
TEST INFORMATION GUIDE

The test information guide provides a summary of concepts that are tested on the written multiple-choice examination for the **Engineering Technician I** job. This information can be reviewed in combination with the class specification and examination announcement to assist you in preparing for the examination.

I. ENGINEERING EQUIPMENT & TERMINOLOGY (12 Questions)

It is critical that employees in this job have extensive knowledge of engineering equipment and terminology. This knowledge enables employees to verify the accuracy of plans, conduct site investigations, take measurements and evaluate specifications as well as technical engineering reports. Test question topics include:

- Surveying equipment (level; transit; GPS; EDM equipment; range poles; etc.) and its use;
- Surveying and engineering measurements;
- Map reading.

II. SURVEYING METHODS (12 Questions)

Employees in this job must be able to utilize a wide variety of surveying techniques in order to successfully perform their jobs. Surveying skill is critical to this job as is the capacity to design and draft engineering plans and specifications. Test question topics in this section include:

- Recording of surveying measurements;
- Common surveying abbreviations;
- Survey points and line bearings;
- Angle measurement.

III. SURVEYING COMPUTATIONS (12 Questions)

An employee in this job must have knowledge of relevant computational methods and be able to accurately compute field survey data in order to interpret and make reports of these data. Test question topics covered in this section include:

- Determining gradients;
- Computing grade elevations;
- Common methods to compute earthwork excavations;
- Marking survey stakes.

IV. MATHEMATICS (10 Questions)

This job requires the use of math skills in a variety of job tasks including preparing cost estimates and analyzing engineering specifications. An employee must be competent in the use of higher math skills such as geometry, trigonometry and algebra. This section of the exam tests your command of these math skills and your ability to recognize the appropriate situations in which to use and then correctly apply these mathematical techniques.

--OVER--

V. DRAFTING

(12 Questions)

Employees in this job must be able to design and draft plans and specifications from field surveys, rough sketches and notes as well as assist in the review drawings created by other staff. Since most drafting is automated using CAD software, it is important for employees to have a grasp of CAD terminology and techniques as well. Specific test question topics include:

- General drafting concepts (e.g., extension lines; broken lines; object views; oblique drawings)
- Computer files used in CAD software;
- Use of coordinate points in CAD software;
- Windowing areas in CAD software;
- Use of TIN models.