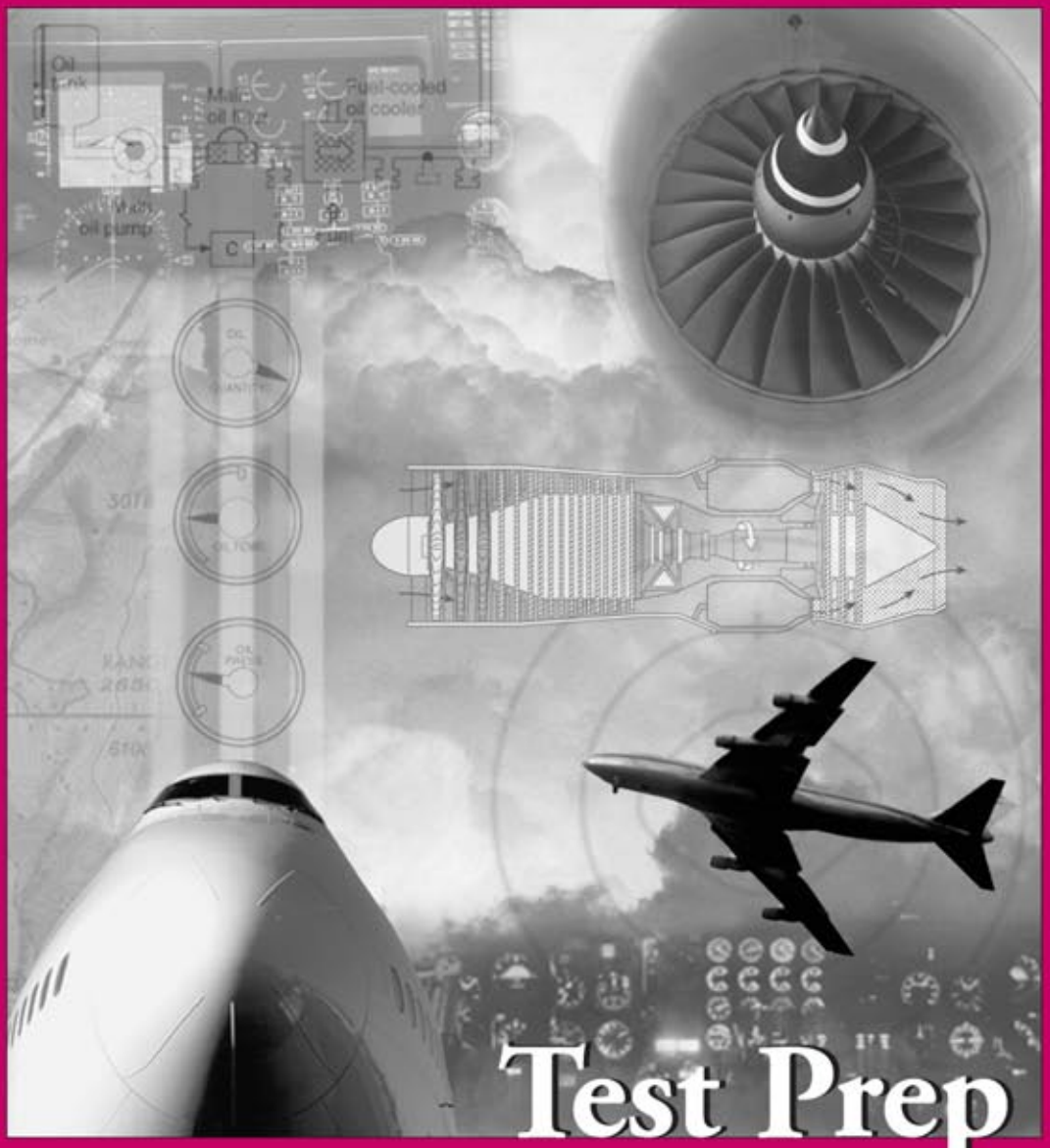
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Cross-References:

A: Answer, Subject Matter Knowledge Code, Category & Page Number ..... A–1 through A–8
B: Subject Matter Knowledge Code & Question Number ..... B–1 through B–10

SAMPLE

ASA Test Prep Layout

The FAA questions have been sorted into chapters according to subject matter. Within each chapter, the questions have been further classified and all similar questions grouped together with a concise discussion of the material covered in each group. This discussion material of "Chapter text" is printed in a larger font and spans the entire width of the page. Immediately following the FAA Question is ASA's Explanation in *italics*. The last line of the Explanation contains the Subject Matter Knowledge Code and further reference (if applicable). *See* the EXAMPLE below.

Figures referenced by the Chapter text only are numbered with the appropriate chapter number, i.e., "Figure 1-1" is Chapter 1's first chapter-text figure.

Some FAA Questions refer to Figures or Legends immediately following the question number, i.e., "1201. (Refer to Figure 14.)." These are FAA Figures and Legends which can be found in the separate booklet: *Computerized Testing Supplement* (CT-8080-XX). This supplement is bundled with the Test Prep and is the exact material you will have access to when you take your computerized test. We provide it separately, so you will become accustomed to referring to the FAA Figures and Legends as you would during the test.

Figures referenced by the Explanation and pertinent to the understanding of that particular question are labeled by their corresponding Question number. For example: the caption "Questions 1245 and 1248" means the figure accompanies the Explanations for both Question 1245 and 1248.

Answers to each question are found at the bottom of each page, and in the Cross-Reference at the back of this book.

EXAMPLE:

Chapter text

Four aerodynamic forces are considered to be basic because they act upon an aircraft during all flight maneuvers. There is the downward-acting force called WEIGHT which must be overcome by the upward-acting force called LIFT, and there is the rearward-acting force called DRAG, which must be overcome by the forward-acting force called THRUST.

Category rating. This question may be found on tests for these ratings.*

ALL, FET, FEN, FEX

1201. (Refer to Figure 14.) The four forces acting on an airplane in flight are

See separate book: *Computerized Testing Supplement* (CT-8080-XX)

A— lift, weight, thrust, and drag.
B— lift, weight, gravity, and thrust.
C— lift, gravity, power, and friction.

FAA question and answer choices

Lift, weight, thrust, and drag are the four basic aerodynamic forces acting on an aircraft in flight.
(H300) — FAA-H-8083-25, Chapter 1

Explanation

Code line. FAA's Subject Matter Knowledge Code in parentheses, followed by further references where applicable.

Answer (B) is incorrect because a power increase for takeoff is only ensured with the proper amount of ADI fluid. Answer (C) is incorrect because if too little, not too much, ADI is injected, the engine could overheat and experience detonation.

Incorrect answer explanation. Reasons why answer choices are *incorrect* explained here.

***Note:** The FAA does *not* identify which questions are on the different ratings' tests. Unless the wording of a question is pertinent to only one rating category, it may be found on *any* of the tests.

ALL=All flight engineer ratings **FEX=Turbojet and Basic** **FET=Turboprop and Basic** **FEN=Reciprocating and Basic**

SAMPLE

Flight Engineer and Medical Certificates

Although "FAR" is used as the acronym for "Federal Aviation Regulations," and found throughout the regulations themselves and hundreds of other publications, the FAA is now actively discouraging its use. "FAR" also means "Federal Acquisition Regulations." To eliminate any possible confusion, the FAA cites the federal aviation regulations with reference to Title 14 of the Code of Federal Regulations. For example, "FAR Part 91.3" is referenced as "14 CFR Part 91 Section 3."

- A **crewmember** is a person assigned to duty in the aircraft during flight.
- A **flight crewmember** is a pilot, flight engineer or flight navigator assigned to duty in the aircraft during flight.

To perform the duties of a flight engineer a person must have in his/her possession a valid **Flight Engineer Certificate** and a **second-class** or higher **medical certificate**. The medical certificate must have been issued within the last 12 calendar months (e.g., a certificate issued on March 2 is valid through March 31). A flight engineer could carry a first-class medical certificate, but it would still be valid for 12 calendar months.

Flight Engineer Certificates are not issued for specific aircraft types but by **class**. The classes of airplanes that can appear on a Flight Engineer Certificate are:

- Turbojet powered
- Turbopropeller powered
- Reciprocating engine powered

A permanent Flight Engineer Certificate is issued without a specific expiration date and is valid indefinitely unless surrendered, suspended or revoked. When a flight engineer receives the initial certificate, or is issued a new class rating, he/she is given a **temporary certificate** by the examiner. This temporary certificate is valid for 120 days.

If a person loses the Flight Engineer or medical certificate he/she may request the FAA send a telegram or facsimile, stating the certificates were issued, and he/she may then use the telegram or facsimile in lieu of the certificates for up to 60 days.

If a flight engineer experiences an increase in physical deficiency that would make him/her unable to meet the standards of the medical certificate, he/she cannot serve as a flight engineer. There is no requirement to report the physical deficiency to the FAA or to submit to any additional exams.

ALL

1004. According to CFR part 1, which of the following defines flight crewmember?

A— A person assigned to perform duty in an airplane during flight time.
B— A flight engineer, flight navigator, or pilot assigned to duty in an airplane during flight time.
C— A pilot, flight engineer, navigator, or attendant assigned to duty in an airplane during flight time.

"Flight crewmember" means a pilot, flight engineer, or flight navigator assigned to duty in an aircraft during flight time. (A01) — 14 CFR §1.1

Answer (A) is incorrect because it defines a crewmember, not a "flight" crewmember. Answer (C) is incorrect because an attendant is not included in the definition of a flight crewmember; a navigator is also not included either as the definition specifies "flight" navigator.

ALL

1009. Which is the latest date that a flight engineer may perform duties if his or her last medical examination was a first-class conducted on August 25, 1999?

A— September 30, 2000.
B— August 31, 2000.
C— August 25, 2000.

A flight engineer must hold at least a second-class medical certificate issued under Part 67. A second-class medical certificate expires at the end of the last day of the 12-month period after the month of the date of examination shown on the certificate. (A30) — 14 CFR §63.31

Answers

1004 [B] 1009 [B]

SAMPLE

ALL

1015. The possession of which combination of certificates permits an airman to perform as a flight engineer?

A—A temporary flight engineer certificate and a second-class medical certificate.
B—A special purpose flight engineer certificate and third-class medical certificate.
C—A commercial pilot certificate with instrument rating and a second-class medical certificate.

No person may act as a flight engineer unless he/she has in his/her possession a current flight engineer certificate with appropriate ratings and a second-class (or higher) medical certificate issued within the preceding 12 months. A temporary flight engineer certificate may be effective for a period of not more than 120 days. (A30) — 14 CFR §63.3 and §63.13

Answer (B) is incorrect because a second-class medical certificate, or higher, is required to exercise flight engineer privileges. Answer (C) is incorrect because a flight engineer certificate (temporary, special purpose or full) is required; a commercial pilot certificate is one of the eligibility criteria for obtaining a flight engineer certificate, but is not required to be in the airman's personal possession to exercise flight engineer privileges.

ALL

1016. How long may a flight engineer use a facsimile (FAX) in lieu of a lost or destroyed medical certificate?

A—30 days.
B—60 days.
C—120 days.

A person whose flight engineer certificate, or medical certificate, or both, has been lost may obtain a facsimile from the Federal Aviation Administration confirming that it was issued. The facsimile may be carried as a certificate for a period of 60 days. (A30) — 14 CFR §63.16

Answer (A) is incorrect because 30 days is the period of time given to notify the FAA of a change of address. Answer (C) is incorrect because 120 days is the period of validity for a temporary certificate.

ALL

1017. A temporary certificate issued to a qualified flight engineer applicant, pending review of their application, is effective for what maximum period of time?

A—60 days.
B—90 days.
C—120 days.

A temporary certificate, effective for a period of not more than 120 days, may be issued to a qualified flight engineer applicant, pending review of the application and supplementary documents and the issue of the certificate for which he/she applied. (A30) — 14 CFR §63.13

Answer (A) is incorrect because 60 days is the period of validity for a facsimile from the FAA confirming issuance of a flight engineer certificate and/or medical certificate. Answer (B) is incorrect because 90 days is the period of time used in 14 CFR Part 63 for students to apply for the written and flight test after completing the ground school course.

ALL

1019. Unless suspended or revoked, a flight engineer certificate

A—expires 1 year after the month of issuance.
B—is issued without a specific expiration date.
C—expires at the end of the 24th month following the month of issuance or renewal.

Except for special circumstances (stated in 14 CFR §63.23), a flight engineer certificate or rating has no specific expiration date. It is effective until it is surrendered, suspended, or revoked. (A30) — 14 CFR §63.15

Answer (A) is incorrect because a one year expiration date applies to a second-class medical certificate, not a flight engineer certificate. Answer (C) is incorrect because a 24-month expiration date applies to special purpose flight engineer and flight navigator certificates, not full flight engineer certificates.

ALL

1020. If a person has lost their flight engineer certificate, the privileges of that certificate may be exercised until a duplicate is received, after obtaining a

A—confirming telegram from the FAA which is valid for 30 days.
B—FAX from the Airman Certification Branch in Oklahoma City which is valid for 60 days.
C—temporary certificate issued by a Flight Standards District Office which is valid for 90 days.

A person whose flight engineer certificate or a medical certificate, or both, has been lost may obtain a facsimile from the Federal Aviation Administration confirming that it was issued. The facsimile may be carried as a certificate for a period of 60 days. (A30) — 14 CFR §63.16

Answer (A) is incorrect because a confirming telegram is authorized and valid for 60 days. Answer (C) is incorrect because the person must obtain a telegram or facsimile from the FAA confirming its issuance, not a temporary certificate (which is valid for a period of 120 days, not 90).

Answers

1015 [A] 1016 [B] 1017 [C] 1019 [B] 1020 [B]

SAMPLE

ALL

1021. A person with a physical deficiency under the standards of CFR Part 67 for their medical certificate

A— may not perform flight engineer duties.
B— must surrender the medical certificate to an FAA inspector.
C— must have a recheck by an FAA medical examiner before returning to flight crewmember duties.

No person may serve as a flight engineer during a period of known physical deficiency, or increase in physical deficiency, that would make him/her unable to meet the physical requirements for his/her current medical certificate. (A30) — 14 CFR §63.19

Answer (B) is incorrect because Part 63 does not require the surrender of a medical certificate. Answer (C) is incorrect because Part 63 does not require a recheck by an FAA medical examiner.

Eligibility

A person must meet the following three requirements to be eligible for a Flight Engineer Certificate:

- Be at least 21 years of age;
- Be able to read, speak and understand the English language (or have an appropriate limitation placed on the certificate); and
- Have at least a second-class medical certificate issued within the last 12 calendar months.

There is no requirement that an applicant be a United States citizen. There is also no requirement that an applicant be able to write in English.

In addition, an applicant for a Flight Engineer Certificate (or an additional class rating) must pass a written and a practical test appropriate to the class rating sought.

An applicant for a class rating must submit satisfactory evidence of one of the following:

1. At least 3 years of diversified practical experience in aircraft and engine maintenance (of which at least 1 year is experience maintaining multi-engine aircraft with engines rated at least 800 horsepower each, or the equivalent in turbine engine-powered aircraft) and at least 5 hours of training in the duties of a flight engineer.
2. Graduation from at least a 2-year specialized aeronautical training course in maintaining multi-engine aircraft with engines rated at least 800 horsepower each, (or the equivalent in turbine engine-powered aircraft) and at least 5 hours of training in the duties of a flight engineer.
3. A degree in aeronautical, electrical, or mechanical engineering from a recognized college, university or engineering school and at least 6 calendar months of practical experience in maintaining multi-engine aircraft with engines rated at least 800 horsepower each (or the equivalent in turbine engine powered aircraft), and at least 5 hours of training in the duties of a flight engineer.
4. At least a commercial pilot certificate with an instrument rating and at least 5 hours of training in the duties of a flight engineer.
5. At least 200 hours of flight time in a transport category aircraft (or in a military airplane with at least two engines and at least an equivalent weight and horsepower) as pilot-in-command or second-in-command, performing the functions of a pilot-in-command under the supervision of a pilot-in-command.
6. At least 100 hours of flight time as a flight engineer.
7. Within the 90-day period before he/she applies, successful completion of an approved flight engineer ground and flight course of instruction.

   A person may take the Flight Engineer Knowledge Test before getting the required flight training.

Answers

1021 [A]

SAMPLE

Flight Engineer Test Prep

Study and Prepare for the Flight Engineer: Basic, Turbojet, Turboprop, Reciprocating and Add-On Rating FAA Knowledge Tests

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