



PREPARED UNDER THE DIRECTION OF  
THE ADJUTANT GENERAL



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**KEEP 'EM  
FLYING!**



***Aviation Cadets***  
***Train for Air or Ground Crews***

**U. S. ARMY AIR FORCES**



## COMMAND *of the* AIR *is* VITAL *to* VICTORY

WE ARE IN THE MIDST of the most momentous war of modern times. A coalition of powerful and ruthless enemies seeks not only to overwhelm us but to annihilate our institutions and our civilization. They have struck with suddenness and with all the force at their command, and have shown that it is their aim to conquer swiftly and completely. Therefore, we have no time to lose. We must surpass them in both strength and speed of attack. We must press them back behind their own borders and there defeat them so decisively that they can never again attempt to impose their wills and their ways of life on a people who cherish liberty above all things; a people always willing to lay down their lives to preserve their freedom.

The United States is now engaged in the greatest aircraft production program ever undertaken by any country. That program, however, can be translated into air supremacy only if we can muster the qualified man power to keep our planes flying. And the source of this man power lies in the youth of the land—they are the men who will "Keep 'em Flying!"

Youth alone has the physical fitness, the mental alertness, the personal daring to meet the acid test for air crews of high-powered military aircraft.

Our Nation's future depends upon command of the air. The future of freedom and liberty everywhere is in the hands of our youth.

The safety of this Nation today, and the welfare of generations to come, demand that every healthy, intelligent young man, from 18 to 26, inclusive, determine at once whether or not he is qualified to serve his country in the U. S. Army Air Forces.



### ★ *You May Have This Opportunity*

Every qualified young man in the country may have an opportunity to take part in the development of our powerful Army Air Forces under the revised and enlarged training program for Aviation Cadets.

*There are now three ways, for those qualified, to enlist in the Army Air Forces for Aviation Cadet training.*

**First**, they may enlist as privates in the Army Air Corps (unassigned) and serve there until their turns come for Aviation Cadet training.

**Second**, they may enlist in the Air Corps Enlisted Reserve and wait until they are ordered to report for Aviation Cadet training.

**Third**, college men (and high school seniors about to enter college), aged 18 to 26, inclusive, may enlist in the Air Corps Enlisted Reserve and continue their schooling, provided they maintain satisfactory scholastic standings. Upon graduation or withdrawal from college, men will be assigned to active duty at training centers as facilities become available.

If the necessity of war demands, the deferred status of any individual in the Army Reserve may be terminated at any time by the Secretary of War.

### ★ *Relative Advantages of the Three Enlistment Plans*

The three plans for enlistment for training as an Aviation Cadet are designed to meet the needs of various classes of applicants. Which one fits you?

As training classes for Aviation Cadets start at stated periods, the Army cannot promise that you will commence Aviation Cadet training just as soon as you may be ready to enlist. It may be weeks or even months before your turn for training will come. However, if you want to get into the Service at once, you may enlist, under the first plan, as a private in the Air Corps. While you are waiting to be appointed an Aviation Cadet, you will draw soldier's pay, which is now \$50 per month, plus food, clothing, and medical attention, and gain Army experience which will be valuable to you when you become an officer. If you are not attending school, or are not employed, this is by far the best plan for you.



If, on the other hand, you are employed or have some civilian business affairs to close, the second plan is attractive. You may enlist in the Air Corps Enlisted Reserve **without pay**. You may continue your normal life until you are ordered to active duty, but you must be prepared to comply with such orders on short notice.

The third method, or deferred service plan, is available only to full-time students enrolled in accredited colleges or universities. Under this plan students may be allowed to continue in school for one, two, three, or four years, as may be necessary in order to graduate. A school year shall be considered as being the period required to complete the full college course of that year. The applicant's status as a student must be certified by the proper official of his college, and he must at all times maintain a satisfactory scholastic standing. Students on temporary leave of absence may be certified. Accredited colleges are those listed in the Directory of Colleges of the U. S. Office of Education, with such exceptions as may be



authorized by the Commanding General, U. S. Army Air Forces. In the event of graduation or withdrawal from college (summer attendance shall be optional), men will be assigned to active duty and appointed Aviation Cadets as their services are required.

While it is not planned that students enlisted on a deferred basis will be needed before the end of the period provided in the **deferred plan**, it must be understood that, in case of necessity, the **deferred status** may be terminated at any time by the Secretary of War.



## ★ Qualifications

**General.**—All applicants for appointment as Aviation Cadets must be between the ages of 18 and 26, inclusive, except those who wish to enroll for training as meteorologists, for whom the age limits are from 18 to 30, inclusive. (Applicants under 21 will be enlisted only with written consent of parents or guardians). Candidates may be single or married. They must have been citizens of the United States for at least ten years prior to date of application. They must submit birth certificates, or other properly authenticated proof of date of birth and of citizenship. Applications must be accompanied by three letters of recommendation from reputable citizens to whom the applicants are well known.

**Physical.**—All Aviation Cadet candidates must meet the same physical standards as those prescribed for appointment and call to active duty as Reserve officers in any component of the Army of the United States. Air Force officers are classified in two main categories—flying officers and ground officers. Aviation Cadets in training for duty as flying officers are required to meet special physical standards, somewhat higher than for others. Their visual acuity and color perception must be perfectly normal. In the case of other officers, while color perception must be normal, visual acuity without glasses may be less keen, provided it is correctible, with glasses, to 20/20 in one eye and 20/30 in the other, and also provided that no organic disease of either eye exists. Hearing must be normal in each ear. Flying officers are required to be not less than 60 nor more than 76 inches in height, and to weigh not less than 105 nor more than 200 pounds. Finally, before any Aviation Cadet is eligible to enter any flying training, he must be able to pass a complete physical examination for flying duty, as prescribed in Army Regulations.

**Mental.**—All candidates for air crew training—bombardiers, navigators, and pilots—are required to take a preliminary mental examination which eliminates at the start any who may lack the fundamental knowledge and intelligence necessary to comprehend the instruction given in the Army Air Forces schools. This test is of the multiple-choice, short-answer type. It is designed to give a picture of the general field of knowledge possessed by each candidate, but is so wide in scope that any intelligent young man with an average background of study should be able to make a passing grade. No definite amount of formal schooling is required. It does not matter how you gained the knowledge if you can pass the test.

Applicants for training as ground officers, however, are required to submit a transcript of college credits. (See Ground Officer Training, page 16.)



## ★ Pay and Special Benefits while Training

Aviation Cadets, while training, receive base pay of \$75 per month and a ration allowance of \$1.00 per day. They are also furnished quarters, medical care, uniforms and other clothing and equipment. They are given a \$10,000 Government Life Insurance policy at Government expense while undergoing training. After graduation and appointment, they must continue this policy in force at their own expense. Transportation to the Air Force Training Center to which the applicant is assigned is paid by the Government.

## ★ Pay and Benefits after Graduation

All Aviation Cadets who complete their training are commissioned second lieutenants or flight officers in the Army of the United States and are immediately assigned to active duty with the Army Air Forces. They are given an allowance of \$150 for uniforms when called to active duty. This is sufficient to purchase their original outfit of clothing and equipment—which is not furnished to officers by the Government beyond this initial allowance.

Monthly pay and allowances of flight officers and second lieutenants are as much as \$291 for single officers, and \$327 for married officers, which amounts include base pay of grade, flying pay, and allowances for rations and quarters. Ground officers serving as second lieutenants receive up to \$216 per month for single officers, and \$252 for married officers, the same as flying officers, less the pay for flying duty. Officers who occupy suitable Government quarters receive no rental allowances.

All officers are eligible for promotion to higher grades, with increased pay and allowances.

## ★ Pay Status while Awaiting Aviation Cadet Training

Men who enlist immediately and await orders for training as Aviation Cadets, are paid the regulation pay of a private in the Army of the United States. Those who enlist in the Enlisted Reserve on a deferred status receive **no pay or allowances** whatever until they are ordered to active duty as Aviation Cadets.

## ★ How to Enlist

Applications for appointment and training as Aviation Cadets must be made on regular War Department forms. These may be obtained from the Faculty Air Force Advisor of any college, junior college, or secondary school; from the headquarters of any Service Command, a list of which will be found on page 25 of this pamphlet; from any U. S. Army Recruiting and Induction Station; or any Aviation Cadet Examining Board.

All applications must be accompanied by properly authenticated birth certificates, or other evidence of date of birth and citizenship; parents' or guardians' consent to enlistment, if applicant is under 21; and letters of recommendation from three reputable citizens, to whom the applicant is known.

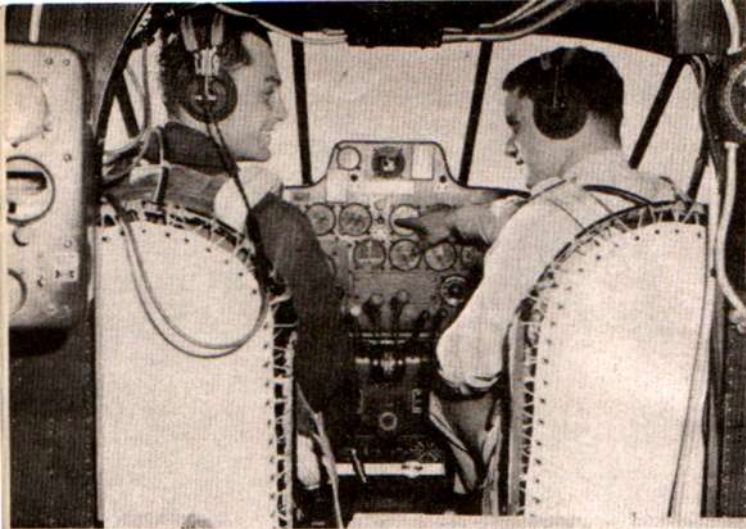
If enlistment on a deferred basis is sought, because of enrollment in a college, a statement must be included from the proper college official to the effect that the applicant is, on the date of application, an undergraduate of the school concerned, and in good standing.

Applicants for ground officer training are also required to submit transcripts of their college records.

Men applying for enrollment as flying officer candidates are not required to present such transcripts.

Each applicant must appear in person before an Aviation Cadet Examining Board. Addresses of Aviation Cadet Examining Boards may be obtained from any U. S. Army Recruiting and Induction Station, or from the headquarters of any Service Command.





### ★ *Flying Officer Training*

Flying officers are classified as bombardiers, navigators, and pilots, depending upon the type of duty for which they are trained. The candidate's preference is respected in this matter as far as possible. However, applicants for flying duty training are given further psychological examinations—in addition to the routine screening test—following their call to active duty as Aviation Cadets. The purpose of these tests is to determine the type of training for which each is best suited by aptitude and personal characteristics.

Candidates eliminated from training for flying duty are eligible to apply for enrollment in one of the courses for ground officer, provided they meet the basic requirements for such training and are recommended for the particular course chosen. If a cadet who is eliminated from flying training cannot meet the requirements for ground officer training in the Army Air Forces, he will be relieved as an Aviation Cadet and sent as a private, Air Corps unassigned, to the Air Force Replacement Training Center (Technical). He will then be eligible to compete for appointment to an officer candidate school of the Air Corps or of another branch of the Service.

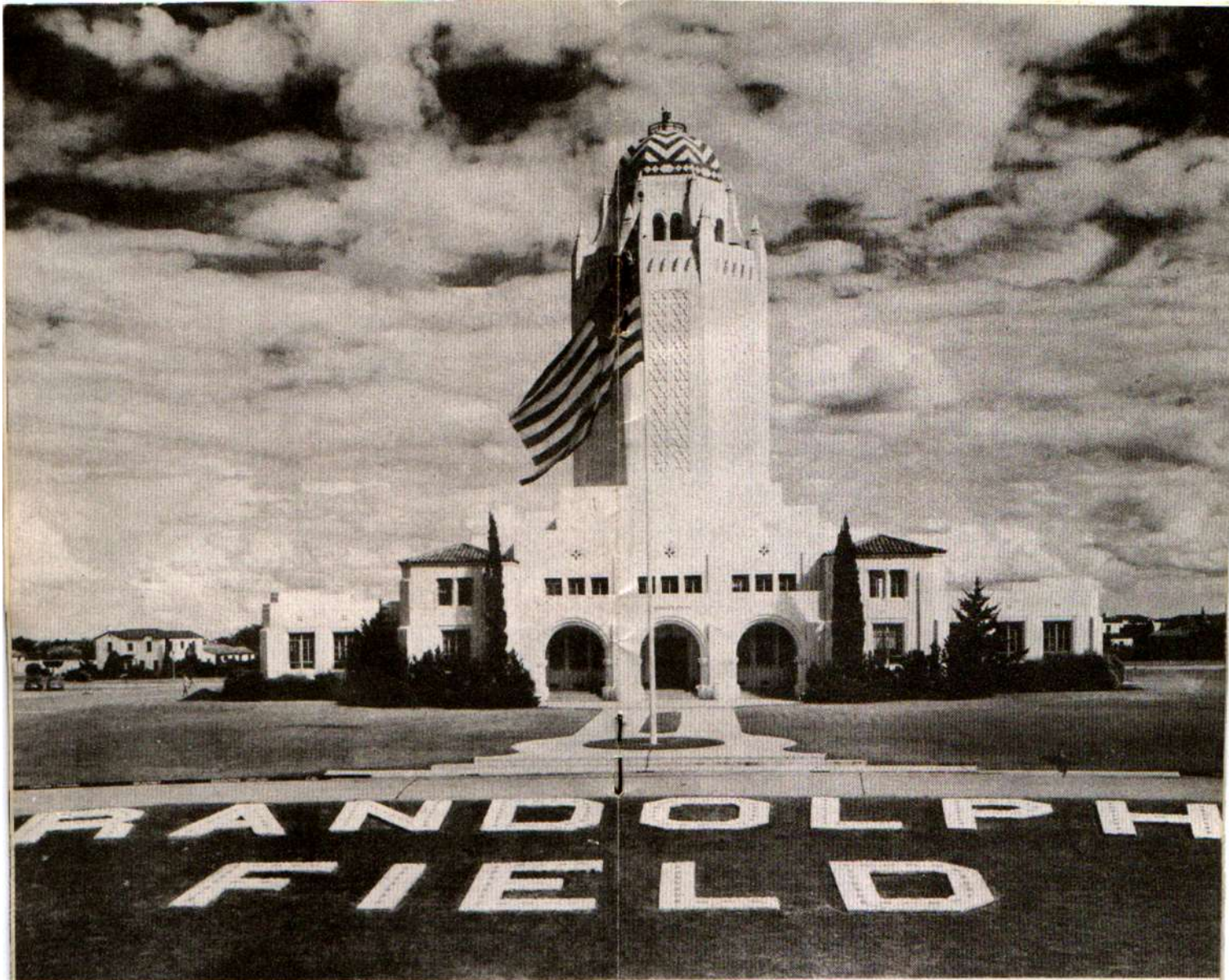
**Bombardier Training.**—The bombardier's duty, once he becomes a participant in a combat flight, is performed in a matter of seconds—but the most important seconds of the flight. At the crucial moment, when the bomber reaches its objective, the bombardier takes over from the pilot. Upon his skill in landing his bombs on the target depends the success of the entire mission.

The Aviation Cadet assigned to bombardier training receives nine weeks' instruction in fundamentals, twelve in specialized bombardier training, and five in gunnery—a total of twenty-six weeks.

Bombardier schools are located at Chandler, Arizona; Kingman, Arizona; Victorville, California; Albuquerque, New Mexico; Carlsbad, New Mexico; Hobbs, New Mexico; Roswell, New Mexico; and Midland, Texas.

While evidence of formal schooling is not required for enrollment as a bombardier student, the chances of successful completion of the course will be increased if, as part of his pre-Cadet training, the applicant has completed mathematics through trigonometry, and has acquired a sound knowledge of the fundamentals of physics.





"West Point of the Air" where Aviation Cadets are trained for the United States Army Air Forces.



**Navigator Training.**—To the navigator member of an air crew belongs the vital responsibility of plotting the airplane's course to its objective, be it near or far, and of determining at all times the exact position of the craft. He is the man behind the man at the controls, and his instructions enable the pilot to guide the ship directly to its objective.

The training of a navigator requires twenty-nine weeks. The first nine weeks are spent in a study of fundamentals, fifteen are devoted to special navigation subjects, and five are spent in the study of gunnery.

As in the case of bombardiers, evidence of formal schooling is not required of candidates for training as navigators. However, a definite mathematical bent is essential, and it is desirable that pre-Cadet training should have included a sound fundamental ground work in mathematics. A knowledge of astronomy will prove useful. Those interested in pursuing their mathematics studies still further, will find an excellent opportunity for doing so in the navigation schools of the U. S. Army Air Forces.

Schools for training navigators are located at Mather Field, California; Albany, Georgia; and Kelly Field, Texas.

**Pilot Training.**—The pilot, as the layman knows, is the member of the air crew at the controls, and the flight of the ship on its course is his responsibility. The navigator lays out the course at the end of which is the objective of the flight. It is up to the pilot to get the craft there in the shortest possible time—or at the desired moment, as the case may be. His is the spectacular role. Yet it is grueling, and his period of training, thirty-six weeks, is longer than that of any other member of the air crew.

The course for pilots is divided into four parts, each of nine weeks' duration. The first period is devoted to fundamentals, involving both military training and preliminary ground work. Then begins flight training, when the Aviation Cadet is sent for nine weeks to an elementary flying school. Upon the completion of this phase of training, he is sent to a basic flying school for the next period of instruction, and finally to a specialized advanced training school for the last nine weeks.

During the specialized training he is assigned to bombardment flying or pursuit flying, and to twin- or single-engine planes, depending upon temperament and physique—two important factors in determining the candidate's particular field of specialization.

Mechanical aptitude, unusually quick reflexes, perfect physical coordination, and the ability to make rapid decisions are desirable in the applicant who wishes to become a pilot. A knowledge of mathematics and some experience in the field of the applied sciences are useful.

## ★ Ground Officer Training

Candidates for commissions as ground officers in the Army Air Forces are offered a choice of training in five fields. These are armament, communications, engineering, meteorology, and photography.

In selecting the course for which he will apply, the candidate's preference in the matter must be supported not only by a natural aptitude for the type of training sought, but by special educational attainments as well—that is, unlike the candidates for flying officer duty, those for ground officer duty are required to present evidence of formal schooling.

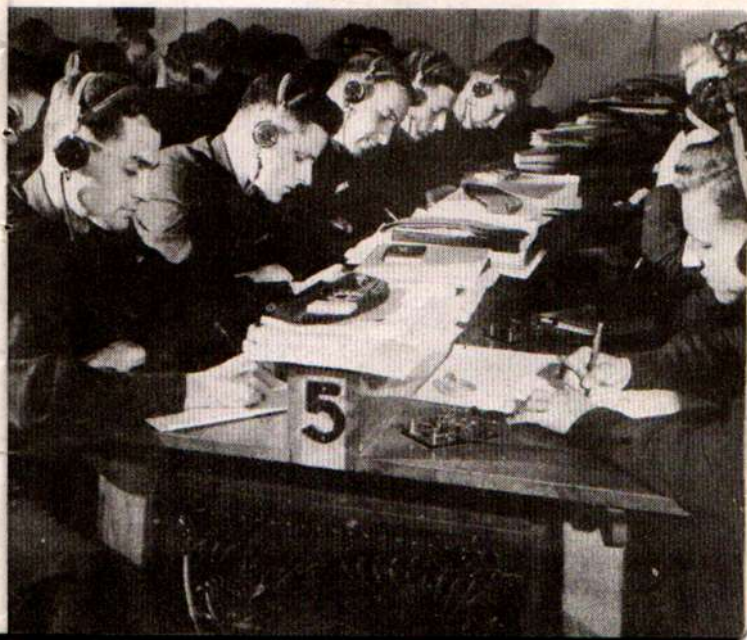
**Armament Training.**—The armament officer is charged with the supervision of all armament carried by airplanes—machine guns, bomb racks, etc. Candidates for training in this field may come directly from civil life or from the enlisted ranks of the Army. Former Aviation Cadets, under certain conditions, are also eligible.

Civilian candidates and candidates from the enlisted ranks of the Army must present college credits showing the completion of at least two years of an engineering course in an accredited college. It is highly desirable that they shall have had shop work and chemistry. Former Aviation Cadets who have been eliminated from flying training because of flying deficiency only, may be accepted for armament training if they have completed two years of college (not necessarily an engineering course) to include one year of college physics, provided they are recommended by their former commanding officers, and have not failed in any ground school subject.

The Armament School is at Lowry Field, Denver, Colorado. The period of instruction for armament officers is twelve weeks. The curriculum includes metal work, soldering, electrical armament control, explosives and ammunition, chemical warfare, small arms, aircraft machine guns, synchronizers and installations, tow targets, field exercises, and other subjects. Upon graduation and commission, the armament officer may be assigned to combat duty, or he may be selected, in certain cases, for special training in bomb-sight maintenance.

**Communications Training.**—The communications officer is charged with maintenance and operation of radio, telegraph and teletype, and directional equipment, including the radio compass. Candidates for this training must have at least two years of college credits, including a year of college physics, except that holders of amateur or commercial radio licenses may substitute the experience represented by these licenses for the physics credit. It is desirable that the candidate have a sound basic ground work in mathematics; courses in electronics and the National Defense Radio Course or its equivalent are also desirable.

The course of instruction in communications is of sixteen weeks' duration, and includes A. C. and D. C. circuits, transmitters, receivers, circuit analysis, communications sets, liaison sets, compass sets, etc. Accepted candidates are sent to the Army Air Forces school at Scott Field, Illinois, for training.





**Engineering Training.**—The engineering officer is responsible for all mechanical details of the plane while it is on the ground. Under his supervision, technically trained enlisted men "Keep 'em Flying!" Candidates for training in this field must have completed at least three years of engineering in an accredited college. It is highly desirable that they should have had training in aerodynamics, airplane construction and instruments, and other aeronautical engineering subjects.

Aviation Cadets in engineering will receive nineteen weeks' instruction at Chanute Field, Illinois, where they will study airplane mechanics, airplane structure, hydraulic equipment, propellers, instruments, engines, electrical systems, and other related subjects.



**Meteorology Training.**—The meteorology officer has one of the most exacting—but also one of the most interesting—tasks connected with modern warfare. The successful accomplishment of military missions, especially aerial missions, depends in large measure upon his accurate forecasting of weather conditions, often from extremely limited data. And his forecasts must cover not merely a local area, but the entire route of flight, often covering thousands of miles.

The educational requirements for candidates for training in meteorology are high. Applicants must have completed three years of college, specializing in engineering or in the sciences. They should have completed differential and integral calculus, as well as physics to include heat and thermodynamics. Throughout their college courses they must have made grades placing them in the upper third of their classes.

The course of instruction given accepted candidates is of thirty weeks' duration. It includes synoptic and dynamic meteorology, meteorological instruments, and laboratory practice. Aviation Cadets accepted for this training will be sent to one of the following civilian schools: Massachusetts Institute of Technology, Boston; University of California at Los Angeles; or the University of Chicago.



The age limit for Aviation Cadets for training in meteorology is now 30 years, to but not including the candidate's thirty-first birthday.

This is the only type of Aviation Cadet training for which candidates over 26 are eligible.

**Photography Training.**—The duties of photography officers are implied in their title. They take charge of and supervise the operation of mobile and fixed photographic laboratories. Their work with aerial photographs, of course, requires special skill and special knowledge not necessary in general photography practice. Candidates for appointment as Aviation Cadets in photography must have completed at least three years of chemistry or geology, including physiography, at an accredited college. They must also have had experience as amateur or professional photographers. Exceptions, with reference to formal educational requirements, may be made in the case of men with extensive technical photographic experience.

Instruction in photography is given at Lowry Field, Denver, Colorado. The course is of twelve weeks' duration and includes administration, basic theory of photography, assembly and interpretation of aerial photographs, map reading, and allied subjects.

## ★ *The Long View*

Looking beyond the end of the war, it is easy to see that your training in the Army Air Forces will undoubtedly prove of great benefit to you after your return to civil life. Most of us are old enough to remember that commercial aviation, as we know it today, came into being following the last war. Largely, it was developed as a result of the lessons learned in that war, and by the men who learned those lessons first hand. The aviation pioneers of the 'twenties, and aviation kings of the 'thirties, were practically all men who had learned to fly while serving in the Army Air Corps in 1917-1918 and in the years immediately following.

It is not at all unreasonable to predict that following the close of the present war, commercial aviation will develop even more rapidly than it did in the 'twenties. Although it may not be apparent at the moment, things are being learned about planes and methods of flight today that will lift the science of aviation to heretofore undreamed-of levels of achievement in the years that are to follow.

Be prepared to take part in that development, and reap the financial rewards sure to come to the pioneers.

Enroll today as an Aviation Cadet in the Army Air Forces and thus help defend your country while preparing yourself for an economically sound future.

Think! Your country needs you to fly its fighting and bombing planes today, or to serve with the Army Air Forces as a ground officer and thus help "Keep 'em Flying!"

The Army will train you free of charge, and pay you a salary, plus allowances and medical care; while you are in training. Then, when you have done your bit to win the war, you will be free to use your new knowledge in your own interests as you think best.

What a future for a live young American!

*"Keep 'em Flying!"*



## EXPLANATION OF THE PURPOSE AND SCOPE OF THE AVIATION CADET QUALIFYING EXAMINATION AND SAMPLE QUESTIONS.

### *Purpose of the Examination.*

This examination is now given by aviation cadet examining boards as a substitute for previous educational requirements for admission to the Air Corps as aviation cadets. The purpose of the examination is to make it possible for every American young man who desires to serve his country in the Army Air Forces, and who possesses the aptitude, knowledge and skills required in flying, to have an opportunity to become a bombardier, navigator or pilot.

The examination is designed to qualify all men who have a good prospect of succeeding and to eliminate only those who are definitely unqualified for flight service. The sections of the examination measure the types of proficiency in comprehension and in problem solving which are typical of those required in Air Corps training schools.

### *General Description of the Examination.*

The examination will be given to an applicant by any examining board. It is not a test of speed, but is a measure of level of ability. Most men complete the examination in less than two hours. No candidate will be able to answer all the questions correctly, but the more questions answered correctly, the higher the rating. The examination contains a number of different sections measuring different abilities and characteristics. The following is a general description of some of the abilities measured by the test:

One necessary qualification of the aviation cadet is quickness in comprehending instructions and accuracy in following directions. If a characteristic of the plane is explained, a demonstration of flight characteristics is given, or some similar information is furnished, he must be alert to understand and to assimilate this information. This ability to comprehend and to follow directions will depend in large part upon his vocabulary, his ability to understand the exact meaning of words and explanations.

The aviation cadet must be able to read intelligently from Army manuals, technical manuals, texts, and other sources, and understand what he reads. In addition to a knowledge of individual words, he must understand sentences and paragraphs, be able to pick out the central thought or essential idea in a passage, organize the given information, see its relation to previous explanations, make interpretations, and draw conclusions on the basis of what he reads. Aviation is a complex subject, and the aviation cadet must be able to educate himself in this field through his own reading and study as well as through actual experience in the air.

Military flying requires a careful planning and a skillful execution of definite missions. The members of the air crew, especially the navigator, must be able to read charts, maps, and weather reports, keep a constant check on the plane's speed and location, plot a course, check it, and carry on many similar activities with speed and precision. Skill and accuracy in fundamental mathematics are essential to many of these activities. The aviation cadet should possess the ability to solve problems involving proportions, fractions, ratios, decimals, formulas, and elementary algebra, and also to read and interpret graphs, tables, and charts.

The air crew is immediately responsible for the operation of a very complicated and highly developed machine — the modern fighting, observation, or bombing plane. In addition to other abilities, it is necessary that members of the air crew have good mechanical comprehension so that they will understand the basic principles of operation of the airplane and the rest of their mechanical equipment.

Members of the air crew frequently have to make sound judgments in practical situations. When an aviation cadet is faced with a problem, whether in the air or on the ground, he should consider all angles of the problem, call upon his previous training and experience, and make the best judgment possible under the conditions. Poor judgment renders the aviator a source of danger, not only to himself, but to others. The sort of ability needed by a successful aviator can be measured by presenting problems which might be met, not only in

flying, but in everyday activities, so that solutions to the problems do not depend upon any special training or unusual experiences as a flier, but rather upon practical judgment.

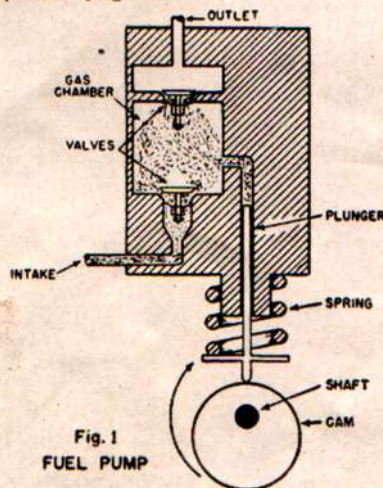
The aviation cadet has an opportunity to become an officer in the Army Air Forces. If he becomes an officer, he will have to assume many responsibilities of leadership. Among other things, the officer must keep up with the most recent changes and developments in aviation and in many other fields. By this alertness to recent happenings, he can take advantage of these developments, see their importance, be ready to adopt worth-while improvements, and as an aggressive leader, help to keep our Nation at the top.

### *Sample Examination Questions.*

The following questions are typical of those contained in the examination. The candidate is asked a question, given a problem to solve, asked to read a passage or study an explanation. In all cases he answers the question by choosing the **best** one of the five possible answers which are given for the problem.

1. When a man is asked to help reinforce a bridge, he is to
  - 1-A widen it.
  - 1-B strengthen it.
  - 1-C destroy it.
  - 1-D close it.
  - 1-E replace it.
2. Barracks are
  - 2-A airplane hangars.
  - 2-B flat-bottomed boats.
  - 2-C living quarters.
  - 2-D street obstructions.
  - 2-E underground passages.
3. "Military courtesy is basic to effective leadership and the maintenance of good discipline. Courtesy implies polite and considerate behavior toward others, whether senior or junior, and whether or not members of the military service. In general, officers of junior rank habitually give the same precedence to and show the same consideration toward their seniors that any courteous person does to his elders. These courtesies, if shown promptly and smartly, do much to add firmness and dignity to the leader."
3. On the basis of the above paragraph the best general summary of the sort of courtesy that is expected from an officer would be the statement that he will show courtesy to
  - 3-A other members of the military service.
  - 3-B everyone with whom he comes in contact.
  - 3-C officers of higher rank.
  - 3-D officers of junior rank.
  - 3-E civilians who are older than he.
4. The paragraph can be interpreted to mean that courtesy toward senior officers is one military duty a soldier should have little trouble remembering because
  - 4-A he will be required to show courtesy while in the Army.
  - 4-B he will expect it from other men who are below him in rank.
  - 4-C it is something which is shown only in the Army.
  - 4-D the penalty for failure to be courteous is certain.
  - 4-E courtesy toward older persons already should be a fixed habit with him.
5. If a hangar which is known to be 30 feet high casts a 20-foot shadow, what is the height of a signal tower which casts a 70-foot shadow at the same time of day?
  - 5-A 46  $\frac{2}{3}$  feet.
  - 5-B 140 feet.
  - 5-C 210 feet.
  - 5-D 23  $\frac{1}{3}$  feet.
  - 5-E 105 feet.
6. If Speed equals one-half  $d$  square, what is the Speed when  $d$  equals 6?
  - 6-A 36
  - 6-B 6
  - 6-C 18
  - 6-D 9
  - 6-E 24

7. Ten trucks are transporting road-building material across country. The leader comes to a 50-foot stretch of ice-covered hill which is so steep and slippery that his truck will not pull it. The most practical thing to do in these circumstances would be to
- 7-A tie all the trucks together so that the first could be pushed up the hill, the last pulled up.  
 7-B turn back and wait for warmer weather.  
 7-C put the drivers to work building a temporary road around the hill.  
 7-D have the trucks back up and take a running start at the hill.  
 7-E put the drivers to work scattering some sand from one of the trucks onto the ice.
8. The first U. S. Army pilot to be publicly acclaimed a hero after our entry in World War II was
- 8-A Charles Lindbergh.  
 8-B Wiley Post.  
 8-C Eddie Rickenbacker.  
 8-D Roscoe Turner.  
 8-E Colin Kelly, Jr.
9. Which one of the following is an adaptation of a slogan which was popular in the United States during the Spanish-American War?
- 9-A "Thumbs Up"  
 9-B "Remember Pearl Harbor"  
 9-C "Time Is Short"  
 9-D "We Do Our Part"  
 9-E "Keep 'em Flying"



Fuel injection pumps are usually operated by a cam and spring. The cam moves the plunger during the delivery stroke and the spring returns it during the suction stroke. The cam is coupled with the engine crankshaft by means of gears or chains. Fuel is drawn into the gas chamber during the suction stroke and forced out during the delivery stroke.

10. If the cam shown in Figure 1 is rotated in the direction indicated by the arrow (clockwise) the gas will be pumped out
- 10-A in a continuous flow.  
 10-B during about one-half of each revolution.  
 10-C during one rotation, chamber refilled during next rotation.  
 10-D during approximately two-thirds of each revolution.  
 10-E when the cam is in the position shown in the drawing.

Further information may be obtained from the commanding general of the Service Command in which you reside, or from The Adjutant General, Washington, D. C.

The States comprising the nine Service Commands into which the country is divided are listed below. Address "The Commanding General" concerned at the Service Command headquarters, indicated in each case.

**1st Service Command: Hq. Boston, Massachusetts**

CONNECTICUT	NEW HAMPSHIRE
MAINE	RHODE ISLAND
MASSACHUSETTS	VERMONT

**2nd Service Command: Hq. Gov. Island, New York**

DELAWARE	NEW JERSEY
NEW YORK	

**3rd Service Command: Hq. Baltimore, Maryland**

DIST. OF COLUMBIA	PENNSYLVANIA
MARYLAND	VIRGINIA

**4th Service Command: Hq. Atlanta, Georgia**

ALABAMA	MISSISSIPPI
FLORIDA	NORTH CAROLINA
GEORGIA	SOUTH CAROLINA
TENNESSEE	

**5th Service Command: Hq. Columbus, Ohio**

INDIANA	OHIO
KENTUCKY	WEST VIRGINIA

**6th Service Command: Hq. Chicago, Illinois**

ILLINOIS	MICHIGAN
WISCONSIN	

**7th Service Command: Hq. Omaha, Nebraska**

COLORADO	MISSOURI
IOWA	NEBRASKA
KANSAS	NORTH DAKOTA
MINNESOTA	SOUTH DAKOTA
WYOMING	

**8th Service Command: Hq. San Antonio, Texas**

ARKANSAS	NEW MEXICO
LOUISIANA	OKLAHOMA
TEXAS	

**9th Service Command: Hq. Fort Douglas, Utah**

ARIZONA	NEVADA
CALIFORNIA	OREGON
IDAHO	UTAH
MONTANA	WASHINGTON