDURE

15. Issue procedure is one of the main functional procedures Ordnance depot. The basic requirement of issue procedures are:

- a. Indents are checked for correct unit entitlement without delay.
- b. Correct selection and packing of stores and distinct marking are applied.

Issues are made on first come first serve basis.

- c. Priority issues are given special attention.
- d. Proper documentation is carried out at each stage.
- e. Stores are dispatched to units within a laid down time frame, and receipts are acknowledged by forwarding to the issuing depots signed and returned copies of issue vouchers.

STOCKTAKING AND RECONCILIATION PROCEDURE

16. Stocktaking is a process of physical verification of stores and reconciling the difference between the actual holding and account card balances in order to make the latter a correct index of the stock held in an ordnance depot.

17. **Basic Requirements**. The basic requirement of stocktaking is:

- a. All stocks of an item are located and counted.
- b. All accounts are updated before physical stocks and account card balances are compared to ensure the discrepancies revealed are not fictitious.
- c. The normal flow of work is interrupted for as short a period as possible including cases for re-account.
- d. The checks proceeds from stores to accounts and not vice versa.

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- e. Attention to items is selective and frequency of stocktaking is related to the importance and value of the items.
 - f. At the end of it the account should reflect, the position of the stock existing on the ground.
18. **Types of Stocktaking.** There are 3 types of stocktaking. These are:
- a. **Cyclic Stocktaking.** Cyclic stocktaking may be half yearly, yearly or of a longer duration.
 - b. **Secondary Stocktaking.** The Secondary Stocktaking is usually carried out when it is suspected that the stocks held do not agree with the account card balance.
 - c. **Special Stocktaking.** Special Stocktaking relates to stocktaking of valuable and attractive items and carried out at irregular intervals.
19. At this stage stores and storehouse management and functional procedures in the depots has been revised.

AMMUNITION

20. **Definition.** Ammunition is defined as any ammunitions of war whether defensive or offensive of any components whether filled or charged or intended to be filled or charged with explosive, smoke, chemical, or pyrotechnic compositions also:
- a. Explosives made up of charges.
 - b. Explosives, Chemical charges and incendiary smoke or pyrotechnic material in bulk.
 - c. Non-explosives stores and components for use in the initiation or assembly of projectile explosive charges.

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21. To take proper care of ammo and prevent deterioration, failure to function or even becoming dangerous to the users, Ammunition Technical Officer (ATO) and Ammunition Technician (AT) are on strength to give direction and guidance to unit on the maintenance and storage of the ammo on their charge. The guidance of an ATO will be sought on all occasions when difficulties are experienced while applying Ammo and Explosive Regulations or when any unusual problem arises in relation to storage, maintenance and movement of ammo.

SITING A BAD

22. The following are points to note when sitting an ideal ammunition depot:
- a. **Accessibility**. An ammunition depot should be sited so that it can be easily accessible by road, rail and air.
 - b. **Isolation**. The depot should be sited at a reasonable distance from public buildings and residential areas. These are necessary to minimize the risks from fire and explosion from outside sources.
 - c. **Concealment**. Trees and underground provide concealment to storehouses.
 - d. **Weather**. Areas which are subjected to storm and other atmospheric abnormalities are to be well drained and not liable to flooding.
 - f. **Extent of Areas**. The area must be large enough to allow future expansion and development.

ARMAMENT AND AMMUNITION DEPOT

23. Ammunition is one of the combat supplies managed by the NAOC. Types of ammunition use by the Army are:
- a. Artillery, Mortar, Rockets and Small Arms Ammunition.

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- b. Mines and Grenades.
- c. Pyrotechnics and Smoke Generators.
- d. Demolition Explosives.
- e. Missiles.

CARTRIDGES

24. Cartridges are bagged propellants, charges of separate loaded ammo. They are both illuminating and signal cartridges. The BL System Cartridge have the following characteristics:

- a. Economical, cheap and easy to manufacture.
- b. Do not leave live or empty cartridge cases requiring salvage.
- c. Storage and transportation is easy.
- d. Do not need extraction of cartridge case after firing.
- e. In event of misfire, the removal and replacement of the tube alone is sufficient. This can be done without opening the breech.

CLASSIFICATION OF PREMATURE, GENERAL ACCIDENT, FAILURES AND DEFECTS

25. All incidence involving the malfunctioning, accidental functioning or misassemble of ammo and explosives will be classified as below:

- a. **Premature**. Premature in any round of guns, howitzer, mortar or similar ammo which on firing explodes or detonates in the bore in flight within 100 metres of the muzzle will be described as bore premature. Any round which premature in flight at any point on trajectory beyond 100 metres from the muzzle will be described as flight premature.

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- b. **Failures**. Failures in any round or component of ammo which fails to function as expected e.g. misfires, blinds, excessive deviation in range or line are described as failures.
- c. **Defects**. Defects are any fault in the constitution or marking of the ammo or the package not attributable to normal deterioration.
- d. **General Accident**. General Accidents are any unusual or unexpected incidents not classified as premature, failures or defects e.g. a fire-involving explosion in an ammo depot, storehouse of the ammo, the accidental explosion of a round or component.

PROCEDURE FOR THE INSPECTION, SENTENCING AND CLASSIFICATION OF AMMUNITION

26. All ammo holdings in the NA will be inspected periodically by ATOs and classified according to their physical conditions as follows:
- a. Condition A – Ammo which is 100% fit for operational use.
 - b. Condition B – Ammo carrying restriction which requires modification before use in peace time but may be issued during a state of emergency.
 - c. Condition C1 – Ammo requiring 100% inspection, repairs/modification before issue in peacetime but which may be issued during a state of emergency without 100% inspection.
 - d. Condition C2 – Ammo requiring 100% inspection/repair/modification before use in any circumstance.
 - e. Condition D – Ammo for disposal.
 - f. Condition D1 – Ammo for break down.
 - g. Condition D2 – Ammo earmarked for possible sale
 - h. Condition D3 – Ammo earmarked for disposal.

INSPECTION AND SENTENCING OF AMMO

27. Both inspection and sentencing of ammo are governed by the physical condition of the ammo as well as the stipulated shelf – life of the complete system. The following inspections are normally carried out by ATOs.

- a. **Initial Acceptance Inspection.** Initial acceptance inspection is carried out when ammo is to be received into the depot from factory.
- b. **Routine Inspection.** Routine inspection is carried out in depots and units stock holding to ascertain the homogeneity of ammo and components after storage in varied climatic conditions or after the first quarter of its shelf life.
- c. **Pre-issue Inspection.** Pre-issue inspection is carried out whenever ammo is to be issued to user units.
- d. **Special Inspection.** Special inspection is carried out by the Director of Ammo as a result of a serious defects/incidents occurring with any ammo item. This inspection involves 100% examination of ammo and its associated components.

SENTENCING

28. Sentencing of ammo at routine inspection is dependent upon a service Quality Requirement which varies according to the role which the ammo will be called upon to fulfill. In these context therefore, ammo is divided into the following classes:

- a. **Class 1.** Class 1 ammo is designed for an intended use in an operational role together with component and ancillaries for use herewith.
- b. **Class 11.** Class 11 ammo is designed for use in an operational role but bearing an inherent and permanent restriction limiting its use to training or ammo solely designed for use in training or practice role and

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components/ancillaries having no operational role and use specifically as training or as practice ammo.

- c. **Class 111**. Class III training expedients listed such as AFG 3412.

VEHICLES ISSUE PROCEDURE

29. The basic vehicle issue procedure ensures the following:
 - a. All vehicles issue are covered by authentic Release Order (RO) from competent staff authority.
 - b. Vehicles are selected for issue from stock on “First – in First out (FIFO) basis”
 - c. Vehicles are properly prepared for issue and leave the depot in good mechanical condition with complete repair kits and tools.
 - d. Documentation should be simple and unit collection practice do not have to visit too many offices.
 - e. Proper accounts are maintained, receipts progressed and stock balance reported to enable release by staff.
 - f. Acknowledgement are received once vehicles are brought on charge by units and the Part X orders so published are received at the issuing depot.
30. The officer is required to be able to answer questions on vehicle issue in the depots and receipts in the user units
31. At this stage the officer is required to be able to know the components of ammo, siting a BAD, classification, inspection and sentencing of ammo.

TYPES OF VEHICLE

32. Officers should be able to identify and classify the various military vehicles in NA's inventory. This is to include the following:

- a. A Vehicles – Armoured Vehicles.
- b. B Vehicles – Soft Skin Vehicles.
- c. C Vehicles – Earth Moving Vehicles.
- d. D Vehicles – Amphibious Vehicles.
- e. E Vehicles – Specialist/Modified Vehicles.

33. Officers should also be able to distinguish between Issue Order and Release Order as it affects vehicles. Issue Order is given at a higher level usually at AHQ, while Release Order is given by HQ NAOCS.

34. **Books/Materials for Further Reading.** Additional information are available in the following:

- a. Comdts Technical Instruction.
- b. Q Admin Instructions.
- c. Ammunition and Explosives Regulations (Land Service).
- d. Issue Order – based on AHQ.
- e. Release Order – HQ NAOCS

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PART 9

**NIGERIAN ARMY CORPS OF ELECTRICAL AND
MECHANICAL ENGINEERS**

Reference:

A. NAEMES/1160/3/G dated 30 Jul 04.

INTRODUCTION

1. Military technology has assumed an unprecedented advancement globally in recent times. Thus, for an army to remain relevant, it is expedient for her crop of officers to be abreast with these modern trends. One of the ways the Nigerian Army (NA) has devised to prepare her middle level officers for future challenges is the Senior Staff Course Selection Examination (SSCSE). However, in line with the dynamism of military technology, it has become expedient for the syllabus and module for this subject to be reviewed.

2. The foregoing was articulated in Reference A, which necessitated the constitution of this committee to review the module on Military Technology for the SSCSE. This is with a view to making the examination more realistic and relevant.

AIM

3. The purpose of this report is to critically examine the current module on Military Technology for the SSCSE. It will also cover assessment, modifications to topics and other as enunciated in the terms of Reference.

TERMS OF REFERENCE

4. The committee's terms of reference were:

Assess and study the module as it relates to NAEME.

If need be, remove irrelevant topics.

Suggest other topics, in view of technological advancement, not included in the module

Modify the topics, if necessary.

Liaise with relevant schools/training branches and seek their opinions.

Make recommendations/suggestions where necessary.

Any other related tasks as deemed necessary.

BOOKS OF REFERENCE

5. The following were the books of reference:

Module on Military Technology for SSCSE.

Module/precies of EME Coy Comd's Course.

Module of courses from NACOL.

Other documents, publications, books and personnel that may be considered relevant to subject matter.

METHODOLOGY

6. The committee met on a number of occasions and deliberate extensively based on past experiences as candidates and Directing Staff. The module of the EME Coy Comd's Course, Military Technology for SSCSE and course contents of the Military and Information Technology module of NACOL were carefully studied. The course contents of some relevant courses at schools of EME and current engineering

journals/publications were also examined.

TOPICS CONSIDERED IRRELEVANT TO MILITARY TECHNOLOGY

7. After carefully studying the various topics in the current module, as it relates to EME, the committee is of the view that, the following topics should be removed due to their irrelevance to military technology:

Organisation and functions.

Unit Admin

Technical Admin.

EME Tactics and Operations.

Personnel Management.

The above topics would only be relevant in a special-to-corps paper.

SUGGESTED TOPICS/MODIFICATIONS TO BE INCLUDED IN THE MODULE

8. The following are the suggested topics to be included in the module:

a. Management.

b. Network Analysis.

Operations Research (formulation of linear programming models).

Inventory Control (As it relates to Materials management).

Equipment Management.

Definition of Engineering.

Definition of Industrial Engineering.

Definition of Terotechnology.

Terotechnology Process.

Equipment Procurement Procedure.

Definition of Reliability, Availability and

Maintainability and simple calculations.

Definition and Forms of maintenance.

9. Elements of World Class Manufacturing. Definition and Challenges of Engineering Management

a. **Motor Vehicle Technology.**

(1) **'A' Vehicles**

Track System.

Suspension. System.

Transmission System.

Power Pack.

Principles of Heat Exchanger.

(2) **'B' Vehicles**

Working Principles of SI and CI Engines.

Electrical System.

Steering System.

Transmission System.

Types of Chassis Frame.

(3) **Rec Vehicles.**

Recovery capabilities.

Recovery Appliances.

Tackle layouts.

b. **Armament Technology.**

(1) Definitions.

(2) Functions of Recoil System.

Types of Mountings.

Gun Barrel Stresses.

Barrel Fittings.

Components of superstructure.

c. **Instruments.**

Optics.

Types of sights.

Definition of LASER.

Principles of Laser Range Finder.

Night Vision Devices (T-55 and EAGLE Tank).

d. **Guided Weapon Systems (Blowpipe and MILAN).**

Components of Guided Weapons.

Roles of Guided Weapons.

Types of Guided Weapons.

Surface to Surface Missiles.

Surface to Air Missiles.

Basic introduction only.

e. **Nuclear, Biological and Chemical Weapons.**

Agents of NBC.

Effects of NBC on Personnel and Equipment.

Protection from NBC.

f. **Radar Systems.**

Types of Radar.

Uses of Radar.

g. **Electrical Devices.**

Differences between AC and DC Circuits.

Standard Colour Code.

Types and Uses of Electrical Measuring Instruments.

Functions of transformers, diodes, capacitors and inductors.

h. **Computers (Hardware Maintenance).**

Computer Fundamentals.

Types of Peripherals.

Types of Virus and Treatment.

Preventive Maintenance Checks.

Software Applications (Microsoft word, excel etc).

Computer Hardware Configuration.

Basic Internet Use.

i. **Basic Manufacturing Technology**

Metal Casting.

Sand Casting.

Die Casting.

Centrifugal Casting.

Continuous Casting.

(1) Metal Machining. Types of metal cutting processes
(drilling, shaping, reaming, turning, boring, knurling etc).

(2) Joining Processes.

Welding.

Brazing.

Mechanical Fasteners.

Basic Process Design.

j. **Computer Integrated Manufacture.**

Computer Aided Design (CAD).

CAD Subsystem.

CAD Drafting.

Computer Aided Engineering.

Computer Aided Manufacturing.

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Tools and Strategies for Manufacturing Management.

RECOMMENDED PRECIS

204. The following précis are recommended materials:

- a. Armament Precis (WEG, NASEME).
- b. Optics Precis (NASEME).
- c. Military Vehicle Technology (MEG, NASEME).
- d. Officers' Electronics Course Precis (EEEG, NASEME).
- e. ECCM Management Precis (NASEME).
- f. Military Technology Precis, NACOL.
- g. Computer Equipment Maintenance Course Precis, NASEME.

OPINIONS AND SUGGESTIONS

10. The committee took a detailed comparative study of the Military Technology module of other corps and discovered that most of the topics have no direct link to military technology. For example, the knowledge of the housing schemes available to NA personnel (Finance corps syllabus) or the functions of a duty room as listed in the Military Police corps' syllabus has no bearing with military technology.

11. It was also observed that the fact that various corps set different questions does not present a level playing ground for all officers. For instance, experience has shown that some corps set sub standard questions compared to the EME corps' syllabus. Since the basic knowledge of military technology is essential for all officers, the committee is of the opinion that the same syllabus could be used for all officers writing the examination to ensure fairness.

12. The committee is of the view that AHQ could set up a committee to write a

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précis on Military Technology. This would serve as a reference material for officers preparing to write the SSCSE. Alternatively, the basic Military Technology module of NACOL could be adopted.

13. The committee opines that if the NA still intends to examine officers based on topics peculiar to corps, it would be necessary to change the name of the subject to special-to-corps paper. If the AHQ accepts this suggestion, then the present EME syllabus would suffice.

14. A minimum of 2 weeks cadre at NASEME would be necessary for NAEME officers to prepare them for Military Technology paper of the SSCSE every year if the new syllabus is approved. HQ NAEMES could invite senior EME officers knowledgeable in specific fields to NASEME during the cadre period.

CONCLUSION

15. The Military Technology module of the SSCSE was critically examined and topics considered irrelevant were removed. A number of new topics were proposed in line with current trend of technological advancement.

16. It was suggested that to ensure fairness, the same syllabus could be used to set the Military Technology paper for all officers. In addition, AHQ could set up a committee to write a new précis on Military Technology as reference material for NA officers or the Military Technology module of NACOL could be adopted in the alternative.

17. Military Technology paper could be changed to special-to-corps paper if the AHQ intends to maintain the present format. In that instance, the committee suggested that the present EME syllabus could be retained.

RECOMMENDATIONS

18. The committee hereby recommends that:
 - a. The same syllabus should be used to set examination for all officers on Military Technology.
 - b. AHQ should set up a committee to write a précis on Military Technology for NA officers.
 - c. The basic Military Technology module of NACOL should be adopted for SSCSE.
 - d. If officers are to be examined as per corps, the name of the paper should be changed to special-to-corps paper.
 - e. The present EME syllabus should be retained if the name of the paper is changed.
 - f. A minimum of 2 weeks cadre on Military Technology should be organized for NAEME officers preparing for SSCSE.
 - g. HQ NAEMES should invite senior EME officers to NASEME during the SSCSE cadre.

PART 10

MILITARY TECHNOLOGY SYLLABUS FOR THE
CORPS OF MILITARY POLICE

INTRODUCTION

1. The Corps of military police (MP) had been saddled with series of tasks from its formation to the present stage. The roles of the MP can be divided into war and peace time roles, why peace time roles could be sub divided into law enforcement physical security roles.

COMBAT SUPPORT ROLES

2. Military police perform combat operations against rear area threats. In addition to their traditional support roles, MP is now a key response force for conducting rear area combat operations against the enemy. MP will fight as a combat force to protect the rear area. The MP conducts Combat Support Operations to expedite the movement of combat resources and evacuate enemy prisoners of war (PWs) from the battle area. They will reconnoitre routes to and within battle area. The Military Police will also find new main supply routes (MSRs) to ensure a way is open to move reinforcing troops, fuel, food and ammunition across the battle field. They will expedite the rapid movement of units and essential supplies. MP will quickly take PWs from combat units and rapidly remove them from battle area to meet obligations of international law.

3. The candidate is expected to know the roles of MP in war time, which includes the following:

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- a. **Rear Area Protection.** These comprise of:
- (1) Control of Main Supply Route (MSR)
 - (2) Construction of Road Blocks at critical points.
 - (3) Construction of Information Posts at Formation Headquarters for briefing VIPs and dignitaries.
- b. **Circulation Control.** The main battle mission of Military Police is battle field Circulation Control (BCC). BCC ensure combat personnel, equipments, and supply move smoothly, quickly and little interference on main supply route (MSRs). MP control circulation on the battle field to meet changes in tactical situations and route conditions. The candidates are expected to know the basic circulation control measure such as:
- (1) **Traffic Control Posts.** MP set up traffic control posts at critical points on MSRs to control the movement of vehicle and personnel.
 - (2) **Mobile Patrols.** An MP mobile patrol is an element sent out by a squad leader to conduct a continuous or area recce. A mobile patrol is a 3 man team whose main mission is to reconnoiter by continually patrolling their assigned routes. They also perform stationary circulation control functions when an emergency arises.
 - (3) **Temporary Signs.** Temporary signs are traffic signs erected to regulate the flow of traffic. MP place temporary signs where hazards exist or where traffic must be regulated. They use signs to guide MSR users. Convoys using can easily follow an MSR and find their units or destination, even on an unfamiliar route.
- c. **Escort Duties.** Candidate will be conversant with types of escorts, planning consideration, division of escort and the diagrammatic representation.

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There are 2 types of escort and ceremonial and protective. A standard Escort can be divided in to the following:

- (1) Vanguard gp
- (2) Main gp.
- (3) VIP (load)
- (4) Rear guard
- (5) Escort comd

d. **Control of Refugees.** Refugee control ensures refugee movements do not interfere with military movements on MSR or with tactical units during combat operations. It also:

- (1) Reduces unnecessary movements.
- (2) Reduces panic or confusion caused by rumours about the enemy.
- (3) Reduces refugee's risk of life and loss of property.
- (4) Increase compliance with orders.
- (5) Keeps refugees from being used as a cover for enemy military or agent infiltration

e. **Control of stragglers.** Straggler control operations are undertaken by MP to return to military control any military personnel separated from their commands. In a combat environment, unit strength must be kept as high as possible. Unauthorized absence must be controlled. The candidate should be able to know to treat each types of straggler are:

- (1) Those that are genuinely lost.
- (2) Those that are mentally ill.
- (3) Those that are injured.
- (4) Those that are running away.

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f. **Prisoners of War (PW)**. The MP PW mission is of humane as well as tactical importance. To support their PW collection and evacuation operation, MP uses two specific control measures. They operate prisoner collecting points, and PW holding areas. In addition, like any soldier on the battlefield, MP is expected to capture prisoners. In handling Prisoners of War (PW) the candidates should be able to know the following:

- (1) Who is a Prisoner of War.
- (2) Construction and Manning of all types of PW cases
- (3) Responsibilities of MP in evacuating, escorting and transportation of PW from combat unit to the holding areas and beyond.

g. **Traffic Control**. This is one of the main functions of the MP. There should strict compliance to traffic rules to ensure that main and material reach the forward areas at the right time and place. This can achieved making use of the following:

- (1) Route signing.
- (2) Road blocks.
- (3) Check points.
- (4) Traffic posts.

h. **Military Executions**. The senior provost officer is responsible for carrying out death sentence. Candidate should be able to know all that is involved before an execution is carried out.

PEACE TIME ROLES

4. The candidate is expected to know that the peace time roles of the MP, could be divided into two main broad headings, which are Law Enforcement and Physical

Security. That of course is not to say that most of the topics do not apply during war situation.

LAW ENFORCEMENT

5. a. **Organization and Functions of a Duty Room**
- (1) Minimum of 6 NCOs on duty.
 - (2) Items at the duty room.
 - (a) High desk.
 - (b) Telephones.
 - (c) Notice board.
 - (d) TFC Accident box.
 - (e) Large scale map.
 - (f) Daily detail.
 - (3) Books maintained at duty room
 - (a) Daily occurrence book (DOB)
 - (b) Absentee and Deserter index for MP only (AFB6510).
 - (c) Criminal property book.
 - (d) Veh in and out book.
 - (e) Early call book.
 - (f) Detainees book.
 - (g) Arms/Movement Register
 - (h) Prisoner property book.
 - (4) Main function of a duty report are:
 - (a) Information and Report Centre of a Unit
 - (b) Unit/det Guardroom.

b. **Offence.** The candidates are expected to define an offence. The types and classification of offences are also important.

(1) **Types of Offences**

- (a) Military offences.
- (b) Civil offences.

(2) **Classification of offences**

- (a) Trivial.
- (b) Misdemeanor
- (c) Felony (Serious)

c. **Arrest.** Arrest is the restraining of the individual's liberty. The candidate is expected to know the two brought types of Arrest which are open and close arrest. When an arrest is not declared it will also be regarded as close arrest.

(1) **Power of Arrest.** The candidate should be able to explain the sources MP power of arrest. In addition he should explain categories of people who have power to arrest.

(2) **Conditions that will warrant arrest.**

- (a) When the offence carries a serious punishment.
- (b) When the accused undermines discipline.
- (c) When accused is likely to injure himself.
- (d) When accused is likely to interfere with witness and Investigation.

(3) **Points to Consider before effecting arrest.**

- (a) Offence committed.
- (b) Types of arrest.
- (c) Conditions that will warrant arrest.

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d. **Military Police Reports.** There are two main reports by the military police.

- (1) Occurrence report.
- (2) Statement of evidence.

e. **Case Files.** The outcome of a trial is entirely dependent on the effectiveness of the investigator. The sequential procedure in producing a complete report in a written form is the case file.

(1) **Authority to Open a Case File.** This is usually the letter which conveys authority on the investigator to enquire into the case and recommend sanctions.

(2) **Contents of a Case File.**

- (a) Case file jacket.
- (b) Diary of action.
- (c) Index to case file.
- (d) Extract from crime diary
- (e) Investigation report.
- (f) Minute sheet.
- (g) Auth for investigation.
- (h) Statement of complainant.
- (i) Statement of Witnesses.

f. **Exhibits**

(1) These are articles tendered in the law court and referred to in written evidences to determine the guilt or innocence of an accused person.

- (2) Packaging and safe custody.
- (3) Types.
 - (a) Wet exhibits.

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- (b) Swabs.
- (c) Dry exhibits.

(4) **Dispatch.** Through 2 means.

- (a) By Police escort.
- (b) By Registered post.

g. **Crime Scene Protection.** In protecting a crime scene, the necessary steps are:

- (1) Render first aid to the injured.
- (2) Protect the crime scene as to:
 - (a) Prevent the destruction and concealment of any trace of evidence.
 - (b) Prevent the departure of suspects and witnesses.
 - (c) You also protect by clearing the scene of persons not related to the incident.
 - (d) Separate the witnesses from suspects.
 - (e) Guard the scene from unauthorized persons.
 - (f) Protect traces of evidence e.g. fingerprint. Footprint, tires, blood strain, glass fragments.
- (3) Apprehend suspects and offenders.
- (4) Record information on AB 466.
- (5) Report information.

h. **Evidence.**

- (1) Definition.
- (2) Classification.
 - (a) Oral.
 - (b) Real.
 - (c) Direct.

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- (d) Hearsay.
- (e) Documentary.
 - (1) Primary
 - (2) Secondary.
- (3) Exceptional cases to Hearsay evidence.
- i. **ID Parades.** Candidates should be conversant with procedure for identification parade.
- j. The Judges Rules.
- k. Witnesses, Interviews and interrogations.
- l. Aids to crime diction.
- m. Stealing, burglary and house breaking.

PHYSICAL SECURITY

- 6. **Security Forces.** Security of an installation provides for enforcement of medium physical security programme. Qualities expected of them include:
 - a. Alertness.
 - b. Judgement.
 - c. Confidence.
 - d. Physical Fitness.
 - e. Tactfulness.
 - f. Self control.
 - g. Mental Attitude.
 - h. Responsibilities and trustfulness.
- 7. **Types of Hazard to physical security.**
 - a. Natural.
 - b. Artificial.

8. **Barrack Security and Access Control.**

- a. Occupants.
- b. Manning of gate.
- c. Classification of areas.
 - (1) Control Areas.
 - (a) Use of ID Card.
 - (b) Use of Passes
 - (2) Restricted Areas.
 - (3) Prohibited or out of bound areas.

9. **Search Technique.**

- a. Personnel.
 - (1) Frisk Search
 - (2) Strip Search
 - (3) Wall Search
- b. Vehicle
 - (1) Occupants get out.
 - (2) Stand clear.
 - (3) Dvr observe search.
 - (4) Search occupant simultaneously if number is enough.

10. **Traffic Accident.** Candidates are expected to know the three types of faults, action by dvr and unit.

- a. Types.
 - (1) Mechanical Faults.
 - (2) Circumstantial Faults.

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- (3) Psychological Faults.
 - b. Action by dvr.
 - c. Action by unit.
 - d. Tfc accident report.

- 11. **Patrols.** Mp Patrols are broadly divided into two. Candidates should bear in mind the differences between the two.
 - a. Foot.
 - b. Mobile.

- 12. The Military Police syllabus for the examination is therefore summarized as listed below and candidates are expected to read in detail all topics.

COMBAT SUPPORT OPERATIONS

- 13. a. The roles of Military Police in War time.
- b. Rear Area Protection:
 - (1) Control of main supply Route (MSR).
 - (2) Road blocks.
- c. Circulation control.
- d. Escort duties.
- e. Control of Refugees.
- f. Control of stragglers.
- g. Prisoners of war
- h. Traffic control.

PART 11

NIGERIAN ARMY INTELLIGENCE CORPS

INTRODUCTION

1. This module is designed to serve as study guide for NAIC candidates writing the Senior Staff Course Selection Examination (SSCSE). Rather than concentrate on improvement in the science of intelligence, the guide emphasizes practical application of knowledge and experience as practiced in the NAIC today. Officers are expected to have come across such at the Detachment Commanders Course and as practiced in the units. Intelligence is designed to assist the battle commander to take decisions in formulating his plans. The candidates should therefore be regarded as a NAIC sub-unit or unit commander putting all his resources at the disposal of his commander. Such NAIC unit or sub-unit commanders should also be aware of their link in the NAIC chain and in the Nigerian Intelligence Community.

2. Candidates would not be asked yes or no multiple choice type of questions. They would also not be asked questions that would make them reproduce précis. The experience of the candidate at this stage of their career should encompass service knowledge in any of the specialist Groups or NAIS and in a Detachment or Group Headquarters. Officers are therefore expected to be fairly widely read to appreciate the expectations of this special to corps examination.

AIM

3. The aim of this guideline is to enhance candidates' preparation of the NAIC special to corps paper at the SSCSE.

READING MATERIALS

4. Candidate are not restricted in their choice of reading material but the following are essential.
- a. Manual of Staff Duties in the field.
 - b. CSC précis Staff Officers HandBook (SOHB)
 - c. NAIS précis on Combat Intelligence.
 - d. NAIS précis on Security.
 - e. NAIS précis on Airphoto Reading.

EXAMINATION SYLLABUS

5. The syllabus is quite comprehensive and covers all subjects taught at the YOC Int, Tactics Int Course and Det Comd Course. It is divided into 3 broad areas of operational; security and technical intelligence. In addition to questions based on the syllabus there would be others on routine procedures in a typical NAIC unit. No aspect of the syllabus should therefore be treated in isolation as comprehensive knowledge of the whole syllabus is expected to be exhibited. Near real type scenarios would be painted for interpretation. Questions in this examination will combine the 3 parts as the syllabus is only to delineate study areas.

QUESTIONS ON OPERATIONAL INTELLIGENCE

6. At the level of Det Comd and above, the NAIC officer is expected to know all the resources available to him. In combat situations, he is to make use of the intelligence available to him before commencement of hostilities, intelligence from above and flanking units and information from flanking and subordinate units. Ideally before a commander writes his Operation Orders, the intelligence picture should be

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available to him. Even when there is no intelligence estimate from higher headquarters, the NAIC officer would be required to provide his commander with an intelligence estimate and for the intelligence picture to be constantly updated.

7. The questions in this section would be designed to test the candidates' knowledge of the type of intelligence support the NAIC provides their commanders at the brigade and divisional levels. The candidates should be conversant with the resources available and how they could be tapped and presented usefully to the commander.

8. While most of the areas are quite explicit, a few others would need some explanation e.g.:

a. **PW Handling**. In PW handling, NAIC officers should be very familiar with the procedure of PW handling from point of capture till exchange of PW after hostilities. Officers should however be thoroughly knowledgeable about the role of the NAIC from the arrival of PW at the divisional cage. Special attention is to be paid to interrogation techniques – Geneva convention guiding all interrogation.....Abu 'Graib'

b. **Intelligence Preparation of the Battlefield**. IPB although a relatively new introduction into the NAIC, IPB offers the most graphic presentation of battlefield to the commander. Candidates should be very familiar with this concept and be able to differentiate it from the intelligence estimate and know the advantages and disadvantages of both over each other.

c. **Deception Operation**. Candidates are expected to be familiar with simple deception techniques at the formation level. Candidates who are however able to relate deception to actual operations in military history would have an advantage.

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d. **Intelligence Cycle.** Candidates are expected to be familiar with the intelligence cycle as well as method of dissemination of intelligence. Particular emphasis should be placed on various types of reports. Candidates should be conversant with the content of these reports and should be able to compose and send them e.g, INTREP, INTSUM, PRETECHREP etc.

QUESTIONS ON SECURITY INTELLIGENCE

9. In peacetime and especially during military regimes a lot of emphasis is placed on threat to national security. Candidates should however see this as a universal phenomenon and not just as a parochial assessment of the Nigerian situation. They should therefore also see themselves as intelligence officers serving any type of government – military or civilian.

10. The section on security intelligence involves a lot of security planning at formation level. Candidates who have worked in NAIC units should have no difficulties as these functions are carried out almost daily. It is however to be pointed out that procedures being practiced in unit would only be acceptable if they conform with those taught at NAIS and issue from HQ NAIC.

11. In vetting for instance candidates should know the different types of Vetting and the forms available for such. It is important for candidates to be able to prepare questionnaires for the Vetting exercise, know the procedures to elicit information where the information on the form could be misleading and the factors to be considered in the final report.

CONCLUSION

12. This study guide is only to direct candidates on what is expected of them in the . It is by no means exhaustive but basically a reminder on the practical application of knowledge. Candidates who have studied the reference materials would find the paper relatively easy.

SYLLABUS

13. **Operational Intelligence.**

- a. Principles of Int.
- b. In Cycle.
- c. Tasking of sources and agencies.
- d. Collection worksheet/log sheet.
- e. ORBAT/ORBAT Collection chart.
- f. Int roles in all phases of war and amphibious operations.
- g. Battle indicators.
- h. Briefing debriefing of patrols.
- i. PW handling.
- j. Interrogation Techniques.
- k. Int prep of the Battlefield (IPB)
 - (1) Templating.
 - (2) Effect of terrain and weather on military operations.
- l. Deception Ops.
- m. Operational Sy (OPSEC).
- n. Roles of intelligence in PSO and IS.

14. **Sy Intelligence.**

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- a. Threat to national Sy emphasis on HIS/DSO.
- b. Surveillance.
- c. Docus Sy.
- d. Office Sy.
- e. Physical Sy measure including principles of physical Sy.
- f. Sy policy and planning.
- g. Conf Sy – Including technical sweeping.
- h. Sy of Armouries.
- i. Investigation general.
- j. Sy Survey Inspection and Checks.
- k. Searches of pers, vehs, buildings and containers.
- l. Vetting.
- m. Pilfering.

15. **Technical Intelligence.**

- a. Photograph.
- b. Electronics.
- c. Locks.

PART 12

NIGERIAN ARMY FINANCE CORPS

INTRODUCTION

1. The Nigerian Army Finance Corps (NAFC) is a minor 'A' service with the responsibility of managing the NA's financial resources and its welfare schemes. NAFC is, no doubt, the Corps upon which all welfare problems affecting the NA personnel are dependent upon for financial solutions. Therefore, there is the need for candidates preparing for the SSCSE to be conversant with the following:

- a. Organisation of the Nigerian Army Finance Corps.
- b. Responsibilities and Roles of the NAFC.
- c. Pay Procedures Officers and Soldiers.
- d. Entitlement Officers and Soldiers.
- e. Accounting System.
- f. NA Budgeting System.
- g. Contract, Payment and Due Process Requirement in the NA.
- h. Pension and Gratuity Procedures.
- i. Implementation of the contributory Pension Scheme in the NA.
- j. Nigerian Army Welfare Schemes.
- k. Nigerian Army Housing Schemes.
- l. Function Costing

2. In achieving the above, the candidate is advised to consult the Manual of Financial Administration 2004, and other appropriate existing materials to broaden their views on detailed financial management matters. This guideline will highlight the basic management approach expected in the conditions considered in the syllabus.

AIM

3. The aim of this paper is to provide guidelines for NAFC officers preparing for Senior Staff Course Selection Examination.

ORGANISATION OF NAFC

4. NAFC is basically organized in line with the NA ORBAT. See approved Nigerian Army ORBAT 1990 Vol 3, pages K2-1 of 47 and K2-47 for details.

RESPONSIBILITIES AND ROLES OF THE NAFC

5. The statutory functions of the Corps are as follows:
- a. The regular payment of personnel emolument of all ranks.
 - b. Receiving and disbursing NA funds.
 - c. Settlement of NA bills.
 - d. Management of NA welfare schemes.
 - e. Training of Armed Forces and Police personnel in accounting and secretarial duties.
 - f. Budgeting for the NA.
 - g. Inspection and audit of NA accounts at all levels.
 - h. Monthly preparation of Transcripts to the Accountant General of the Federation.
 - i. Appearance before the Public Accounts Committee to defend any query on accounts from the Auditor General of the Federation.
 - j. To advise Comd and Staff at all levels in matters relating to finance and account.

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- k. Formulate accounting and financial management policies in line with laid down government regulations.

PAY PROCEDURE OFFICERS AND SOLDIERS

6. Pay procedure is NAFC statutory responsibility, which encompasses the administration of payment of salaries, allowances and claims to NA officers/soldiers when they become due. Nigerian Army Personnel Pay Office (NAPPO) administers pay procedure for Offrs/WOs while that of Ssgt and below is administered by Bdes and Divs Finance Offices.

7. For the SSCSE, candidates will be examined on the following:
 - a. Pay procedures Offrs and WOs.
 - b. Pay procedures Ssgt and below
 - c. Personal Income Tax.

ENTITLEMENT OFFICERS AND SOLDIERS

8. An officer will have his net pay entitlement and allowances paid monthly in arrears to a bank of his choice.

9. Deduction may be made from an officer's pay for:
 - a. Income tax (in accordance with current Federal Tax Regulations).
 - b. Accommodation (Rent of Quarters).
 - c. National Housing Fund (2.5% of basic salary).
 - d. Nigerian Army Welfare Insurance Scheme (NAWIS).
 - e. Benevolent Fund.
 - f. Contributory pension fund (21/2% of basic salary, housing and transport allowances).

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- g. Electricity bill.
 - h. Water rates.
 - i. Any other amount authorized by the officer for recovery through this accounts.
 - j. Any sum directed by the Chief of Army Staff.
10. Soldiers are entitled to standard pay as per their ranks whether married or single.
11. The soldier is entirely responsible for providing for himself and his family from his pay, all their needs except accommodation and such other benefits as are given in kind or by special allowance. For details on pay and allowances, candidates are advised to consult the Terms and Conditions of Service Officers and Soldiers.

ACCOUNTING SYSTEM

12. The role of the Nigerian Army Finance Corps, among all others, is to account for the NA military funds including the internally generated funds. For this purpose, NAFC has developed and standardized a unique and fully indigenous military accounting system, which encompasses the colonial regimental accounting practices.
13. **Imprest Account**. An Imprest Account is the account maintained in a Div, Bde or Bn command into which all public sums released to the command to meet expenditure under the approved army allocation is paid. The main purpose of the account therefore, is to record receipts and subsequent expenditure of the funds paid into it. For the purpose of the SSCSE, candidates are advised to study the following:
- a. Authority to open an Imprest Account.
 - b. Authorised Imprest Account Holder.

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- c. Authorised Bank as directed from time to time by ASA.
- d. Provision of Funds.
- e. Bank Reconciliation.
- f. Losses and Irregularities in Account.
- g. Receipt and Payment Vouchers.
- h. Overdraft.

14. **Regimental Funds**. Regimental funds are those funds in a comd/unit other than the imprest account. They are:

- a. Welfare funds:
 - (1) Comd funds.
 - (2) PRI (President Regimental Institute).
- b. Officers Mess Fund.
- c. WOs/Sgt Mess Fund.
- d. Cpls and below Canteen Fund.

Candidates are required to know the operation, purpose and sources of regimental fund.

15. **Accounting System in Operational/War Situation**. For accounting system in operational situation candidates are required to study the following topics:

- a. Field Division Finance Office.
- b. Field Brigade Finance Office.
- c. Battalion Cash Office.
- d. Pay Procedure during operations.

NA BUDGETING SYSTEM

16. Budgeting is defined as the art of giving fore thought to intended actions to properly arrange resources to achieve desired results. Good budgeting entails the need to avoid overlapping of duties, provide for a resourceful organization and the desire to maximize the use of resources.

17. The accepted budgeting system in the NA is the Planning Programming Budgeting System (PPBS). PPBS is an all embracing concept that emphasizes the setting of objectives and the making of plans to achieve those stated objective. It is a management tool, which ensures that plans are made and that plans are backed by proper allocation and utilization or resources to achieve stated objectives.

18. Under the NA budgeting system, SSCSE candidates are advised to study the following:

- a. Concept and Characteristics of PPBS.
- b. Application of PPBS in the NA.
- c. Budget Preparation.
- d. Budget Execution.
- e. Budget Monitoring and Review.
- f. Command Responsibility.
- g. Advantages and Disadvantages of PPBS.

CONTRACTS PAYMENT AND DUE PROCESS REQUIREMENT IN THE NIGERIAN ARMY

19. The adoption of the due process as an extant financial rule and guideline of the Federal Government was formulated in Oct 2001. The advantages of the Due Process Requirement are as follows:

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- a. Good management of public money and assets resulting in the reduction of corruption.
 - b. Improved system planning and project preparation work leading to accuracy of costing, cost/benefit analysis and prioritization in deciding the spending pattern and plan for any given year.
 - c. Improved fiscal management through more effective expenditure management, institutions, processes and control mechanisms.
 - d. More optimal resources allocation decision to achieve clearly articulated public policy objectives through enhanced identification of the costs and benefits of alternative expenditure decision.
 - e. Improved liquidity management of public funds.
 - f. Improved technical efficiency in managing and utilizing resources through improved information flows.
 - g. Enhanced transparency and accountability of government providing better historic information as a guide to the future.
20. The Due Process Compliance Certification (DPCC) is a three-level certification process that comprises the following:
- a. **Budget Preparation Work Certification.** Budget preparation work certification is to ensure that planning is linked to budgeting and accounting especially through the process of selecting and monitoring of projects. During the submission of ministerial/spending unit budget proposal, ministries and spending units are mandated to submit a package of their capital proposal to the Budget Monitoring and Price Intelligence Unit (BMPIU) for processing.
 - b. **Contract Award Process Certification.** A key component of the Contract Award Process is the tender procedure aimed at providing a competitive framework for government procurement. All contracts above one

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million Naira (₦1m) must be presented through a memo by executing unit to Ministerial Tender Board for approval.

c. **Completion Work Certification.** Completion Work Certification is the responsibility of the Residence Due Process Team in ensuring that satisfactory progress is made towards completion of the work. The basis of work certification shall be as follows:

- (1) Funds released earlier have been utilized.
- (2) Contract work is being carried out as agreed in contract.
- (3) Percentage of work completed is commensurate with funds spent.
- (4) Anticipated project result is achieved or if not appropriate measures have been taken to ensure that results and goals identified under contract are fully achieved.

CONTRACT AWARD AND SPENDING LIMITS

21. The spending limits in respect of contract awards are as follows:

a. **Contracts up to ₦1,000,000.00.** Any procurement whose value does not exceed ₦1,000,000.00 (one million) Naira can be approved by Permanent Secretary/Chief Executive without open competitive tendering. However, at least 3 relevant written quotations should be obtained from suitably qualified contractors/suppliers. All expenditure incurred under this policy should be documented and reported to the Honourable Minister on quarterly basis for information.

b. **Contracts above ₦1m but below ₦50m**

- (1) There shall be established in each Ministry/extra ministerial Department, a Ministerial Tender Board (MTB) whose Chairman shall be

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the Permanent Secretary/Chief Executive of the Extra-Ministerial Department.

(2) The other members of the MTB include Director/Head of Departments in the Ministry of Establishment.

(3) The Board can approve contracts above N1m but below N50m.

(4) The decision of the MTB is to be confirmed by the Honourable Minister.

c. **Contracts above N1m but below N50m for Armed Forces/MOD Tenders Board**

(1) Board to be chaired by the Permanent Secretary.

(2) Members of the Board to include representative of the Army, Navy, Airforce, Director of Finance and Accounts of the Ministry of Defence.

(3) Approves contracts above N1m but below N50m.

(4) Decision of the Board to be confirmed by the Honourable Minister.

d. Contracts valued at N50m and above are to be approved by the Federal Executive Council (FEC).

COMPOSITION OF IN-HOUSE RESIDENT DUE PROCESS TEAM (RDPT) FOR THE NA

22. The Resident Due Process Team (RDPT) of the NA as may be constituted shall be charged with the responsibility of certifying compliance with due process for contracts and payments relating to the NA. The issuance of the MOD Due Process Certificate (MOD DPC) by the NA team is consequent upon establishing that the spending unit i.e. NA has complied with the following specific guidelines.

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- a. Contract Award Process Certification through the tender award procedure.
 - b. Transmission of NA Due Process Certificate to the Accountant General of the Federation through the MOD.
 - c. Completion of work certification guideline in ensuring that satisfactory progress is being made towards completion of contract. To this extent, NA shall be required to submit a technical and financial progress report to enable the RDPT effectively evaluate value-for-money to be released.
 - d. Contract Award Certification to enable project be certified before contract can be certified for award of contract by the Budget Monitoring and Price Intelligence Unit (BMPIU).
 - e. Completion work certification enable further payments to be made upon certification by NA/MOD in conjunction with BMPIU.
23. The NA RDPT is composed as following:
- a. COLOG(A) - Chairman.
 - b. DAFA - Member.
 - c. DPS(AO) - ”
 - d. D Plans - ”
 - e. Rep of BMPIU - ”
 - f. S01 ATB - Secretary.
24. The budget is the single most important instrument of power and governance. The goal of government is to crystallize budgetary and public expenditure management systems and procedures in ensuring transparency and accountability. The current due process guideline which establishes Resident Due Process Teams in each Ministry/spending unit to handle spending of between 1-20 million Naira thresholds is a major milestone in institutionalizing the mechanism.

PENSION AND GRATUITY PROCEDURES

25. The Military Pensions Board (MPB) is a tri-service establishment under the control of the Minister of Defence. The MPB is charged with the responsibilities of computing gratuities, pensions, contract gratuities, and death benefits to all discharged/retired personnel of the Armed Forces or dependant in case of a deceased personnel.

26. With the introduction of the Pensions Reform Act 2004, MPB will only be responsible for the pension administration of NA personnel who disengage from service before the expiration of the transition period by June 2007. The NA will engage a Pensions Fund Administrator for officers and soldiers that disengage from July 2007. The new Act establishes contributory payment between the employer and the employee. The guidelines for the implementation of the scheme is still being awaited.

27. The payment of pensions and gratuity under the MPB is covered by:

- a. Armed Forces Pension Decree No 103 of 1979 (as amended).
- b. Terms and Conditions of Service Offrs/Sldrs 1984.

The rules contained in the Terms and Condition of Service serves as a guide towards pensions and gratuities, which officers/soldiers might expect on retirement, resignation or discharge.

28. In preparation for the SSCSE, qualified officers are expected to study and master the following areas:

- a. Organisation of MPB.
- b. Types of Benefits:
 - (1) Gratuities.

- (2) Pension.
- (3) Disability Pension.
- (4) Death Benefit.
- (5) Contract Gratuity.
- c. Gratuity Procedure
- d. Pension Procedure.

IMPLEMENTATION OF THE CONTRIBUTORY PENSION SCHEME IN THE NA

INTRODUCTION

29. Sequel to the enactment of the Pension Reform Act of 2004, the President, C-In-C of the Armed Forces had approved the implementation of the Contributory Pension Scheme in the Public Service of the Federation with effect from 1 Jul 04. In the case of the NA, government shall contribute 12.5% and NA personnel shall contribute 2.5% of the basic salary, housing and transport allowances. The NA had since commenced implementation of the scheme in line with the policy.

30. The National Pension Commission, is the apex body to regulate and supervise pension schemes, formulate, direct and oversee the overall policy on pension matters in Nigeria.

AIM

31. The aim of this brief is to acquaint officers and soldiers with the implementation of the Contributory Pension Scheme in the NA.

SCOPE

32. The brief will cover the following:
 - a. Overview of the Pension Reform Act 2004.
 - b. Implementation of Arrangements.
 - c. Conclusion.

OVERVIEW OF THE PENSION REFORM ACT 2004

33. **Philosophy of the Pension Reform.**
 - a. Ensures that every officer and soldier receives his retirement/discharge benefits as and when due.
 - b. Assists NA personnel to save in order to cater for their livelihood during retirement/discharge as may be applicable.
 - c. Establishes a system that is financially sustainable, simple and transparent, safeguards pension assets and promotes savings.
34. **Objectives of the Pension Reform.**
 - a. Establishes sustainable pension system.
 - b. Empowers NA personnel to have control over Retirement Savings Account (RSA).
 - c. Ensures transparent and efficient management of pension funds.
 - d. Promotes savings culture.
35. **Nature of the Scheme.**
 - a. Contributory.
 - b. Fully funded.
 - c. Individual retirement savings accounts.

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- d. Privately managed and third party custody of pension assets.
- e. Strictly regulated and supervised.

36. **Coverage and Exemption.**

- a. For all officers and soldiers. However, officers/soldiers with 3 years or less to their retirement/discharge are exempted.
- b. Existing pensioners are also exempted i.e. those presently being administered by MPB.

37. **Retirement Savings Account.**

- a. NA personnel open a Retirement Savings Account (RSA) with a Pension Fund Administrator (PFA).
- b. Federal Government/NA personnel to jointly contribute minimum of 15% basic salary, housing & transport allowances to RSA; 12.5% by government and 2.5% by NA personnel.
- c. Government to deduct and remit to Pension Assets Custodian (PAC) within 7 days of pay day.
- d. PAC to notify, within 24 hours, the PFA who would credit NA personnel's RSA.

38. **Withdrawal from Retirement Savings Accounts.**

- a. Account holder must be 50 years or upon retirement (terms of employment, medical advice or disability).
- b. 50 years not related to 35 years of service or 60 years of age. The Act did not stipulate a Retirement Age. That is entirely dependant on each employee's terms and condition of service.
- c. Mode of withdrawal:
 - (1) programmed monthly or quarterly withdrawals or

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(2) Annuity for life purchased from Life Insurance Company with monthly or quarterly payments. An annuity is an income purchased from a licensed life insurance company approved by the Commission with monthly or quarterly payments during the lifetime of a retiree.

d. A retiree/discharge can draw a lump sum up to 50% from the balance of his Retirement Savings Account provided the balance after the withdrawal could provide an annuity or fund monthly payments that would not be less than 50% of his monthly pay as at the date of his retirement.

e. A programmed withdrawal is the method by which the personnel collects his accumulated benefits in periodic sums for the length of an estimated life span.

f. If a personnel retires before the age of 50 years in accordance with the terms and conditions of his employment, he or she may withdraw a lump sum of money not more than 25% of the amount standing to his credit or RSA provided that such withdrawals shall only be made after six months of retirement and retired personnel does not secure another employment.

39. **Survivor and Disability Benefits**

a. Government, being our employer shall maintain life insurance equivalent of 3 times total emolument in favour of each personnel.

b. Upon death and disability, the benefits under life insurance will be paid to the RSA.

c. Benefits be paid thereafter to the designated beneficiary.

40. **Function of Pension Assets Custodian**

a. Receives the total contributions remitted on behalf of NA personnel.

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- b. Notifies the PFA within 24 hours of the receipt of contributions on our behalf.
- c. Holds pension fund assets in safe custody on trust for all personnel, NOK and beneficiaries of the retirement benefits.
- d. Execute transactions and undertakes other related activities on behalf of PFA.
- e. Reports to the Commission on assets held for PFA.

41. **Transitional Arrangements for Public Section Including the NA.**

Retirement benefits of personnel under the old scheme (MPB administration) shall be treated as follows:

- a. Personnel's right to accrued pension for past service is guaranteed by the Pension Reform Act 2004. This applies to all serving personnel as at 30 Jun 04.
- b. Right to accrued pension shall be acknowledged through a Federal Government Retirement Bond, which shall be redeemed upon retirement/discharge.
- c. In anticipation of the redemption of the Bond, the Federal Government shall establish a Retirement Benefits Bond Redemption Fund at the CBN into which it shall pay 5% of total monthly wage payable to its employees (including the NA) on a monthly basis.

IMPLEMENTATION ARRANGEMENTS

42. **Collection of Contributions.**

- a. Collections commenced in Jul 04.
- b. Deduction of source before the release of monthly allocations of personnel costs by AGF.

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- c. Upon receipt of AIE from the DG (Budget) the AGF provides cash backing of government + NA personnel contributions.
- d. Contributions are lodged at the CBN.
- e. CBN invests the contributions in NTBs.

43. **Accounting for Contributions.**

- a. Commission credits the Temporary RSA with contributions and returns thereof.
- b. Maintains proper accounting records and ensure reconciliation.
- c. Statements of accounts issued quarterly for fully verified personnel profiles.
- d. Most Ministries/Depts/Agencies (M/D/A) had already designated Liaison Officers

44. **Retirement Savings Account.**

- a. Choice of a Pension Administrator.
- b. Open an RSA with PFA of your choice.
- c. Unique Account Number – for life.
- d. PFA manages funds while custodian provides custodial services.
- e. Quarterly statement of account.
- f. Could switch to another PFA.

45. **Reporting Requirements**

- a. The NA is to submit to the commission quarterly report indicating each personnel's name, number, rank/appointment/deployment, grade level, step and changes in personnel profile.

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- b. Quarterly RSA statements by commission for verified personnel records.
- c. Quarterly statement of account by PFA.

CONCLUSION

46. This brief has highlighted the key points of proceeding at the seminar organized by the National Pension Commission to sensitize stakeholders on the crucial role expected of them towards the success of the new pension scheme. The seminar highlighted a number of issues including the rationale and objectives of the pension reform, major provisions of the Pension Reform Act 2004, transitional arrangement as well as implementation framework and reporting requirements.

47. The present administration has demonstrated the commitment to carry through the pension reform. Members of the National Pension Commission have been appointed whilst the implementation of the Contributory Pension Scheme took effect from 1 Jul 04.

NIGERIAN ARMY WELFARE SCHEMES

48. The Nigerian Army has over the years evolved some welfare packages meant to improve the lot of its personnel. This has given birth to four major welfare schemes:

- a. The Nigerian Army Welfare Insurance Scheme (NAWIS).
- b. The Nigerian Army Benevolent Fund.
- c. The Nigerian Army Post Exchange (NAPEX).
- d. NA Post Housing Scheme.

THE NIGERIAN ARMY WELFARE INSURANCE SCHEME (NAWIS)

49. The Nigerian Army Welfare Insurance Scheme (NAWIS) is a limited liability company established on 1 Jan 88. The objectives of the scheme as stated in the Company's Articles and Memorandum of Association are:

- a. Improvement of existing welfare services in the NA.
- b. Reduction of the sufferings of officers and soldiers of the NA and their legal dependants in the event of sudden death, retirement, discharge, dismissal or permanent disability.
- c. Raising the morale and consequently the efficiency of officers and soldiers of the NA and enhancing esprit de corps.
- d. Provision of insurance cover for all occupational hazards associated with military duties including war risks and riots, which are not usually covered by conventional insurance policies.

50. **Administrative Policy and Procedure for NAWIS.** The Nigerian Army Welfare Insurance Scheme (NAWIS) is designed to insure a soldier for the payment of benefits to the NOK or the contributor. It is mandatory for all officers and soldiers of the NA to contribute to this scheme. HQ NAWIS pays benefits:

- a. The NOK on the death of a contributor.
- b. Any personnel on leaving the NA and withdrawing from the scheme.

51. **Aim.** The aim of this procedure is to explain the process of claiming benefits from HQ NAWIS.

52. **Death Claim.** On the death of a contributor the unit will immediately assemble the following documents.

- a. A copy of NAWIS Form 3 - Promotion Information Form.

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- b. A copy of NAWIS Form 4 – withdrawal from scheme form. This will be completed by the NOK of the deceased and signed by the immediate superior officer.
- c. A copy of NAWIS Form 5 – Death Claim Form. This will be completed by the NOK of the deceased contributor. HQ NAWIS will not accept any mutilations or cancellations of any part of the form. Part B of the form will be completed and signed by the deceased's immediate superior officer.
- d. A passport photograph of the NOK of the deceased will be attached to the form 5. The unit Adjutant will certify that the passport photograph is the true likeness of the NOK of the late contributor, endorse it and write his name and personal number.
- e. Medical certificate of death or a letter signed by the Chairman or Secretary of the Local Government to the effect that the contributor died in his home town and no certificate was available.
- f. NOTICAS.
- g. Letter of Condolence.
- h. Part II Order promulgating the death.

53. The unit Adjutant will personally cross-check each of these documents and endorse them at the back as the true certified copy issued by the unit. He will sign, write his name, rank, personal number and date

54. **Withdrawal Claim.** On retirement, discharge or dismissal of a contributor from the NA the following documents are to be assembled by the contributor's unit, endorsed by the unit Adjutant as explained in paragraph 5 above and forwarded to Bde HQ.

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- a. NAWIS F3 – Promotion Information Form.
- b. NAWIS F4 – Withdrawal From Scheme Form.
- c. Part II Orders publishing the occurrence.
- d. In the case of officers – Retirement Letter from MS 'A'.

55. **Process.** All the NAWIS Forms and the certified documents will be collated and sent to Bde HQ with a covering letter signed by the unit Adjutant. The Bde HQ appointed NAWIS officer will confirm the signature of the Adjutant with a specimen signature already with him. He will then endorse each of the documents and append the Brigade Stamp on each of them before dispatching them to the Div HQ.

56. At the Div HQ the Col AQ will confirm the Bde appointed NAWIS officer's signature with a specimen already with him. He will endorse each of the documents before they are sent to HQ NAWIS for payment. Only the Col AQ or an appointed NAWIS officer is authorized to sign correspondence to NAWIS.

57. HQ NAWIS will disregard or return any correspondence not dispatched through the Div HQ and not endorsed by the Col AQ or an appointed NAWIS officer. This guideline also applied to formations without a designated Col AQ in which case any officer performing a similar function will be accepted, so long as his specimen signature is on file at HQ NAWIS. All Corps HQ and Schools will channel their correspondence through formations on whose AOR they are.

58. **Claim Schedule.**

- a. Death claims should be processed and received at HQ NAWIS within 30 days of the death of a contributor.
- b. Claims for refund of contribution should be made within one month of withdrawal from the scheme.

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- c. Cheque for refund of contribution to retired or dismissed contributors will be ready for collection within 7 days of the receipt of the relevant documents at HQ NAWIS.
- d. Cheques for death benefits will be ready for collection within 7 days of receipt of the relevant documents at NAWIS.
- e. Cheques not presented after 6 months of issue for death benefits are considered stale, but such cheques can be presented for re-issue at HQ NAWIS. However, observations and queries must be cleared with the originating formation before payments are effected.
- f. If a death claim is being made by the second NOK the claim must be accompanied by:
 - (1) The death certificate of the first NOK and
 - (2) A sworn affidavit to that effect.

59. It is desirable that all contributors are educated on the contents of this procedure. They should in turn educate their NOKs for easy processing of claims.

THE NIGERIAN ARMY BENEVOLENT FUND (BENFUND)

60. The NA Benevolent Fund (BENFUND) established on 1 Jul 1983, with the purpose of providing succour, to relieve the immediate needs of dependent(s) of officers and soldiers who die whilst serving in the Nigerian Army. The fund is created to assist in alleviating the distress of such dependant(s). Payment from the fund is made to beneficiaries of officers and soldiers who had died during peacetime including military operations and expeditions. For those who die during a declared war, normal provisions for beneficiaries will apply. Retired officers and discharged soldiers shall be entitled to refunds of contributions made to the fund. Claims on the fund become effective from 1 October 1983.

61. **Mechanism for Operation.** The existing procedure for claims, admission and payment of death gratuities to the dependant(s) of deceased officers and soldiers is not only cumbersome, but also time consuming. It is well known that in some cases death gratuities payment drag on for over two years before a final payment is made to the authorized dependant(s).

62. Furthermore, there have been cases where either owing to the last respect accorded to the deceased soldier; relations and friends decide to transport the corpse of a deceased soldier to his home town for final burial. In most cases where this situation arises, the unit is always looked upon to bear the cost of evacuation of the deceased officer/soldier's family to their home town. Units on the other hand, have not got the resources to foot such burial expenses and very few can barely afford to transport the corps home. It is against this background that the establishment of the Nigerian Army Benevolent Fund was decided so as to provide some immediate financial relief to the families or dependant of a deceased officer and soldier.

63. **The Purpose of Establishing a Benevolent Fund.** The purpose of the Nigerian Army Benevolent Fund is to provide immediate but short-term financial assistance to the families of deceased officers and soldiers who die while still in service so that the immediate financial problem of the deceased officer and soldier, are to some extent alleviated at the most crucial time of distress. The dependants in this case are such person or persons so nominated by the officer or soldier in a declaration form.

64. **Documentation.** Every officer or soldier while still in service, who is a member of this scheme is required to complete 5 copies of a Declaration Form, stating the dependant entitled to claim the benevolent fund on his behalf in the event of his or

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her death. The unit bible contains and maintains the relevant particulars of each officer or soldier.

65. **Posting Procedure.** The Board for the fund at AHQ level maintains a current account into which all monthly subscription is paid into. It is form that all reimbursements to the Divs are made.

66. **Subscription.** Subscriptions are by way of monthly deductions from officers and soldiers pay.

67. **Grant.** In the event of death a service personnel grant is made to the deceased's beneficiary.

68. **Method of Deduction.** Monthly contributions by officers and Warrant Officers are done centrally at source by NAPPO. Total monthly contributions are forwarded to the Board's Account together with a detailed breakdown according to each group for easy verification and checking.

69. In the case of monthly contribution from Ptes –Ssgts, deductions are entered in the Acq/Rolls and treated in the same manner as deductions from PRI currently in practice in the NA. Each Div HQ and AHQ Gar forward cheques for the total monthly deductions together with breakdown, unit by unit by unit within that fmn to the Board's Account at AHQ for necessary action.

70. **Disbursement to Beneficiaries.** Disbursement to beneficiaries is decentralized to the Div HQs and AHQ Gar level, so as to reduce to the barest minimum the time lag for the payment of the Benevolent Fund to the dependants.

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71. Payment to beneficiaries must be made on Treasury Form 1 prepared at the Bde HQ duly supported with NOTICAS signal from the unit of the deceased personnel, as well as the units copy of the deceased officer or soldier's Declaration Forms. The payment voucher duly prepared is personally authorized by the Bde Comd or in his absence, the DAA & QMG by signing the "OFFICER CONTROLLING THE EXPENDITURE " column of the TFI in respect of each payment.

72. Whenever a soldier or officer dies while still in service, it is the duty of the CO to the deceased to arrange for the collection and payment of the benevolent grant at the unit location.

73. **Reimbursement**. When for reasons of distance, a bde pays out disbursement to beneficiaries, such Bdes shall claim for reimbursements in respect of each benevolent grant paid out to their Div HQs with copies of TF1 as soon as each payment is made. Div HQs will in turn claim for reimbursement from AHQ Board's Account with copies of TF1 including all the supporting documents.

74. Where an officer or soldier retires or discharges after 6 or more years subscription to the scheme, it is the duty of the CO to arrange for the collection and payment of the B/F at the unit location. The following is the percentage rate of reimbursement:

a. **Retirement/Discharge**

- (1) Subscription up to 6 years – 50% of total subscription.
- (2) Subscription for more than 6 years – 100% of total subscription.

b. **Dismissal**

- (1) There shall be no refund for cashiering or dismissals.

c. The board has powers to review these rates as and when necessary.

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75. **Accounting.** Each Bde HQ/Div HQ and AHQ Gar will maintain Cash Book AB 69 to record all transactions as they affect the account. Cash book entries will accurately reflect all payments made, deductions and reimbursements as they occur and will be balanced on a monthly basis. All TF1 and Receipt Book AB 57 (if any) must be serially numbered and filed. Fmn Ledger Card NA BEN F3 will also be maintained to show the breakdown of deductions made.

76. At AHQ level, the Board will maintain a Cashbook AB 69, AB57 Receipt Book, Benevolent Fund ledger NA BEN F4 as well as other relevant accounting documents. All contributions received from the Divs, will be duly receipted on AB 57 and original copy forwarded to the fmn making the contribution. All entries must be made promptly as they occur. The Cash Book is balanced monthly together with Cash and Bank Reconciliation statement duly prepared.

FUNCTION COSTING

77. A function is any activity, organized by the Mess which members are expected to attend. A function may be a Mess Get-together, Regimental Dinner Night etc. The method of apportioning the cost of a mess function among members is a policy decision at the discretion of the Mess Executive Committee. Where guests are invited, the expenditure on them is normally borne by the members. The method described below should be adopted by a mess executive committee.

PAY AS PER RANK (PPR)

78. For equitable distribution of the cost of a function among members, the Pay as Per Rank (PPR) method is applied. The PPR operates as follows:

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- a. The cost of a function is ascertained, which should be net of a Grant if any.
- b. An appropriate number of shares is calculated based on the weighting system to apply and whether or not members not in attendance will share in the cost of the function.
- c. The shares are weighted per rank. A 2/Lt will have 1 share, Lt 2 shares with the shares increasing in line with the rank. Where a unit increase is considered too high, a half unit increase may be adopted (i.e. 2/Lt 1 unit, Lt 1 ½, Capt 2 and so on).
- d. The cost per share chargeable to each member is derived. This is the Net Chargeable Cost of the function divided by the total number of shares.
- e. The total Cost Chargeable to each member is the cost per share multiplied by the number of shares allotted to the rank of that member.

HOUSING SCHEMES PROGRAMME AVAILABLE TO NA PERSONNEL

79. Available to all NA personnel are the following Housing Schemes:
 - a. National Housing Fund (NHF).
 - b. Nation Housing Programme (NHP).
 - c. NA Housing Scheme (NHS).
 - d. Post-Service Housing Directorate (Army) – PHD(A).

80. **National Housing Fund (NHF)**. As mandatory contribution to the NHF, 2.5% deduction is being made from the basic salary of officers and soldiers whether they wish to apply for a housing loan or not. This is done in line with the National Housing Policy (NHF Decree 3 of 1992). The Federal Mortgage Bank of Nigeria (FMBN) is to pool the contribution for lending to contributors, to enable them build,

buy, or renovate their own houses. The NA therefore remits the total monthly deduction from officers' and soldiers' salaries to FMBN, as other employers also do.

81. **National Housing Programme (NHP)**. The National Housing Programme (NHP) was initiated by the Federal Ministry of Works and Housing through the Federal Housing Authority (FHA) in 1994. Subscription to the scheme is voluntary upon completion of application forms and payment of prescribed deposit for the house required. Direct subscribers to FHA are to pay 20% of the cost of their desired houses as deposits, while the balance is to be provided as loan through PMIs, using funds raised under the NHF. Officers and Soldiers who applied through AHQ pay concessional deposits of 5% for their desired house, while balance for deposit would be paid on their behalf as a loan by Federal Government Staff Housing Board (FGSHB).

82. **The Nigerian Army Housing Scheme**. The NA Housing Scheme is a unique programme specifically conceived for only NA personnel. This scheme is complementary to the already existing housing programmes and schemes in the country. The scheme's main objective is to provide officers and soldiers with personal plots of land or houses while in service, or immediately after leaving service, in locations of their choice.

83. **Post-Service Housing Directorate (Army-PHD (A))**. The newly established Post-Service Housing Directorate (Army) – PHD (A) is to implement the NA Housing Scheme. The directorate has also been tasked with the responsibility of liaison with other establishments responsible for housing provision on behalf of the NA. The primary aim of PHD (A) is to enable officers and soldiers acquire houses into which they can retire, without being cheated or distracted from their jobs.

DETAILED NAFC MIL TECH SYLLABUS FOR SSCSE

84. **Organization of NAFC**

- a. Organization chart.
- b. Responsibilities and Roles.

85. **Pay Procedure Offrs and Sldrs**

- a. Pay Procedure Offrs/WOs.
 - (1) Commencement.
 - (2) Documentation.
 - (3) Selection of Bank.
 - (4) Pay Point.
 - (5) Occurrences.
 - (6) Stoppage of Salaries.
- b. Pay Procedures Ssgts and Below
 - (1) Banking System.
 - (2) Commencement.
 - (3) Unit Salary Account.
 - (4) Opening of Current Account.
 - (5) Bde Finance Office.
 - (6) Div Finance Office.
 - (7) Acqroll, Bank Schedule and Cheques.
 - (8) Occurrences.
- c. Personal Income Tax.
 - (1) Purpose.
 - (2) Completion of Tax Form A.
 - (3) Disclosures.

- (4) Tax Computation.
- (5) Relevant Tax Reliefs and Rates.

86. **Accounting System.**

- a. Imprest Account.
 - (1) Definition.
 - (2) Authority to Open Account.
 - (3) Authority Imprest Account Holder.
 - (4) Authorized Bank.
 - (5) Provision of Funds.
 - (6) Bank Reconciliation.
 - (7) Losses and Irregularities in Account.
 - (8) Receipt and Payment Vouchers.
 - (9) Overdrafts.
- b. Regimental Fund.
- c. Accounting System in Operational/War Situations.
 - (1) Field Division Finance Office (FDFO).
 - (2) Field Bde Cash Office (FBCO).
 - (3) Bn Cash Office (BCO).
 - (4) Pay Procedure.

87. **NA Budgeting System (Planning Programming Budgeting System).**

- a. Process of Budgeting in the NA.
- b. PPBS – An Overview.
 - (1) Concept and Characteristics of PPBS.
 - (2) Phases of PPBS.

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- c. Application of PPBS in the NA.
 - (1) AHQ Strategic Planning Committee.
 - (2) AHQ Planning Committee.
 - (3) Relationship of Planning Objectives and Programme Tasks.
 - (4) AHQ Budget Committee.
 - (5) Principal Budget Centres, Committee and Conference.
 - (6) Responsibility Budget Centres, Committee and Conference.
 - (7) FMN Budget Committee/Conference.
 - (8) AHQ Budget Approval Committee.
 - (9) Budget Preparation.
- d. Budget Execution.
 - (1) Fund Allocation.
 - (2) Fund Releases.
- e. Budget Monitoring and Review.
 - (1) Nigerian Army Accounts Inspectorate (NAAI).
 - (2) Budget Monitoring Cell.
- f. Comd Responsibility.
 - (1) Responsibility of Comds.
 - (2) Budget Discipline.
- g. Advantages and Disadvantages of PPBS.

88. **Pension and Gratuity Procedures**

- a. Organization and Functions of MPB.
- b. Types of Benefit.
- c. Gratuity Procedure.
- d. Pension Procedure.

89. **NA Ben Fund/NAWIS.**

- a. NA Ben Fund.
 - (1) Membership.
 - (2) Capital.
 - (3) Administration of Fund.
 - (4) Signatories to the Accounts.
 - (5) Accounts of the Fund.
 - (6) Powers to Make Regulations.
 - (7) Control of the Fund.
 - (8) Benefits.
- b. Nigerian Army Welfare Insurance Scheme (NAWIS).
 - (1) Establishment and Objectives.
 - (2) Unique Features.
 - (3) Administration.
 - (4) Organization Chart.
 - (5) Sources of Revenue.
 - (6) Investments.
 - (7) Benefits.
 - (8) Claims Procedure.
 - (9) Accounting and Management Control.

90. **Function Costing.** Pay as Per Rank (PPR) – Method of Costing.

REVISION QUESTIONS

91. a. With the aid of a diagram, illustrate the organization of NAFC.
- b. List 4 roles of NAFC.

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- c. Define PPBS.
- d. What are the characteristics of PPBST?
- e. List 10 accounting forms or docus associated with payment of troops in operations.
- f. Explain 3 ways by which the security of cash in combat zone will be taken care of.
- g. What are the regulatory statutes or books of law that govern pensions and gratuity?
- h. What are the functions of the MPB?

SELF ASSESSMENT QUESTIONS/HINTS

92. Discuss NAWIS claims procedure.
- a. Claims for refund of contributions and payment of death benefits to NOKs is made on the prescribed NAWIS forms by those concerned at the unit level. Designated officers at various levels of command are delegated the responsibility of vetting the claim forms, certifying each form and subsequently forwarding same to the next superior authority.
 - b. Supporting documents like Unit Part II Orders, death certificates, NOTICAS and a copy of condolence letter certified must be attached to death claims document before such claims are processed for payment. All documents whether for refund or payment of death benefit are collated at the Fmn HQs and forwarded to HQ NAWIS by the Col AQ or S01 A of the Fmn. Direct communication links between lower units and HQ NAWIS are discouraged to ensure that all claims are authenticated by the Fmn HQs before such claims are processed for payment.

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c. On receipt of claims documents from Fmn HQs, the signature of the Col AQ or S01 A on the covering letters forwarded the documents are cross-matched with the specimen signature stored at HQ NAWIS to ensure that the documents forwarded were authenticated. Processing of claim documents are speedily done by the various departments of NAWIS before the computer department confirms that the claims have been made by bonafide contributors to the claim. Information relating to all NA personnel are contained in NAWIS computers and such information are usually recalled from the computer for comparison with the information contained in the claim documents forwarded from the Fmn HQs. Observations are raised when records contradict each other, otherwise payment is effected immediately.

93. How does the Pay as Per Rank (PPR) of a function costing operates?

The PPR operates as follows:

- a. The cost of a function is ascertained, which should be net of a grant if any.
- b. An appropriate number of shares is calculated based on the weighting system to apply and whether or not members not in attendance will share in the cost of the function.
- c. The shares are weighted per rank. A 2.Lt will have 1 share, a Lt 2 shares with the shares increasing in line with the rank. Where a unit increase is considered too high, a half unit increase may be adopted (i.e. 2/Lt 1 unit, Lt 1^{1/2}, Capt 2 and so on).
- d. The cost per share chargeable to each member is derived. This is the Net Chargeable Cost of the function divided by the total number of shares.
- e. The total cost chargeable to each member is the cost per share multiplied by the number of shares allotted to the rank of that member.