EXAMINATION GUIDELINES

The examination is organized and conducted by the European Society of Intensive Care Medicine (ESICM).

The ESICM will award successful candidates the European Diploma in Intensive Care Medicine (EDIC).

The aim of the examination for the European Diploma in Intensive Care Medicine is to promote quality standards in education and training for intensive care medicine in Europe and elsewhere. The exam is intended to be complementary to specialist postgraduate medical training and the taking of the two components of the exam should normally correspond with stages of experience/training in intensive care medicine (see eligibility criteria below).

March 2012
## EDIC PART I: WRITTEN EXAMINATION

<table>
<thead>
<tr>
<th>Criteria for entry</th>
<th>Required documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fully registered Medical Doctor (i.e. internship completed). Candidates must be in good standing with their national medical registration authorities.</td>
<td>Copy of University-awarded medical degree</td>
</tr>
<tr>
<td>2. Entry into a national training programme in a primary specialty. This may include Anaesthesiology, General/Internal Medicine (and other medical specialities), General Surgery (and other surgical specialities), Accident &amp; Emergency Medicine, Paediatrics, or Intensive Care Medicine if a primary speciality.</td>
<td>Letter of confirmation from national or regional primary specialty Training Authority (e.g. College or Society)</td>
</tr>
<tr>
<td>3. Entry into a national training programme in intensive care medicine or satisfactory completion of 12 months training/experience in ICM**, of which not more than six months may include complementary training. Complementary training entails training in the acute and emergency medical care of patients other than in the trainee's primary speciality.</td>
<td>Documents/letter confirming your training in ICM or completion of ICM training programme</td>
</tr>
</tbody>
</table>

** Intensive Care Medicine training/experience should be undertaken in modules of dedicated, full-time, supervised training / experience in Intensive Care Medicine

Specialists (Consultants/Attending) may take the EDIC if they have a regular, substantive day-time and emergency call commitment to intensive/critical care medicine.

You must provide evidence of your specialty and support for your application

## EDIC PART 2: ORAL/CLINICAL EXAMINATION

<table>
<thead>
<tr>
<th>Criteria for entry</th>
<th>Required documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Successful completion of EDIC Part I</td>
<td>Documents/letter confirming your training in ICM or completion of ICM training programme (to complement what you submitted for EDIC Part I)</td>
</tr>
<tr>
<td>2. 24 months of training/experience in ICM**, of which not more than 6 months may include 'complementary training' (see above). To minimise the failure rate and to accommodate requests for candidates from outside Europe, it is recommended that candidates should acquire a thorough understanding of European ICM practice. It is recommended that this is best facilitated by working in an academic European ICU for a period of at least six months. If your application form does not specify training within a European ICU, you may be requested to provide documentation confirming such training / experience.</td>
<td>Copy of primary specialty certification, if completed</td>
</tr>
</tbody>
</table>

** Intensive Care Medicine training/experience should be undertaken in modules of dedicated, full-time, supervised training / experience in Intensive Care Medicine

Contact details for:
- If you are in ICM training: Training Authority, supervisor or Head of training
- If you have completed your ICM training: Head of Department or Head of Training Programme or other representative who can attest to your having completed ICM training

## AWARDING OF EDIC DIPLOMA

The diploma is awarded to those who have successfully:
- passed EDIC Parts I and 2
- completed their primary base specialty **

*** If you have passed parts I and 2 but not yet completed your primary specialty, please send proof of completion of this specialty. Only upon reception of this document will you be awarded EDIC.
The EDIC is a two part examination: Part 1 is a multiple choice questionnaire written examination and Part 2 is a clinical / oral examination.

**PART I WRITTEN EXAMINATION**

EDIC part I examination is a multiple choice written examination in English. There are 100 multiple choice questions (MCQs) and each question trunk will have either four or five stems.

The paper contains two types of MCQ questions:

♦ 50 type A questions: of the five options (A to E) available, only one answer is correct
♦ 50 type K questions. The questions requires an individual answer T (true) or F (false), to each of the four statements A to D in the question.

**EXAMPLE OF TYPE A QUESTIONS**

Which ONE of the following statements about vasoactive drugs is FALSE:

<p>| | | | | |</p>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>Adrenaline (epinephrine) has alpha and beta receptor agonist activity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Noradrenaline (norepinephrine) is a vasoconstrictor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Dopamine acts on renal dopamine receptors</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Isoprenaline (isoproterenol) is a systemic and pulmonary vasodilator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>Dopamine has a specific renal protective action in critical care patients at risk of renal failure</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The required (correct) answer is marked here with an X.

During the exam, you will be required to mark your answer in the question booklet AND indicating the correct answer on your answer sheet.

On the answer sheet, you will need to designate the correct answer with a stroke in the box corresponding with the correct answer: The boxes corresponding with the incorrect options should be left blank as shown below.

**EXAMPLE OF TYPE K QUESTIONS**

Appropriate, immediate, initial antimicrobial therapy (after cultures have been taken) for the following acute infections, in adult patients, is:

<p>| | | | | |</p>
<table>
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<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Cefotaxime 2G 4hrly (or equivalent) IV for meningitis</td>
<td>T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>Linezolid 600mg bd IV for suspected pseudomonas pneumonia</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>Vancomycin 1G bd IV for peritonitis</td>
<td>F</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>Metronidazole 400mg 8hrly NG for suspected Cl. Difficile enterocolitis</td>
<td>T</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For these questions you must also note your answers in the question booklet AND on the answer sheet. In the question booklet note your answers with a T (True) or F (False) next to the question. On the answer sheet a T (True) response is indicated by a + (plus) sign and a F (False) is indicated by a − (minus) sign. On the answer sheet, you are asked to indicate your chosen answer by over-writing with a stroke on the (+ = true) and (− = false) as follows (See column B).
There are no negative markings.

Questions are drawn from the entire spectrum of intensive care medicine, including basic medical sciences, pathophysiology of relevant diseases, interpretation of diagnostic data, therapeutics/toxicology, ethics and all aspects of clinical ICM practice.

The ESICM will be offering registered candidates (who have paid their exam fee) to access a series of sample MCQ questions used in previous EDIC-1 exams. Candidates will get an individual time-limited password and be able to answer questions online, with instant feedback on their own performance. In addition to the training experience this will give a very good impression about the difficulty to expect during the exam, and how different kind of questions (A and K) can look like.

**EVALUATION OF THE EXAM AND INDIVIDUAL ANSWERS**

For a correct answer type A question 1 point is given, for a wrong or a blank answer 0 point. For a type K question, 1 point is given for 4 correct answers, 0.5 point for 3 out of 4 correct answers and 0 point for less then 3 correct answers. The pass mark is fixed each year based on a calculation using the mean value and SD. (mean value of the cohort, \(-0.6\) SD).

Each year the ESICM EDIC committee along with SGI (the Swiss society of Intensive Care Medicine) and IML evaluates the exam, and generates statistics on each question. Doubtful and poorly performed questions are usually removed before the final evaluation of the exam.

**The Angoff method procedure**

The Modified Angoff procedure is used to determine the initial passing score for an examination used to certify or license practitioners. It is one of the most popular procedures for setting a criterion-referenced passing point. It is not a norm-referenced method, when a candidate’s pass or fail status is determined by his or her performance in relation to other candidates. Using the Angoff procedure, once the passing point is determined, a candidate’s pass/fail performance is established independently of the group who sat for the exam. Candidates are judged by comparing their performance to an absolute standard, not to other candidates. Theoretically, all candidates can pass or all can fail.

The Angoff method relies on subject-matter experts, in our case the EDIC subcommittee, who examine the content of each test question (item) and then predict how many of 100 “minimally competent practitioners” are likely to answer the item correctly. The average of the judges’ predictions for a test question becomes its predicted difficulty. The sum of the predicted difficulty values for each item averaged across the judges and items on a test is the recommended Angoff cut score. (Passing Scores: A Manual for Setting Standards of Performance on Educational and Occupational Tests (1982). Livingston, S.A., and Zieky, M.J.)

Here how the EDIC subcommittee members (EDIC-panel), 9 experienced intensivists of 6 different European countries, assessed the absolute standard for EDIC part 1:

- All members of the EDIC-panel were properly trained on how to use the Angoff Method and informed on the test’s purpose. Then each EDIC-panel member individually rated each of the 2010 and 2011 exam MCQs based on how many of 100 “minimally competent practitioners” would answer the item correctly or incorrectly. A “minimally competent practitioner” has been defined as a person with sufficient knowledge to work in the ICU independently without jeopardizing patient life. Once this first round of ratings had been conducted, EDIC-panelists met and get access to the ratings of the other panelists so that they could compare what they determined about a particular item. Then, EDIC-panelists were asked to rate the items again for a second round. The second round of rating gives to EDIC-panelists the opportunity to review their initial rating of an item and decide whether or not they might like to change their decision based on the expert judgments of the other panelists. This second round of ratings was then averaged across the EDIC-panelists to determine the final cut score (absolute standard) for the EDIC part 1 exam. The cut score for the 2012 and future exams has so been fixed at 60, which means that 60% of the questions have to be answered correctly to pass the exam. Each year exam difficulty will be compared with the previous ones. If similar, then the same standard is applied. The absolute standard will be re-evaluated in 3-5 years time.
The content blueprint which the exam questions follow is currently is broadly as follows:

<table>
<thead>
<tr>
<th>Blueprint N°.</th>
<th>Blueprint Topic</th>
<th>Combined number of Type A &amp; K questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cardiovascular</td>
<td>12</td>
</tr>
<tr>
<td>2</td>
<td>Respiratory</td>
<td>16</td>
</tr>
<tr>
<td>3</td>
<td>Neuro-critical care</td>
<td>10</td>
</tr>
<tr>
<td>4</td>
<td>Gastro Intestinal / nutritional</td>
<td>8</td>
</tr>
<tr>
<td>5.1</td>
<td>Renal</td>
<td>4</td>
</tr>
<tr>
<td>5.2</td>
<td>Urology, Obstetrics &amp; Gynaecology</td>
<td>4</td>
</tr>
<tr>
<td>6.1</td>
<td>Endocrine &amp; metabolic</td>
<td>4</td>
</tr>
<tr>
<td>6.2</td>
<td>Bleeding &amp; Coagulation disorders</td>
<td>4</td>
</tr>
<tr>
<td>6.3</td>
<td>Oncology</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>Environmental Hazards, Poisoning &amp; acute pharmacology</td>
<td>8</td>
</tr>
<tr>
<td>8</td>
<td>Severe Infection &amp; Sepsis</td>
<td>10</td>
</tr>
<tr>
<td>9</td>
<td>Surgery &amp; trauma</td>
<td>6</td>
</tr>
<tr>
<td>10.1</td>
<td>Ethics, Law &amp; Quality Assurance</td>
<td>4</td>
</tr>
<tr>
<td>10.3</td>
<td>Intensive Care management</td>
<td>4</td>
</tr>
<tr>
<td>10.4</td>
<td>Transplantation</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

The content blueprint is subject to changes each year.

The questions are drawn from the entire spectrum of intensive care medicine and within each section of the blueprint, components of the question relate to basic medical sciences, patho-physiology of relevant diseases, interpretation of diagnostic data, therapeutics/toxicology, complications and any other aspect relevant to the clinical practice of Intensive Care Medicine.

The exam is under continuous review and the format may be changed without notice. Similarly, the requirements for the exam, its conduct, and the standards required, are all kept under review, and are subject to change.

**EXAM REGULATIONS**

♦ Three hours are allowed for the examination. This is strictly applied.
♦ Please check your candidate information on the question paper and answer sheet. Please complete the additional candidate information requested at the end of the question paper, and correct any incorrect information.
♦ The question paper and answer sheets are the only paper materials allowed on your desk.
♦ No examination aids are permitted e.g. calculator or dictionary.
♦ All bags and belongings must be placed at the designated location.
♦ Copying or cheating of any description will entail immediate disqualification. The decision will be at the discretion of the examination supervisor.
♦ Toilet breaks are only allowed if accompanied by an examiner, and if the exam room is equipped with the facilities.
♦ Mobile phones must be switched off.
♦ The exam booklet and answer sheet must be filled in with a pencil (no pens).
♦ The question paper and answer sheet must be signed and returned to the examination supervisor at the end of the examination.

**PART I EXAM RESULTS**

All candidates who have passed the Part I exam will be notified of their results by the ESICM administrative office approximately 6 weeks after the exam. This time is necessary for the validation process. Candidates, who have failed the Part I exam, will be allowed to sit the exam again after 12 months, no earlier. A total of three attempts are allowed.

**PART 2: THE CLINICAL AND ORAL EXAMINATION**

The standard expected for Part 2 is that of a senior trainee nearing completion of specialist training in ICM, and capable of safe, independent practice. Candidates should be able to communicate effectively and be capable of consulting and drawing appropriately on the fullness of multi-disciplinary patient support. Some subspecialty knowledge is expected, including for example, some general aspects of paediatric, cardiac and transplant critical care.
To minimise the failure rate and to accommodate requests for candidates from outside Europe, it is recommended that candidates should acquire a thorough understanding of European ICM practice. It is recommended that this is best facilitated by working in an academic European ICU for a period of at least six months. If your application form does not specify training within a European ICU, you may be requested to provide documentation confirming such training / experience.

Only those candidates who have successfully passed Part 1 may take the Part 2 clinical/oral examination. It is anticipated that it will usually be taken within 24 months of passing Part 1, and no later than 4 years after passing Part 1 unless otherwise approved by the Examinations Subcommittee.

The Part 2 should be conducted in English or in the language of the candidate or in another European language chosen by the candidate, subject to the availability of approved centre and examiners.

ORGANISATION

Location
In European countries, a group of suitable, major hospital general Intensive Care Units are identified in conjunction with relevant Council members and the ESICM EDIC Examinations subcommittee. The ESICM Education Secretariat will announce locations available via the website (www.esicm.org).

Exam frequency
The Part 2 exam is held at least once annually in each European country if there are enough eligible candidates who have applied. Sessions are held either in May/June or October/November each year.

EDIC panel of examiners
In European countries, a panel of ESICM approved examiners is agreed upon with the advice of the relevant ESICM Council member(s) and the panel is held by the ESICM Education Secretariat. The ESICM Council member for the country, whether or not he/she is an examiner, takes an active role in the organization of the exam. At least one of the faculty of examiners at the exam should be board certified (or equivalent) in the primary specialty of the candidate.

External examiner
Where possible and suitable, an external examiner may be invited usually from another European country with the prior agreement of the ESICM Examinations subcommittee. Externs provide reports to the ESICM (and local examiners) on the conduct of the examination, with a view to the facilitation of Europe-wide harmonization of quality standards.

CONDUCT OF THE (PART 2) EXAMINATION

The exam will consist of clinical and oral (viva voce) components. It is anticipated that each candidate will have around two hours for the clinical and oral parts, including patient examination and discussion with the examiners.

The candidate will be observed by the examiners in the clinical environment while examining more than one patient.

The clinical component: This should take between 60-90 minutes. It is recommended that the candidate should see one major case (approximately half an hour of examining) and two to three minor cases (10 to 15 minutes of examining each, depending on whether two or three cases are chosen).

Major case: This should preferably be a patient with a range of clinical problems, for example pneumonia, severe asthma, multiple trauma, post-surgical complications, sepsis, severe pancreatitis, multiple organ dysfunction or failure, acute lung injury, ventilator dependence and weaning difficulties, etc.

Minor cases: Two or three cases may be appropriate. These may be ICU or non-ICU cases. They might for example focus on a clinical sign e.g. new cardiac bruit / other signs of endocarditis, equipment such as chest drains or an intra-aortic balloon pump, or a specific clinical examination e.g. brain stem testing. The candidate does not undertake practical procedures.

The oral component: This should take approximately 30-40 minutes and may be divided into two separate sessions or performed as a single session.

CANDIDATE ASSESSMENT

Clinical component
The assessment, particularly in the major case should take account of:

♦ How well a candidate is able to elicit clinical information which is accurate, relevant and comprehensive – within the constraints of the circumstances. This is primarily physical-examination based, but includes information to be gained from around the bedside, for example from the nurse, the case records, the ICU charts or information system, drainage and other tubes, sputum collection containers, machines and monitors.

♦ The approach of the candidate to the patient in terms of professionalism, politeness, compassion, patient dignity and ethical probity.

♦ The capacity of the candidate to complete a structured clinical examination with due consideration for the staff and environment, e.g. showing compliance with isolation and hand-washing procedures where applicable.

♦ How well a candidate can integrate information, present it coherently, construct relevant differential diagnoses, make management evaluations and then suggest and discuss therapeutic options at a level of expertise appropriate for a specialist in Intensive/Critical Care Medicine.
Oral component
This component should test knowledge of practical scenarios that cannot easily be provided or tested in the clinical environment. This will include radiology images, electrocardiograms, biochemical results and blood gas estimations and patient equipment. Abstracted case histories may also be used to test, for example, approaches to ethical dilemmas.

MARKING PROCESS
The candidate will be assessed by the examiners for both the clinical and the oral components of the exam, and graded for each component using a numeric scale from 0 to 5 as indicated below:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grade</th>
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<tbody>
<tr>
<td>0</td>
<td>Severe failure</td>
</tr>
<tr>
<td>1</td>
<td>Failure</td>
</tr>
<tr>
<td>2</td>
<td>Bare Fail</td>
</tr>
<tr>
<td>3</td>
<td>Pass</td>
</tr>
<tr>
<td>4</td>
<td>Good pass</td>
</tr>
<tr>
<td>5</td>
<td>Excellent</td>
</tr>
</tbody>
</table>

EXAM RESULTS
All candidates who have successfully passed the Part 2 exam will be notified of their results by the ESICM administrative office. Upon completion of Part 2 of the exam, as well as completion of their base specialty prior, will candidates be awarded EDIC.

Candidates who have failed the Part 2 exam are allowed two initial attempts. If a candidate has failed on each of these 2 occasions, (s)he will be required to allow 12 month break for further training and preparation before taking the Part 2 exam again – when two final attempts are allowed.

EXAMINATION PREPARATION
The following educational resources are recommended for candidates preparing for the examination

- Local or national critical care medicine education and training opportunities especially those associated with training programmes.
- PACT (Patient-centred Acute Care Training): the ESICM distance-learning multi-media programme for intensive care.
- Up-to-date clinical textbooks on intensive/critical care.
- Current research and review literature in journals such as Intensive Care Medicine, Critical Care Medicine and other major journals.
- ESICM annual congresses of the ESICM and its postgraduate courses (www.esicm.org).
- CoBaTrICE program of intensive care competencies (www.cobatrice.org).
- Further documentation is also found on the ESICM website (www.esicm.org).

ADMINISTRATION
Applications must be made prior the deadline using the appropriate application forms. Late or incomplete applications will not be accepted. Application forms, exam dates and application deadlines can be obtained via the ESICM website (www.esicm.org).

Candidates attending either Part 1 or Part 2 of the examination may be asked to provide identification (passport or any other form including photograph and signature of the candidate) [see regulations]. Admission to an examination will be at the discretion of the examiner or ESICM.

FEES
Examination fees will be determined annually, and will be published on the ESICM website (www.esicm.org). Candidates who have not paid ESICM membership when they are applying for the EDIC exam (oral or written) will automatically be billed the non member's price. Should you wish to benefit from the member’s price, please pay your ESICM membership fees first, and then apply for the EDIC exam. The ESICM will not reimburse the difference if you become an ESICM member after you have applied for the EDIC exam. Results will be blocked for any candidates who have not paid their fees on time or in full.

WITHDRAWAL FROM THE EXAMINATION
Notice of withdrawal must be sent in writing to edic@esicm.org. Any requests for modifications of dates for the part 2 exam must be made in writing to the edic@esicm.org.

The examination fee, less a 25% administrative charge, will be refunded when notice of withdrawal is received 28 days before the published closing date for Part 1, and 28 days before the Part 2 exam date. Refunds will not be given thereafter. Fees cannot be transferred to the next examination.

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