

Airmen's Academic Examination

M2

Qualification	First class aircraft maintenance technician (Rotorcraft) First class aircraft line maintenance technician (Rotorcraft) Second class aircraft maintenance technician (All aircraft) Second class aircraft line maintenance technician (All aircraft)	No. of questions ; time allowed	20 questions; 40 minutes
Subject	Civil Aeronautics Law (subject code : 04)	Code	CCCC042272

Explanatory Notes : (1) In the designated spaces on the Airmen's Academic Examination Answer Sheet (Multiple-Choice Answers) (mark sheet), write your examinee number, examinee number mark, subject, subject code, subject code mark, qualification, qualification category, name, and date of birth.

If you write your examinee number, examinee number mark, subject code, and / or subject code mark incorrectly, computer grading will not be possible and you will fail the subject.

(2) Write your answers on the Airmen's Academic Examination Answer Sheet (Multiple-Choice Answers) (mark sheet).

Point Allocation : All questions are worth five points each.

Pass Mark : The pass mark is 70 %.

- Q 1 Which of the following is not a purpose of the Civil Aeronautics Law?
- (1) Conformity with convention on International Civil Aviation
 - (2) To ensure the safety of aircraft
 - (3) Prevention of issues arising from aircraft navigation
 - (4) Proper and rational management of business for operating aircraft
 - (5) Conformity with the US-Japan Air Security Treaty
- Q 2 Which of the following are not classed as air navigation facilities under the provisions of Article 2 of the Civil Aeronautics Act?
- (1) Aeronautical lighting fixtures
 - (2) Control towers
 - (3) Instrument landing systems
 - (4) Satellite-based augmentation systems
 - (5) Obstacle markings
- Q 3 Which of the following statements regarding the registration of an aircraft is incorrect?
- (1) The Minister of Land, Infrastructure, Transport and Tourism shall register aircraft in the Aircraft Register.
 - (2) Any aircraft acquires Japanese nationality when registered.
 - (3) The Minister of Land, Infrastructure, Transport and Tourism shall issue the Aircraft Register to applicants for new registrations.
 - (4) Aircraft owned by any person without Japanese nationality shall not be eligible for registration.
- Q 4 Which of the following should make the aircraft available to the Ministry of Land, Infrastructure, Transport and Tourism to obtain "the stamp of the registration mark"?
- (1) Aircraft owner
 - (2) Aircraft operator
 - (3) Aircraft maintenance manager
 - (4) Pilot-in-command

Q 5 Which of the following is incorrect in relation to airworthiness certification under the provisions of Article 10 of the Civil Aeronautics Act?

- (1) The Minister of Land, Infrastructure, Transport and Tourism shall issue airworthiness certification to aircraft upon registration.
- (2) No aircraft may be granted airworthiness certification without Japanese nationality, except where specified by a Cabinet Order.
- (3) Categories of aircraft use and aircraft operating limitations shall be designated for airworthiness certification.
- (4) The design, manufacturing process and current conditions of aircraft shall be subject to inspection.

Q 6 Which of the following is not specified in the Flight Manual?

- (1) General description of the aircraft
- (2) Standards regarding objects falling from aircraft
- (3) Aircraft performance
- (4) Particulars relating to engine emission
- (5) Various systems that must be operated and other actions that need to be taken in case of emergency
- (6) Particulars relating to aircraft noise

Q 7 The following statement is an excerpt from the provision set forth in “Maintenance and Alteration” of the Ordinance for Enforcement of the Civil Aeronautics Act. Which of the phrases that should fit in (A) is correct? Select from options (1) to (4).

Article 5-6 Details of maintenance or alteration work are as prescribed in the following table based on the category of work specified in that table.

Work Categories		Description of Work	
Maintenance	Preventive maintenance	Minor preventive maintenance	(Omitted)
		General preventive maintenance	(A)
	Repair	Slight repair	(Omitted)
		Minor repair	(Omitted)
		Major repair	(Omitted)

- (1) Repair work whose effect on airworthiness remains minor and does not require operational checking of power systems and other complex forms of inspection for work verification
- (2) Replacement of standard equipment or parts without complex assembly work as part of simple preventive maintenance
- (3) Preventive maintenance work other than minor preventive maintenance
- (4) Replacement of standard equipment or parts without adjustment of rigging or clearance as part of simple preventive maintenance

- Q 8 Which of the following options as descriptions of aircraft use in the “Document of designation for operating limitations, etc.” is correct?
- (1) Airworthiness category
 - (2) Classification into single-engine land, multi-engine sea, etc.
 - (3) Classification of business
 - (4) Classification into aeroplane, rotorcraft, etc.
- Q 9 Which of the following options as cases where the effect of the airworthiness certification is suspended is incorrect ?
- (1) It is not in conformity with the standards under paragraph 4, Article 10 of the Civil Aeronautics Act.
 - (2) It is likely to fail to comply with the standards under paragraph 4, Article 10 of the Civil Aeronautics Act before the validity period of airworthiness certification is expired.
 - (3) The safety of the aircraft is uncertain.
 - (4) The registration of the aircraft is deleted.
- Q 10 Which of the following statements concerning Article 12 (Type Certification) of the Civil Aeronautics Act is incorrect?
- (1) Certification is considered in relation to the strength and structure of aircraft upon application.
 - (2) Upon application, type certification must be granted if the minister deems that the type of aircraft described in the application complies with the standards of Article 10, paragraph 4.
 - (3) Type certification is granted by issuing a type certificate to the applicant.
 - (4) The Minister of Land, Infrastructure, Transport and Tourism must, prior to issuing a type certificate, hear opinions from the Minister of Economy, Trade and Industry.

- Q 11 The following provision is specified in Article 24 "Repair and Alteration Inspections" of the Ordinance for Enforcement of the Civil Aeronautics Act. Which of the provisions that fit in (A) to (C) is incorrect ? Select from options (1) to (4).

Article 24 Any repair or alteration which is subject to inspections referred to in paragraph 1, Article 17 of the Act specified by Order of the Minister of Land, Infrastructure, Transport and Tourism, is listed in each item of the right column in the following table according to the classification of aircraft listed in each item of left column in that table.

Classification of aircraft	Scope of repair or alteration
(i) Aircraft referred to in paragraph 1, Article 19 of the Act	(Omitted)
(ii) Aircraft other than those listed in the preceding item	(a) (Omitted) (b) (Omitted) (c) The following repair or alteration to an aircraft referred to in item (iii) of paragraph (4) of Article 10 of the Act and other repair or alteration which is likely to affect engine emissions of the aircraft (1) (A) (2) (B) (3) (C)

- (1) Any repair or alteration accompanying the change of shape of air intake of engines
- (2) Any repair or alteration accompanying the change of engine, fuel system or their parts to be installed in an aircraft (limited to combustion chamber and other parts which affect engine emissions)
- (3) Any repair or alteration accompanying any major change in an engine performance
- (4) Repair or alteration producing any major change in matters of engine limitation

- Q 12 Which of the following is the correct in relation to the "Validity Period for Authorization" of approved organizations (Article 20 of the Civil Aeronautics Act)?
- (1) One year
 - (2) Two years
 - (3) Indefinite
 - (4) Period during which the approved organization exposition applies
- Q 13 Which of the following is correct as a description of "Confirmations of compliance with the standards set forth in paragraph (4) of Article 10 of the Civil Aeronautics Act" to be given by certifying staff?
- (1) To be given by entering the approved organization number and placing a seal in the statement of conformity or the flight logbook
 - (2) To be given by entering the approved organization number and placing a seal in the document where inspection results are recorded
 - (3) To be given by signing or entering the relevant name and placing a seal on the statement of conformity or the flight logbook
 - (4) To be given by signing or entering the relevant name and placing a seal on the documents where inspection results are recorded
- Q 14 Which of the following is correct as the deadline for an applicant for a certificate of competency to submit "a document which proves their career" to the Minister of Land, Infrastructure, Transport and Tourism?
- (1) Within a year of the date on which the application for a certificate of competency is submitted
 - (2) Within two years of the date on which the application for a certificate of competency is submitted
 - (3) Within a year of the date of notice regarding the applicant's passing of a written test pertaining to the application
 - (4) Within two years of the date of notice regarding the applicant's passing of a written test pertaining to the application

Q 15 Which of the following statements on aircraft markings is correct? Note that cases in which permission is obtained in relation to the provision under the proviso of paragraph (1), Article 11 of the Civil Aeronautics Act shall be excluded.

- (1) For rotorcraft, nationality marks and registration marks must be displayed only on the bottom of the fuselage.
- (2) Nationality marks or similar displayed on the primary wing must be on the bottom right corner and top left corner thereof.
- (3) The manufacturer and type of aircraft must be stamped on the identification plate.
- (4) Aircraft nationality must be displayed as "JA" in Roman capital letters.

Q 16 Which of the following is responsible for keeping flight logbooks on aircraft?

- (1) Certifying staff
- (2) Aircraft owner
- (3) Aircraft operator
- (4) Airman

Q 17 The following provision is set forth in Article 212-4 of the Ordinance for Enforcement of the Civil Aeronautics Act, "Details of the Safety Management Rules."
Which of the phrases that should fit in (A) is correct? Select from options (1) to (4).

Article 212-4 As for the contents of the safety management manual specified by Ordinances of the Ministry of Land, Infrastructure, Transport and Tourism pursuant to Article 103-2 paragraph (2) of the Act, the matters listed in the upper column of the following table shall be specified in the lower column of the table.

[Upper column]	[Lower column]
(Omitted)	(i) Matters related to basic policy (ii) Matters related to compliance with relevant laws, safety management manuals and other rules and regulations for ensuring transportation safety (iii) Matters related to management
(A)	(i) Matters related to organization (ii) Matters related to the responsibility of the person in charge of management for ensuring transportation safety (iii) Matters related to the authority and responsibility of a safety manager
(Omitted)	(i) Matters related to communication and co-ownership of information (ii) Matters related to consideration and implementation of preventive measures against accident, etc. (iii) Matters related to correspondence in case of accidents, disasters, etc. (iv) Matters related to implementation of internal audits and other operations and confirmation of its management status (v) Matters related to education and training (vi) Matters related to preparation and management of documents for transportation safety (vii) Matters related to improvement of implementation and management of operation
(Omitted)	Matters concerning methods of appointment of a safety manager

- (1) Matters concerning policies for operations of services for ensuring transportation safety
- (2) Matters concerning the implementation of services and its management system to ensure the transportation safety
- (3) Matters concerning the method for the implementation and management of operations for ensuring transportation safety
- (4) Matters concerning safety manager responsibilities

Q 18 The following is the provision set forth in Article 145-2 "Offences related to Operations at Certified Facilities" of the Civil Aeronautics Act. Which of the following combinations of words that fit in (a) and (b) is correct? Select from options (1) to (4).

Article 145-2 Any person who has been certified under Article 20 paragraph 1 shall, when he/she falls under any of the following cases, be liable to a fine of up to one million yen.

- I In case of conducting operations pertaining to (b) under Article 20 paragraph 1 without obtaining approval under the provisions of paragraph 2 of the same article, or without complying with the (a)
- II In case of violating an order under the provisions of paragraph 6 of Article 20

- | (a) | (b) |
|------------------------------------------------|-----------------|
| (1) Safety management manual | • Certification |
| (2) Approved organization exposition | • Approval |
| (3) Maintenance manual | • Permission |
| (4) Maintenance and administrative regulations | • Examination |

Q 19 Which of the following are "Standards specified in Annex 3" as set forth in paragraph 3, Article 14 of the Ordinance for Enforcement of the Civil Aeronautics Act is correct?

- (1) Standards for aircraft noise
- (2) Standards for aircraft engine emissions (excluding carbon dioxide)
- (3) Minimum Equipment List (MEL)
- (4) Standards for the strength, structure and performance to ensure safety of the aircraft and its equipment

Q 20 The following statement describes the importance of human factors. Which of the word groups below can be used to fill in the blanks in (a) to (d) to make the statement complete and correct? Select from options (1) to (4)

As aviation technology has advanced, the (a) of aircraft has continued to decline, but the downward trend has recently slowed.

As for causes of accidents, the ratio of those caused by (b) has decreased over time, but the ratio of those caused by failure of (c) , i.e., human error, has gradually increased.

To further reduce the number of aviation accidents, it is therefore important to prevent the occurrence of human error to the maximum extent possible. For this purpose, it is necessary to know (d) and their limitations, etc. understand the concept of human factors to make effective use of this knowledge, and take appropriate measures in consideration of these factors.

	(a)	(b)	(c)	(d)
(1)	▪ accident due to pilot error	▪ form of operation	▪ mechanics	▪ equipment capabilities
(2)	▪ failure due to maintenance error	▪ maintenance method	▪ pilots	▪ pilot fatigue management
(3)	▪ failure rate	▪ maintenance technique	▪ manufacturers	▪ support from manufacturers
(4)	▪ accident rate	▪ equipment	▪ humans	▪ human capabilities