

SECTION J

GENERAL EXAMINATION REQUIREMENTS AND PROCEDURES

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J1 GENERAL INFORMATION

This Section provides information on the examinations appropriate to the grant or extension of a licence in accordance with Part-66. Examinations under BCAR Section L and Part-66 (with certain Exemptions) are not interchangeable and cannot be credited between the two requirements.

J2 PART-66 EXAMINATIONS

Although Part-66 employs a modular syllabus the content of a module may vary in terms of the subjects covered within the module and depth of knowledge required according to the basic licence category sought. Part-66 examinations are based on the Part-66 syllabus as set out in Appendix I to Part-66.

The examinations will be provided in English, using abbreviations where applicable and compiled by a computer in multiple choice format. Candidates may apply to take papers singly or in groups however, Part-147 organisations may impose certain minima.

A list of common abbreviations used in the examinations can be found in Appendix A to this Section.

J2.1 Multi-Choice Paper

For each module being taken, a question paper including instructions is provided together with an answer sheet. Each question comprises an introductory statement (question stem) and three alternative answers designated (A), (B) and (C) printed below. Only one of these answers is totally correct; the remaining two answers are incorrect or only partially correct, being incomplete in some definite aspect.

J2.2 Essay Paper

Prior to licence issue essay examinations need to be passed in the following modules:

Module 7 - 2 questions
Module 9 - 1 question
Module 10 - 1 question

Essays can be sat singly or in groups.

For details of the subject modules and applicability please refer to the relevant Sections of this publication.

J3 WRITTEN EXAMINATION BOOKING PROCEDURE

In order to make a booking for an examination sitting, applicants are asked to follow the procedures below:-

- Candidates should apply in writing (either by post or fax) using the appropriate application forms which are available from Personnel Licensing Department or on our website www.caa.co.uk/elforms. No bookings can be made by telephone and all bookings are made on a first come, first served basis.

- Candidates should indicate on the application form their first and second preference venue choices and the date they wish to sit the examination(s). **The Authority reserves the right to change any venue to satisfy demand and does not guarantee a candidate a specific venue or examination date.**

- Examination fees must be sent with the application form. Bookings will not be made unless the correct fees have been received.

- Once a booking has been made, candidates will receive an examination booking confirmation by post.

- The time between the closing date for applications and the examination sitting is two weeks. Personnel Licensing Department will endeavour to send booking confirmations, venue details and examination timetables to reach candidates within 2 days of the booking and, in any case, at least 1 week prior to the sitting.

J4 EXAMINATION TIMETABLE

Details of the SCHEDULED examination dates can be found at Appendix B.

J5 EXAMINATION VENUES

Detailed venue maps can be found on the CAA (SRG) website at: www.caa.co.uk

Facilities for lunchtime meals and/or snacks will be provided at all written exam venues, wherever possible, on a payment basis.

J6 CANCELLATION OR TRANSFER OF DATE/VENUE

Examination bookings cannot be amended within two weeks prior to the examination. Cancellations will only be accepted, if received in writing, at least 10 working days before the examination. For CAA purposes working days means Monday to Friday (excluding public holidays). Refund of examination fees for emergency cancellations or non-attendance will only

be given if a valid medical certificate (original) is provided, together with a letter of explanation.

For the refund or transfer of fees or when an examination has been re-arranged at the request of the applicant, a transfer fee is payable as stated in the Scheme of Charges.

J7 ATTENDANCE AT THE EXAMINATIONS

Candidates should be present at the examination centre at least 20 minutes before the scheduled time for the commencement of each examination sitting. All candidates are required to present photo ID on the exam day. Acceptable photo ID's are passport, UK Forces ID, company or student ID. Candidates without ID will not be permitted to sit the exam. Candidates may only enter the examination room during the 10 minutes preceding the start of the examinations to prepare examination material. They must not remain in the room after the finish of the examination period.

Personal coats, bags, briefcases, etc. may be placed at the front/rear of the examination room, under the direction of the invigilating officer. Any bags etc. could be removed if left unattended outside the examination room.

Note: the CAA accepts no responsibility for items of personal equipment a candidate brings into the examination hall and which he/she is not permitted to retain during the examination.

Whilst every attempt is made to ensure reasonable comfort in examination halls which are operated on hire or lease arrangements and over which the CAA, as a result, has no direct control, the CAA cannot be held responsible for extraneous noise or for any breakdown or fluctuation in heating, lighting or ventilation facilities. Candidates are also advised that, at all examination centres, a 'no smoking rule' must be observed.

J8 MATERIALS FOR THE EXAMINATION

We will provide everything needed for the examination. No other materials are allowed on the desks. However, candidates may use own pens when writing essays. The use of calculators is not permitted.

J9 EXAMINATION BRIEFING

Before the start of the examinations, the invigilator will give a briefing regarding the examination.

J10 REGULATIONS APPLIED TO THE CONDUCT OF WRITTEN EXAMINATIONS

Candidates are not allowed to use any loose paper other than that provided at the examination. All papers issued by the CAA are to be returned with the answer sheet to the invigilator on completion.

Candidates must ensure that all answers have been transferred onto their answer sheet by the end of the examination. Candidates failing to do this will not be given any extra time.

Silence is to be observed in the examination room **at all times**. Electronic alarms and key rings are not permitted. Mobile telephones, pagers etc. must be switched to silent or off and left with the candidates personal belongings.

If a candidate wishes to speak to an Invigilating Officer, he/she should remain seated and raise his/her hand. *It should be noted that the Invigilating Officer will consider only those questions from candidates which relate to the general conduct of the examinations and he/she will not enter into discussion on the interpretation of words or questions contained in the examination papers.*

Candidates are to stop work and put pencils down when so directed and must remain seated and quiet until all answer material has been collected.

Any candidate who attempts to remove unauthorised examination materials from the room will be liable to disqualification from those examinations which have been taken and may be subject to special arrangements for future examinations.

Any infringement of examination regulations may result in the candidate being disqualified in any subject he has taken and barred from further participation in future examinations.

J11 EXAMINATION RESULTS

Results will normally be dispatched by first class post or air mail within 10 working days following the end of the examination week concerned. **Candidates should not telephone Personnel Licensing Department to request despatch dates of examination results, as results will not be given over the telephone under any circumstances. In the event of non-receipt of a result notification, arrangements can be made for repeat notifications to be sent by post.** Results will not be released by fax, nor is it possible to collect your results on the day of despatch, simply because one candidate could enjoy time advantage over another. Allowance should be made for possible postal delay before asking for a repeat notification. Results will not be released until any outstanding payments have been received.

The CAA cannot enter into discussion or correspondence with candidates on the subject of their written examination results, but candidates may apply for any paper to be remarked on payment of the fee as stated in the Scheme of Charges.

J12 **EXAMINATION RE-SITS**

Candidates cannot apply to re-sit examinations, which they believe they may have failed, until they have received the official result notification. In the case of Part-66 examinations a period of 90 days must lapse between the initial sitting and re-sit. The Part-66 90 day rule is reduced to 30 days for a candidate attending a Part-147 approved maintenance organisation that

conducts a course of re-training tailored to the failed subjects in the particular module.

J13 **EXAMINATION PASS STANDARDS AND VALIDITY PERIODS**

A candidate must complete all required written and/or oral examinations within 5 years of their first pass. Passes falling outside that time limit will lapse. The papers can be attempted in any order. A pass in a Part-66 examination will be awarded to a candidate achieving at least 75% of the marks allocated to that examination.

APPENDICES TO SECTION J

- ◆ **Appendix A** **Common Abbreviations**
- ◆ **Appendix B** **Written Examination Timetable**
- ◆ **Appendix C** **Suggested Study Material**

APPENDIX A COMMON ABBREVIATIONS

A

a:	atto
ABIP	Advisory Body of Interested Parties
AC:	Alternating Current
a/c:	Aircraft
ACARS:	Aircraft Communication Addressing and Reporting System
AD:	Airworthiness Directive
ADI:	Attitude Director Indicator
ADF:	Automatic Direction Finder
ADO:	Approved Design Organisation
AFCS:	Automatic Flight Control System
AGNA:	Advisory Group of National Authorities
Aircraft:	any machine that can derive support in the atmosphere from the reactions of the air other than reaction of the air against the earth's surface
a/l:	airline
ALT:	Altitude
AMC:	Acceptable Means of Compliance
A-NPA:	Advance Notice of Proposed Amendment
AMO:	Approved Maintenance Organisation
AMOSS:	Airline Maintenance and Operation Support System
AMSD:	Aircraft Maintenance Standards Division
AMP:	Approved Maintenance Programme
AMT:	Approved Maintenance Training
AN:	Airworthiness Notice (CAP 455)
ANO:	Air Navigation Order
AOC:	Air Operator Certificate
A/P:	Autopilot
APO:	Approved Production Organisation
APU:	Auxiliary Power Unit
ARC:	Airworthiness Review Certificate
ARINC:	Aeronautical Radio Incorporated
ASL:	above sea level
ATC:	Air Traffic Control
ATM:	Air Traffic Management
AWO:	All Weather Operations

B

BCAR:	British Civil Airworthiness Requirements
BR:	Basic Regulation

C

c:	centi
CAME:	Continuous Airworthiness Maintenance Exposition
CADC:	Central Air Data Computer
CAP:	Civil Aviation Publication
CDU:	Control Display Unit
Certifying staff:	means personnel responsible for the release of an aircraft or a component after maintenance.

CF:	Certification
CJAA:	Central Joint Aviation Authorities
CofA:	Certificate of Airworthiness
Component:	means any engine, propeller, part or appliance.

Continuing	
Airworthiness:	means all of the processes ensuring that, at any time in its operating life, the aircraft complies with the airworthiness requirements in force and is in a condition for safe operation.
CRD:	Comment Response Document
CRI:	Certification Review Item
CRT:	Cathode Ray Tube
CRS:	Certificate of Release to Service
CS:	Certification Specification
CSP:	Certification Standardisation Panel

D

d:	deci
da:	deca (ten)
db:	decibel (acoustic measurement unit)
DC:	Direct Current
DG TREN:	Directorate-General for Energy and Transport (European Commission)
DME:	Distance Measuring Equipment
DOA:	Design Organisation Approval
DOE:	Design Organisation Exposition

E

E:	esca
E:	Engine
EADI:	Electronic Attitude Director Indicator
EASA:	European Aviation Safety Agency
EC:	European Commission
ECAM:	Electronic Centralised Aircraft Monitor
ECU:	Electronic Control Unit
EEC:	Electronic Engine Control
EEPROM:	Electrically Erasable Programmable Read Only Memory
EFIS:	Electronic Flight Instrument System
EHSI:	Electronic Horizontal Situation Indicator
EICAS:	Engine Indicating and Crew Alerting System
EL:	Engineer Licensing
EPA:	European Part Approval
EPR:	Engine Pressure Ratio
EPR:	Environmental Protection Requirements
EPROM:	Erasable Programmable Read Only Memory
ER:	Essential Requirements
ETSO:	European Technical Standard Order
ETSOa:	European Technical Standard Order authorisation
EU:	European Union

F

f:	femto	Maintenance:	means any one or a combination of overhaul, repair, inspection, replacement, modification or defect rectification of an aircraft or component, with the exception of pre-flight inspection.
FAA:	Federal Aviation Administration	MB:	Management Board (EASA)
FADEC:	Full Authority Digital Engine Control	MEL:	Minimum Equipment List
FCL:	Flight Crew Licensing	MHRS:	Magnetic Heading Reference System
FCU:	Flight Control Unit	MM:	Maintenance Manual
FDS:	Flight Director System	MMEL:	Master Minimum Equipment List
FMCS:	Flight Management Computer System	MOA:	Maintenance Organisation Approval
FMS:	Flight Management System	MOE:	Maintenance Organisation Exposition
G		MoC:	Means of Compliance
G:	giga	MOM:	Maintenance Organisation Manual (Subpart F)
GA:	general aviation	MSA:	Member States Administration
GM:	Guidance Material	MS:	Member State (of the European Community)
GMT:	Greenwich Mean Time	MTO(A):	Maintenance Training Organisation (Approval)
GPS:	Global Positioning System	MTOE:	Maintenance Training Organisation Exposition
GPWS:	Ground Proximity Warning System	MTOM:	Maximum Take Off Mass
GS:	Glide Slope	MTOP:	Maximum Take-Off Power
H		N	
h:	hecto (hundred)	N:	newton
HLD:	Hold	n:	nano
HSI:	Horizontal Situation Indicator	NAA:	National Aviation Authority
HUD:	Head-Up Display	NAV:	navigation
I		NPA:	Notice of Proposed Amendment
IAS:	Indicated Airspeed	O	
ICAO:	International Civil Aviation Organisation	OAT:	Outside Air Temperature
ILS:	Instrument Landing System	OCP:	Organisations Certification Procedure
INS:	Inertial Navigation System	OEM :	Original Equipment Manufacturer
IPC:	Illustrated Parts Catalogue	Ops:	Operations
IR:	Implementing Rules	Organisation:	means a natural person, a legal person or part of a legal person. Such an organisation may be established at more than one location whether or not within the territory of the Member States.
IRS:	Inertial Reference System	P	
ISA:	International Standard Atmosphere	P:	peta
J		P:	Propeller
J:	joule	p:	pico
JAA:	Joint Aviation Authorities	Pa:	Pascal
JAR:	Joint Aviation Requirements	PAD:	Proposed Airworthiness Directive
K		Part 21:	Commission Regulation (EC) No 1702/2003 Certification of aircraft and related products, parts and appliances
K:	kelvin	Part M:	Commission Regulation (EC) No 2042/2003 Annex I Continuing Airworthiness Requirements
k:	thousand	Part 145:	Commission Regulation (EC) No 2042/2003 Annex II Maintenance Organisation Approvals
KHz:	KiloHertz	Part 66:	Commission Regulation (EC) No 2042/2003 Annex III Certifying Staff
KIAS:	Indicated Airspeed in Knots	Part 147:	Commission Regulation (EC) No 2042/2003 Annex IV Training Organisation Requirements
KT:	Knots (nautical miles/ hour)		
L			
Large aircraft:	means an aircraft, classified as an aeroplane with a maximum take-off mass of more than 5700kg, or a multi-engined helicopter.		
LCD:	Liquid Crystal Display		
LoA:	Letter of agreement		
LOC:	Localiser		
LRU:	Line replaceable Unit		
M			
M:	mega (million)		
m:	milli		
m:	metre		
μ:	micro		

PCB: Printed Circuit Board
 PCM: Project Certification Manager
 PCP: Products Certification Procedure
 POA: Production Organisation Approval
 POE: Production Organisation Exposition
 PPA: Products, parts and appliances
 Pre-flight
 Inspection: means the inspection carried out before flight to ensure that the aircraft is fit for the intended flight.

R

RCVR: Receiver
 RG: Rulemaking
 RIA: Regulatory Impact Assessment
 RMI: Radio Magnetic Indicator
 RNAV: Area Navigation
 RP: Responsible Party
 RTA: Request for Technical Advice

S

SARP: ICAO Standards and Recommended Practices
 SAS: Stability Augmentation System
 SECAL: Selective Calling
 SoD: State of Design
 SoR: State of Registry
 SRM: Structural Repair Manual
 SSSC: Safety Standards Consultative Committee
 STC: Supplemental Type Certificate
 STD: Synthetic Training Device
 STCH: STC Holder

T

T: tera
 TAS: True Air Speed
 TAT: Total Air Temperature
 TC: Type Certificate

TCH: Type Certificate Holder
 TCDS: Type Certificate Data Sheet
 TET: Turbine Entry Temperature
 TGT: Turbine Gas Temperature
 ToA: Terms of Approval
 ToR: Terms of Reference
 TVP: Type validation principles

U

UAV: Unmanned Aerial Vehicle

V

VDU: Visual Display Unit
 VLA: Very Light Aeroplane
 VLR: Very Light Rotorcraft
 VNAV: Vertical Navigation
 VOR: Very-high-frequency Omnidirectional Range
 VS: Vertical Speed

W

W: watt
 WA: Working Arrangement
 WG: Working Group
 WXR: Weather Radar Transceiver

X

XTR: Transmitter

Y

Y: yotta
 y: yocto

Z

Z: zeta
 z: zepto

APPENDIX B **EXAMINATION TIMETABLE**

All engineer licensing examinations will be held at the main Personnel Licensing Department examination venues

	Gatwick	Oxford	Glasgow	Silsoe	Macclesfield College	Huddersfield
Jan 06	13	13	13	13	13	13
Feb 06	10	10	10	10	10	10
Mar 06	10	10	10	10	10	10
Apr 06	7	7	7	7	7	7
May 06	12	12	12	12	12	12
Jun 06	9	9	9	9	9	9
Jul 06	7	7	7	7	7	7
Aug 06	11	11	11	11	11	11
Sep 06	8	8	8	8	8	8
Oct 06	6	6	6	6	6	6
Nov 06	10	10	10	10	10	10
Dec 06	8	8	8	8	8	8

The venues, in total, can seat a minimum of 500 candidates per month. Venue details will be sent with each examination confirmation.

Please note that published exam dates may be subject to alteration or cancellation.

The closing date for applications is 2 weeks before the exam sitting i.e. applications to sit exams 9 December 2005 must be received by 25 November 2005.

Booking confirmations, including venue details and timetables should reach candidates at least 1 week prior to the exam sitting. Candidates are strongly advised not to make any travel or accommodation arrangements until their bookings are confirmed in writing.

Note: Exam sittings at Gatwick, Oxford and Macclesfield are usually fully booked 2 months in advance.

APPENDIX C SUGGESTED STUDY MATERIAL

The following is a list of publications which may be useful when studying for knowledge examinations in support of a Part 66 maintenance licence. BCAR Section L contains a list appropriate to the UK licence required for Airships.

CAP 455	Airworthiness Notices
CAP 715	An Introduction to Human Factors in Aviation Maintenance
CAP 747	Mandatory Requirements for Airworthiness
JAR-OPS – 1	
JAR-OPS – 3	

Commission Regulation	EC 1592/2002
Commission Regulation	EC 1702/2003 Part 21
Commission Regulation	EC 2042/2003 Annex I Part M
Commission Regulation	EC 2042/2003 Annex II Part 145
Commission Regulation	EC 2042/2003 Annex III Part 66
Commission Regulation	EC 2042/2003 Annex IV Part 147
Certification Specifications for Normal, Utility, Aerobatic, and Commuter Category Aeroplanes (CS-23)	
Certification Specifications for Large Aeroplanes (CS-25)	
Certification Specifications for Small Rotorcraft (CS-27)	
Certification Specifications for Large Rotorcraft (CS-29)	
Certification Specifications for Auxiliary Power Units (CS-APU)	
Certification Specifications for All Weather Operations (CS-AWO)	
Certification Specifications for Definitions and Abbreviations (CS-Definitions)	

The above publications are available on the EASA website.

Book Title	Author	ISBN
Basic Knowledge		
Ordinary Level Physics	Abbott	0-435-6700-5
ASA-AMT-G	Dale Crane	1-56027-152-3
Mechanics of Flight	A.C. Kermode	0-582-23740-8
Principles of Flight	Mike Burton	1-85310-779-4
Principles of Flight	Jeppesen	0-88487-358-7
Principles of Flight	Nordian	82-8107-014-5
The Foundations of Helicopter Flight	Simon Newman	0-340-58702-4
The Helicopter How it Flies	J Fay	0-7153-8940-8
The Art & Science of Flying Helicopters	Shawn Coyle	0-340-65249-7

Airframe and Mechanical		
Aircraft Maintenance and Repair	Kroes.Watkins.Delp	0-07-112991-X
The Aeroplane Structure	A.C. Kermode	0-273-25229-1
ASA-AMT-Structure	Dale Crane	1-56027-339-9
Jeppesen General		0-88487-203-3
Jeppesen Airframe		0-88487-205-1
ASA-AMT-A	Dale Crane	1-56027-153-1
Engineered Materials Handbook Vol 1	ASM International	0-87170-279-7
Light Aircraft Inspection	J.E. Heywood	0-85661-016-X
Light Aircraft Maintenance	J.E. Heywood	0-24611-909-8
ASA – AMT – SYS	Dale Crane	1-56027-340-2
Fundamentals of Helicopter Maintenance	Schafer	0891002812
Powerplant		
The Jet Engine	Rolls Royce	0-902-121235
Aircraft Powerplants	Bent & McKinley	0-07-035569-X
Aircraft Powerplants	Kroes. Wild	0-07-113429-6
ASA – AMT – P	Dale Crane	1-56027-410-7
Aircraft Gas Turbine Engine Technology	I. E. Treager	0028018281
Aircraft Gas Turbine Engine Technology	I. E. Treager	007065199X
Electrical / Electronic and Avionics		
Electrical Technology	E Hughes	0470207337
Aircraft Electrical Systems	E Pallet	0-582-98819-5
Aircraft Electricity and Electronics	Eisman	0-02-801859-1
Art of Electronics	Horowitz /Hill	0-521-37095-7
Elements of Electronics	Hickey/Villines	0070286957
Modern Aviation Electronics	A Helfrich	0-13-118803-8
Micro Electronics in Aircraft systems	E Pallet	0-273-08612-X
Digital Logic	Boyce	0-13214619-3
Fiber Optics	Zanger	0-675-20944-7
Introduction to Avionics	Collinson	0-412-48550-9
Avionic Fundamentals		0-89100-293-6

Manual of Avionics	B Kendal	0-632-01863-1
Automatic Flight Control	E Pallet	0-632-03495-5
Aircraft Instruments & Integrated Systems	E Pallett	0-582-08627-2
Digital Avionic Systems	GRS Spitzer	0-07-060333-2
Transport Category Aircraft Systems	Wild	0-88487-232-7
Aircraft Radio Systems	J Powell	0-273-08444-5
Aircraft Radio Systems	J Powell	0-89100-356-8
Radio Navigation Systems	Forsell	0-13-751058-6
Avionic Navigation Systems	Kayton/Fried	0-471-54795-6
Electro-magnetic Compatibility	Kodali	0-7803-117-5