



BHRS Certification 2016: An Overview

Stuart Allen

Points To Note

- Membership of BHRS is a requirement for entry
- Exam only runs 1 x per year
- Certification will be valid for 10 years
 - After which the examination will need to be re-taken (you must remain a member of BHRS)
- There will be a requirement for continuing professional development (CPD)
- Certification is recognised for 30 credits at masters level via Teesside University
- Look at the website
 - WWW.BHRS.Com/certification
 - There is a updated word doc. On the website that covers most of the FAQs in terms of the exam and the logbook

Exam Format

There are 60 core questions (section 1) which you must answer

Core Paper

Devices

EP

Clinical

The examination consists of 240 questions divided into 4 sections, of which you should answer 2 sections, that is, 120 questions

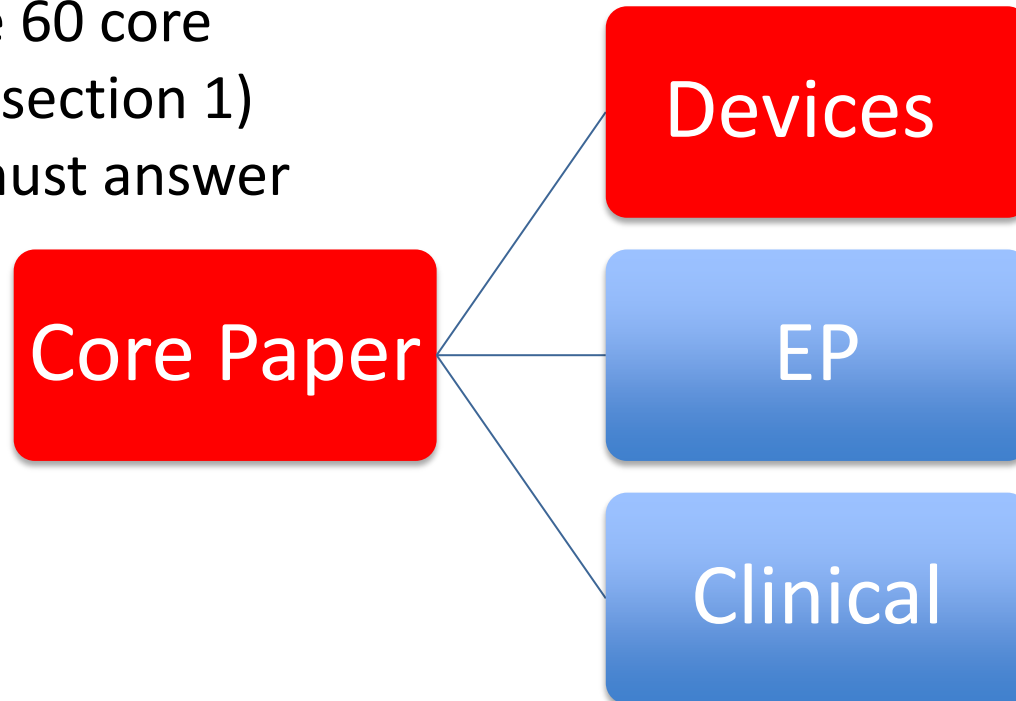
Exam Format

- There are 3 further sections each consisting of 60 questions.
 - Section 2: Specialist questions relating to devices (PPM, ICDs, CRT).
 - Section 3: Specialist questions relating to EP
 - Section 4: In depth clinical questions aimed at specialist nurses

You must only complete **one** of these sections

Exam Format

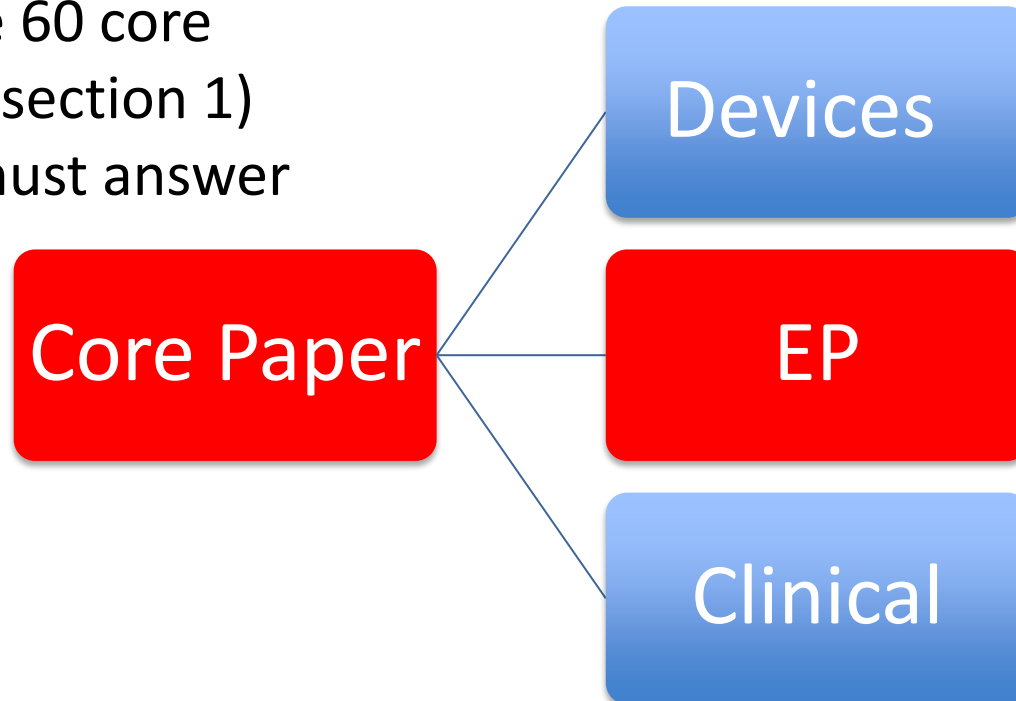
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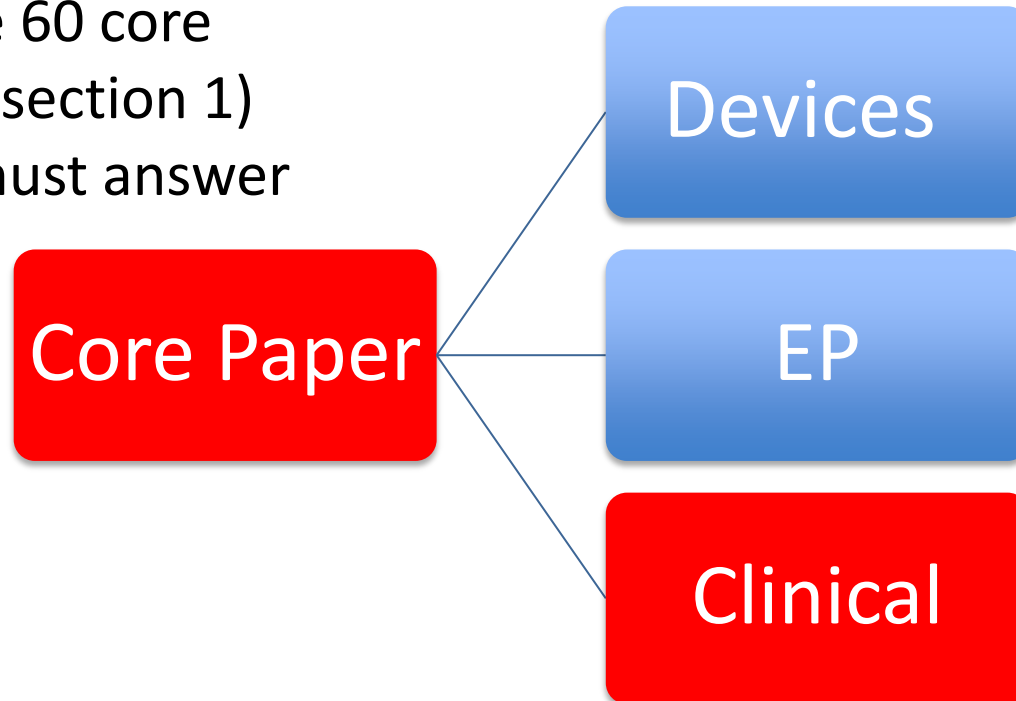
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BHRS CERTIFICATION EXAMINATION SYLLABUS 2014

Candidates will be expected to demonstrate an understanding of the diagnosis and management of patients with, or at risk of, experiencing arrhythmias. Awareness of national policy and guidance, clinical trials and treatments available relating to arrhythmia management will also be required.

The core syllabus expects a basic, general understanding of the contents of this section. A more detailed and in-depth knowledge is expected for the specialist sections. This is not an exhaustive list and candidates are expected to read widely.

CORE SYLLABUS

ANATOMY AND PHYSIOLOGY

Structure, including cardiac chambers, valves and great vessels (with particular reference to sites of vascular access), autonomic nervous system, blood supply, conduction system, cardiac cycle, action potential, normal physiology, cardiac failure.

CLINICAL ASSESSMENT

Basic knowledge will be expected of cardiovascular and respiratory symptoms and signs. ALS guidelines and basic X ray interpretation.

ARRHYTHMIAS – DIAGNOSIS & ECG INTERPRETATION

ECG interpretation of common morphological abnormalities. Candidates should be aware of the features of common tachyarrhythmias such as atrial fibrillation, atrial flutter, atrial tachycardia, AVNRT, AVRT, ventricular tachycardia and ventricular fibrillation. Ventricular pre-excitation and the importance of accessory pathways should be understood. The common bradyarrhythmias including sinus node disorders and heart blocks should be recognised. Clinical evaluation of syncope and its causes and risk assessment of individuals at risk of sudden cardiac death. Evaluation of patients with atrial fibrillation, including stroke risk.

DEVICES

Although a greater depth of understanding will be expected in the specialist section, a general understanding will be expected of: indications for pacing and ICD implantation including CRT & implantable cardiac recorders, device circuitry, sensing technology, conductors and impedance, lead technology, defibrillator testing, pacemaker codes, lead and device extraction, electromagnetic interference, pacemaker syndrome, basics of timing cycle, parameter characteristics and device programming, radiation safety, device malfunction, patient follow-up, hysteresis, mode switching, rate response, ICD detection and therapy, principles underlying device implantation, end of life issues and device deactivation.

ELECTROPHYSIOLOGY STUDIES & ABLATION

Although a greater depth of understanding will be expected in the specialist section, a general understanding will be expected of: arrhythmia diagnosis and management, arrhythmia mechanisms (automaticity, re-entry and triggered activity), patient preparation, indications for EP study / ablation, radiation safety, basics of programmed stimulation, recognition of common arrhythmias at EP study including electrogram pattern recognition, success rates and complications of ablation, awareness of mapping techniques.

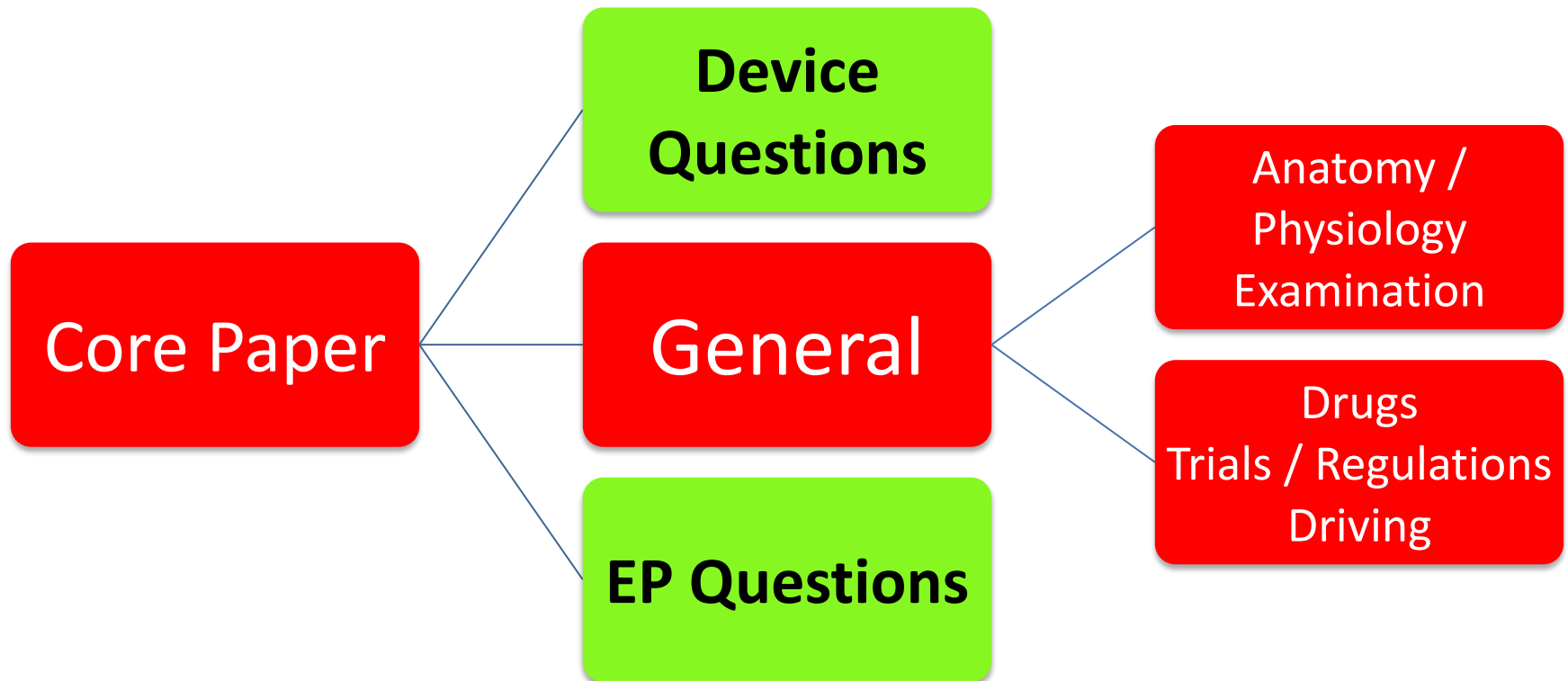
PHARMACOLOGY

Action, duration of action, side effects, interactions and contra-indications of drugs used in the management of arrhythmias and heart failure including the Vaughan Williams classification, pro-arrhythmic effects, potential effect of drugs on implantable device function, agents used for moderate sedation, reversal agents, antibiotics, anticoagulation, pharmacological provocation e.g. isoprenaline, ajmaline and the management of heart failure e.g. role of beta-blockers, ACE inhibitors.

CURRENT DVLA REGULATIONS AND NATIONAL GUIDANCE AND POLICY FOR ARRHYTHMIA MANAGEMENT including NSF, NICE etc.

MEDICO-LEGAL ISSUES including informed consent, role of the MHRA, clinical governance and audit, data protection, research ethics.

Myths: Core Paper



40/60 questions are general device/EP questions
Not a “Doctors” paper. Highest median mark

Exam Format

- To pass the examination you will need to achieve satisfactory marks in both the core section and your chosen specialist section
 - All questions consist of a statement or question followed by five answers (A – E)
 - Only one of these answers is correct
 - There is no negative marking, so put an answer in for every question.
- Sample questions on website
 - WWW.BHRS.com/certification

Exam Format

- You may use a basic calculator (non-programmable), dividers, rulers and magnifying glass but not ECG rulers or any other devices
- You will need to bring a “soft” pencil (Hb or b) and an eraser
- Any special requirements e.g. dyslexia
 - Tell us in advance
- **Mobile phones are not permitted**

Queries

admin@bhhs.com

Example Question: Clinical

- 58-year-old male with ischaemic cardiomyopathy is referred for consideration of device therapy. His transthoracic echocardiogram confirms severe LV systolic dysfunction and his 12 lead ECG is reported as sinus rhythm with a QRS duration of 144ms. He is NYHA class I and has no documented ventricular tachyarrhythmias. Which of the following medications would provide him with prognostic (survival) benefit?
 - A. Amiodarone
 - B. Digoxin
 - C. Furosemide
 - D. Lisinopril**
 - E. Verapamil

www.bhrs.com/certification


HR-UK

Heart Rhythm UK

MULTIPLE-CHOICE EXAMINATION ANSWER SHEET

Single Best

MARKING INSTRUCTIONS

This document is designed to be machine readable. Please mark like this  using an HB pencil. If you make a mistake, use an eraser.

If your candidate number has fewer than nine digits, please mark zeros in front of the number as shown in the example below:

EXAMPLE CANDIDATE NUMBER

000001234

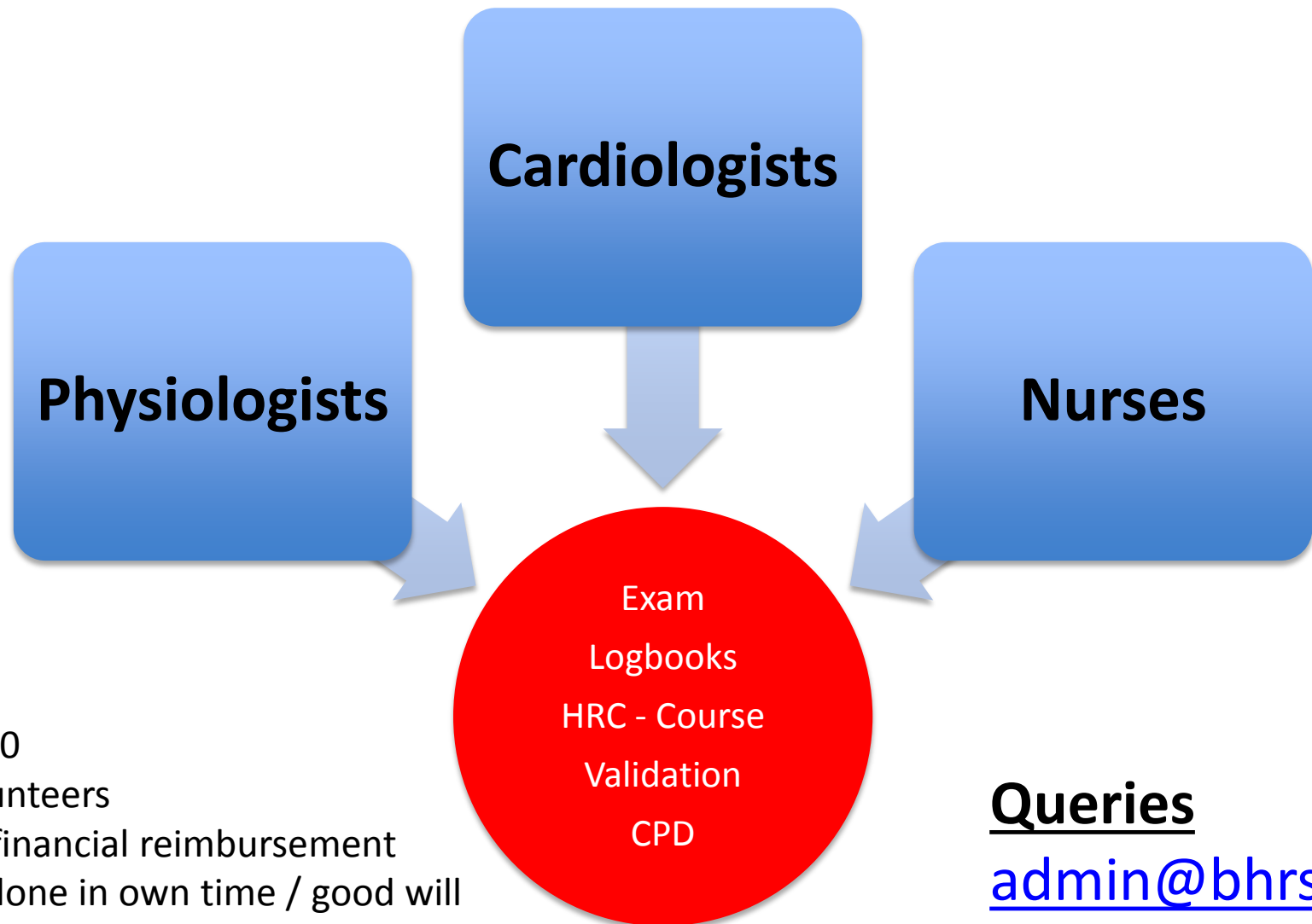
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74	75	7

Certification Committee



N=20
Volunteers
No financial reimbursement
All done in own time / good will

Queries
admin@bhhs.com

Exam Fees

- £180 to sit full exam* (previously £150)

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 [Exam Information](#) >
 [Allied Professional Exams](#) >
 [Device Exam](#) >
 [Fees](#)

Allied Professional Device Exam Fees

Listed below are the fees for the 2015 Allied Professional Pacing/Device Exam:

Eligibility Policy		
Fees		
Application		
Exam Content Outline		
Computer Based Testing Tutorial		

	Member	Non-Member
First-time Candidates, Early	\$1,045	\$1,235
First-time Candidates, Standard	\$1,170	\$1,290
Re-take & Recertification Candidates, Early	\$945	\$1,115
Re-take & Recertification Candidates, Standard	\$1,060	\$1,175

*If a candidate wants to sit a specialty paper, ie did device paper 2016 and wants to sit EP paper 2017, cost is 50% (currently £90)

Exam 2017

- Need to be a BHRS member to sit the exam
- Friday 24th March 2017
- Registration will open 12 noon
 - Exam running
 - 1pm-5pm (4 hrs), 2 invigilators
- Leeds Lee Graham
- Belfast Wilson McNair
- London Sue Jones

Exam Facts 2015

- 141 candidates registered
 - 15 were doctors and 4 nurses
 - > 120 physiologists
 - 125 candidates sat the core section with the vast majority passing.
 - **The device paper remains the paper people find the hardest.**

Exam Marks 2015

- The median mark is shown for each section for the exam. Please note the Median mark **IS NOT** the pass mark.

– Core	63.3%
– Device	53.3%
– EP	61.7%
– Clinical	55.8%
- All candidates who reach the required standard for the appropriate exam will pass however it has been and continues to be the decision/policy of BHRS council not to disclose the actual pass mark or to enter discussions with individual candidates about their marks/examination performance.

Exam content

Core	Sub-Sections	No. Questions
1.1	Anatomy / Physiology / Clinical Assessment	8
1.2	Arrhythmias – Diagnosis / ECGs	10
1.3	Devices (Inc. clinical trials)	15
1.4	Electrophysiology (Inc. clinical trials)	15
1.5	Guidelines / DVLA / MHRA	6
1.6	Pharmacology	6

Devices	Sub-Sections	No. Questions
2.1	Pacemaker biophysics & physiology	7
2.2	Device indications & modes	10
2.3	Pacemaker follow-up, troubleshooting, CXR	15
2.4	Cardiac Resynchronisation Therapy	10
2.5	Implantable Cardioverter Defibrillators	10
2.6	ECGs / Infection / Lead extraction / ILR	8

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