



**Level 3 Composite Technician  
Apprenticeship (ST0094/1.1)**

**AM3 – Multiple-Choice Test  
Guidance**

**Version 3**

**Updated 02 April 2025**

# INTRODUCTION

The multiple-choice test gives you the opportunity to demonstrate the knowledge, skills and behaviours (KSBs) mapped to this assessment method within the Composite Technician standard.

Wherever possible you will undertake this test on the same day as the AM1 observation assessment. PIABC will advise you if this is not the case.

## KNOWLEDGE, SKILLS AND BEHAVIOURS (KSBs)

Your test will be assessing the following KSBs:

### KNOWLEDGE

K1	Composite industry awareness. Range of composite products. Manufacturing environments. Types of customers.
K3	Health and safety regulations and standards awareness. Control of Substances Hazardous to Health (COSHH). Display Screen Equipment. Electrical safety and compliance. Fire safety. Hand arm vibration (HAVS). Health and Safety at Work Act – responsibilities. Human factors, ergonomics. Legionella. Lifting Operations and Lifting Equipment Regulations (LOLER). Lone working. Manual handling. Noise regulation. Provision and Use of Work Equipment Regulations (PUWER). Slips trips and falls. The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR). Working at Height. Working in Confined Spaces.
K5	Environmental and sustainability regulations and guidance. Environmental hazards that can arise from composite operations. Environmental management systems standard. Environmental Protection Act. Environmental signage and notices.
K7	Definition of a composite. Interaction between resin and fibre. Types of core. Benefits of adding core. Advantages and disadvantages of composites.
K8	The characteristics of finished composite products and their various applications.
K9	The difference between thermoset and thermoplastics mechanical and thermal benefits, processing requirements, and re-cycling potential.
K10	Types of reinforcement materials aramid, carbon, glass, natural fibres, and thermoplastic fibres; processing, cost, performance, benefits, and limitations.
K11	Types of matrix materials bismaleimide, cyanate ester, epoxy, phenolic, polyester, vinylester, and bio-derived processing, cost, performance, benefits, and limitations.
K12	The manufacture of materials chopped strand mat, non-crimp fabrics, pre-impregnated, preforms, unidirectional, and woven reinforcements. Different weave styles plain, satin and twill; impact on drape and mechanical properties.
K13	Composite process materials and consumables peel plies, release agents, release films, sealant tapes, and vacuum bag; application and benefits of use.
K14	Hand lay-up techniques open moulding, spray lay-up, and pre-impregnated. Resin infusion, resin transfer moulding, and closed moulding using vacuum techniques.
K15	Awareness of automated lay-up automated fibre placement, automated tape layup, braiding, and filament winding.
K17	The curing cycle. Glass transition temperature (Tg). The science of pressure and vacuum.
K18	Principles of process control and instrument control methodology.
K30	Awareness of audits and their purpose.

## FORMAT

You will have 60 minutes to complete the test.

The test will consist of 40 questions. Each question will have four answer options, including the one correct answer.

A correct answer gets 1 mark. Any incorrect or missing answers get zero marks.

The test is closed book which means that you will have no access to any books or reference material whilst taking the test.

## LOCATION

The test will take place in a suitably controlled environment that is a quiet space, free from distractions and influence and in the presence of an invigilator.

## SAMPLE TEST

A sample test and marking scheme will be made available to you before the date of your test so you will know what to expect on the day.

Examples of the type of question and test paper layout:

**There is ONE correct answer to each question.**

**Choose the correct letter A, B, C or D and circle it on this test paper.**

1. Which of the following sectors is NOT typically a large user of composites? (1 mark)
  - (A) Aerospace
  - (B) Agriculture
  - (C) Automotive
  - (D) Energy
  
2. Which of these statements is NOT a key message in the Work at Height Regulations (2005)? (1 mark)
  - (A) Ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly
  - (B) Consider emergency evacuation and rescue procedures
  - (C) Ensure equipment is suitable, stable and strong enough for the job, maintained and checked regularly
  - (D) Maintain two feet and one hand on a stepladder at all times

(The answers to the above questions are: Q1 – B & Q2 – D)

## MARKS & GRADING

Your test will be assessed Pass or Fail; you will not be given no other grade.

Grade	Minimum Marks Required	Maximum Marks Required
Fail	0	27
Pass	28	40

## RESITS AND RETAKES

If you fails one or more assessment method(s) can take a re-sit or a re-take at your employer's discretion. Your employer would need to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, whereas a re-take does.

You would have a supportive action plan to prepare for a re-sit or a re-take.

Your employer and PIABC will agree the timescale for a re-sit or re-take. A re-sit is typically taken within 2 months of the EPA outcome notification. The timescale for a re-take is dependent on how much re-training is required and is typically taken within 4 months of the EPA outcome notification.

Failed EPA methods must be re-sat or re-taken within a 6-month period from the EPA outcome notification, otherwise the entire EPA will need to be re-sat or re-taken in full.