

Regulations for the Examination of Taught Master's Degrees¹

Appointment of Examiners

1 Boards of Examiners

- 1.1 A Chairman and External Examiners for each Master's Degree course shall be appointed annually by the appropriate Graduate School Committee from the beginning of the Academic session for twelve months or for such time as is sufficient to cover all the necessary work. College Examiners are appointed by the Chairmen of Boards of Examiners. Their names shall be supplied to the appropriate Graduate School Master's Quality Committee on request. One Board shall act for both full- and part-time courses in the same subject. The Graduate School committees shall take into account nomination of examiners made by Departments/Divisions.
- 1.2 The Chairman of the Board of Examiners shall be a member of the academic staff of the College.
- 1.3 The Board of Examiners shall include at least one External Examiner.
- 1.4 Individuals will normally only be appointed as External Examiners if they can show appropriate evidence of:
- a) Knowledge and understanding of UK sector agreed reference points for the maintenance of academic standards and assurance and enhancement of quality;
 - b) Competence and experience in the fields covered by the programme of study, or parts thereof;
 - c) Relevant academic and/or professional qualifications to at least the level of the qualifications being externally examined, and/or extensive practitioner experience, where appropriate;
 - d) Competence and experience relating to the design and operation of a variety of assessment tasks appropriate to the subject and the operation of assessment procedures;
 - e) Sufficient standing, credibility and breadth of experience within the relevant discipline to be able to command the respect of academic peers and, where appropriate, professional peers;
 - f) Familiarity with the standard to be expected of students to achieve the award that is to be assessed;

¹ These Regulations also apply to the examination of Postgraduate Diploma and Postgraduate Certificate Programmes.

- g) Fluency in English and where programmes are delivered and assessed in languages other than English, fluency in the relevant language(s) (unless other secure arrangements are in place to ensure that the External Examiner is provided with the information to make their judgements);
 - h) Where appropriate, meeting applicable criteria set by professional, statutory or regulatory bodies;
 - i) Awareness of current developments in the design and delivery of relevant curricula;
 - j) Competence and experience relating to the enhancement of the student learning experience.
- 1.5 External Examiners appointed by the College should not normally hold more than two taught course external examiner appointments at any one time.
- 1.6 An individual should not normally be appointed as an External Examiner if they are:
- a) From a department in an institution where a member of the College is serving as an examiner, although exceptions may on occasions be unavoidable, for example, in the case of subjects taught only in a very small number of institutions;
 - b) From the same department of the same institution as another external examiner appointed by the College.
 - c) A member of a governing body or committee of the College or one of its collaborative partners, or a current employee of the College or one of its collaborative partners;
 - d) Significantly involved in current or recent substantive collaborative research activities with a member of staff closely involved in the delivery, management or assessment of the programme in question;
 - e) In a close professional, contractual or personal relationship with a member of staff or student involved with the programme of study;
 - f) Required to assess colleagues who are recruited as students to the programme of study;
 - g) In a position to influence significantly the future of students on the programme.
- 1.7 An External Examiner should not normally be appointed in succession to an External Examiner from the same home department and institution, although exceptions may on occasion be unavoidable, for example, in the case of subjects taught in only a very small number of institutions.
- 1.8 Former members of staff and students shall not be appointed as External Examiners before a lapse of at least five years or, in the case of staff, sufficient time for students taught by that member of staff to have passed through the system, whichever is the longer.
- 1.9 Persons invited to act as External Examiners will be invited to advise the Academic Registrar if they have any connections (e.g. as a close professional or personal relationship) with any candidate on the relevant course which would make it desirable for their appointments to be reconsidered.

- 1.10 An External Examiner will be appointed annually for a period of not more than four consecutive years. In exceptional circumstances an External Examiner may be reappointed to serve a fifth and final year, for example to ensure continuity, by the relevant Graduate School Master's Quality Committee.
- 1.11 An individual who has previously acted as a taught course External Examiner for the College may be re-appointed in exceptional circumstances but only after a period of five years has lapsed since their last appointment.
- 1.12 The number of examiners appointed to any Board shall be the minimum necessary for the efficient conduct of the examination and the appropriate Graduate School Master's Quality Committee shall ensure that the Board of Examiners appointed is competent to examine the course concerned at Master's degree level. The number of External Examiners appointed should be sufficient to cover the academic diversity of programmes of study.
- 1.13 The Board shall meet at least once to determine the final results of the examination, and at such other intervals as is necessary for the expedition of its business.
- 1.14 External Examiners wishing to resign during their period of office should write formally to the Rector, giving sufficient notice for the appointment of a replacement.
- 1.15 The termination of an External Examiner's appointment during his/her period of office shall rest with the Rector as Chairman of the Senate. This power shall only be exercised after consideration of a formal report from the Chairman of the Board of Examiners on which the Chairman of the relevant Graduate School Master's Quality Committee shall have had the opportunity to comment. Grounds for such termination shall include that criteria for appointment are found to have been breached, and failure to fulfil duties in a timely way.

Conduct of Examinations

The examinations for taught Masters' degrees shall be conducted in accordance with these Regulations, the General Regulations, the Regulations for the award of Taught Master's Degrees, Postgraduate Diplomas and Postgraduate Certificates and the relevant Programme Requirements.

2 Duties of External Examiners

- 2.1 The primary duty of an External Examiner is to ensure that the standard of the degrees awarded by the College in the field of study concerned is consistent with that of the national university system.
- 2.2 External Examiners shall have regard to the totality of the degree in respect of both syllabus and examination.
- 2.3 External Examiners shall be provided with sufficient briefing documentation to enable them to carry out their duties. As a minimum this should include copies of the programme specification, syllabus, examples of previous examination questions, and the marking scheme.
- 2.4 External Examiners shall be invited to participate in the setting of examination papers, and each individual paper shall be approved by at least one External Examiner.

- 2.5 External Examiners have the right to inspect any script or other assessed examination material.
- 2.6 The Chairman of the Board of Examiners shall determine the distribution of duties between External Examiners. External Examiners may be asked to sample scripts or other assessed examination material (including essays/reports/dissertations) and to take part in oral and practical examinations where these are specified. In those cases where it is agreed that the internal examiners should make a selection of scripts to be sent to an External Examiner, the principles for such selection must be agreed in advance. Examiners should have enough evidence to determine that internal marking is of an appropriate standard and is consistent. External Examiners should see a sample of scripts and other assessed examination material from the top, the middle and the bottom of the range. They should normally see all scripts and other assessed examination material of borderline candidates. They should also see all scripts and other assessed examination material assessed internally as meriting distinction or as failures. To carry out these duties effectively External Examiners should not be overburdened with duties such as second marking of scripts.
- 2.7 External Examiners shall be required to attend meetings of Boards of Examiners at which significant decisions are to be taken. The Chairman of the Board of Examiners shall ensure that External Examiners are invited to attend such meetings. External Examiners should be given as much notice as possible of the date of the final meeting of examiners.
- 2.8 External Examiners shall approve the pass list and advise on the award of marks of merit and distinction. In so doing External Examiners shall certify that for Master's degrees the standard of the examination was appropriate for a one-year full-time course of study (or part-time equivalent) at the Master's level of the Framework for Higher Education Qualifications and that the examination had been conducted in accordance with the Regulations.
- 2.9 External Examiners are asked to make a written report each year to the Rector which may include observations on teaching, course structure and course content, on the form provided. If an External Examiner so wishes, he/she may send a separate confidential report to the Rector.
- 2.10 External Examiners are asked to submit an overview report to the Rector at the end of their term of office.

3 Secrecy of Examination Papers

- 3.1 Examiners are required to preserve absolutely the secrecy of examination papers at all stages until the papers have actually been worked by the candidates. The contents must not be disclosed to any persons other than members of the Board of Examiners or officials of the College who are specially appointed to deal with papers except where the College has specifically approved the disclosure to candidates of the topics to be covered in specific papers in advance of the examination. In any revision classes prior to examinations staff must take care not to release information about actual questions on the examination. Failure to observe these instructions by an examiner or any other person having knowledge of the actual or probable content of an examination paper will constitute an examination offence and may lead to action being taken under the College disciplinary procedures for academic staff. Applications for approval of examination questions to be disclosed to students in advance of the examination should be made to the appropriate Graduate School Master's Quality

Committee and should state the particular paper at which this method will be employed, the place of that paper in the examination for the degree as a whole, whether this method is to be used initially for a trial period and the purpose of the use of this method of examination and any special criteria that will apply in relation to its assessment by virtue of the candidates having advance knowledge of the questions. Where examination questions are disclosed to candidates in advance arrangements must be in place to ensure that all candidates would receive the question papers at the same time.

- 3.2 At any meeting at which the content of a question paper is to be discussed the Chairman will specifically draw the attention of all persons present to these instructions and especially to clause 3.1.

4 Copyright of Examination Papers

- 4.1 It is a condition of the appointment of every examiner that the College shall, without payment, be licensed to reproduce sufficient copies of examination papers (or material contained therein) prepared by that examiner for the College, either alone or in collaboration with others, for the purpose of conducting the examination. The College shall also have the exclusive licence thereafter to publish the paper(s) as a whole provided that the College shall not assign or transfer this exclusive licence in any way to any other person.

5 Requirements for the Use of Source Materials, Calculators and Computers by Candidates

- 5.1 Boards of Examiners are authorised to determine precisely what source materials candidates shall be permitted to introduce or which shall be provided for candidates in the examination room as prescribed by the General Regulations (paragraph 14.2).
- 5.2 Such materials may not include dictionaries for the specific purpose of enabling students to overcome any deficiency in their command of the English language.
- 5.3 Boards of Examiners are authorised to determine at which examinations the use of calculators is permitted and shall ensure that:
- 5.3.1 Candidates will each be provided at the beginning of every examination with an approved calculator for use in the examination;
 - 5.3.2 Candidates will be given the opportunity to practise on the approved model of calculator before the examination period begins;
 - 5.3.3 The calculators issued to candidates for use during the examinations will be collected up at the end of the examination;
 - 5.3.4 Candidates should note that it will not be possible for them to take their own calculators into examination rooms, even if they are the approved model;
 - 5.3.5 The ruling above (points 5.3.1 to 5.3.4) does *not* apply to open book examinations. Candidates may take any model of calculator they wish into such examinations.

- 5.4 Boards of Examiners may also wish to ensure that candidates are advised that examiners require answers to numerical questions to include a clear statement of the method of calculation, together with appropriate intermediate steps and results.
- 5.5 Where the relevant Senate Committee has given approval, Boards of Examiners are authorised to determine at which examinations the use of laptop or other computers is permitted and under what circumstances. They shall ensure that the machines used are checked to ensure that students do not have access to unauthorised material through that computer and that all the machines have the same software. Students should where appropriate have the opportunity to practise on the computers if they are machines bespoke for the particular examination.
- 5.6 Boards of Examiners shall only permit the introduction of materials by candidates if it can reasonably be expected that students will have or will be able to purchase such materials.
- 5.7 No materials other than those specifically authorised may be introduced into an examination room.

6 Invigilation

- 6.1 Normally the member of academic staff responsible for a written examination, or another appropriate member of academic staff, should invigilate at each written examination. Additional invigilators need not be members of the academic staff.
- 6.2 The member of academic staff responsible for a written examination, or the appropriate alternative, must be in the examination room at least ten minutes before the examination is due to begin. If not acting as the invigilator, he/she must then remain in the room for a further thirty minutes after the start of the examination.
- 6.3 Before the examination begins the member of academic staff responsible for it, or the appropriate alternative, must check his/her paper for any errors. If any amendments are necessary he/she shall inform the invigilator on duty (if not themselves) and ensure that the required announcements are made to all students (including those sitting the examination in alternative venues).
- 6.4 Before leaving the examination the member of academic staff responsible for it, or the appropriate alternative, must ensure that arrangements have been made for him/her to be immediately contactable in the event of any further questions from candidates on the paper.

7 Essays, Reports and Dissertations

- 7.1 Save where the Regulations otherwise provide, essays, reports and dissertations may be returned to candidates.
- 7.2 It is the responsibility of Course Organisers to notify candidates of the arrangements for submission of essays, reports and dissertations, subject to the provisions of the individual Programme Requirements.

- 7.3 Essays/reports/dissertations must be submitted by the date specified in the relevant Programme Requirements. Subject to the provisions of the Requirements, work not submitted by this date will be examined at the following year's examination.
- 7.4 If a Course Organiser wishes to make essays, reports and dissertations available for consultation, borrowing, etc., after the completion of the examination, he/she must make appropriate arrangements with the candidate.

8 Identification of Candidates

- 8.1 Candidates shall be assigned a candidate number which shall be the only identifier on the candidate's examination answer script.
- 8.2 Candidates must clearly display their College identity card throughout all examinations, in a manner so that it can be inspected.

9 Oral Examinations

- 9.1 Oral examinations shall be conducted by not less than two examiners acting together. The Board of Examiners shall determine who shall attend an oral examination, save that where an oral examination is held to determine the final degree result of a candidate, or a selection of candidates, one of the examiners should be an examiner external to the University.
- 9.2 No one may attend an oral examination except the examiners and the candidate.

10 Marking Schemes

- 10.1 Each Board of Examiners shall draw up a marking scheme for the degree for which it is responsible in accordance with the rules agreed by Senate for advanced course marking schemes. The Board may adopt such conventions as it considers appropriate within its own marking scheme, including allowing for compensation between individual components within elements as long as no mark below 40 per cent is accepted as a condoned failing mark. But the marks shall be converted, where necessary, to a scale in which 50 per cent is the pass mark, 60 per cent is the merit mark and 70 per cent is the distinction mark for each element and the degree overall. One agreed mark should be returned for each element. Candidates must pass all elements of the examination.

Element refers to a large body of work contributing a significant percentage to the student's final mark. Examples would include a dissertation or the combined written or oral examined element to a course. Component refers to a single piece of work that combines with others to form an element of a course. Examples include individual essays, presentations, projects or examinations. Master's courses should normally contain no more than three elements. Each should normally contribute at least 25 per cent of the assessment for the award of the degree as a whole. Where an element represents a small but of necessity discrete contribution to the degree award, this may be assessed as pass/fail only.

10.2 In order to be awarded a result of merit, a candidate must achieve at least 60 per cent in each element; in order to be awarded a result of distinction, a candidate must achieve at least 70 per cent in each element.

10.2.1 Where appropriate, a Board of Examiners may award a result of merit where a candidate has achieved an aggregate mark of 60 per cent or greater across the programme as a whole AND has obtained a mark of 60 per cent or greater in each element with the exception of one element AND has obtained a mark of 50 per cent or greater in this latter element.

10.2.2 Where appropriate, a Board of Examiners may award a result of distinction where a candidate has achieved an aggregate mark of 70 per cent or greater across the programme as a whole AND has obtained a mark of 70 per cent or greater in each element with the exception of one element AND has obtained a mark of 60 per cent or greater in this latter element.

10.3 Candidates should only be considered for promotion to pass, merit or distinction if their aggregate mark is within 2.5 per cent of the relevant borderline. Nevertheless, candidates whom the Board deems to have exceptional circumstances may be considered for promotion even if their aggregate mark is more than 2.5 per cent from the borderline. In such cases the necessary extra marks should be credited to bring the candidate's aggregate mark into the higher range.

10.4 Marking schemes shall be submitted to the appropriate Graduate School Master's Quality Committee when requested.

11 Marking of Scripts and Essays/Reports/Dissertations

11.1 Every script and essay/report/dissertation² shall be marked by at least **two** College Examiners or by **one** Assessor and **one** College Examiner, who shall afterwards prepare an agreed list of marks. The scripts and essays/reports/dissertations should be moderated by an External Examiner in accordance with the provisions of paragraph 2.6 above.

11.2 Coursework which counts towards a student's final classification should be marked in detail by one College Examiner, with a second internal marker having at least an overview of the work. If any differences of opinion emerge, the External Examiner should be asked to moderate.

11.3 Marks allocated to all scripts/essays/reports/dissertations may be subject to moderation. Where a Board of Examiners has determined that a particular cohort of students' marks are anomalous, and that this is due to an identifiable cause, then they may take action to scale those marks either upwards or downwards. Such scaling may only be done after consultation with an External Examiner, and must be applied consistently to all students in the cohort. Any such action must be reported and approved at the final meeting of the relevant Board of Examiners.

11.4 Members of a Board of Examiners shall have the right to see the scripts, essays/reports/ dissertations and coursework of any candidate for the purposes of conducting the examination.

11.5 Examination scripts shall be retained until six months following the meeting of the Board of Examiners in the case of successful candidates. In the case of unsuccessful candidates scripts will be retained

² Please see the General Academic Regulations, paragraph 14.10, for the definitions of essays, reports and dissertations.

until six months following the meeting of the Board of Examiners at which the results of any retaken examinations were confirmed.

12 Determination of Results

- 12.1 The final result of an examination shall be determined at a meeting held after the completion of all elements of the examination at which all examiners are required to be present, but of which the proceedings shall not be invalidated by the absence of an examiner or examiners through illness or other unavoidable cause, in which case the examiner(s) should endeavour to be available for consultation (see paragraph 2.7). Normally a minimum of 60 per cent of the membership of a Board of Examiners should be present for valid decisions to be taken.
- 12.2 A record shall be kept by the Board of each meeting and particularly of those cases which required special consideration.
- 12.3 No persons other than the members and designated administrative staff shall be permitted to attend meetings of any Board of Examiners, except that Assessors may be invited to attend for discussion as required.
- 12.4 Members of Boards of Examiners are required to declare to the Chairman of the Board any personal interest in a candidate being assessed.
- 12.5 The decision shall be arrived at by a majority vote of those present. External Examiners shall be required to confirm the decisions of Boards of Examiners and, in doing so, to confirm that the examinations have been conducted fairly and in accordance with the relevant policy and Regulations.
- 12.6 If an External Examiner is unable to confirm the decision of a Board of Examiners, the matter will be reported to the Chairman of the appropriate Graduate School Master's Quality Committee. The Chairman shall undertake such investigations as are necessary and shall make a report to the Committee.
- 12.7 The Chairman shall have a casting vote in addition to his/her own vote. Administrative officers acting as Chairmen do not have a vote.
- 12.8 The Board of Examiners shall not place on any list of successful candidates the name or number of any candidate who has not taken all the tests prescribed under the Regulations for the examination for which he/she has entered and no candidate shall be included in any such list unless he/she has shown a competent knowledge in the examination as a whole. If the essay/report/dissertation is otherwise adequate but requires minor amendments, and if the candidate satisfies the examiners in all the other parts of the examination, the examiners may require a candidate to make within one month amendments specified by them and approved by them or one of their number nominated by them.
- 12.9 **Where complete examination is taken in one year**

- 12.9.1 The Board of Examiners shall determine the result of the examination and shall determine to which candidates, if any, to award a result of merit or distinction.
- 12.9.2 If a candidate who has been examined in all the elements of the examination for which he/she has entered fails to satisfy the examiners, the examiners may determine that he/she may on re-entry be exempt from one or more of the following:
- (a) one or more of the written papers;
 - (b) essay/report/dissertation;
 - (c) assessment of coursework;
 - (d) practical examinations;
 - (e) clinical examinations;
 - (f) oral examination.

The Board of Examiners is therefore required to indicate for each candidate who fails whether in the event of re-entry he/she may be exempt from any of the elements indicated. A candidate will be permitted to re-enter each element in which he/she has been unsuccessful on one occasion only (subject to paragraph 1.5.8 of the Regulations for the award of Taught Master's Degrees, Postgraduate Diplomas and Postgraduate Certificates).

- 12.9.3 Where the individual Programme Requirements specify that individual elements of the examination will be taken at dates throughout the year the above provisions will apply when determining the result of the candidates in the examination for the Master's degree.
- 12.9.4 Deferment of any part of the examination, including submission of the essay/report/dissertation, may be granted for reasons judged adequate in the particular case at the discretion of the appropriate Graduate School Committee. Subject to such exemption being granted, candidates will be informed of the marks they obtained in those elements in which they have been examined and the examiners may determine the exemptions which may be allowed on re-entry as specified in paragraph 12.9.2.
- 12.9.5 Where a candidate fails to attend an examination, including submission of the dissertation, and further fails to provide a medical certificate or proof that deferral was agreed in advance by the appropriate College committee (see 12.9.4) he/she will be deemed to have failed the degree programme in its entirety, without exemption allowed on re-entry.

12.10 **Where the examination extends over more than one year**

The examination for students taking some courses part-time may extend over a period of up to three years. Details of examination arrangements for courses followed part-time are set out in the relevant Programme Requirements.

- 12.10.1 The Board of Examiners shall determine the result of a part of the examination in the year in which the candidate enters for that part.

12.10.2 If a candidate who has been examined in all the elements of the examination for which he/she has entered in a particular year fails to satisfy the examiners, the examiners may determine that he/she may on re-entry be exempt from one or more of the following:

- (a) one or more of the written papers;
- (b) essay/report/dissertation;
- (c) assessment of coursework;
- (d) practical examinations;
- (e) clinical examinations;
- (f) oral examination.

The Board of Examiners is therefore required to indicate for each candidate who fails whether in the event of re-entry he/she may be exempt from any of the elements indicated. A candidate will be permitted to re-enter each element in which he/she has been unsuccessful on one occasion only (subject to paragraph 1.5.8 of the Regulations for the award of Taught Master's Degrees, Postgraduate Diplomas and Postgraduate Certificates).

12.10.3 When the candidate has satisfied the examiners in all elements of the examination the Board of Examiners shall review his/her performance and determine whether to award him/her a result of merit or distinction.

12.10.4 Deferment of any part of the examination, including submission of the essay/report/dissertation, may be granted for reasons judged adequate in the particular case at the discretion of the appropriate Graduate School Committee. Subject to such exemption being granted, candidates will be informed of the marks they obtained in those elements in which they have been examined and the examiners may determine the exemptions which may be allowed on re-entry as specified in paragraph 12.10.2.

12.10.5 Where a candidate fails to attend an examination, including submission of the dissertation, and further fails to provide a medical certificate or proof that deferral was agreed in advance by the appropriate College committee (see 12.10.4) he/she will be deemed to have failed the degree programme in its entirety, without exemption allowed on re-entry.

13 Failure to complete examination due to illness or other adequate cause

13.1 A candidate for a Master's degree who is prevented owing to their pregnancy or illness or the illness or death of a near relative or other cause judged sufficient by the Graduate School from completing at the normal time the examination or part of the examination for which he/she has entered may, at the discretion of the examiners,

(a) Enter the examination in those elements in which he/she was not able to be examined on the next occasion when the examination is held in order to complete the examination,

or

(b) be set a special examination in those elements of the examination missed as soon as possible and/or be permitted to submit any work prescribed (e.g. report) at a date specified by the Board of

Examiners concerned. The special examination shall be in the same format as specified in the Programme Requirements for the element(s) missed.

14 Publication of Examination Results

14.1 No marks are to be put on material which will be returned to the candidate.

14.2 The results are confidential until pass lists have been displayed.

14.3 Examination marks are the property of the College and may not be revealed without express authority of the College except as set out in paragraph 14.5 below. Only Boards of Examiners, designated members of the administrative staff and other members of the College whose duties require them to receive such information may have access to examination marks or other assessment judgements about individual candidates.

14.4 The Academic Registrar shall inform candidates of the results of examinations taken, including the marks obtained.

14.5 The College and all examiners are required to comply with the Data Protection Act 1998 (DPA98) and process all personal data, including examiners' comments, examination marks and results, in accordance with the Data Protection Principles set out in the Act. Examiners must comply with the College Policy on the storage of data relating to identifiable individuals either electronically or in a relevant filing system and with all associated Codes of Practice and Guidelines, in particular the Guidelines on Examination Records and Performance and Course Assessments. The College recognises the right of a data subject to withdraw consent to the processing of personal data where such processing could cause them significant damage or distress. Unless an individual student chooses to exercise the right to object, the College may publish the names and results of all candidates who have satisfied the examiners in the examinations in the form of a pass list or in graduation ceremony literature. Such lists will only be displayed locally.

15 Representations from Candidates

15.1 Chairmen and examiners must not communicate with candidates on behalf of the Board about their performances at the examination. Any representations which a candidate may make in connection with his/her examination must be referred to the Academic Registrar and will be dealt with in accordance with the Procedure for Consideration of Representations concerning decisions of Boards of Examiners (Appendix 1).

15.2 It is common for students to have some form of academic or social interaction with their External Examiners at some point during or after their studies as well as during the assessment process itself. Students should however note that it is inappropriate to submit complaints or representations direct to External Examiners or to seek to influence or otherwise harass their External Examiners. Inappropriate communication by a student towards an examiner would make that student liable for disciplinary action.

16 Examination Offences

- 16.1 Any case of alleged cheating or offences of a similar character, including conduct affecting the security of examinations, whether or not proscribed by the Regulations governing the examination at or in connection with which it occurs, will be governed by the Cheating Offences Policy and Procedures (Appendix 3).