OETT Apprenticeship Program Entrance Exam Study Guide 2023

This study guide was developed to assist you in being prepared for what to expect on the Entrance Exam. However, it is just a GUIDE. You are advised to use what you are introduced to in the guide and find additional resources to assist you in studying.

In this study guide you will find:

- o Resources and links to material to help you be prepared for the OETT entrance exam.
- o Test breakdown and brief explanation of each section of the OETT entrance exam.
- o OETT entrance exam terms and concepts to be familiar with.

Online Links to Study Resources:

- **Mechanical Aptitude:**
  - o Bennet Test App download – has questions very similar to the OETT entrance exam.
    https://play.google.com/store/apps/details?id=com.alexuvarov.bennettest&hl=en
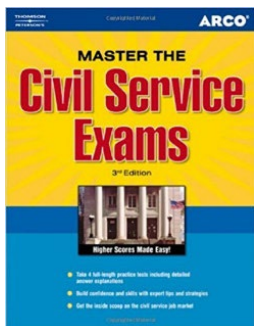
- **Mathematical tutoring**: YouTube Math Antics

- **Good for Vocabulary, Math, and Mechanical Aptitude:**
  - o **ASVAB** FREE ASVAB Practice Test 2023 | ASVABTutor.com
  - o **YouTube** - find video demonstrations that will help tutor you: Example, how force is applied - YouTube
    - You want to know how <u>force</u> works? In YouTube search bar type, "how does force work," and video clips explaining <u>force</u> will be displayed.
    - Math tutor example, how to convert fractions to decimals - YouTube, type in "how to convert fractions to decimals," and video clips explaining it will be displayed.

- **Vocabulary terms:** look up definitions, synonyms, and antonyms @ http://www.dictionary.com/ and http://www.synonym.com.
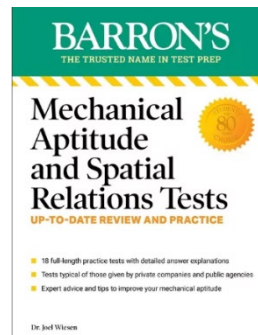 - o Great verbal reasoning resource –https://www.fibonicci.com/

- # Useful Study Guides:

  Master the Civil Service Exams, 3rd Edition, by Shannon R. Turlington

  Chapters to Study
  - 5 – Synonyms
  - 7 – Verbal Analogies
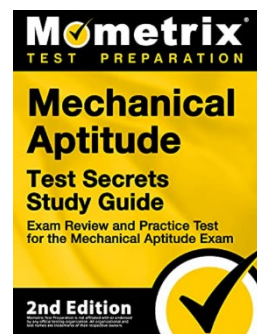 - 15 - Fractions/Decimals
  - 16 - Percentages/Ratios

  Barron's **Mechanical Aptitude and Spatial Relations Test**, 2023 Edition, by Dr. Joel Wiesen

  Chapters to Study
  - Ch's 1-6 only
  - Relevant Practice Tests in back of book

  How2Become **Mechanical Comprehension Tests**, 2017 Edition

  Study all Chapters

  Mometrix Test Preparation **Mechanical Aptitude Test Secrets Study Guide**, 2023 Edition

  Chapters to Study
  - 1st 11 Sections
  - Relevant Practice Tests

OETT Entrance Exam Breakdown

**100 Multiple Choice
questions
Length - 60 minutes**

Content Area	# of Questions	Brief Explanation
<u>Vocabulary and Verbal Expression</u> • Synonyms - words that mean the same thing. • Antonyms – words that mean the opposite. • Verbal Analogies – word relations.	**35**	When faced with synonym questions, match the term to the word or phrase closest in meaning. Read the question carefully, as it may ask which word does not belong. In that case, it would be the antonym.
<u>Basic Mathematics & Reasoning</u> • Addition, Subtraction, Division and Multiplication o Applying these techniques to fractions and decimals • Converting fractions to decimals and decimals to fractions • Knowing how to read a basicgraph/table • Knowing how to round to the nearest 10th and 100th • Knowing how to calculate percentages	**20**	Applying these basic mathematical techniques to construction related problems, such as: • adding up pieces of wood • calculating how much it costs for materials by the inch, foot, yard • calculating hourly rate of pay and averages • calculating square and cube footage • calculating radius from diameter • Calculating volume and rate of flow

<u>Mechanical Aptitude</u>
• Gravity, weight and movement of swinging and falling
• Understanding how force and mechanical advantage works as it pertains to:
   - weight distribution for levers
   - pulleys
   - wheel/axel radius
   - gears, gear ratios and revolutions p/min (rpm)
• Understand linear speed, friction, resistance & velocity
• Understand centrifugal force &
	45	Ability to:
		• See relationships among different parts of mechanics.
		• Understand basic physics related to work force.
		• Identify basic geometrical shapes
		• Comprehend movement and mechanical advantage.
		
		Know the difference of these shapes – cone, box, cylinder, triangle, pyramid, circle, sphere, cube, rectangle and square.

<u>Units & Calculations to be familiar with:</u>

- How many inches are in a foot
- How many feet are in a yard
- How many cubic feet are in a cubic yard
- How to use a ruler or tape measure
- Finding area of a square and/or a rectangle
- Finding volume of a box
- Difference between diameter and radius
- How to calculate an average

TERMS and CONCEPTS to know - understand cause and effect, how, what, where, why and when for each term/concept. How do the terms/concepts relate to our everyday lives?

Mechanical Advantage	Gravitational Force	Percentage
Pulley Systems and Mechanical Advantage	Motion and Projectile	Decimal Place
	Linear Speed	Feeler Gauge
Basic physics of Force	Friction as Resistance	Ruler
Weight Distribution as its applied to a Lever and Effort Force	How a Pendulum works regarding its mass and movement	Average
		Square Surface Area
Centrifugal Force	How Cooling and Heating of a substance works	Diameter
Velocity		Radius
Gear Systems	Flow Rate	Circumference
Gear Teeth Ratios and RPM	Weight Density and Buoyancy	Volume
Rate of objects falling	How to read a Graph	Cubic Yard
How Projectiles work	Order of Operations [PEMDAS]	Cubic Foot

Testing Hints

- Read each question carefully and more than once. Don't let the pictures in the mechanical aptitude section mislead you!!! You may think you know the answer but think about them and utilize problem solving skills before you chose the most obvious answer.
- When you don't know an answer, begin to eliminate the answers you know are incorrect. Through the process of elimination, you will have a better chance of making a good guess.