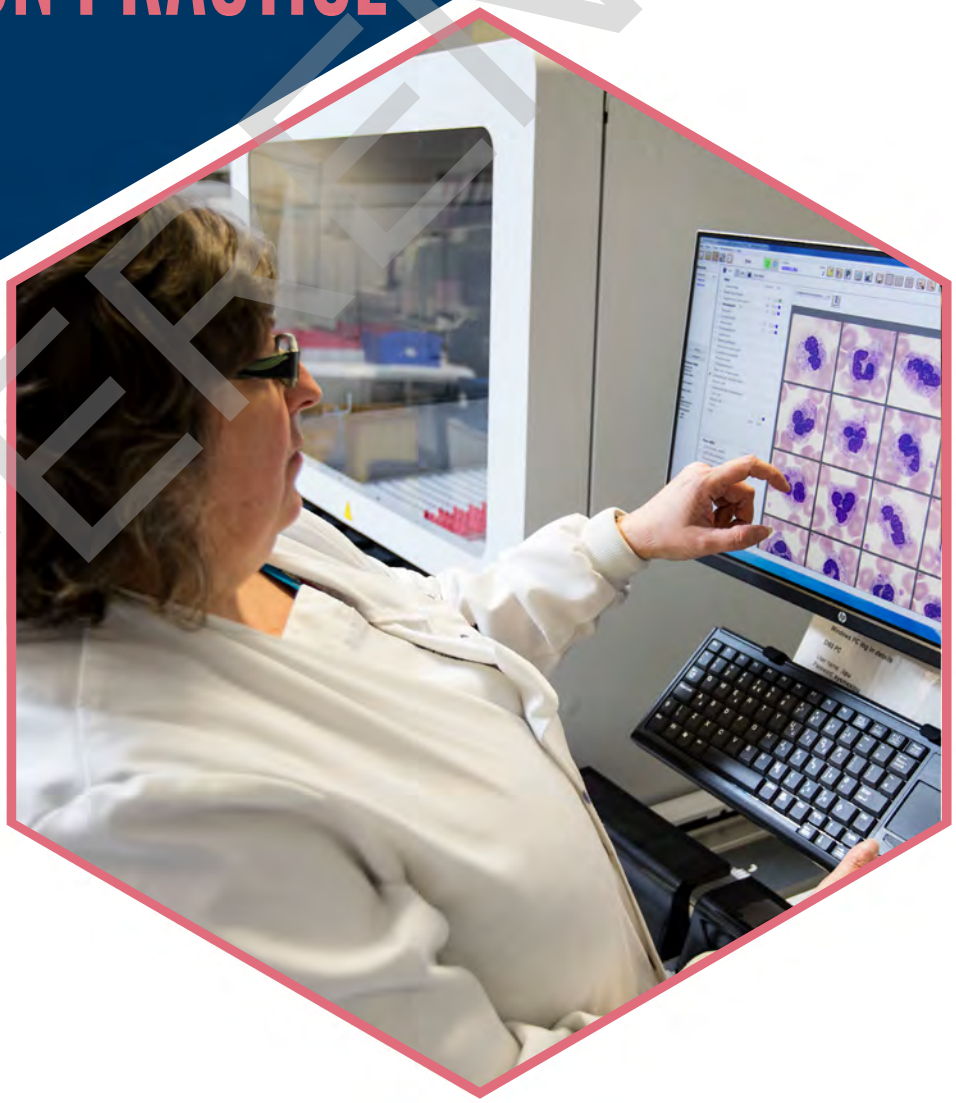
RECORD OF LABORATORY TRAINING FOR THE IBMS SPECIALIST DIPLOMA HAEMATOLOGY WITH TRANSFUSION PRACTICE



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Personal Details
Name:
IBMS Membership Number:
IBMS Membership Grade:
HCPC Registration Number:
Date of HCPC Registration:
Employment Address:
Telephone Number:
Date Specialist Training Commenced:
Name of Training Officer:

Confirmation of Completed Training		
Date Training Completed	Training Officer's Signature	Candidate's Signature

Recommendation for Award of Specialist Diploma		
Date of External Examination	External Examiner's Signature	External Examiner's Name

Training Review A training review should occur on a monthly basis between the trainee and training officer. These will provide an opportunity for feedback, set targets, agreed deadlines and monitor progress.		
Reviewed by	Date	Comments

Contents

1. INTRODUCTION

1.1. In order for you to be awarded an Institute Specialist Diploma you must be a current member of the Institute since the time you were issued with the portfolio. You must have held corporate membership for at least one year and be a current member at the time of the examination.

1.2. The Institute of Biomedical Science (Institute/IBMS) Specialist Portfolio provides the opportunity for you to gain recognition that you have finished a programme of structured, standardised post-registration training. This requires you to complete the IBMS Record of Training for the Specialist Diploma (Specialist Portfolio), submit a portfolio of evidence for assessment and undertake an oral examination of your specialist knowledge and understanding in your chosen field, in order to be awarded the Institute's Specialist Diploma.

1.3. Holding a Specialist Diploma demonstrates that you have been assessed against a benchmark standard for a specialist practitioner in your chosen discipline. It can be used by your employer to demonstrate specialist knowledge and skills linked to career and pay progression.

1.4. The Specialist Portfolio is considered to be the property of the individual as it represents a commitment by the employer for professional development specific to them. It is not 'owned' by the laboratory. If you are re-employed in another laboratory and you wish to continue with a partially completed portfolio, it is at the discretion of your new employer whether or not they wish to continue with the same portfolio or restart the process. If they opt to continue with the existing portfolio, the new employer is responsible for reviewing the evidence in your portfolio and confirming your competence in line with the requirements of your position.

1.5. To support completion of this Specialist Portfolio a separate guidance document has been produced (*Institute of Biomedical Science Specialist Portfolio Guidance for Candidates, Training Officers and External Examiners).* This provides all of the information required to ensure the portfolio is completed and assessed in accordance with the Institute's requirements. Following the guidance in this document is essential to your success.

1.6. It is strongly recommended that you and your training officer/mentor read and understand this document. Failure to do so could jeopardise your chances of success. External examiners for the portfolio are required to read and understand it as part of their responsibility as a representative of the Institute.

1.7. A discipline specific portfolio reflects the range of analyses that are considered to be relevant to your specialty. All sections must be completed in order to express your ability to operate at the specialist level. Completion of the sections should follow the formal training programme that is submitted by your laboratory to the IBMS as part of the laboratory training approval process.

1.8. The IBMS Specialist Portfolio can only be completed in laboratories which hold IBMS approval for post-registration training.

1.9. The following sections highlight some key points **but are not a substitute** for reading the information contained in the *Institute of Biomedical Science Specialist Portfolio Guidance for Candidates, Training Officers and External Examiners.*

2. TRAINING

2.1. As a requirement for IBMS approval of your laboratory for training you must have an indicative training programme which sets out the sections of the laboratory they will rotate through, the expected duration in each area, the module(s) that are covered and how training is assessed.

2.2. In-service training and assessment must demonstrate good scientific practice based on the knowledge and competence in the stated modules in order to meet the requirements of the external examination process. Each module requires you to demonstrate knowledge and competence elements specific to an investigation or task. It is the responsibility of the trainer(s) to ensure that you meet the expected level defined by the following learning outcomes which have been subdivided into three areas.

Knowledge and understanding
As a successful candidate you will be able to:

a. Demonstrate knowledge and understanding of complex scientific and technical aspects of their specialist discipline including: correct procedures for handling specimens before, during and after analysis; maintenance of routine equipment; principles of in-house data management systems and quality control/assurance procedures.

b. Demonstrate knowledge and understanding of the scientific basis of the laboratory tests and the disease process under investigation.

c. Show an awareness of current issues and developments within healthcare and biomedical science.

These are evidenced by in-house assessments of training and examination of knowledge during the *viva voce* with the external examiner to assess the ability of the candidate to describe/discuss these aspects of their work.

Professional skills
As a successful candidate you will be able to:

a. Competently perform a range of laboratory tests without immediate supervision.

b. Demonstrate self-direction in solving problems and exercising personal autonomy in relation to scope of practice.

c. Demonstrate a systematic application of professional knowledge and understanding in the interpretation of laboratory data to determine action based on best practice.

These are evidenced by the in-house assessments of training and portfolio of evidence.

Transferable skills
As a successful candidate you will be able to:

a. Demonstrate communication skills within the healthcare environment and as part of the laboratory team. This is evidenced by the presentation.

b. Demonstrate the ability to critically reflect in order to inform best practice. This is evidenced by personal reflective statements.

2.3. Where you do not have access to a particular technique, knowledge must still be demonstrated together with an understanding of the key skills required to perform the test. There may also be other tests your laboratory includes within its basic in-house repertoire in which you are additionally required to be competent. These can be assessed and then recorded in the reflective practice statement at the end of each sub-section.

2.4. The Institute recommends that you have a regular review of your training (e.g. on a monthly basis) with your training officer in order to monitor your progress. These sessions will provide an opportunity for you to receive feedback on how your training and completion of your portfolio is progressing against the structured departmental training programme you will be following, which is a requirement for IBMS training laboratory approval). It is a time to take into consideration issues that have impacted

on your training, and whether additional support is required or available. Targets to complete stages of your training can be set and deadlines for meeting them, agreed.

3. EVIDENCE

3.1. Evidence is generated through the internal assessment of your training and can be from a variety of sources (see section 5.11 in the guidance document for some examples). Many pieces of evidence will be generated and you will need to select those most suitable for the Specialist Portfolio module. Your training officer should be asked to check these are appropriate and confirm meet the requirements of the standards for external examination.

3.2. Evidence must be filed in a single specialist portfolio of evidence.

3.3. In addition to evidence of answering questions set by the trainer only ONE other example of evidence is required for the **Evidence of Achievement** section. This is chosen by you as an example of evidence that demonstrates your knowledge and competence in performing a particular technique.

3.4. You are required to justify your choice of evidence in a reflective practice statement at the end of every module.

3.5. Evidence must be sufficient to enable an informed judgement by the external examiner on whether the standard in terms of knowledge and skills for the module has been met.

The amount of evidence must not exceed the requirement for evidence stipulated in the evidence of achievement section and should be presented in one A4 size lever arch folder.

3.6. Your portfolio of evidence will be externally assessed as part of examining your suitability for the award of an IBMS Specialist Diploma. It is very important that it is well organised and an index for the evidence is provided.

4. COMPLETING THE RECORD OF LABORATORY TRAINING

4.1. Once you have completed your training for a particular module it must be signed off by the trainer to confirm that the knowledge and competence requirements and the Evidence of Achievement sections have been met.

4.2. You are required to complete a reflective practice statement at the end of each module to justify your selection of evidence.

4.3. All sections of your record of training for the Specialist Portfolio must be completed and signed off by the trainer, and your portfolio of supporting evidence checked, to confirm your suitability for the specialist examination.

5. END-POINT ASSESSMENT

5.1. On completion of training and in accordance with the requirements of the Specialist Diploma, your employer should apply to the Institute for the appointment of a visiting external examiner.

5.2. Accompanying the portfolio should be a signed statement from the laboratory manager testifying to the range of laboratory investigations that you undertake in your own laboratory. This will be used by the external examiner to guide the areas for questioning during the laboratory tour. Please note the external examiner can ask questions on any of the modules in the record of training for the Specialist Portfolio and your portfolio of evidence.

5.3. The external examiner will determine your suitability for the award of the Specialist Diploma by assessing your knowledge and understanding of your specialty through: the oral presentation; the evidence of training you have provided and questions asked during the laboratory tour.

5.4. Your presentations should not be overcomplicated and slides should be kept simple: they are really a prompt to give your talk a structure. You are talking about things you know: how you gained your experience, key aspects of your work, recent developments that may have occurred, or are planned and any particular interests you have. The external examiner may also wish to ask some questions related to the presentation or seek points of clarification.

5.5. Your portfolio of evidence will provide the examiner with an opportunity to assess the quality of your training (e.g. through the questions asked by the trainer) and your understanding of the techniques (e.g. annotated evidence, witness statements, reflective statements).

5.6. During the laboratory tour with *viva voce* the external examiner will not assess your practical competence; this was the responsibility of your trainer. However, they will expect you to be able to demonstrate knowledge and understanding of the practical

aspects underpinning a techniques and corrective action you might take if things go wrong.

It is reasonable for the examiner to ask questions on any aspect covered in the portfolio. A theoretical knowledge is required as a minimum on tests performed outside of the department. Questions may include references to equipment in use, samples that are being processed, investigative techniques being performed, quality control, results and health and safety.

5.7. After this you will be informed of the outcome (Pass or Fail) and verbal feedback will be provided by the examiner. If you have not been successful the examiner will provide more detailed written feedback explaining the reason(s) for this outcome and providing guidance on how to address them. This will be recorded in the examiner's report. A timeline will be agreed by the candidate, training officer and examiner to address any shortfalls. A subsequent full or partial examination will be required and this must be arranged through the IBMS.

6. COMPLETION OF REPORTS AND AWARD

6.1. Check with your trainer that they have submitted the feedback report form to the Institute. Both the external examiner and the laboratory trainer are required to submit reports, and delays in this part of the process will delay the award of your Specialist Diploma.

6.2. Once the reports have been received the Institute will issue your Specialist Diploma. If you are currently in the class of Licentiate you will be eligible to apply to upgrade your membership to become a Member. Upgrading to the next level of membership is not automatic and you are advised to make an application to the Institute as soon as possible in order to access the Institute's higher level qualifications to assist you in furthering your career.

Section 7: Haematology

This section covers the range of procedures and diagnostic techniques that have been identified as being most relevant to practice as a specialist biomedical scientist working in haematology. If part of the service there is an option in hospital transfusion practice. Candidates completing these are expected to be able to demonstrate the application of knowledge and skill defined in section 2 of this portfolio.

It is accepted that some of these tests may not be performed in the candidate's own laboratory. Whilst practical skills may not be achievable (for example through secondment to another laboratory) to the level of someone performing them regularly, knowledge and understanding of its application is still required and may be examined.

There may be other tests, outside of those listed in this portfolio, that are part of the training laboratory's basic repertoire in which the individual is required to be competent. These can be recorded in the reflective statement at the end of each sub-section

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1a Cell counting and haemoglobin concentration measurement

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and practice of the automated cell counting/concentration methods for:
   - Leucocytes
   - Erythrocytes (RBCs)
   - Platelets
   - Reticulocytes
   - Nucleated RBCs
   - White cell differentials
   - RBC parameters
   - Haemoglobin
2. The use of calibration and control materials and how to deal with out of limit values.
3. Correct preparation of samples for testing and pre-analytical factors that could affect accuracy of the results.
4. Effects of haemolysis, lipaemia, icterus, microthrombi, pre-analytical variables and storage conditions on laboratory results.
5. The use of reference values and the significance of abnormal results.
6. Limitations of tests and further investigations that may be required.
7. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Prepare and operate named automated analysers for routine use.
d. Perform analysis in accordance with standard laboratory procedure.
e. Critically evaluate results and understand the process of auto-validation, delta checks, reference ranges and conditional ranges.
f. Complete all relevant documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1b Erythrocyte sedimentation rate (ESR)/plasma viscosity

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and purpose of ESR measurement and environmental effects on the accuracy of results.
2. Principles and purpose of measurement of plasma viscosity.
3. Relevance of these measurements in the diagnosis and monitoring of disease.
4. Urgent scenarios in which ESR measurement is important.
5. Principles of instrumentation used for ESR and plasma viscosity measurement.
6. Reference values and the significance of abnormal results.
7. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Prepare and operate named automated analysers for routine use.
b. Prepare samples for manual ESR technique if method is used locally.
c. Perform named tests in accordance with standard laboratory procedure.
d. Identify abnormal results and likely significance to clinical detail.
e. Complete documentation in accordance with quality control and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components

Subsection 7.1c Identification and enumeration of peripheral blood cells by microscopy

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and application of light microscopy.
2. Principles and practice of staining blood cells by Romanowsky staining.
3. Use of slidemaker/stainers.
4. Pre-analytical variables that will affect the appearance of blood cells.
5. Mechanisms of normal haemopoiesis.
6. Recognition of normal and abnormal red cell morphology, their relationships to red cell indices and clinical significance.
7. Normal morphological features of the myeloid and lymphoid series of white blood cells.
8. Significance of abnormal or immature white blood cells on the peripheral blood film and their significance.
9. Key features of blasts and signs of dysplasia.
10. Abnormal platelet morphology and numbers on the peripheral blood film and their significance.
11. Normal reference values and the significance of abnormal results.
12. Morphological and serological features of infectious mononucleosis.
13. Internal quality control and external quality assurance procedures, including digital or standard NEQAS schemes.

COMPETENCE

Be able to:

a. Prepare and stain blood films of suitable quality for morphological analysis.
b. Set up a microscope for viewing blood films.
c. Accurately identify morphological features of normal and abnormal cells.
d. Perform tests in accordance with standard laboratory procedures.
e. Manually enumerate WBC differential counts.
f. Estimate the platelet count from the blood film and confirm accuracy of automated count.
g. Assess platelet clumping and adhesion to neutrophils.
h. Identify possible abnormalities and likely significance to clinical details.
i. Refer samples for further testing according to abnormalities.
j. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1d Infectious mononucleosis

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. The principles and practice of the screening test for infectious mononucleosis (IM).
2. Blood count, serological and morphological features of infectious mononucleosis.
3. Limitations of IM screening tests.
4. Differential diagnosis if a patient presents with signs of IM but screening gives a negative result.
5. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Perform tests in accordance with standard laboratory procedure.
b. Clearly distinguish between positive, negative and equivocal results.
c. Complete documentation in accordance with quality control and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1e Screening test for sickle cell haemoglobin (HbS)

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and practice of the screening test for sickle cell haemoglobin (HbS).
2. Limitations of HbS screening tests.
3. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Prepare samples and perform tests in accordance with standard laboratory procedure.
b. Clearly distinguish between positive, negative and equivocal results.
c. Complete documentation in accordance with quality control and audit requirements.
d. Describe local clinical procedures to follow up positive or negative results.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1f Bloodborne parasites

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Geographical occurrence of malaria.
2. Risk assessment protocol for viral haemorrhagic fever (VHF) assessment prior to malaria request.
3. Techniques for detecting the presence of human malaria parasites, including:
   - Thick and thin blood films
   - Use of different stains
   - Immunochromatography
   - Awareness of other tests (e.g. PCR, QBC)
4. Presenting clinical symptoms of suspected cases and haematological changes.
5. Different types of malaria parasites.
6. The life cycle of malarial parasites and the stages found in the blood.
7. The effect of drug treatment on detection.
8. The limitations of techniques employed.
9. Internal quality control and external quality assessment procedures.
10. Other bloodborne parasites - *Babesia*, *Trypanosoma*, *filaria*, *Leishmania*.

COMPETENCE

Be able to:

a. Prepare samples and perform tests in accordance with standard laboratory procedure.
b. Clearly distinguish between positive, negative and equivocal results.
c. Complete documentation in accordance with quality assurance and audit requirements.
d. Describe the local clinical procedures to follow up positive or negative results.
e. Recognise malarial parasites on blood films.
f. Estimate malaria parasitaemia, knowing when this should be undertaken, and its significance.
g. Recognise other bloodborne parasites on blood films.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1g Coagulation screening

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Components of the *in vivo* and *in vitro* haemostatic pathways and their modes of action.
2. Principles and practice of techniques for measuring prothrombin (PT) and which clotting factors are involved.
3. Principles and practice of the techniques for measuring activated partial thromboplastin time (APTT) and which clotting factors are involved.
4. Principles of instrumentation used to assess haemostasis function.
5. Pre-analytical variables that can affect results.
6. Normal reference values and the significance of abnormal results.
7. The relationship between abnormal PT and APTT and other laboratory tests (e.g. full blood count and liver function tests).
8. Principles and practice of the techniques for measuring thrombin time (TT) and reptilase time (RT).
9. Effects of anticoagulant therapy on PT, APTT and TT measurement.
10. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Measure prothrombin time (PT) and activated partial thromboplastin time (APTT) in accordance with standard laboratory procedure.
d. Critically evaluate results.
e. Identify samples that may require further investigations.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1h Fibrinogen

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Components of the *in vivo* and *in vitro* haemostatic pathways and their modes of action.
2. Laboratory investigation and clinical emergency of suspected disseminated intravascular coagulation (DIC).
3. Principles and practice of fibrinogen estimation.
4. How to distinguish between afibrinogenemia, hypofibrinogenemia and dysfibrinogenemia.
5. Principles of instrumentation used to estimate fibrinogen.
6. Pre-analytical variables that can affect results.
7. Normal reference values and the significance of abnormal results.
8. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Prepare assay reagents and controls for use.
d. Prepare and operate named automated analysers for use.
e. Prepare and check controls are within acceptable limit.
f. Perform analysis in accordance with standard laboratory procedures.
g. Identify problems that may affect result and take remedial action.
h. Identify samples that may require further investigations.
i. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1i Fibrin degradation products

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Components of the *in vivo* and *in vitro* haemostatic pathways and their modes of action.
2. Principles and practice of D-dimer estimation.
3. Principles of the instrumentation and manual method used to detect fibrin degradation products.
4. Pre-analytical variables and interacting substances that can affect results.
5. Normal reference values and the significance of abnormal results.
6. Use of D-dimer for the investigation of suspected cases of venous thromboembolism.
7. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform analysis in accordance with standard laboratory procedures.
d. Identify problems that may affect result, and take remedial action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Primary Investigations of Blood and its Components
Subsection 7.1j Anticoagulant therapy

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles of heparin and vitamin K antagonist (VKA) therapy.
2. Principles and practice of monitoring anticoagulant therapy with unfractionated heparin (UFH), low molecular weight heparin and related anticoagulants (e.g. danaparoid, fondaparinux).
3. Principles and practice of the international normalised ratio (INR) system for monitoring VKA therapy.
4. Principles of instrumentation used to determine INR.
5. Pre-analytical variables that can affect results.
6. Therapeutic ranges and significance of out of range results.
7. Principles, practice and limitations of assessing direct thrombin inhibitor (DTI) and direct factor Xa inhibitor (DFXaI) therapy with routine coagulation screening tests and specific assays for DTI and DFXaI.
8. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Prepare test reagents and controls for use.
d. Prepare and perform INR in accordance with standard laboratory procedures.
e. Prepare and perform APTT in accordance with standard laboratory procedures.
f. Prepare and perform anti-Xa assays for LMWH and related anticoagulants, UFH and DFXaIs in accordance with standard laboratory procedure.
g. Prepare and check controls are within acceptable limit.
h. Identify problems that may affect results and take corrective action.
i. Identify samples that may require further investigations or action.
j. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.1 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.1 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.2 Iron Deficiency Anaemia and Iron Overload

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Normal erythropoiesis and production of haemoglobin.
2. Normal iron metabolism and storage.
3. The effect of iron deficiency on red cell indices, including reticulocyte parameters and red cell morphology.
4. The effect of iron overload on red cell indices.
5. Clinical causes of iron deficiency, functional iron deficiency and iron overload.
6. Laboratory tests available to assess iron status (e.g. serum ferritin, serum transferrin, serum iron, zinc protoporphyrin).
7. Pre-analytical variables that can affect results.
8. Normal reference values and the significance of abnormal results.
9. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques in accordance with standard laboratory procedures.
d. Identify problems that may affect result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.2 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.2 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.3 Haemolytic Anaemia

Subsection 7.3a Screening tests

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Causes of hereditary and acquired haemolytic anaemia.
2. Peripheral blood morphological features (intravascular and extravascular) associated with haemolytic anaemia.
3. Principles of screening tests to identify the occurrence of haemolysis, including:
   - Reticulocyte count
   - Serum haptoglobin
   - Haemosiderin
   - Methaemoglobin
4. Normal reference values and the significance of abnormal results.
5. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.3 Haemolytic Anaemia

Subsection 7.3b Inherited and acquired haemolytic anaemia

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Causes of hereditary and acquired haemolytic anaemia.
2. Blood morphological features associated with haemolytic anaemia.
3. Metabolic pathways in red cells (e.g. glycolytic).
4. Key aspects of the glycolytic pathway.
5. Principles and limitations of techniques to identify membrane abnormalities (e.g. flow cytometry).
6. Principles and limitations of techniques to identify enzyme deficiencies (e.g. glucose-6-phosphate dehydrogenase [G-6-PD]).
7. Principles and limitations of techniques to identify acquired immune haemolytic anaemia (e.g. direct antiglobulin test [DAT], presence of cold or warm reacting antibodies).
8. Principles and limitations of techniques to identify acquired non-immune haemolytic anaemia (e.g. paroxysmal nocturnal haemoglobinuria [PNH], malaria).
9. Normal reference values and the significance of abnormal results.
10. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.3 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.3 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.4 Abnormal Haemoglobins and Thalassaemia

Subsection 7.4a Haemoglobin variants (e.g. HbS, C, D, E)

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Normal structure of the haemoglobin molecule.
2. Structural variants leading to haemoglobin abnormalities (e.g. HbS).
3. Combined defects (e.g. HbSC, HbS/thalassaemia).
4. Red cell indices and blood morphological features associated with abnormal haemoglobin variants.
5. Principles, practice and limitations of current techniques (high-performance liquid chromatography [HPLC], capillary electrophoresis, isoelectric focusing, mass spectrometry) for the detection and investigation of abnormal haemoglobin variants.
6. Reference values and the significance of abnormal results.
7. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques for the detection of abnormal haemoglobin variants in accordance with standard laboratory procedures and interpret results.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.4 Abnormal Haemoglobins and Thalassaemia
Subsection 7.4b Imbalanced globin chain production

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Normal structure of the haemoglobin molecules.
2. Imbalanced globin chain production leading to the thalassaemias.
3. Globin chain composition of severe and trait forms of alpha and beta-thalassaemias, HbH and HbBarts.
4. Combined defects (e.g. HbSC, HbS/thalassaemia).
5. Red cell indices and blood morphological features associated with the thalassaemias.
6. Structural difference and significance between severe and trait form of thalassaemias.
7. Principles and practice of relevant techniques for the detection and investigation of imbalanced globin chain production.
8. Reference values and the significance of abnormal results.
9. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques for the detection and quantification of abnormal haemoglobins due to imbalance in globin chain production in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.4 Abnormal Haemoglobins and Thalassaemia
Subsection 7.4c Unstable haemoglobin

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Normal structure of the haemoglobin molecules.
2. Mutations in globin chains leading to the production of unstable haemoglobin.
3. Red cell indices and blood morphological features associated with unstable haemoglobin.
4. Principles and practice of relevant techniques for detection of unstable haemoglobin.
5. Significance of abnormal results.
6. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques for the detection of unstable haemoglobin in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.4 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.4 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.5 Macrocytic Anaemia

Subsection 7.5a Vitamin B12 and folate deficiency

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Metabolism of vitamin B12 and folate, and their role in haemopoiesis.
2. Causes of vitamin B12 and folate deficiency.
3. Changes in blood cell indices and morphological features associated with vitamin B12 and folate deficiency.
4. Differences between, and causes of, megaloblastic and other types of macrocytic anaemia.
5. Red cell morphology and indices.
6. Folate cycle and role in cell production.
7. Neural tube defects.
8. Principles and practice of relevant techniques for the measurement of vitamin B12 and folate.
9. Limitations of tests and further investigations that may be required.
10. Reference values and the significance of abnormal results.
11. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques to measure vitamin B12 and folate status in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigation or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.5 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.5 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.6 Haematological Malignancies
Subsection 7.6a White cell malignancy

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Mechanisms of normal haemopoietic cell production and differentiation, and the consequences of abnormality.
2. Rationale and application of the World Health Organization (WHO) classification of haematological malignancies.
3. Changes in peripheral blood cell indices associated with white cell malignancy, including:
   - leucocytosis
   - leucopenia
   - thrombocytopenia
   - thrombocytosis
   - anaemia
4. Recognition and identification of typical morphological indicators of malignancy, including:
   - leucoerythroblastic blood picture
   - Auer rods
   - ring sideroblasts
   - signs of dysplasia
5. Recognition of the typical features associated with the following malignancies:
   - acute myeloid leukaemia
   - acute lymphoblastic leukaemia
   - chronic myeloid leukaemia
   - chronic lymphocytic leukaemia
   - myelodysplastic syndromes
   - myeloproliferative neoplasms
6. Principles and application of relevant techniques for the investigation of white cell malignancies, including:
   - bone marrow aspirate/trephine collection and examination.
   - immunophenotyping
   - cytogenetics and molecular genetics
7. Limitations of tests and further investigations that may be required.
8. Reference values and the significance of abnormal results.
9. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform named techniques to investigate white cell abnormalities in accordance with standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.6 Haematological Malignancies
Subsection 7.6b Polycythaemia

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Distinction between erythrocytosis and polycythaemia.
2. Mechanisms that lead to erythrocytosis and polycythaemia.
3. Changes in blood cell indices and morphological features associated with polycythaemias.
4. Principles and practice of relevant techniques for the investigation of increased red cell counts.
5. Significance and methods of investigating mutations in *JAK2*, or alternative molecular markers for the diagnosis of myeloproliferative neoplasms.
6. Limitations of tests and further investigations that may be required.
7. Reference values and the significance of abnormal results.
8. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Describe how to perform analysis to investigate increased red cell count according to standard laboratory procedures.
b. Identify problems that may affect results and take corrective action.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.6 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.6 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 7.7 Haemostasis Abnormalities

Subsection 7.7a Bleeding disorders

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and components of the haemostatic pathways.
2. Principles and significance of the screening tests for coagulation and the clotting factors, which are measured by PT, APTT and TT.
3. Coagulation abnormalities associated with the haemophilias A, B and C, von Willebrand disease and other factor deficiencies.
4. Coagulation abnormalities associated with acquired defects.
5. Bleeding abnormalities, associated with platelet and vessel defects.
6. Replacement therapy and complications.
7. Principles, practice and limitations of techniques to assess specific coagulation factor deficiencies (e.g. one-stage clotting assays).
8. Principles and practice of techniques to detect presence of coagulation factor inhibitors.
9. Principles and practice of techniques to assess platelet function.
10. Pre-analytical variables that can affect results.
11. Normal reference values and the significance of abnormal results.
12. Internal quality control and external quality assessment procedures.
13. Differences between assays in the diagnosis of a deficiency and monitoring of treatment.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match samples to patient unique identification and confirm urgency of analysis.
c. Perform factor assays, inhibitor assays and VWF parameter analysis according to standard laboratory procedures.
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.7 Haemostasis Abnormalities
Subsection 7.7b Thrombotic disorders

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and components of the haemostatic pathways and its natural inhibitors.
2. Thrombotic risks associated with reduced levels of inhibitors and co-factors.
3. Thrombotic risks associated with defects that are detected using genetic analysis, such as:
   - Factor V Leiden
   - Prothrombin G20210A gene mutation
4. Principles and practice of techniques to investigate thrombotic risk associated with thrombosis, including:
   - Clotting (i.e. protein C activity, protein S activity, activated protein C resistance assays)
   - Chromogenic (i.e. antithrombin activity, protein C activity)
   - Immunoassays (i.e. free protein S antigen, protein C antigen, antithrombin antigen)
5. Pre-analytical variables that can affect results.
6. Normal reference values and the significance of abnormal results.
7. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match sample to patient unique identification.
c. Perform analysis for the investigation of thrombotic disorders according to standard laboratory procedures (e.g. thrombophilia screen).
d. Identify problems that may affect the result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.7 Haemostasis Abnormalities
Subsection 7.7c Lupus anticoagulant

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Principles and components of haemostatic pathways.
2. What is meant by the term 'lupus anticoagulant'.
3. Principles and significance of the screening tests for coagulation and the potential influence of lupus anticoagulants on them.
4. Effect of lupus anticoagulants on clotting based tests (e.g. international normalised ratio [INR], one-stage factor assays).
5. Principles and limitations of techniques to demonstrate the presence of lupus anticoagulants (e.g. screening, confirmatory and mixing tests for assays such as dilute Russell's viper venom time [dRVVT] and activated partial thromboplastin time [APTT]).
6. Interpretive procedures for distinguishing lupus anticoagulants from other causes of elevated clotting times.
7. Pre-analytical variables that can affect results.
8. Normal reference values and the significance of abnormal results.
9. Internal quality control and external quality assessment procedures.

COMPETENCE

Be able to:

a. Check the suitability of sample quality for analysis.
b. Match sample to patient unique identification.
c. Perform lupus anticoagulant screening assays in accordance with standard laboratory procedures.
d. Identify problems that may affect result and take corrective action.
e. Identify samples that may require further investigations or action.
f. Complete documentation (paper or electronic) in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 7.7 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 7.7 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8: (Optional)

Hospital Transfusion Practice

This section covers the range of procedures and diagnostic techniques that have been identified as being most relevant to practice as a specialist biomedical scientist working in haematology with an option in hospital transfusion practice. Candidates completing these sections are expected to be able to demonstrate the application of knowledge and skills defined in section 2 of this portfolio.

It is accepted that some of these tests may not be performed in the candidate's own laboratory. Whilst practical skills may not be achievable (for example through secondment to another laboratory) to the level of someone performing them regularly, knowledge and understanding of its application is still required and may be examined.

There may be other tests, outside of those listed in this portfolio, that are part of the training laboratory's basic repertoire in which the individual is required to be competent. These can be recorded in the reflective statement at the end of each sub-section

Section 8.1 Patient and Donor ABO/D Typing and Antibody Screening
Subsection 8.1a Routine ABO/D typing and antibody screening

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. The basis of the major blood group systems (e.g. genes, antigens and antibodies) and their clinical significance in transfusion medicine.
2. Principles of the indirect antiglobulin test (IAT), and of commonly used technologies available for detection of clinically significant antibodies.
3. Factors affecting antigen-antibody reactions *in vitro*.
4. Principles of serological tests used in manual and automated blood grouping and antibody screening, their appropriate use and potential sources of error.
5. Increased security afforded by the electronic transfer of ABO/D and antibody screening results from automation to the LIMS.
6. Specifications of reagents for patient blood grouping and antibody screening, the rationale behind their selection, and controls required depending on the testing system and methods used.
7. The use of potentiators in routine reagents and the potential difficulties in result interpretation.
8. Validation of reagents prior to use and actions to take in any cases where validation fails.
9. Minimum specifications for blood grouping in emergency situations, and before the issue of group compatible blood.
10. The relevance of erroneous and anomalous results of patient testing.
11. Internal quality control and external quality assessment procedures.
12. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Apply sample acceptance criteria and demonstrate understanding of the risks associated with inadequately labelled samples in transfusion.
b. Perform indirect antiglobulin tests (IAT) and demonstrate an understanding of possible sources of error dependent on the technology used and the patient's clinical condition.
c. Perform blood grouping and antibody screening tests using manual and automated methods.
d. Complete documentation accurately and in accordance with quality control and audit requirements, use IT and follow procedures to minimize the risk of transcription error.
e. Select and apply appropriate controls, recognise control failures and identify further actions required.
f. Interpret patient blood grouping and antibody screening results, recognise anomalies and identify further actions required.
g. Provide safe blood components for patients, where clinically necessary, before a confirmed ABO/D result can be established.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.1 Patient and Donor ABO/D Typing and Antibody Screening
Subsection 8.1b Investigation of ABO and RhD anomalies

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Clinical and laboratory factors that may affect results of ABO/D typing.
2. Clinical and laboratory factors that may lead to anomalous results of ABO/D typing.
3. Principle and practice of investigating blood group anomalies in specific patient groups (e.g. paediatric, elderly and immunosuppressed patients).
4. Principles and practice of investigating blood group anomalies in various clinical and technical scenarios, including:
   - Haemopoietic stem cell transplantation
   - Presence of cold agglutinins
   - Transfusion reactions
   - Potential 'wrong blood in tube'
5. The scientific basis and significance of ABO subgroups and weak/partial D types in patients.
6. Limitations of testing when using rare antisera.
7. How to interpret anomalous grouping results in clinical and laboratory circumstances and selection of safe and appropriate components for the patient.
8. Criteria and trigger factors for further testing or referral before a blood group can be assigned.
9. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Prepare samples and select reagents and controls.
b. Select appropriate tests to investigate ABO/D anomalies and perform them in accordance with standard laboratory procedures.
c. Interpret results of tests and controls and distinguish between normal, erroneous and anomalous results.
d. Assign appropriate blood groups to patients to ensure safe transfusion practice.
e. Identify samples requiring additional testing and possible referral.
f. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.1 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.1 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.2 Antibody Identification

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. The basis of the major blood group systems, characteristics of red cell antigens within each system and clinical significance of corresponding antibodies in pre-transfusion and antenatal scenarios.
2. Mechanisms of antigen:antibody reactions and their role in *in vivo* red cell destruction.
3. Principles, practice and application of the range of tests available to aid antibody identification.
4. How to positively identify antibody specificities using British Society of Haematology (BSH) guidance on inclusion.
5. How to systematically exclude antibody specificities as part of the antibody identification process.
6. Relevance of red cell phenotyping in antibody identification.
7. How to interpret results, recognise and deal with samples requiring further investigations.
8. Internal and external quality assurance procedures.
9. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Prepare samples, select reagents and controls.
b. Perform routine red cell antibody identification tests in accordance with standard laboratory procedures.
c. Interpret the result of antibody identification, and recognise cases requiring additional tests and/or clinical advice.
d. Recognise the likely clinical significance of the antibody specificities identified and select safe blood components for transfusion.
e. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.2 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.2 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.3 Red Cell Phenotyping

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Relevance of red cell phenotyping in pre-transfusion and antenatal testing.
2. Rationale for extended red cell phenotyping for patients on long-term transfusion support, and know which groups of patients may require blood matched for antigens other than ABO and D.
3. Situations in which red cell phenotyping cannot be performed and genotyping is required.
4. Selection of reagents and controls for red cell phenotypes.
5. Requirements for validation of reagents prior to use.
6. Relevance of antithetical groups when performing red cell phenotypes.
7. Internal quality control and external quality assessment procedures.
8. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Recognise situations where phenotyping will not give a reliable result.
b. Prepare samples and select reagents and controls.
c. Perform extended red cell phenotyping in accordance with standard laboratory procedures.
d. Identify appropriate antithetical and familial antigen groups required for a complete phenotype.
e. Interpret results and distinguish between normal, unusual, erroneous and abnormal results.
f. Complete documentation in accordance with quality control and audit requirements.
g. Identify samples requiring referral for additional testing.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.3 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.3 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.4 Selection of Red Cells and Components

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Criteria for the selection of donors and the mandatory tests performed on all donations.
2. Extended and additional testing performed on donations for specific patient categories (e.g. neonates).
3. Principles of blood component preparation, and the range of blood components available.
4. How to interpret tests and their results from other areas/disciplines of pathology (e.g. haematology and coagulation) in clinical context to determine transfusion requirements.
5. Alternatives to allogeneic blood transfusion.
6. Importance of communication with all staff groups involved in effective provision of transfusion support in routine and emergency situations.
7. Criteria for selection of red cells and components for patients with clinical conditions giving rise to special requirements (e.g. HSCT, IUT, neonates, AIHA, solid organ transplants, red cell antibodies).
8. Rationale for selection of red cells and components with additional specifications (e.g. irradiated, CMV negative, HbS negative, K- for females of child-bearing potential, phenotyped).
9. Relevant internal quality control and external quality assessment procedures.
10. Main requirements of national guidelines relating to the above.
11. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Determine what tests are required before issuing blood or components.
b. Select the appropriate blood component to meet the patient's special requirements.
c. Provide safe and effective blood and components for emergency use.
d. Provide transfusion support in cases of major haemorrhage, demonstrating the ability to communicate effectively with all parties involved.
e. Recognise the potential need for specialist products (e.g. cryoprecipitate, PCC).
f. Complete documentation in accordance with quality control and audit requirements.
g. Identify cases requiring specialist components, products or clinical advice.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.4 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.4 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.5 Pre-Transfusion Testing Procedures

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Importance of pre-transfusion testing in establishing compatibility.
2. Value of a historical record in pre-transfusion procedures.
3. The role of IT and automation in improving security in pre-transfusion testing.
4. Criteria for suitability of samples for serological crossmatching/electronic issue, depending on the patient's recent transfusion and obstetric history.
5. Principles and practice of serological compatibility testing.
6. Principles and practice of 'electronic' and remote issue of blood and components and the criteria for use.
7. How to investigate an incompatible serological crossmatch.
8. Internal quality control and external quality assessment procedures.
9. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Determine what tests are required before issuing blood or components.
b. Determine whether or not patients are suitable for electronic issue.
c. Perform necessary compatibility tests in accordance with standard laboratory procedures.
d. Clearly distinguish between normal and abnormal results.
e. Evaluate requests for further blood components to decide whether additional samples/tests are required before issue.
f. Complete documentation in accordance with quality control and audit requirements.
g. Identify cases where additional testing or clinical advice is required.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.5 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.5 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.6 Issuing of Blood Components and Products

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Correct procedures for the labelling and issue of blood components and products by the transfusion laboratory for patient use.
2. Subsequent storage requirements and expiry times of thawed plasma products.
3. Relevant storage and transport criteria for issued blood components/products.
4. Procedures for traceability, recall, restocking and disposal of blood components and products.
5. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Prepare fresh frozen plasma (FFP) and cryoprecipitate for issue.
b. Visually inspect blood components to ensure they are fit for use.
c. Label and issue blood components/products via IT systems to ensure complete traceability.
d. Manage requests for further red cells, components or products.
e. Manage return of unused blood components/products.
f. Complete documentation in accordance with quality control and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.6 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.6 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.7 Blood Stocks Management

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Risks associated with inappropriate care and handling of blood components and products.
2. Principles of appropriate use of blood and blood components.
3. The requirement for traceability from donor to patient and vice versa.
4. The role of stock management in the efficient use of blood.
5. The role of the Blood Stocks Management Scheme (BSMS).
6. Local policies and procedures and national guidelines covering all of the above, including emergency blood management where national stock levels are 'critical'.

COMPETENCE

Be able to:

a. Check stocks and place routine orders with blood services in accordance with standard laboratory procedures.
b. Order blood and blood components in routine and non-routine situations.
c. Sort and rotate stock to ensure the most efficient use of stock is achieved.
d. Collect data for the BSMS and act on feedback to minimise wastage.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.7 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.7 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.8 Adverse Reactions and Events in Transfusion

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Classification and characteristics of adverse reactions to transfusion.
2. Laboratory-based procedures for investigating suspected adverse reactions according to clinical presentation.
3. The process for internal and external recall.
4. The role of internal and external incident reporting (e.g. Serious Adverse Blood Reactions & Events [SABRE] / Serious Hazards of Transfusion [SHOT]) in reducing errors in blood transfusion.
5. Principles and application of root cause analysis.

COMPETENCE

Be able to:

a. Respond to reports of suspected adverse reactions/events in accordance with standard laboratory procedures.
b. Identify the probable 'type' of adverse reaction/event.
c. Identify the samples required and refer for appropriate testing.
d. Complete an internal and/or external recall in accordance with local laboratory procedures.
e. Perform repeat testing on pre- and post-transfusion samples in cases of suspected haemolytic transfusion reactions.
f. Interpret results in clinical context.
g. Recognise when referral for additional testing is required.
h. Complete documentation in accordance with quality control and audit requirement including relevant internal and external incident reporting.
i. Inform the clinical and transfusion specialist staff of the outcome of laboratory investigation.
j. Assess the need to report to SHOT and/or SABRE, and for internal SAE reporting.
k. Take part in root cause analysis if required.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.8 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.8 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.9 Antenatal Testing and Procedures

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Requirements for routine antenatal testing.
2. How to perform and interpret results of antenatal screening for red cell antibodies.
3. How identify samples requiring further investigation.
4. Clinical significance of red cell antibodies in the context of haemolytic disease of the fetus and newborn (HDFN).
5. Requirements for antenatal and post-natal follow up testing where clinically significant antibodies are detected.
6. Importance of communication in successful management of pregnancies in women with red cell antibodies.
7. Principles and application of routine antenatal anti-D prophylaxis (RAADP).
8. Principles of acid-elution/staining and flow cytometric methods for measuring fetal maternal haemorrhage (FMH).
9. How to interpret FMH results and instigate appropriate follow-up testing.
10. How to determine the dose of anti-D immunoglobulin required.
11. Local policies and procedures and national guidelines covering all of the above.

COMPETENCE

Be able to:

a. Perform routine antenatal and post-natal testing.
b. Identify cases where further investigation or action is required.
c. Provide appropriate antenatal anti-D prophylaxis as RAADP, and to cover potentially sensitising events.
d. Provide appropriate post-natal anti-D prophylaxis as a standard dose and to cover any identified FMH.
e. Perform routine FMH testing by acid elution.
f. Decide when samples require referral for additional or specialist testing.
g. Communicate with all staff groups involved to ensure delivery of anti-D prophylaxis and appropriate laboratory follow up of pregnancies where red cell antibodies are identified.
h. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.9 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.9 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.10 Haemolytic Disease of the Fetus and Newborn

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. Aetiology of haemolytic disease of the fetus and newborn (HDFN).
2. Significance of red cell antibodies in HDFN.
3. Criteria and methods for quantification of antibodies in pregnancy.
4. The need to differentiate between immune and prophylactic anti-D.
5. The role of paternal testing and fetal genotyping in monitoring HDFN.
6. Routine testing required on neonates and additional testing required when the mother has red cell antibodies.
7. Transfusion requirements for the treatment of HDFN.
8. Criteria for the selection of blood for intrauterine transfusion (IUT), exchange and top-up transfusions.

COMPETENCE

Be able to:

a. Prepare samples, and select correct reagents and controls for all testing.
b. Undertake compatibility testing and provide appropriate blood components for the fetus/neonate as IUT, exchange or top-up transfusion, in cases of HDFN due to red cell antibodies.
c. Perform a direct antiglobulin test (DAT) on cord blood sample and comment on the significance of the results.
d. Complete documentation in accordance with quality assurance and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

Date of completion:

Trainer's name:

Trainer's signature:

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Date of completion:

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One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

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Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.10 Reflective Practice

This section is used to demonstrate that you can relate knowledge from several areas, draw conclusions and reflect on your own performance with regard to current and future practice as an independent professional learner. It is therefore a useful source of information for your CPD profile should you be audited by the Health and Care Professions Council (HCPC).

The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce.*

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.10 Candidate's Reflective Practice Statement Part 2.

The ethos of undertaking reflective practice should be the recognition that it is a naturally occurring characteristic of those wishing to develop. How you complete this section is personal to your own circumstances. It should be approached by recognising you have a responsibility to demonstrate self-awareness when analysing gaps in your knowledge. This is therefore an opportunity to reflect on aspects of training, the application of new knowledge and skills, and how goals have been achieved.

Personal reflection on your training and examples of evidence for this section.

Section 8.11 Investigation of Red Cell Autoantibodies

KNOWLEDGE

The candidate is expected to be able to demonstrate knowledge and understanding of the following:

1. The main reasons for *in vivo* sensitisation of red cells with immunoglobulins and/or complement in autoimmune haemolytic anaemias and post-transplantation.
2. The mechanism of *in vivo* red cell destruction.
3. Principles and practice of direct antiglobulin techniques (DAT) using poly- and monospecific antiglobulin reagents.
4. How a positive DAT may influence results of pre-transfusion testing.
5. How to provide blood for patients with autoantibodies.
6. Internal quality control and external quality assessment procedures.
7. How to interpret results and deal with samples requiring further investigations.

COMPETENCE

Be able to:

a. Perform a DAT using poly- and monospecific reagents.
b. Interpret results of tests and controls, and distinguish between normal, erroneous and anomalous results.
c. Identify samples requiring further or additional testing.
d. Complete documentation accurately in accordance with quality control and audit requirements.

EVIDENCE OF ACHIEVEMENT

This section requires the trainer to sign that the candidate has successfully achieved fitness to practice as a biomedical scientist at the specialist level. The candidate is required to present the supporting evidence indicated below as a separate specialist portfolio of evidence.

Candidate has been assessed by the trainer to work in accordance with standard laboratory procedures. (No other evidence is required).

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Trainer's signature:

Candidate has answered questions set by the trainer on the knowledge and skill components required to complete this module. (Evidence to support this is required).

Date of completion:

Trainer's name:

Trainer's signature:

One other piece of evidence chosen by the candidate as an example of their competence in this area.

Date of completion:

Trainer's name:

Trainer's signature:

This is to confirm that the knowledge and competence requirements for this section and the requirements in the Evidence of Achievement section have been met.

Internal Assessor's signature:

Internal Assessor's name:

Date:

Section 8.11 Reflective Practice

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The external examiner will review this reflective report which should cross reference to the evidence contained in the portfolio. This may lead to further discussion during the *viva voce*.

Candidate's Reflective Practice Statement Part 1.

Summarise your role within the laboratory in the context of this section.

Section 8.11 Candidate's Reflective Practice Statement Part 2.

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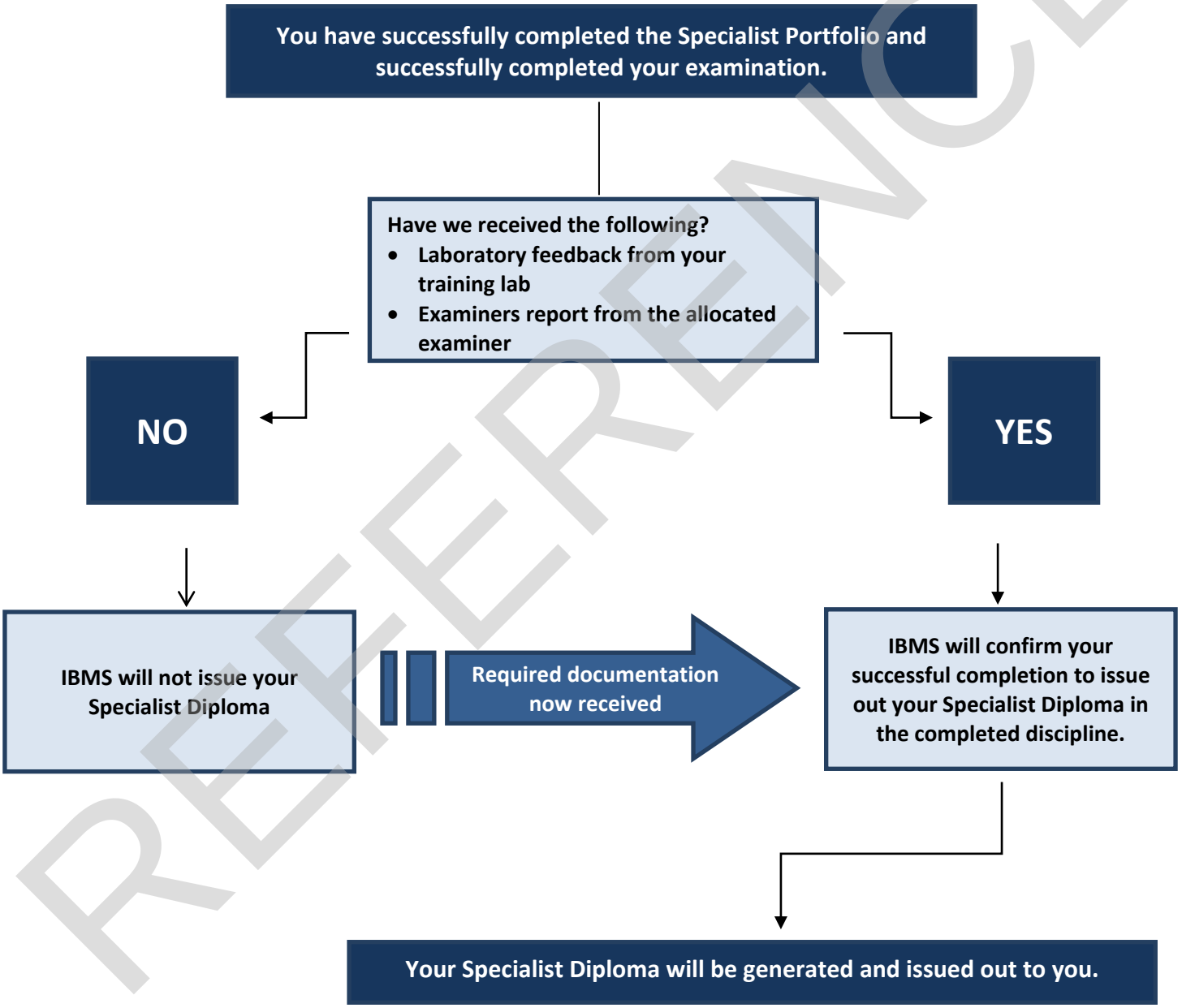
Personal reflection on your training and examples of evidence for this section.

Steps to IBMS Specialist Diploma

What is next: Your Specialist Diploma

Upon successful completion of the Specialist Portfolio, successful candidates are awarded the Specialist Diploma in the discipline(s) completed which will be issued out and sent to your provided address.

Note: The IBMS will also issue your award to your provided address.



About this document

Document title: Record of Laboratory Training for the Specialist Diploma in Haematology with Hospital Transfusion Practice

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Version: Version 4.2

Active date: July 2019

Review date: April 2021

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