Preparation Guide

Diagrammatic Reasoning

This preparation guide helps you prepare for diagrammatic reasoning aptitude tests. It provides guidance on how best to approach the test, allowing you to give your best possible performance.

Why are Aptitude Tests used?

Employers often use aptitude tests as part of their assessment procedures for the selection and development of staff. Research has shown that they are powerful predictors of performance at work.

Tests help you to:
- demonstrate your strengths
- be assessed fairly on job relevant criteria
- find out more about your strengths and development needs
- make future career decisions based on your abilities

Tests help employers to:
- select people best suited to the demands of the job
- identify areas where individuals might benefit from further development
- obtain objective information about people’s abilities

Instructions

On the following pages are some practice questions that are similar to those you will be presented with in the actual test. Completing these will help you to understand the types of questions used and to gain experience in taking ability tests.

These questions are designed to assess your ability to understand logical processes. For each set of questions there is a panel and an illustration. The panel describes the effect of various operators in words. The illustration shows the operators working. Use the information in the panel and illustration to answer the questions that follow. Each question contains a question mark ‘?’.

Your task is to identify which of the answer options could replace the ‘?’ that indicates a missing INPUT, PROCESS or OUTPUT.

Some operators change the shape (triangle/circle), the size (big/small) or the shading (light/dark) of the symbols in the INPUT sequence. Other operators delete, duplicate or reorder symbols.

Operators either affect all figures in the same way or only affect some figures according to certain rules. The effect of each operator is either fully defined in the panel or partly defined. Partly defined operators state ‘(see illustration)’ and require you to work out their effect from the illustration.

Where the process consists of more than one operator, the operators are applied in sequence from left to right.

Have a pen and paper to hand to indicate your answers and make notes.

The actual test is strictly timed. Try to complete each set of 4 questions within 2 minutes.

Turn to page 2 and begin.
Practice Questions 1-4

**Panel**

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>EFFECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>Changes shading of all figures</td>
</tr>
<tr>
<td>U</td>
<td>Swaps 1st and 3rd figures</td>
</tr>
<tr>
<td>V</td>
<td>Changes 1st figure (see illustration)</td>
</tr>
</tbody>
</table>

**Illustration**

<table>
<thead>
<tr>
<th>INPUT</th>
<th>PROCESS</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>△ ○</td>
<td>T</td>
<td>△ △ ○</td>
</tr>
<tr>
<td>△○ ○</td>
<td>U</td>
<td>○○ ○</td>
</tr>
<tr>
<td>○△</td>
<td>V</td>
<td>△ △</td>
</tr>
<tr>
<td>△△</td>
<td>V</td>
<td>○•○</td>
</tr>
</tbody>
</table>

1. ? → T → △ △ ○
   - A: △ △ ○
   - B: △ △ ○
   - C: ○○ ○
   - D: △ △ ○

2. △ ○ → ? → □ □
   - A: △ ○
   - B: △ ○
   - C: □ □
   - D: □ □
   - T: △ ○
   - V: △ ○
   - TV: △ ○
   - VT: △ ○

3. □ □ → U → ?
   - A: □ □
   - B: □ □
   - C: □ □
   - D: □ □
   - UT: □ □

4. ? → T → △ △ △
   - A: △ △ △
   - B: △ △ △
   - C: △ △ △
   - D: △ △ △
   - T: △ △ △
   - V: △ △ △
   - TV: △ △ △
   - VT: △ △ △
## Practice Questions 5-8

### PANEL

<table>
<thead>
<tr>
<th>OPERATOR</th>
<th>EFFECT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Changes shading of triangles</td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>Changes size of circles</td>
<td></td>
</tr>
<tr>
<td>@</td>
<td>Changes light figures (see illustration)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INPUT</th>
<th>PROCESS</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Input" /></td>
<td><img src="image2" alt="Process" /></td>
<td><img src="image3" alt="Output" /></td>
</tr>
<tr>
<td><img src="image4" alt="Input" /></td>
<td><img src="image5" alt="Process" /></td>
<td><img src="image6" alt="Output" /></td>
</tr>
<tr>
<td><img src="image7" alt="Input" /></td>
<td><img src="image8" alt="Process" /></td>
<td><img src="image9" alt="Output" /></td>
</tr>
</tbody>
</table>

#### 5

```
5  A B C D

?       +       @
○ △ •   ○ △ •   ○ △ •   ○ △ •
○ △ •   ○ △ •   ○ △ •   ○ △ •
```

#### 6

```
6  A B C D

@       ?       #
● △ •   ● △ •   ● △ •   ● △ •
● △ •   ● △ •   ● △ •   ● △ •
```

#### 7

```
7  A B C D

@       ?       #
● △ •   ● △ •   ● △ •   ● △ •
● △ •   ● △ •   ● △ •   ● △ •
```

#### 8

```
8  A B C D

@       ?       #
● △ •   ● △ •   ● △ •   ● △ •
● △ •   ● △ •   ● △ •   ● △ •
```
Try to answer any questions you did not reach in the time limit before checking your answers.

**Checking your Answers**

Check your answers against the correct answers at the bottom of this page. Look at any questions you got wrong and try to understand how to arrive at the correct answer. Keep in mind that most aptitude tests are designed to increase in difficulty and that people typically do not complete all the questions within the time limit. If you took much longer than 4 minutes to answer the questions, try to speed up your work rate. If you finished all of the questions within the time limit but made many mistakes, try focusing on the accuracy of your responses.

**Improving your Diagrammatic Abilities**

Some tips for improving diagrammatic abilities are provided below:

- Examine diagrams in books and newspapers.
- Study flowcharts of processes and procedures.
- Improve your logic by solving puzzles.
- Try to clarify different types of relationships within diagrams.
- Create diagrams in order to illustrate sequences of events.

**Before the Session**

- Follow the suggestions given in this preparation guide.
- Get a good night's sleep before the test session.
- Make sure you are wearing or bring with you glasses, contact lenses, hearing aids or anything else you may require for the session.
- If you have any special requirements, such as larger print versions of the test, specific lighting or seating needs, it is important that you make these known as soon as possible prior to the session to allow for appropriate accommodations to be made.

**During the Test**

- Try to stay calm; using the practice tips provided Using the practice tips above should help you feel more at ease.
- Follow the instructions carefully, and ask questions if you are not sure of anything before the test starts.
- Read each question carefully.
- Work as fast as you can. Do not spend too much time on any one question.
- If you find a question too difficult or are unsure of an answer indicate your best choice and move on quickly.
- After completing a test always seek feedback. It is much easier to improve your abilities if you know how well you have done.

Good luck in your test session. We wish you every success in your career.