NEW LIMITATION CHANGE

TO
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AUTHORITY
ARI Notice, 13 Nov 1979
1. Authorization and Background. The Appointment and Induction Branch, AGO, requested the Personnel Research Section to construct revisions of the examinations used for the selection of temporary warrant officers. (Authority: SOS MFD Disposition Form SPGA E/221/w/o/(8-18-42)-22, dated 7 Dec 42.) The battery of tests was to include 29 examinations for classifications No. 1-37 inclusive with the exception of classifications No. 2, 4, 14, 18, 19, 24 which had been eliminated and No. 35 and 36 for which no written examinations were required. (See Inc1 1) Since revisions sent in from the field had proved to be unsatisfactory, it was decided that the tests would be constructed by this section with the assistance and advice of an officer or warrant officer thoroughly conversant with the subject matter in his classification.

2. Procedure. While necessarily modified by the special requirements of each individual test, these basic operating procedures were closely followed.

a. Consultant Assigned. A request was made that a qualified officer or warrant officer in each classification be assigned to this section on temporary duty for two weeks to review, criticize, and reconstruct the test for final release. For the guidance of these officers, a series of suggestions was written, outlining the job it was felt he should do. (See Inc1 2)

b. Job Description. A job description for his classification was written by the officer assigned. This description consisted of an exhaustive list of the duties included in the job and the experience and training necessary to qualify a man in the field. Experience was defined in terms of length of military service, completion of particular courses, and knowledge of applicable Army publications. If possible, civilian source jobs closely related to the military job under classification were listed. Inclosure 5 contains the job descriptions written for classification Nos. 3, 5, 6, 7, 8, 9, 11, 12, 14, 16, 17, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 32, 33, 34, 37.

c. Scope of Examination. A list of topics was planned that would encompass the general and special knowledge which a warrant officer in each classification actually employs on the job. A tentative budget of items under the topics listed was then set up as a guide to the proper apportionment of items in the completed test. Inclosure 4 contains the scope of classifications Nos. 3, 5, 6, 7, 8, 9, 11, 12, 13, 16, 17, 20, 21, 22, 25, 26, 27, 28, 29, 30, 32, 33, 34, 37.

d. Test Construction. The assigned officer with the help of a personnel technician revised or constructed items which in his opinion would determine whether the applicant possessed sufficient information to perform his duties satisfactorily. Items from the original test and the field revision were used whenever they fitted into the scope and had not been rendered obsolete by new methods or publications. A list of available military references was compiled for each major topic heading and as each item was approved, the reference was noted on the item card. Alternatives were checked in order to insure that

(1) each item had only one correct alternative

(2) three alternatives were incorrect yet sufficiently plausible to confuse a poorly qualified applicant
The completed items were sent to the Editorial Services Unit for review and revision. Any changes made by them were approved by the officer and technician before they were incorporated into the items.

e. Test Assembly. After the items had been edited, they were sorted into subject matter categories as outlined in the scope and a final check made of the coverage of the subject matter. The items were sorted into three categories — hard, average, and easy according to the judgment of the test constructor. If the test seemed to be too heavily weighted with any one difficulty level, appropriate adjustments were made. While it was not attempted to adhere exactly to any given frequency distribution of item difficulties, an attempt was made to keep the distribution reasonably symmetrical and to include a greater number of items in the center category than in either of the other two. The tests were checked for uniformity in format of test, booklets, length of test, administration, answer sheets, and scoring.

f. Field Review. It was not feasible to conduct a field review for all tests, but in those cases where the assigned officer felt it was possible that the procedures given below were followed:

When the warrant officer left this office, he was given a direction sheet for further review and copies of his items on three by five cards. The review at his station was conducted somewhat as follows:

(a) A review of the test by officers or warrant officers directly concerned with the particular classification. This consisted of a review of the entire test by each officer or a review of specialized items by officers best qualified to make judgments on that particular section.

(b) Items were tried out on men going through the school with which the officer was connected. From this tryout, which consisted of a group of from 10 to 50 men, the relative difficulty of the test was determined to a degree at least as valid as the judgment of the officer or anyone from this office.

(c) Using the decisions of the officers and warrant officers and the informal tryout as a basis for judgment, a final choice of items was made. Each item was approved by the officer in charge and a statement expressing his approval forwarded to this office. (See Incl 5).

g. Editing and Publishing. When the approved items were returned to this office, a final check and survey were made. The items were keyed and sent to editing for final typing. The resultant tests were forwarded to the Appointment and Induction Branch, HQ, for publication. Distribution, administration, maintenance of records, and determination of the need for future revision are their responsibility.
3. Present Status. 29 tests have been completed by this office and sent to the Appointment and Induction Branch, AGO for publication. These tests will be distributed, administered, scored, and the results recorded by that branch. They will also be responsible for determining the need for future revisions. Inclosure 1 lists the classification numbers and titles of the tests submitted.

### CLASSIFICATION NUMBERS AND TITLES FOR WARRANT OFFICER EXAMINATIONS

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Inclosure 1
Suggestions for Officers and Warrant Officers
Who Are Serving as Consultants on the Development and Revision of Warrant Officer Tests.

Preliminary judgments have been made by this office staff in the assembly of material for the test upon which you are to work. It is recognized, however, that these judgments may not conform to the practical situation and that important revisions may at times be needed. The judgment of experienced men who are personally acquainted with the duties to be performed by the warrant officers is of great importance in arriving at decisions concerning the scope and emphasis of the test. You have been selected as an officer who is well qualified to represent the field point of view in the construction or revision of a test.

The suggestions given in the following paragraphs are intended to serve as aids to your work with the test. The work has been divided into five phases or steps. The first step in the evaluation and revision of a warrant officer test is the determination of the scope of the test (the various topics to be included) and the emphasis of the test, in terms of the number of questions that should be included for each topic according to the relative importance of that topic.

In your consideration of the desirable scope and emphasis of the test, you will find that for most warrant officer tests the topics to be included have been specified and are listed in Section VI, AR 610-10, 13 September 1941. These lists of topics were used in the construction of the original tests and also have served as a guide in the construction of items for the revision. You may wish to recommend the revision of the list as well as the test. This reference, however, does not indicate the relative importance of the different topics, or the particular phases of a topic that are most relevant.

Using AR 610-10, a list of major topic headings has been prepared for the examination on which you are to work. For each heading a list of the available military references has been compiled. You will be supplied with these lists of headings and references. In forming your judgments as to the importance and relevance of topics and sub-topics, however, it is hoped that you will be guided primarily by your knowledge of the practical requirements of the position, and pay only secondary attention to such factors as the number of references on the topic or the number of pages of reading matter available.

Since this determination of the scope and emphasis of the test is important, it is desirable that you take enough time to consider the problem from every angle. As a general suggestion, and with allowance for variations in different tests, it may be desirable to spend two or three days on this step.

The second step will ordinarily be a conference in which your judgments and those of other individuals working on the same test may be discussed and compared, it is hoped that the outcome of this conference will be a statement, satisfactory to all, defining the scope and emphasis of the test with sufficient exactness to serve as a guide in the selection of items.

The third step is the criticism of the items that have already been prepared for the test. These items have been previously reviewed and the correctness of the answer has been verified so far as has been possible. However, much remains to be done.

Incl 2
A procedure that seems reasonable for this phase of the evaluation is as follows:

1. Take the first topic heading and locate all of the item cards that are available for that topic. Cards will be marked in advance to facilitate this selection.

2. Rate each item with regard to the importance of its content. A scheme that may prove helpful is:
   a. Place in one pile those items which deal with information which is essential knowledge for the warrant officer in order that he may be able to carry out the practical duties of his position.
   b. Place in a second pile those items which, because of their theoretical nature or lack of immediate applicability, are not as essential as the first group, but which represent useful knowledge for the warrant officer and are relevant to the examination.
   c. Place in a third pile those items the contents of which seem to have minimal value for the test. An item may be placed in this pile for such reasons as:
      (1) It concerns a point of information which is within the general scope of the examination, but is irrelevant to the duties of this kind of warrant officer.
      (2) It requires knowledge of detail which the warrant officer would usually not be expected to remember, but would check in a suitable reference.
      (3) It deals with a point which is too trivial to be included.

3. Compare the number of items in piles one and two combined, with the total for the topic heading that was agreed upon in Step 2. If the number of available items is less than the number wanted, new items must then be constructed; if it is larger, some items will have to be discarded. Note how many new items are needed or how many are in excess.

4. Consider how well the available good items sample the important or essential points under the topic heading. In discarding excess items, or adding new items, one should strive for the ideal coverage proportionate to the importance of the topic which also provides a representative sampling of what the warrant officer should know.

5. After having selected items suitable for the topic heading, examine them carefully for accuracy and fairness. Criticisms and suggestions for changes may be noted for later discussion. Each item may be examined with the following questions in mind:
   a. Is the keyed answer correct according to the latest available publications?
   b. Are the other three answers clearly inferior to the key answer?
o. Are the three wrong answers sufficiently reasonable that a man could not guess the correct answer simply by eliminating the obviously absurd or impossible alternatives?

d. Is the wording clear, free from ambiguity, and conforming to good English usage?

6. New items are to be constructed as needed.

7. The procedure just described is repeated for each of the other topic headings.

The fourth step involves conferring with the other people who are working on the test and discussing the conclusions arrived at in step three. These conferences may take place informally while you are working on step three. This would allow you to work on the construction of new items or revision of old items while you have the topic in mind. As new items are constructed they should be reviewed for content, accuracy, and sound construction as described above, and revised if necessary.

The final step is a general conference on the test as selected, and the determination of suitable standards of proficiency. In accordance with the requirements stated in par. 6b, AR 610-15, 27 February 1943, it will be necessary to decide what numbers of correct answers correspond to the ratings of superior, excellent, satisfactory, and unsatisfactory.
Audits property records of Posts, camps, stations or other installations. Examines inventories and property vouchers for validity of statements; inspects posting of property data to stock record cards and checks computations and extension in terms of overages and shortages; prepares certificates of audit to indicate condition of accounts for review by senior officers; interprets regulations and directives on property accounting and auditing and insures compliance; advises accountable officer of methods to correct discrepancies and irregularities; prepares correspondence on accounting and auditing problems. May check property storage and warehouse facilities.

Performs the audit of such non-appropriated funds as he may be directed to examine by higher authority. Examines the legality of the purchases to assure that the funds are expended only for the acquisition of articles, the purchase of which is permitted by Regulations; inquires into the sufficiency of vouchers supporting the expenditure of the funds; checks the property record account of the fund against the purchase vouchers; determines whether all incomes are properly accounted for; checks to see that the funds are kept in authorized banks and that excess balances are kept in accordance with Regulations. Performs the audit of all other accounts and/or records as directed by his superior officer.

Must have thorough knowledge of Army Regulations pertaining to accounting and auditing of funds and property, and of procedures for fiscal or property accounts.

Experience in auditing operations desirable.

Preferably should have college training in business administration.

SOURCE JOBS

Accountant
Auditor

Comptroller
Industrial Property Auditor
Acts as Chief Clerk of the Staff Judge Advocate's Office. Keeps current file of publications. Supervises receipt and distribution of all mail. In general court-martial cases, enters charges in ledger; prepares index cards containing complete case record; prepares necessary indorsement carrying out directions of the appointing authority with reference to disposition of charges; dispatches charges to proper authority, and makes appropriate entries in office journal and index card. Upon completion of trial, prepares form of action for Reviewing Authority upon recommendations contained in the review of the trial record by the Staff Judge Advocate. Prepares General Court Martial Order upon receipt of Reviewing Authority's approval of action. Then assembles complete record of trial to be forwarded to The Judge Advocate General.

Maintains a chronological index of action in processing special and summary records of trial. Answers telephonic inquiries pertaining to subject matter contained in Manual for Courts-Martial. Examines weekly reports of Trial Judge Advocate and informs Staff Judge Advocate of the status of pending cases. Prepares statistical reports required from time to time by the Reviewing Authority and The Judge Advocate General. Prepares annual report to be submitted to The Judge Advocate General relative to inferior courts-martial during the fiscal year. Supervises the preparation of General Court Martial Orders relative to suspension or remission of sentence of General Prisoners, as well as Special Orders appointing General Courts-Martial. Prepares necessary data for clemency proceedings on general prisoners. Checks upon unnecessary delays in trial proceedings. Acts as law clerk for the Staff Judge Advocate. Keeps abreast of all changes in policies or procedures which affect operation of the office and carries out the same. Keeps office suspense file.

At least one year of continuous military, administrative clerical experience is essential, preferably with experience in one of the following offices: Judge Advocate, Provost Marshal, Police and Prison, or Disciplinary Barracks. At least two years of commercial office practice and procedure, preferably in some supervisory capacity, is desirable. Some legal training is highly desirable but not essential.
WARRANT OFFICER, ADMINISTRATIVE FISCAL, #6

Directs the disbursement of Public Funds to military and civilian personnel for services rendered, and for supplies furnished. Trains and supervises subordinate personnel in technical assignments; advises the disbursing officer on technical problems and questions pertaining to the Finance Department; reviews and revises reports prepared by subordinate personnel; supervises checking and verification of all classes of pay vouchers; supervises issuance of war bonds subscribed by civilian personnel; supervises cash and/or check payments on all approved vouchers and advises the disbursing officer on legality of questionable items; may be detailed to the maintenance of fiscal records for payments made and balances in all funds.

Must be thoroughly familiar with Army Regulations and other pertinent publications concerning disbursement of Public Funds.

Basic military training and service in the Finance Department or completion of Finance course at the Army Finance School is essential. Both service in the Finance Department and completion of a Finance course at the Army Finance School are desirable.

SOURCE JOBS

Accountant
Auditor
Bank Executive
Paymaster

Treasurer
Comptroller
Credit Manager
Lawyer.

Incl 3

- 9 -
WARRANT OFFICER CLASSIFICATION #7
ADMINISTRATIVE SUPPLY, GENERAL

Usually assistant supply officer of the unit or installation. Also acts as chief clerk of the unit or installation. Supervises the procurement (both by purchase and requisition), receipt, storage, issuance, and shipment of supplies. Prepares reports on received, issued, and expended items of equipment. Prepares correspondence and reports as called for by higher headquarters and Army Regulations. Carries out policies promulgated by the supply officer and/or higher headquarters.

At least one year's experience in military supply is essential. A warrant officer must have a general knowledge of all ARs, technical manuals, and other publications pertinent to supply. He must also be familiar with the organization of the Army and the relation of the various branches of the Service to each other. As is generally known, he must also be familiar with all procedures of the particular post to which he is assigned.
WARRANT OFFICER, ADMINISTRATIVE-SUPPLY
AIR CORPS #3

Supervises an administrative organization, or a section thereof, engages in maintaining records pertaining to Air Corps Supply. Supervises the processing of requisitions, including editing, in accordance with AAF Regulations, ASC Regulations, Technical Orders, and Stock Lists. Maintains the Stock Record Account; coordinates and requests action on current and possible future shortages, and on shipments to Air Corps installations and other establishments; supervises the keeping of inventories, inspections and reports of surveys; prepares correspondence and messages incident to Air Corps Supply problems and confers with superiors on such matters.

Warrant Officers may be assigned to duties appropriate to junior commissioned officers, with the exception of those duties which are required by regulation to be performed by commissioned officers only. When warrant officers are legally assigned to duties normally performed by commissioned officers they are vested with all the powers usually exercised by commissioned officers in the performance of such duties, and they will be governed by the appropriate regulations and directives pertaining to the performance of such duties by commissioned officers. (10 Cir. #164 - 1943).

Warrant Officers should be familiar with Air Corps forms in general, and specifically with Air Corps Supply forms and with Army Air Forces Property accounting systems. Should know proper procedures of handling all types of accountable records as well as all channels and flow of paperwork. Should have a specific knowledge of handling, storing, issuing, packing and shipping of all types of material. Should be familiar with the organization of the Army Air Forces and have a detailed knowledge of the organization of the Air Service Commands. Should be thoroughly familiar with the provisions of PCM, AIR-PCM, and POM, and have a working knowledge of pertinent Army Regulations, War Department Circulars, AAF Regulations, and ASC Regulations.

Should have had at least one year's experience in Air Corps Technical Supply. Several years of civilian experience in storage and distribution of various commodities would constitute an excellent background as well as experience in stock control or retail merchandising.

SOURCE JOBS

Warehouser Manager
Foreman, Storage, Shipping or Receiving Department
Stock Record Supervisor
Purchasing Agent
Bookkeeper
Controller
Retail Merchandiser

Incl 3
Supervises an administrative unit engaged in the maintenance of property records for, and the storage and issue of, Signal Corps supplies. Supervises processing of requisitions including editing in accordance with stock numbers, nomenclature, Tables of Basic Allowance, Tables of Allowances, and lists of special equipment; maintains current catalog of supplies and identification of listed material for initiating action relative to local procurement of material not in depot stocks; coordinates and secures action on unit shortages and on shipments to and from installations and other establishments; supervises the taking of inventories, the maintenance of stock records, and the processing of documents relating to accountability and responsibility for property; prepares correspondence incident to general supply problems and confers with superior officers on supply matters. May supervise military or civilian personnel.

Should be thoroughly familiar with methods and procedures involved in stock accounting. Should have knowledge of shipping procedures, packing, crating, and marking.

Military experience, including thorough training in supply, organization, and procedures is essential.

Civilian supervisory experience in storage and distribution of various commodities is very desirable.
The proper assignment of a Warrant Officer, Technician Specialist - Aviation, Weather, may be as: (a) Forecaster - Assistant Station Weather Officer, (b) Assistant Inspector, Weather Squadron Headquarters, or (c) Assistant Instructor - Meteorology. Assignments (a) and (b) are authorized in T/O & E 1-627, 17 August 1943.

The above three assignments call for duties as follows:

a. Forecaster - Assistant Station Weather Officer.
1. The complete physical and kinematical analysis of weather conditions by use of synoptic surface weather maps and auxiliary charts (including winds aloft charts, constant level charts, isentropic charts, vertical atmospheric cross-section, and various thermodynamic diagrams).
2. The preparation of weather forecasts for specific geographic areas, for specific aircraft routes and specific aircraft missions.
3. The briefing of aircraft crews on weather to be encountered on a particular flight.
4. Advising the Commanding Officer of the base (or his representative—usually the Operations Officer) of weather conditions expected for proposed flights in connection with the briefing of aircraft; completing the weather section (Section C) of AAF Form 23 - Aircraft Clearance.
5. Assisting the Station Weather Officer in locating, organizing, equipping, and operating the weather station.
6. Supervising weather observers in making, reporting, and plotting weather observations.
7. Conducting in-station-training of weather observers.
8. Instruction of local flight personnel in meteorology and in the use of the weather service.
9. Instruction of local aircraft personnel in the making of weather observations in flight.
10. Assisting in the preparation of climatological reports.

b. Assistant Inspector, Weather Squadron Headquarters. — Assisting in the inspection of weather stations and in recommending improvements with particular attention to:
1. Accuracy of weather observations and records.
2. Accuracy of weather analyses and forecasts.
3. Fulfillment of local requirements for weather service.
6. Levels of supplies.
7. Compliance with AAR's, AAF Regulations and RCO Memoranda.
8. Administration of Personnel.
9. In-Station-Training of Personnel.
10. Administrative reports.

c. Assistant Instructor - Meteorology. The instruction of enlisted men and officers in
1. Synoptic Weather Map Analysis and Forecasting.
2. The analysis and use in forecasting of auxiliary charts.
3. Dynamic Meteorology.
4. Synoptic Meteorology.
5. Forecasting from limited data.
6. Weather Station Operation.

WARRANT OFFICER CLASSIFICATION #20.

A warrant officer in the usual Motor Transport set-up is ordinarily assigned as a Division Headquarters battery motor officer. As such, he is required to supervise the operation, inspection, and maintenance of motor vehicles in the headquarters battery. However, he may be assigned to other duties such as: Assistant Division Motor Officer. As such he is responsible to the Division motor officer and may be required to perform one or more of the following duties: make technical inspections of motor vehicles in the division, submit maintenance and inspection reports to the division motor officer, assist in the command inspections of motor vehicles. As advanced instructor at the Division Motor School, he may be required to perform the following duties: supervise the basic and advanced instruction of vehicle drivers, and supervise the basic technical and tactical training of motor maintenance personnel.

The warrant officer may be called upon to make decisions and to advise on policy of procedure covering the entire scope of Motor Transport motor officer to the enlisted men, WACs, and civilians within his jurisdiction. Must be a specialist in all phases of motor transport.

At least one year's experience as a first mechanic or as a battery or battalion motor sergeant is essential. A warrant officer must have a general knowledge of all AR's, technical manuals, field manuals, and other publications pertinent to motor transport. Since he may be called upon to carry out any one phase of motor transport, he should have a general knowledge and background in all phases. Completion of motor school course in arm or service to which assigned is also desirable.
A warrant officer in an Ordnance Automotive Section is ordinarily assigned as a Technical Inspector and Assistant Maintenance Officer to the Automotive Officer and is required to supervise the operation, inspection, and maintenance of wheeled and half track vehicles, tanks, and tractors. He may also be assigned as the section supply officer and should know all phases of the five echelons of maintenance. As an Assistant Maintenance Officer, he is responsible for the following: directs and supervises all activities of an Ordnance Automotive Section, for transportation, maintenance, and supply; supervises the inspection of vehicles, repairs and requisitions, spare parts required to keep vehicles in operating condition; keeps a record of all fuels and lubricants used in the section and procures same when required; maintains and supervises a daily dispatch record on all vehicles; sees that a daily driver's instruction program is carried out and that each man is given a driver's test before being allowed to operate any vehicle; keeps a record of all work performed on vehicles and also keeps a record of the registration and engine numbers; supervises and keeps records of all issues of spare parts used in maintenance of vehicles; makes weekly inspections of vehicles; keeps records of all inter-shop work orders; keeps records of all field service modification work orders and sees that parts are requisitioned for all modification work orders and that parts are applied to vehicle for which procured when received; supervises and checks each month the field service modification work order status report; supervises and checks all requisitions pertaining to dead line vehicles; supervises and keeps inventory of spare parts and keeps stock records of all parts on hand and requisitioned, also all parts issued for the maintenance of vehicles; supervises and sees that technical inspections are held on each vehicle; supervises the preparing of vehicles for storage and shipment.

As indicated in par. 1, the Warrant Officer has to have a thorough knowledge of Automotive, General, so that he can direct the personnel working under him and be able to make decisions relating to certain phases of Automotive Ordnance when called upon to do so.

At least one year's military experience as a mechanic working on all types of vehicles is essential. As a Warrant Officer, he should also know the essential Army publications relating to Automotive Ordnance. Attendance at an Army Automotive School is desirable. At least a year's civilian experience as a mechanic in all phases of automotive work is also necessary.
WARRANT OFFICER, TOPOGRAPHIC ENGINEER #22

Assists in the direction or supervision of an organization composed of survey, photomapping, and map reproduction units, or any combination of these. For example, in the Operations Section of topographic units, in schools or in research groups.

May supervise the execution of photogrametric and drafting work for preparation and revision of maps, mosaics, overlays, and overprints; may supervise reproduction by lithography, black and white process printing, and gelatin duplication; may coordinate and supervise procurement, storage, and distribution of maps; may supervise maintenance of supplies and equipment; may supervise the conduct of surveys in the compilation of data necessary for map preparation; may assist in the establishment or extending of horizontal and vertical control forward and the supply of necessary ground mapping control for utilization by field artillery units.

Must have technical knowledge of survey work, such as determining exact location and measurements of points, elevations, lines, areas, and contours on the earth's surface; photogrammetry and topographic drafting, photo transferring and lithographic processes, and the operation of lithographic equipment, including the necessary photographic laboratory methods.

Military experience with specialized knowledge of military ground and aerial maps and military map symbols essential.

Civilian or military experience in engineering, surveying, and topographic drafting essential. Experience in lithographic and reproduction work desirable.
Directs or supervises activities of a service section of an ordnance repair shop engaged in the maintenance, repair, and inspection of ordnance material. Supervises receipt and inspection of all incoming material, supervises assignment of material to proper specialists for accomplishment of repair work; directs preparation and distribution of work orders, intershop work orders and parts for various repair jobs; conducts periodic inspections to insure that operations of various technicians are handled in an efficient and expeditious manner; prepares plans for current and future requirements of shop; directs the maintenance of adequate stock materials, and the keeping of reports and records.

Must have thorough knowledge of mechanical repairs of ordnance material in which welding, blacksmithing, heat treating, carpentry, painting and machine shop operations are included. Must have ability to organize and direct work of personnel engaged in these activities.

Military experience essential. Should include completion of courses in machine shop, welding, and heat treatment at Ordnance Service School.

Extensive civilian supervisory experience in mechanical and maintenance work is a general repair shop essential.
The duties of a Warrant Officer assigned to an Ordnance Company, Ammunition, Renovation, are as follows:

Directs the inspection, repair and renovation of unserviceable ammunition. Supervises the removal, handling, disposition, and replacement of explosives, primer and fuses. Determines the nature and extent of machine operations necessary to accomplish renovation. May direct the renovation or disposal of various types of ammunition rejected or abandoned by field units.

The duties of a Warrant Officer assigned to an Ordnance Base Group follow:

Directs or supervises the activities of personnel engaged in the receipt, storage, classification, and distribution of ammunition. Plans and arranges storage facilities to provide adequate protection against deterioration, fire hazards, and sabotage. Maintains records. May supervise the handling of enemy ammunition. May instruct classes in problems and procedures of ammunition supply, including classification and storage of ammunition and explosives. May supervise operation of the ammunition supply section of a general depot.

If a Warrant Officer is included in the organization of an Ordnance Company, Ammunition, his duties will include a major portion of those listed above.

Must have a thorough knowledge of ammunition, including the following: functioning of all ammunition components; identification and classification; reconditioning and renovation; destruction of ammunition and material, general; storage rules and safety factors; supply of ammunition in both the zone of Interior and the Theater of Operations.

At least a year's military experience, one-half of which must have been spent as a non-commissioned officer in the first three grades, is essential. The completion of a course in ammunition is essential.
As an assistant to the Chemical Warfare staff officer of a service command, a division, an army corps, a field army, or even a theater of operations. In the event of such an assignment, he would:

1. assist both in the supervision and conduct of Chemical Warfare training units within the command.

2. offer advice on technical problems pertaining to the supply, transportation, storage, handling, and use of chemical warfare weapons, munitions, and protective equipment.

3. take an active part in the planning and operation of all chemical warfare activities within the command.

As a member of the faculty of the Chemical Warfare School:

1. assist in the planning and execution of training of officers of the Chemical Warfare Service, and of other branches of the Army, Navy, Marine Corps, and Coast Guard.

2. provide instruction, where applicable, in methods and techniques of filling chemical munitions in the field; storage and transportation of explosives, chemical ammunition, and other dangerous materials; filling and servicing airplane smoke tanks; maintenance of chemical warfare weapons and material; and disablement or destruction of material to prevent its capture and use by the enemy.

As a member of a Chemical Warfare Depot Installation:

1. assist in the receipt, storage, and issue of chemical warfare equipment and munitions.

2. assist in the supervision of handling, storing, and field filling of land mines, airplane bombs, and such other munitions as may be filled in the field.

3. assist in the supervision of maintenance and repair of weapons and equipment used by Chemical Warfare troops and protective equipment and appliances issued to troops of other services.

4. assist in the preparation of plans for disablement and destruction of chemical warfare material to prevent its capture and use by the enemy. To furnish technical advice as to the methods and techniques employed in the implementation of the above plans.

Incl 3
As a member of a convoy and security unit transporting chemical ammunition, chemicals in bulk, or other chemical warfare materials by truck, rail or by water:

1. assist in the supervision of the convoy detachment as to methods, procedures, safety regulations, and general precautions to be implemented in case of an emergency.

2. assist in the inspection as to stowing, loading, and bracing of materials shipped by water. Assist in inspecting the ventilating system aboard ship, the protective appliances to accompany the shipment, and periodic tests for presence of gas in the hold. After inventory of shipment during unloading, assist in supervision of whatever decontaminating procedures necessary to clear the vessel of gas.

As a member of the detachment at a Chemical Warfare Service Point:

1. offer advice as to selection of site for toxic gas yard.

2. offer technical assistance in planning set-up.

3. offer technical assistance in the operation of the installation.

4. assist in plans for demolition in case of evacuation.

As a member of the detachment at a salvage collecting point:

1. act as technical advisor to the unit commander on problems relating to chemical warfare equipment, both our own and that of the enemy.

As a member of a chemical warfare combat battalion:

1. act as assistant to the ammunition officer.

2. act as a technical advisor on plans for demolitions.

3. act as a technical advisor on maintenance problems.

In consideration of the above duties, it follows that a warrant officer of the above classification must be a specialist in a major portion of the phases of chemical warfare. He should have had at least 1 year's experience with a school operations unit, a chemical weapons battalion, an air operations company, a chemical maintenance company, or a chemical composite company, preferably as a noncommissioned officer. In addition to being a specialist in chemical weapons and munitions, he must know explosives and demolitions and have had experience in decontamination techniques.

Desirable civilian occupations as a background are:

Professional toxic gas handler
Licensed explosive handler
Munitions inspector

Industrial chemical handler
Stoedore foreman
Plumber and pipe-fitter

- 20 -
Supervises those functions of field communication in a lower echelon that requires a specialized skill or technical proficiency of a high degree in the province of radio, telephone, and telegraph communication or its associated work.

Informs the Message Center of facilities available and assists in allocation of circuits to traffic loads.

Assists the Signal Officer by preparing such charts, diagrams, circuit diagrams, line route maps, and traffic or training schedules as may be required.

Advises the Signal Officer on assignment of operators; timing of shifts; state of training and proficiency of various teams in the command.

Supervises such shop service facilities for repair or adjustment of items of radio, telegraph, telephone, or wire-laying equipment as may be presented.

Assists the Supply Officer of his unit by maintaining adequate stock of spare parts, the identifying material requisitioned.

In the Radio Intelligence unit, he develops operating schedules for interception of enemy traffic, advises on Direction Finder locations, and supervises preparation and maintenance of adequate records as required.
JOB DESCRIPTION FOR WARRANT OFFICER #28

Supervises the installation, operation, maintenance, and training of the signal communication agencies as of units in the Air Corps. Supervises the installation of wire, radio, visual and pyrotechnical communications facilities. Supervises the operation of the following types of communications in the Air Forces: Air-air and air-ground communications, control tower operations (communications phases), A.A.C.S. systems, radio aids to navigation facilities, signal center operations, aircraft radio equipment, wire installations. Supervises 1st and 2nd echelon maintenance of communications equipment pertinent to the Air Corps: ground equipment and airborne equipment. Supervises the training of all personnel in the 1st and 2nd echelon maintenance, operation, installation, and all procedures common to Air Corps communications equipment and operation thereof. Supervises the training of personnel in the proper communications procedures and application thereof for all types of Air Forces communication, i.e., Radio telephones and Radiotelegraph procedures; Visual and contact procedures. Supervises individual, team, and unit training of all concerned in communications.
WARRANT OFFICER EXAMINATION #29, TECHNICIAN SPECIALIST-
SIGNAL COMMUNICATIONS, FIELD ARTILLERY

Instructs commissioned and enlisted personnel in all phases of signal communication employed by Field Artillery. Performs the duties of assistant communication officer of a Field Artillery Battalion or higher unit, such as: plans and supervises instruction and training of all communication personnel of any Field Artillery unit; reconnaissance and selection of position and wire routes; prepares prearranged message codes, line route maps, traffic diagrams, and transmission authenticator systems; technical adviser to the communication officer; plans and supervises installations of wire and radio systems within a unit; assumes the duty of unit communication officer whenever necessary; instructs and supervises radio repairman in rapid diagnosis, location, and clearance of faults in all Field Artillery communication equipment; establishes a system of periodic inspections for preventive maintenance of Field Artillery communication equipment.

Must have at least one year of active military service in the United States Army on date of application. Must have successfully completed a communication course of not less than three months at a Field Artillery School or a general communication course at a Signal Corps School, plus one year of active service in a Field Artillery communication section; or one year of active service, plus three years' experience as a commercial radio operator, or as a technician with a telephone or telegraph company.

SOURCE JOBS

Radio Repairman
Wire Chief
Telephone Inspector

Radio Technician
Sound Engineer
Radio Engineer

Incl 3
Is familiar with the operation, maintenance, and repair of all tanks. Directs or supervises all tank maintenance and repairs which do not require machine shop work. Organizes crews and instructs the personnel of his training organization in tank maintenance. Through the chain of command, assigns repair tasks, supervises their performance, and makes inspections to determine the quality of work. Directs emergency repairs on any tank in the field. Coordinates his maintenance and supply activities with those of higher echelons. Inspects periodically and keeps detailed records of the condition of all tanks of the unit to which he is assigned. Inspects and is responsible for the preventive maintenance performed by subordinate units. Is familiar with all echelons of maintenance and has a thorough knowledge of their activities.

Must have had at least one year's recent service with a tank unit. Must have completed the Armored Command School, tank maintenance course, or have had the equivalent field experience of at least one year's duty in tank maintenance.

Considerable civilian experience as an automobile mechanic, automobile service manager, or as a garage foreman is desirable.
DUTIES OF INFORMATION OFFICER, 22 RECONNAISSANCE, C....

The reconnaissance officer is the chief assistant to the commander of the mobile gun or AN battalion in carrying out the latter's reconnaissance duties. Makes special reconnaissance as directed and a reconnaissance of the general area to be defended, noting suitable positions and routes thereto; is in charge of topographical operations and prepares such charts, special maps, and sketches as may be needed; supplies the intelligence and plans and training officers with information for operations and situation maps and assists in preparing such maps; determines the coordinates and orienting lines for such of the following as may be necessary: Battalion observation posts, battery directing points, director parallels for each gun battery, altimetric base and stations (when used), battery flank observing stations for trial fire and spotting, trains assistants.

Military experience in surveying, engineering, gunnery, map making.

Civilian experience in civil engineering, topographical surveying, civil engineering student.
The general duties of warrant officers in this classification are to:

a. Select pack and saddle animals for pack transport.

b. Assign pack and saddle animals to various batteries.

c. Make emergency diagnosis of faults and injuries to animals and apply first aid whenever necessary.

d. Supervise the proper care of the animals.

e. Supervise the training of the animals.

f. Supervise the adjustments of pack saddles.

g. Possess a thorough knowledge of the nomenclature relating to the equipment used in animal transport.

h. Supervise the preparation and care of all types of cargoes.

i. Supervise the preparation and care of gun loads.

j. Supervise the care and disposition of the animals on the line of march and in bivouac during field operations.

General Qualifications:

a. Must have had at least one year's experience with an Army pack unit.

b. Standard Army courses in packing and animal management are desirable. Good horsemanship is desirable.

c. Civilian experience as a packer or guide with expeditions and similar enterprises requiring the use of pack animals or experience with animals, are desirable.

Source Jobs

<table>
<thead>
<tr>
<th>Packer</th>
<th>Guide, Animal Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forest Ranger</td>
<td>Horse Breaker, Draft or Saddle</td>
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</table>
DIRECTOR THE STORAGE, REPAIR, AND CLEANING OF PERSONNEL PARACHUTES, AIRLIFT DELIVERY ASSEMBLIES, LIFE VESTS, AND OTHER RELATED AAF EQUIPMENT ISSUED TO A PARACHUTE UNIT.

Supervises all changes or modifications to be made on AAF equipment as directed by AAF Technical Orders.

Supervises the periodical inspections and repacking of parachute assemblies.

Is responsible for all records pertaining to parachutes under his supervision.

Supervises the initial inspection of all AAF equipment and initiates Unsatisfactory Reports (AAF Form 724 - AAF Regulation 15-54) on conditions noted.

Inspects the fitting and adjustment of parachutes to unit personnel.

Supervises the delivery of equipment by parachute to units in the field.

Supervises the testing of parachutes for serviceability.

Makes minor repairs and adjustments on sewing machines and small hand tools.

Inspects accomplished work orders on repaired and manufactured items.

Designs and manufactures containers for special unit equipment.

Source Jobs

Tailors
Parachute Manufacturer
Sewing Machine Operator
Selects a technically favorable site for and supervises the installation of a ground radar set or supervises the installation of an airborne radar set in aircraft structurally and aerodynamically adapted to that set. Supervises the initial adjustment and alignment of any radar set; supervises the orientation and calibration of any radar set; advises and/or instructs operating personnel in the proper posting of station and maintenance logs and analyzes such logs in order to ascertain that the equipment is operating at maximum efficiency; instructs and supervises radar repairmen in proper preventive maintenance and routine servicing of any radar set; instructs and supervises radar repairmen in the rapid diagnosis, location and clearance of faults and their causes in any radar set; performs emergency repairs on any radar set under difficult or unfavorable conditions, using any materials and tools at hand; analyzes the history of recurring faults for evidence of unsatisfactory design or improper operating or maintenance practices and suggests corrective measures.

Must have had at least one year of active military experience. Must have successfully completed a recognized course in radar maintenance or have equivalent field experience of at least six months duty in radar maintenance. College training and/or civilian experience in electrical or communications engineering are desirable.

SOURCE JOBS

Electrical Engineer
Radio Engineer
Radio Technician
Radar Specialist
I. Property Auditing and Accounting
   A. Sales Officer accounts
   B. Reports of Survey
   C. Accountability & Responsibility
   D. Certificates of Audit
   E. Stock Record Cards
   F. Selective Audit Procedure

II. Audit of Non-Appropriated Funds
   A. Keeping of Records (Council Book, Vouchers, etc)
   B. Proper Disbursements
   C. Improper Disbursements
   D. Sources of Income
   E. Manner of Keeping Funds (banks, bonds, etc.)
   F. Audit of United States Army Motion Picture Service Funds

III. Standard Accounting Procedures
   A. Journal Entries
      1. Discounts
      2. Depreciation
   B. Assets and Liabilities
   C. Profit and Loss Statements
   D. Trial Balances
   E. Cost Accounting

Incl 4
SCOPE OF WARRANT OFFICER EXAMINATION

I. Manual for Courts-Martial
   A. Composition
   B. Appointing Authorities
   C. Jurisdiction
   D. Preparation of charges
   E. Submission of charges
   F. Appointment of Personnel
   G. Procedure
   H. Records - general, special, and summary courts-martial
   I. Reviewing Authority
   J. Rehearings
   K. Action after Promulgation
   L. Punishments
   M. Disciplinary Power of C. O.
   N. Oaths
   O. Appendices
   P. Incidental Matters

II. Prisoners

III. Enlisted Men - AWOL and Desertion

IV. Discharges

V. Arrest and Confinement

VI. Courts-Martial Expenses

VII. Military Correspondence

VIII. Library Accountability

Incl 4
IX. Operation of JAGD
X. Forfeiture of Pay
XI. Personnel Records
XII. Courts of Inquiry
XIII. General Administration Procedures
SCOPE OF EXAMINATION FOR WARRANT OFFICER, CLASSIFICATION #6
ADMINISTRATIVE-FISCAL.

I. Pay of Enlisted Men.

A. Credits:
1. Base Pay.
2. Longevity, foreign service, sea duty, and distinguished
   service awards.
3. Flying pay.
4. Pay for parachute duty.
5. Soldier's deposits and interest.
6. Personal expense money.
7. Extra pay to enlisted men detailed as stenographic reporters.
8. Station allowances and quarters allowances for dependents.

B. Allotments and Class F Deductions.

C. Stoppages and Court Martial Fines,
   1. Maximum amount of indebtedness collectible.
   2. Use of credits to offset indebtedness.
   4. Stoppage of pay during unauthorized absences.
   5. Reward for apprehension of absentees or escaped military prisoners.
   6. Debts due individuals and agencies.
   7. Court martial forfeitures—general provisions.
   8. Disposition of collections of court martial fines.

D. Partial payments.
   1. Statutory.
   2. Conditional.

E. Casual Payments.

F. Payments while missing, captures, etc.

G. Payments on separation from the service.
   1. Travel pay payable.
   2. Repayment of soldier's deposits.
   3. Settlement of balance due insane or deceased enlisted men.
   4. Death gratuity.
   5. Fraudulent enlistment discharges.
   6. Accounts of deserters.
   7. Forfeitures by desertion.
   8. Dishonorable discharges.
   9. Donations on discharge.

H. Furlough and travel allowances.
   1. Rate paid.
   2. Period of furlough.

Incl 4
3. Overstaying of furlough.
4. Suspension on admission to Army Hospital.
5. Quarters and rations payable while traveling.
6. Meal tickets.

J. Aviation Cadets - Women's Army Corps - Navy Enlisted Men.
   1. General provisions.

II. Pay of Officers.
   A. General
      1. Components of the Army of the United States.
      2. Temporary rank of Officers in time of war.
   B. Pay of commissioned officers.
      1. General provisions governing pay.
      2. Pay for longevity.
      3. Additional pay for aide duty.
      4. Rules governing leave of absence.
      5. Unauthorized absences affecting pay.
      6. Excess leave of absence.
      7. Payments while prisoner of war, missing, etc.
      8. Flying pay.
     10. Pay for foreign service or sea duty.
   C. Pay on separation from the service.
      1. Discharge.
      2. Death.
      3. Retirement.
   D. Pay of Contract Surgeons.
   E. Pay of Warrant Officers.
   F. Pay of Flight Officers.
   G. Pay of Army Nurses - Dietitians - Physical Therapy Aides.
   H. Pay of members of the Women's Army Corps.
   J. Subsistence and Rental Allowances.
   K. Allotments and stoppages.

III. Pay of Civilian Employees.
   A. General provisions governing pay.
   B. Leave.

Incl 4
C. Stoppages.

D. Retirement Deductions.

E. Procedure for handling payrolls outside continental limits of U.S.

F. Pay of Reporters, witnesses, etc.

IV. Travel Allowances.

A. Official routes and distances.
   1. Railroad travel.
   2. Highway travel.

B. Mileage payable to Officers.
   1. Basic principles.
   2. Special cases involving duty status.
   3. Special cases involving leave status.
   4. Transportation in lieu of mileage.

C. Deductions for land grant.

D. Other allowances to military personnel.
   1. Per diem allowances.
   2. Actual and necessary expenses.

E. Civilian Personnel.
   1. General provisions governing travel allowances.

F. Transportation of dependents.

G. Vouchers and supporting papers.

V. Commercial Accounts.

A. Payment for telephone and telegraph services.

B. Remittance of taxes collected.

C. Discounts

D. Vouchers and supporting papers.

E. Contracts and purchase orders.

VI. Administration of Public Funds.
A. General Provisions.
   1. Punitive provisions.
   2. Acquisition of Public Funds.
   3. Disposition of public funds.

B. Preparation, disposition, and negotiation of official checks.

C. Procurement, disbursement, and advance of cash.

D. Deposit of Funds to the Credit of the Treasurer of the U.S.

E. Agent Officers.

VII. Accounting for Public Funds.

A. Basic records kept by a disbursing officer.
   1. Cash blotter
   2. Cash book
   3. Check register
   4. Control accounts for certifying officers

B. Accounting Reports and Schedules.
   1. Submission
   2. Schedule of Disbursements
   3. Schedule of Collections
   4. The Account Current
   5. Supporting papers to the Account Current


D. Statement of Money Accountability.

VIII. Fiscal System of the War Department.

A. Appropriations and War Department Procurement Code.

B. Delegation of authority to obligate appropriated funds.

C. Field Fiscal functions.

D. Fiscal aspects of disbursement of funds.

E. Fiscal aspects of collections of funds.

IX. Pay of Prisoners of War.

A. Regulations governing accounts of Prisoners of War.
I. Property
   A. Requisitioning, Issue, and Transportation
   B. Accountability
   C. Unserviceable

II. Quartermaster Corps
   A. Duties
   B. Clothing
   C. Rations and subsistence
   D. Printing and binding

III. Transportation
   A. Troops
   B. Supplies — bills of lading
   C. Baggage

IV. Procurement of Supplies
   A. Purchase
   B. Marking
   C. Storage

V. Types of Equipment

VI. Correspondence
   A. Forms
   B. Authorized Abbreviations

VII. Finance Department

VIII. Services — salvage, laundry, ice

IX. Fire Protection

Incl 4
I. General
II. Accountability and Responsibility
III. Stock Records
IV. Processing Requisitions
V. Requisitioning
VI. Internal Organizational Breakdown
VII. Army Air Force Organizational Breakdown
VIII. Regulations, Technical Orders, Stock Lists
IX. Correspondence
X. Inspection, Inventory, and Research
XI. Storage and Stock Handling
XII. Receiving
XIII. Packing and Shipping
XIV. Stock Disposal and Repair
XV. Issuance
XVI. Forms and Their Use
XVII. Purchasing

Incl 4
I. Receiving, Warehousing, and Shipping.
   a. Receiving
   b. Storage
   c. Packing
   d. Marking
   e. Property Accountability
   f. Inventory
   g. Salvage

II. Requisition & Issue.
   a. Editing
   b. Signal Corps Catalogus & Nomenclature

III. Transportation.
   a. Supplies
   b. Personnel

IV. Local Procurement - Purchase

V. Administrative Procedures.
   a. Civilian Personnel
   b. Military Personnel
   c. Military Correspondence

VI. Army Supply Organization.

Incl 4
SCOPES OF MILITARY OFFICER EXAMINATION
ADMINISTRATIVE-ORDNANCE, SUPPLY AND CLERICAL

1. Property: Accountability, responsibility, requisitioning, receipt, issue, shipment, sales.
2. Property: Lost, destroyed, damaged, or unserviceable.
3. Property: Records
4. Auditing: Property Accounts
5. Ordnance: Property malfunction of small arms.
6. Supplies: Procurement, transportation, storage, and issue
7. Bills of lading
9. Correspondence.
11. Preparation of payrolls, morning reports, daily sick reports.
13. Inspections
14. Transportation of individuals.
15. Ordnance field services - ammunition supply.

Incl 4
Air Mass Analysis
   a. Modification
   b. Regional Characteristics
   c. Source Characteristics
   d. Weather Characteristics

Dynamic Meteorology
   a. Deepening and filling
   b. Physical forces
   c. Winds

Forecasting
   a. Clouds and ceilings
   b. Fog
   c. Fronts
   d. Icing
   e. Precipitation
   f. Temperature
   g. Turbulence
   h. Winds

Synoptic Meteorology
   a. Constituents of Atmosphere
   b. Extra-terrestrial factors
   c. Fog
   d. Fronts
   e. Icing
   f. Lapse rates
   g. Ocean effects
   h. Pressure
   i. Stability
   j. Temperature
   k. Vertical air motion
   l. Winds

Weather Station Operation
   a. Administration
   b. Clearances
   c. Codes
   d. Flight rules - weather
   e. Forecasts
   f. Organization

Incl 4
I. Basic, aerial, mapping, and motion picture photography.
II. Map and aerial photograph reading.
III. Photographic Operations.
IV. Use and repair of aircraft cameras.
V. Photographic equipment.
VI. Photographic supplies.
VII. Filter factors.
VIII. Printing
IX. Code designation of AAF photographs.
X. Reports.
XI. Publications—regulations.
SCOPE OF WARRANT OFFICER EXAMINATION
CLASSIFICATION NO. 16

TECHNICIAN SPECIALIST - AVIATION ARMAMENT

I. Chemical Warfare
II. Explosives and Ammunition
III. Electrical Armament Controls
IV. Bomb racks
V. Cal .50 aircraft machine guns
VI. Cal .30 M2 aircraft machine gun and .20 mm aircraft gun
VII. .37 mm and .75 mm aircraft machine guns
VIII. Synchronizing
IX. Aircraft machine gun sights and gun cameras
X. Power operated gun turrets
XI. Field test operations

Incl 4
SCOPE OF WARRANT OFFICER EXAMINATION
CLASSIFICATION NO. 17
TECHNICAL SPECIALIST: AVIATION, BOMBSIGHT.

I. Theory of Bombing

II. Bombing technique and error

III. Bombing trainer

IV. Storage and shipping of bombsights

V. Theory of bombsight M-series

VI. Operation of bombsight M-series

VII. Maintenance of M-series sight

VIII. Calibration of M-series sight

IX. Gyroscopes

X. Electricity

XI. Theory of airplane flight

XII. Operation of airplane

XIII. Regulations

NOTE: This examination is built in three sections: General, M-Series Bombsight, and C-1 Automatic Pilot.
SCOPE OF WARRANT OFFICER EXAMINATION
CLASSIFICATION NO. 20
MOTOR TRANSPORT

I. Maintenance of:
   A. Engine
   B. Power transmission system to include the winch
   C. Wheels, axles and trunion bearings
   D. Front end alignment
   E. Steering, springs, and shock absorbers
   F. Fuel system
   G. Electrical system
   H. Brake system
   I. Pneumatic tires and tracks
   J. Lubrication

Knowledge of:

A. AR's (covering Motor transport; 1-10, 1-5, 850-5, to 850-20, 45-80, 310-200).
B. Forms, records and reports (listed in TM 9-2810 and AR 850-15)
C. Supply motor parts and fuels
D. Battle field recovery, demolition and decontamination
E. Driver selection and training
F. Publications.
I. General Purpose Vehicles: Oper. & Maintenance
   A. Engines
   B. Power-transmission
   C. Chassis
   D. Brake systems
   E. Wheel alignment and steering
   F. Fuels and carburation
   G. Electrical systems
   H. Lubrication

II. Combat Vehicles: Oper. & Maint.
   A. Engines
   B. Power-transmission & Chassis
   C. Brake system
   D. Fuels and carburation
   E. Electrical systems
   F. Lubrication

III. Supply procedures
   A. Requisitioning
   B. Records and forms

IV. Knowledge of publications

V. Field operations

VI. Hand measuring tools.

Incl 4
I. Map Reading

II. Surveying
   A. Equipment
   B. Principles

III. Photogrametry
   A. Equipment
   B. Topographic Drafting
   C. Grids and Projections
   D. Photogrametric Methods

IV. Photolithography
   A. Process Photography
   B. Halftone Photography
   C. Plate making
   D. Press Operation

Incl. 4
I. Ammunition Components
   A. Military explosives
   B. Chemicals
   C. Small arms
   D. Grenades
   E. A. T. Mines
   F. Anti-personnel Mines
   G. Mortar
   H. Artillery
   I. Bombs
   J. Pyrotechnics
   K. Rockets
   L. Demolition Material

II. Ammunition Supply, 2 of I
   A. Principles
   B. Storage
   C. Transportation

III. A. S., Theatre of Operations
   A. Principles
   B. Army Organization
   C. Field Operations
   D. Army Am. Depot
   E. Administrative Details.
IV. Destruction of Ammunition

A. Principles

B. Specific types
I. Chemical Warfare Service Tactics and Techniques
   a. Theory
   b. Principal weapons
   c. Secondary weapons

II. Chemical Warfare Service Munitions and Materials
   a. Munitions
   b. Weapons

III. Ordnance
   a. General provisions
   b. Regulations
   c. Safety provisions

IV. Ammunition - general
   a. Field Artillery
   b. Aircraft munitions
   c. Grenades

V. Transportation

VI. Defense against chemical attack
   a. Individual
   b. Group-decontamination

VII. Use of smokes and lacrimators in training

VIII. Explosives and demolitions

IX. Ammunition allowances and qualification in arms

X. Range regulations for firing munitions

XI. Inspection of property for condemnation

XII. Domestic disturbances.

Incl 4
I. Electrical Fundamentals

II. Radio
   a. Theory
   b. Operation
   c. Maintenance
   d. Equipment

III. Telephone plant
    a. Construction
    b. Operation
    c. Maintenance
    d. Equipment

IV. Teletype

V. Message Center

VI. Storage Batteries

VII. Map reading

VIII. Signal supply

IX. Administration and Training in Signal Communication
SCOPE OF WARRANT OFFICER EXAMINATION
CLASSIFICATION NO. 28
TECHNICIAN SPECIALIST - SIGNAL COMMUNICATION, AIR CORPS

I. Telephone plants
   A. Construction
   B. Operation
   C. Maintenance
   D. Equipment

II. Teletype:

III. Electrical Fundamentals:

IV. Radio: Air-Ground:
   A. Theory
   B. Operation
   C. Maintenance
   D. Equipment

V. Air Control - Administration and Training:

VI. Signal Security:

VII. Message Center:

VIII. Storage Batteries:

IX. Map Reading

Incl 4

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I. Tactics and Technique, F. A. Communication

II. Electrical Fundamentals

III. Radio
   A. Fundamentals
   B. AM Transmitters and Receivers
   C. FM Transmitters and Receivers
   D. Testing
   E. Operating Procedures

IV. Wire
   A. Telephone EE-S-A
   B. Switchboards, BD-71 and BD-72
   C. Field Telegraph, TC-5-( )

V. Message Center - Codes, ciphers & records

VI. Field Operation
   A. Transmission security
   B. Capabilities and Limitations
   C. Counter Measures & General Continuity
SCOPES OF MILITARY OFFICER EXAMINATION
CLASSIFICATION NO. 30
TECHNICIAN SPECIALIST-TANK

I. Engine Section
   A. Engine
   B. Electrical Systems
   C. Cooling Systems

II. Clutch

III. Power Train
   A. Propeller Shaft
   B. Transmission
   C. Transfer Case
   D. Controlled Differential
   E. Final Drive

IV. Suspension and Track
   A. Suspension
   B. Track

V. Hull and Turret

VI. Lubrication and Fuels

VII. Miscellaneous Equipment

VIII. Battery Circuits

Incl 4
I. Tactics and Reconnaissance

A. 1. Organization
   2. Fire Unit
   3. a. S-2
      b. S-3
      c. Reconnaissance Officer

B. 1. C A Missions
   a. AA Missions
   b. Use of Weapons

C. 1. Position reconnaissance
   2. a. Bomb release lines
      b. Critical zone

D. Tactical disposition

E. 1. AAA
   2. Air defense grid

F. 1. Route reconnaissance
   2. Hasty estimation of bridges

Military Maps and Aerial Photograph Reading

A. 1. Projections
   2. Scales

B. RF's

C. Marginal information (maps)

D. 1. Military symbols
   2. Foreign map scales

E. Types of aerial photographs

F. Interpretation of detail

G. Construction of photomaps

III. Orientation and Surveying

A. Azimuths and bearings.

Incl 4
B. Use of instruments

C. 1. Traversing
   2. Office computation

D. Coordinates

E. Military grids

F. Star identification

G. Azimuth determination

H. Field location of points

IV. Meteorology and Gunnery

A. 1. Use of instruments
   2. Differential effects
   3. Standard atmospheric conditions
   4. Meteorological messages

B. Elements of data

C. Base line and preparatory fire

V. Mathematics

A. Logarithms

B. Slide rule

C. 1. Right triangle
   2. Oblique triangle

VI. Engineering Drawing

A. Use of instruments

B. Reproductions

VII. Photography

A. Exposure

B. Darkroom procedure

VIII. Camouflage

A. Principles of camouflage Field Fortification

Incl 4
I. Selection of Animals
   a. Mules
   b. Horses
   c. Assignment

II. Care of Animals
   a. Watering
   b. Feeding
   c. Stabling
   d. Health Maintenance
   e. Shoeing

III. Training of Animals
   a. Initial Period
   b. Final Period

IV. Packsaddles
   a. Normal adjustments
   b. Emergency adjustments

V. Cargoes
   a. Knots and splices
   b. Types
   c. Manting
   d. Slings
   e. Hitches—balancing

VI. Gunloads
   a. Saddle adjustments
   b. Special adapters
   c. Load cinches

VII. Field Operations
   a. Road discipline
   b. Line of march
   c. Bivouac
   d. Stream crossing

incl 4
Parachutes, Personnel Type
  a. Packing
  b. Inspection
  c. Nomenclature
  d. Maintenance
  e. Fitting and Adjustment
  f. General Instructions

Aerial Delivery Assemblies and Related Equipment
  a. Canopy
  b. Containers
  c. Related Equipment
  d. General Instructions

Maintenance, general
  a. Fabrics
  b. Cords and threads
  c. Repair instructions
  d. Hardware
  e. Sewing machines
  f. Equipment
  g. Stitches and seams

Technical Instructions
  a. AAF Technical Orders
  b. AAF Stock List
  c. AAF Regulations
I. Electrical Fundamentals

II. Basic Electronics
   A. Vacuum tube functioning
   B. Tuned circuits
   C. Transmission lines
   D. Antennas
   E. Vacuum-tube application

III. Radio
   A. Fundamentals
   B. Transmitters
   C. Receivers
   D. Test instruments

IV. Radar Fundamentals
   A. Special circuits
   B. Cathode ray tubes
   C. Wave guides and cavity resonators
   D. Ultra high frequency generators

V. Siting

VI. Reporting

VII. Gunlaying

VIII. Airborne

Incl 4
REVIEW OF PROPOSED EXAMINATION

This examination is in experimental form. As such; comments relating to the efficacy, expediency, and clarity of the individual items are most desirable. The final form of the examination should represent the earnest thought of qualified personnel.

As you study or do the examination, please list those items which seem to you to fit the categories listed below. Simply write the number of the item in the appropriate column. Work carefully so that the best possible examination may result.

I. Lead inadequate

II. Answer readily discernible

III. Poor alternate choices

IV. More than one acceptable answer

V. Item non-essential

At the conclusion of the examination, answer the following questions by placing checks in the appropriate spaces:

1. On the whole, the examination covers the field very well, adequately, inadequately.

2. On the whole, the items are stated clearly, poorly.

3. The time for this examination should be 1½ hrs., 2 hrs., 2½ hrs.

4. There are % hard items, % average items, % easy items.

5. The passing grade should be 85%, 80%, 70%, 65%.

Name: ____________________________
DIRECTIONS

There are 150 questions in this test. Work as accurately and as rapidly as you can. When you are not sure which answer is right, make the best guess you can. You should not waste time on questions if you have no idea what the correct answer is because you will be penalized for guessing wildly.

After each question, you will find four possible answers, only one of which is correct. Read each question carefully; decide which one of the four answers is right; then, on the separate answer sheet, write the letter corresponding to the answer. All answers go on the separate answer sheet.

DO NOT MAKE ANY MARKS ON THIS TEST BOOKLET.

Here are some practice questions to show you how to mark your answers on the answer sheet.

I. Who is Commander-In-Chief of the Army of the United States?

A - The Secretary of War
B - The President
C - The Chief of Staff
D - The Quartermaster General

Selection of an Answer Sheet

I B

The B answer is the right one -- The President is the Commander-In-Chief of the Army. Now look at the section of an answer sheet at the right of the page. After I, the letter "B" has been written since the B answer is the right one for this question.

Here is the second question:

II Ohm's law may be stated as

A - \( R = IE \)
B - \( R = I/E \)
C - \( I = ER \)
D - \( E = IR \)

Write the correct answer after II on the section of an answer sheet shown at the right of the page. You should have written "B" since the B answer is the right one. Notice that it is necessary to read all four choices.

When you write your answers on the answer sheet, always make sure that the number on the answer sheet corresponds to the number of the question. Be sure to begin with Number 1 in the test booklet and on the answer sheet.

DO NOT TURN THIS PAGE UNTIL YOU ARE TOLD TO DO SO.