

Engineering Psychometric Tests

In the engineering sector, many companies use ‘tests’ as part of their recruitment process to assess the general abilities, intelligence and personal attributes/characteristics of candidates applying for jobs. These assessments are usually presented in the form of online or electronic tests and are often sent to candidates by email or undertaken at assessment centre stage.

While most tests are multiple choice type answers and do not always require previous knowledge to complete, they do require certain methods of logical thinking and are often time limited - so it is important to prepare for tests beforehand.

There are three main types of psychometric tests for engineering roles: **Engineer Aptitude Tests**; **Engineer Technical Tests**; and **Engineer Situational Judgement and Personality Tests**.

Detailed below is information on these tests along with some sample questions and links to practice tests:

Engineer Aptitude Tests

Aptitude tests are designed to assess general abilities and intelligence. The most common aptitude tests used for graduate engineering roles are:

- **Numerical Reasoning Tests**

These are mathematical tests that assess your numerical abilities. Questions often involve tables and graphs and ask you to calculate ratios and percentages based on the information presented to you.

To sample free numerical reasoning tests, please access the links below (PDF versions):

www.jobtestprep.co.uk/images/free-pdf/free-numerical-reasoning-test-questions.pdf

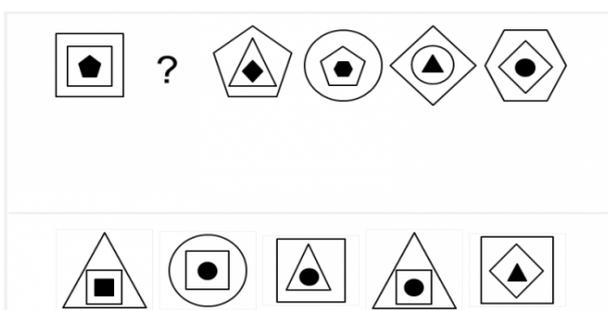
www.jobtestprep.co.uk/images/free-pdf/free-ukcat-questions-only.pdf

- **Inductive/Abstract/Diagrammatic Reasoning Tests**

Inductive, Abstract and Diagrammatic tests are different variations of reasoning tests that present you with shapes and images displayed in groups and sequences. You will need to work out particular patterns and rules in order to understand how to answer these types of questions correctly.

Answers often involve you working out where an image belongs in an assorted group of images or, alternatively, choosing an image that completes a chronological sequence.

Below is an example of an Inductive Reasoning question.



Question:

Choose the image that completes the pattern

In addition, please access the link below to sample a free logical/inductive reasoning test (PDF version):
www.jobtestprep.co.uk/images/free-pdf/free-logical-reasoning-questions-practice.pdf

- **Verbal Reasoning Tests**

These tests present you with paragraphs and texts and are designed to examine your comprehension abilities as well as verbal and logical skills. You will need to read certain excerpts very carefully and work out what information can and cannot be understood from the given text. Questions often ask whether a certain sentence can be considered “True”, “False” or “Cannot Say”.

Please access the link below to sample a free verbal reasoning test (PDF version):
www.jobtestprep.co.uk/images/free-pdf/free-verbal-reasoning-questions-only.pdf

- **Spatial Ability Tests**

Spatial Ability tests often seem similar to Inductive/Abstract/Diagrammatic tests in that they involve images and shapes. The difference is that Spatial Ability tests assess your spatial understanding and how well you perceive images in 3 dimensions. You will be required to visualise a number of 2d and 3d images in your head and work out how they appear when rotated in different ways.

To sample a free spatial ability test, please access the link below (PDF version):
www.jobtestprep.co.uk/images/free-pdf/free-spatial-reasoning-questions-practice.pdf

- **Fault Diagnosis Tests**

Fault Diagnosis tests are especially likely if you are applying for a position as an electrical engineer or technician. They often present you with diagrams made up of switches and circuits and test your logical reasoning skills when looking for faults or errors in the electrical boards or systems presented.

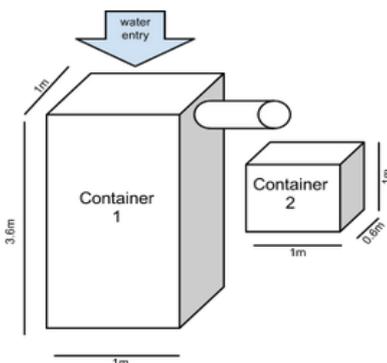
Please access the link below to sample a free fault diagnosis test:
www.psychometric-success.com/downloads/download-fault-diagnosis-practice-tests.htm

Engineer Technical Tests

In addition to aptitude tests, many employers of engineers also use examinations that specifically test technical and engineering knowledge. These tests are also referred to as ‘Mechanical Ability’ tests and often deal with subjects such as:

- Electricity - electrical currents, circuits and voltages
- Physical forces - motion, gravity, pressure, acceleration, friction etc.
- Calculations such as area or mass
- Pulleys and levers
- Magnetism
- Dynamics of liquids as well as water and air pressure
- Terminologies, conventions and tools

Below is an example of a Mechanical Ability question:



Question:

How long will it take for the second container to become completely full, when using a tube with flow rate of 1 [litre/second] to fill it?

- a.) 10 minutes b.) 42 minutes c.) 70 minutes

To sample further mechanical ability questions, please access the following link (PDF version):
www.jobtestprep.co.uk/images/free-pdf/free-mechanical-aptitude-questions-answers.pdf

Engineer Situational Judgement and Personality Tests

These tests differ from the aptitude and technical tests as they are not designed to assess either general abilities or knowledge based skills. Rather, employers use these tests to find out more about personal attributes and characteristics.

- **Situational Judgement Tests**

Situational Judgment Tests (or SJTs) will present you with a number of work based scenarios involving a conflict or dilemma. You will then be required to solve the problem by selecting the best possible solution or action to take based upon a series of options.

To sample free situational judgement questions, please access the link below (PDF version):
www.jobtestprep.co.uk/images/free-pdf/free-sjt-questions.pdf

- **Personality Tests**

Personality tests (or questionnaires) are designed to assess particular characteristics of a job applicant and ascertain whether he/she has the relevant personality traits to perform in the job. To help prepare for these tests, it is advisable to research the organisation you are applying for and gain an understanding of their core values and also what qualities they consider important in an employee.

For more information on personality tests, please access the link:
www.jobtestprep.co.uk/personalityfree.aspx

Further Help

Please visit Purple Door if you need further assistance with psychometric testing. You can access books, in-tray exercises and further sample tests to strengthen your psychometric testing ability as well speak to a member of our team for advice and support.

Further example tests are also available at:

- www.shldirect.com - SHL provide sample questions and practice tests on verbal and numerical reasoning, inductive reasoning and mechanical ability.
- www.assessmentday.co.uk - Assessment Day help job seekers become familiar with the style and layout of different psychometric tests and provide a variety of practice tests.
- www.prospects.ac.uk - Prospects provides links to lots of sample test sites.

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