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ABSTRACT

The outline presents a specialized course in recording basic technical and scientific terms in shorthand, including intensive practice in taking dictation and transcribing materials related to these areas with a high degree of speed and accuracy. It includes spelling, pronunciation, and definitions of the most-used technical and scientific terms, and the role and ethics of a good technical secretary. The document consists of a list of the performance objectives, an outline of the course content, suggested teaching procedures, evaluative instruments used, and a list of resources for teachers and students. Appended are sample test items. (Author/BP)

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AUTHORIZED COURSE OF INSTRUCTION FOR THE



QUINMESTER PROGRAM

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TECHNICAL DICTATION & TRANSCRIPTION

Business Education--7707.44 (New: 7755.44)

DADE COUNTY PUBLIC SCHOOLS

DIVISION OF INSTRUCTION • 1971

ED 097573

TECHNICAL DICTATION & TRANSCRIPTION

7707.44 (New: 7755.44)

Business Education

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Written by Ruth Valenti
And Approved by the Business Education Steering Committee
For Quinmester Courses

for the

DIVISION OF INSTRUCTION
Dade County public Schools
Miami, FL 33132
1973

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I. COURSE TITLE--TECHNICAL DICTATION & TRANSCRIPTION

II. COURSE NUMBER--7707.44 (New: 7755.44)

III. COURSE DESCRIPTION

A. Synopsis

A specialized course in recording basic technical and scientific terms in shorthand; intensive practice in taking dictation and transcribing materials related to these areas with a high degree of speed and accuracy; includes spelling, pronunciation, and definitions of the most-used technical and scientific terms, also the role and ethics of good technical secretary.

B. Textbook

One or more of the state adopted typing textbooks and/or one of the department's choosing.

C. Occupational Relationships

Technical secretary (electronic, engineering, architectural, etc.)
Scientific secretary (marine, meteorological, entomological, etc.)

IV. COURSE ENROLLMENT GUIDELINES

A. Prior Experiences Needed

Students enrolled in this course should have attained the objectives of Advanced Dictation and Transcription. Technical Typewriting (New: 7766.34) would be helpful. It is recommended that the student consult a business teacher for help in selecting other courses that would improve skills needed in his occupational choice.

B. Pretest

This test should be used to determine whether the student has attained the objectives of the preceding course and/or the objectives of this course. It should also help the teacher determine individual placement within the class.

V. COURSE OF STUDY PERFORMANCE OBJECTIVES

Upon successful completion of this course, students will be able to--

1. take practiced technical and scientific dictation at a minimum rate of 100 wpm for 5 minutes and transcribe their notes on a typewriter with 95 percent accuracy;
2. take unfamiliar technical and scientific dictation at a minimum rate of 90 wpm for 5 minutes and transcribe their notes on a typewriter with 95 percent accuracy;
3. type at a minimum rate of 30 wpm for 5 minutes from straight-copy scientific material with a 3-error cutoff;
4. transcribe technical letters and scientific reports from shorthand notes, using correct spelling, punctuation, grammar, capitalization,

V. COURSE OF STUDY PERFORMANCE OBJECTIVES, Continued

- sentence structure, letter placement, and paragraphing, at a minimum rate of 10 pram;
5. take office-style technical and scientific dictation and transcribe their notes on the typewriter with 95 percent accuracy.
 6. define at least 25 given technical and scientific terms using the dictionary and appropriate reference materials, and spelling the sounds of the words;
 7. write from dictation shorthand outlines for 50 technical and scientific terms and transcribe them with 80 percent accuracy; and
 8. demonstrate personal qualities, traits, and attitudes of a legal secretary through good habits and self-evaluations.

VI. COURSE CONTENT

- A. Equipment and Supplies--In addition to those listed in Shorthand Theory (Introductory) and/or Introduction to Machine Shorthand Theory (electric typewriters)
 1. Typing paper
 2. Office forms
 3. Letterheads
 4. Envelopes--various sizes
 5. Onion skin or second sheet paper
 6. Carbon paper and index cards
 7. Typing erasers, correction tape, or correction fluid
 8. Pencil or soft eraser (for carbon copies)
 9. Optional: at least one typewriter with a mathematics keyboard or a Selectric typewriter with technical elements
- B. Skill Building
 1. Shorthand dictation
 - a. Technical and scientific material
 - b. Speedbuilding--to break plateaus
 - c. Difficult material--to develop ability to form new outlines
 - d. Office-style dictation
 2. Timed writings
 - a. Standard straight copy
 - b. Technical and scientific copy
 3. Shorthand transcription
 - a. Plate notes of technical material
 - b. Shorthand notes of copied shorthand material
 - c. Dictated shorthand material
 - d. Transcription for "meaning" drills
 4. Technical shorthand vocabulary
 - a. Intensive practice of words and phrases that were written incorrectly by students in shorthand notes
 - b. Abbreviations of shorthand outlines

VI. COURSE CONTENT, Continued

- c. Lists of technical shorthand vocabulary derived from class work
 - d. Shorthand notes written from paragraphs in technical periodicals
- C. Brief Review of Acceptability Standards
- 1. Rough draft drills
 - 2. Proofreading drills from shorthand notes
 - 3. Proofreading drills from typed material
 - 4. Erasing practice drills
- D. English-Related Drills--Technical and Statistical Terms
- 1. Punctuation and capitalization
 - 2. Word division and formula division
 - 3. Spelling, pronunciation, and definitions of technical vocabulary terms
 - 4. Correct use of technical words and terms
 - 5. Numerical usage
- E. Production of Letters and Memorandums
- 1. Business letter--block and modified block
 - 2. Punctuation--mixed and open
 - 3. Interoffice memorandums
 - 4. Envelopes
 - 5. Carbon copies
 - 6. Correct letter placement estimated from shorthand notes
- F. Mathematical Symbols and the Greek Alphabet
- 1. Special typewriter keyboards or elements for IBM Selectric
 - a. Chemical
 - b. Engineering
 - c. Mathematical
 - d. Weather Bureau
 - e. Air Navigation
 - 2. Changeable typebars, such as typits for use with standard keyboards
 - 3. Transfer letters
 - 4. Template used with pen
 - 5. Combination of regular typewriter keys and pen
- G. Role and Ethic of a Technical Secretary
- 1. Confidential nature of work
 - 2. Organization of time and work
 - 3. Good human relations
 - 4. Necessity of assuming responsibility
 - 5. Mature character traits

VII. SUGGESTED PROCEDURES, STRATEGIES, AND LEARNING ACTIVITIES

A. Course Strategy and Method

The methodology to be utilized should be directed toward training the student primarily in taking and transcribing technical materials. Emphasis in dictation should be on developing the student's ability to write, phrase, and abbreviate technical words.

Previously learned skills may be reinforced through practice sessions in shorthand dictation, transcription, and timed writings, and through performance tests.

Introduction of technical terminology should include sufficient practice material to enable the student to attain a high degree of proficiency and accuracy in recording and transcribing technical dictation.

The student should be permitted to work at his own rate (above the established minimums) and to investigate learning experiences that will satisfy himself and his teacher that he has attained sufficient competency for employment as a stenographer in the technical or scientific area of his choice.

B. Skill Building

Shorthand dictation should be given on a daily basis. While the majority of the dictation practice should be from technical material, other material should be used occasionally to maintain the student's speed at a previously acquired level and to break speed plateaus. As new technical words are encountered in dictation or other material, students should be encouraged to develop their own shorthand outlines and list them, rather than habitually copying lists of shorthand outlines. It is advised that this list contain the definition and pronunciation of each word as well as the shorthand outline.

Typewriting timed writings should be given occasionally so that the student will maintain and/or increase the skill he has previously acquired. Short timings of one minute should be given on straight copy, technical and scientific copy, sentences, and shorthand copy to increase accuracy and build speed.

Shorthand transcription should include a wide variety of sources--students notes, plate notes--keeping in mind that the student should transcribe for the meaning of the paragraph. Emphasis should be placed on neatness and accuracy. Mailability in scientific materials is complete accuracy.

C. Acceptability Standards

The student should be well trained in all phases of error correction. Proofreading tests and drills should continue on typed

VII. SUGGESTED PROCEDURES, STRATEGIES, AND LEARNING ACTIVITIES, Continued

material because much source material that the technical secretary uses is rough draft material.

The student should also be trained in making changes, corrections, and insertions in shorthand notes. All special instructions concerning each set of notes should be written at the beginning of the notes so that they will not be overlooked. A colored pencil highlights these changes as well as marks made while proofreading shorthand notes.

D. English Drills

English-related drills should be used periodically to reinforce previous learning. Topics such as punctuation and capitalization, word and formula division, and correct use of numbers should be included.

Grammatical errors made by the dictator should be corrected as a matter of course unless this practice is opposed by him. Spelling, vocabulary, and punctuation tests should be used to acquaint students with technical terminology. Students should also receive training in correct use of technical words and terms and be able to decide on the correct term to use in a given sentence.

E. Production of Letters and Memorandums

In the typing of letters and memorandums, emphasis should be placed on mailability. Proper placement of the letter should be estimated from the length of shorthand notes.

F. Mathematical Symbols and the Greek Alphabet

The student should receive information and practice on some of the special or interchangeable keyboards. A working knowledge of methods of "making" the mathematical symbols and the Greek alphabet should be developed. Broad skills in this area will be obtained in the course, Technical Typewriting.

G. Role and Ethics of a Technical Secretary

Since many scientific and technical secretaries process classified information, it is necessary to stress adherence to ethics when a student becomes a technical secretary. Mature personality traits are especially vital to a technical secretary--such as good organization of time and work, ability to get along well with other people, and the necessity of assuming responsibility. Other necessary personal traits include honesty, punctuality, attention, concentration, neatness, and initiative.

VIII. EVALUATIVE INSTRUMENTS

A. Tests

Suggested items for tests may be found in the sample evaluative instruments in the Appendix.

<u>TYPE</u>	<u>PURPOSE</u>
Shorthand Dictation and Transcription Test	To determine if the student is able to take technical dictation at suggested speeds and transcribe notes with 95 percent accuracy.
Letter Test (including addressing of envelopes)	To determine if the student can transcribe his notes in mailable form in a given amount of time.
Timed Writings	To determine if the student is increasing his speed on technical copy; 5-minute timed writings.
Spelling Test	To determine if a student can spell scientific and technical words
Definitions and Pronunciation Test	To determine if a student can match definitions with scientific words and then pronounce them correctly. (This test would have to be administered individually or the student could write the phonetic spelling of the word instead of giving the oral pronunciation).
Technical & Scientific Shorthand Word Test	To determine if a student can write an acceptable shorthand outline for a list of 50 words.

B. Grading

There is no "one" method of grading considered the best. It is suggested, however, that there be consistency in grading throughout the course.

All dictation/transcription work should be evaluated on the basis of its relationship to the standards included in the objectives.

When production tests are graded, it is recommended that Net Production Rate a Minute (Net PRAM) be used.

Objective tests (such as spelling and timed writings) may be graded on pre-determined standards if desired. Scores may also

VIII. EVALUATIVE INSTRUMENTS, Continued

be placed in rank order and letter grades assigned, using the objectives as the minimum skills for a passing grade.

IX. RESOURCES FOR STUDENTS

A. Books

Adams, Dorothy and Kurtz, Margaret. The Technical Secretary: Terminology and Transcription. New York: Gregg Division of McGraw-Hill Book Co., 1970.

Lojko, Grace K. Typewriter Techniques for the Technical Secretary. Englewood Cliffs: Prentice-Hall, 1972.

Pascale, Alfred C. The Secretarial Specialist. Providence, RI: Programs for Achievement in Reading, Inc. 1971.

B. Supplementary Books

Adams, Dorothy and Kurtz, Margaret. Workbook for the Technical Secretary: Terminology and Transcription. New York: Gregg Division of McGraw-Hill Book Co., 1970.

A Manual of Style. Chicago: University of Chicago Press. 12th edition, 1969.

Bennett, H. Concise Chemical and Technical Dictionary, 2nd ed. 1962. Brooklyn: Chemical Publishing Co., Inc.

Chandor, Anthony. A Dictionary of Computers, 3rd edition. Baltimore: Penguin Books, Inc., 1971.

Clark, George L. and Hawley, Gessner G. Encyclopedia of Chemistry. New York: Reinhold Book Co., 2nd edition, 1966.

Dunford, Nelson. A Handbook for Technical Typists. New York: Science Publishers, Inc., 1964.

Gavin, R. E. and Hutchinson, E. L. Reference Manual for Stenographers and Typists, 3rd edition. New York: Gregg Division of McGraw-Hill Book Co., 1961.

Handbook for Authors of Papers in the Research Journals of the American Chemical Society. Washington: American Chemical Society Publications, 1965.

Handel, Samuel. A Dictionary of Electronics. 3rd edition. Baltimore: Penguin Books, Inc., 1971.

House, Clifford and Koebele, W. H. Reference Manual for Office Personnel. 5th edition. Cincinnati: South-Western Publishing Co., 1970.

IX. RESOURCES FOR STUDENTS, Continued

- House, Clifford. Typewriting Style Manual. Cincinnati: South-Western Publishing Co., 1968.
- James, Glenn and James, Robert C. Mathematics Dictionary, 3rd edition. Princeton: D. Van Nostrand Co., Inc. 1968.
- Laird, Eleanor. The Engineering Secretary's Complete Handbook, 2nd edition. Englewood Cliffs: Prentice Hall, 1962.
- Leslie, Louis. 20,000 Words, 6th edition. New York: Gregg Division of McGraw-Hill Book., 1971.
- Rose, Arthur and Elizabeth. Concise Chemical and Technical Dictionary, 7th edition. New York: Reinhold Publishing Co., 1966.
- Schultz, Howard and Webster, Robert W. Technical Report Writing. New York: David McKay Co., 1962.
- Silverthorn, J. E. and Perry, Devern. Word Division Manual, 2nd edition. Cincinnati: South-Western Publishing Co., 1970.
- Stafford, Alison R. and Culpepper, Billie. The Science-Engineering Secretary, 2nd edition. Englewood Cliffs: Prentice Hall, 1963.
- Tver, David, F. Dictionary of Business and Scientific Terms, 2nd edition. Gulf Publishing Co., 1961.
- Uvarov, E. B. A Dictionary of Science, 3rd edition. Baltimore Penguin Books, Inc., 1971.
- Weisman, Herman M. Basic Technical Writing, 2nd edition. Columbus: Charles Merrill Book Co., Inc., 1968.

C. Drill Books

- Bowman, Wallace B. Business Letter Typing. Cincinnati: South-Western Publishing Co., 1965.
- Brendel, I. and Near, D. Punctuation Drills and Exercises Programmed for the Typewriter. New York: Gregg Division of McGraw-Hill Book Co., 1970.
- Fries, Albert C. Timed Writings About Careers. Cincinnati: South-Western Publishing Co., 1963.
- Grubbs, R. L. and White, J. L. Sustained Timed Writings, 2nd edition. New York: Gregg Division of McGraw-Hill Book Co., 1969.
- Humphrey, Katherine; Lambert, Allie Dale; and Newhouse, Howard I. Timed Writings for Typing and Transcribing. New York: Gregg Division of McGraw-Hill Book Co., 1965.

IX. RESOURCES FOR STUDENTS, Continued

Rowe, J. L. and Etier, F. Typewriting Drills for Speed and Accuracy. 3rd edition. New York: Gregg Division of McGraw-Hill Book Co., 1966.

D. Review Materials

Gregg, John R.; Leslie, Louis A. and Zoubeck, Charles E. Gregg Shorthand Dictionary. Diamond Jubilee Series. New York: Gregg Division of McGraw-Hill Book Co., current edition.

Gregg, John R.; Leslie, Louis A. and Zoubeck, Charles E. Gregg Transcription. Diamond Jubilee Series. New York: Gregg Division of McGraw-Hill Book Co., 1972.

Gregg, John R.; Leslie, Louis A. and Zoubeck, Charles E. Gregg Speed Building. Diamond Jubilee Series. New York: Gregg Division of McGraw-Hill Book Co., 1964.

X. RESOURCES FOR TEACHERS

A. Books

Leslie, Louis A. Methods of Teaching Gregg Shorthand. New York: Gregg Division of McGraw-Hill Book Co., 1963.

Leslie, Louis A. and Zoubeck, Charles E. Dictation for Transcription, Diamond Jubilee Series, 2nd edition. New York: Gregg Division of McGraw-Hill Book Co., 1972.

Leslie, Louis A. and Zoubeck, Charles E. Dictation for Mailable Transcripts. New York: Gregg Division of McGraw-Hill Book Co., 1950.

Leslie, Louis A. and Zoubeck, Charles E. Transcription Dictation. New York: Gregg Division of McGraw-Hill Book Co., 1956.

Teacher manuals and/or keys are available for most of the books listed in the previous section, Resources for Students, from the respective publishing companies.

Zoubeck, Charles E. Speed Dictation with Previews in Gregg Shorthand, Diamond Jubilee Series. New York: Gregg Division of McGraw-Hill Book Co., 1963.

Zoubeck, Charles E. Progressive Dictation with Previews. New York: Gregg Division of McGraw-Hill Book Co., 1956.

B. Audio-Visual Aids

1. Records

Business Letters and Office Style Dictation Records. 60-310 wam. New York: Dictation Disc Company.

X. RESOURCES FOR TEACHERS, Continued

Dictation Record Set. 40-120 wam. Skokie: Stenographic Machines, Inc.

Gregg Speed Dictation Records, Diamond Jubilee Series; Gregg Students' Dictation Practice. Speed Set 6, 100-130 wam. New York: Gregg Division of McGraw-Hill Book Company.

2. Tapes

Dictation Disc Speed Building Tape Set. 50-140 wam. Mountain View, CA: Western Tape.

Technical Secretary Tape Set. (Lessons 1-4) Mountain View, CA: Western Tape

- a. SE4-41TBW Typing of Mathematical and Chemical Problems
- b. SE4-42TBW The Greek Alphabet
- c. SE4-43TBW Typing Mathematical Symbols
- d. SE4-44TBW Typing the Technical Manuscript

The Secretarial Specialist. 30 dictation tapes, 60-120 wam. Providence, RI: Programs for Achievement in Reading, Inc.

C. Teaching-Learning Aids (available from South-Western and Gregg Division of McGraw-Hill Book Co.

- 1. Certificates of credit and proficiency
- 2. Award pins and charms
- 3. Progress charts
- 4. Rolls of honor

D. Periodicals

Balance Sheet. Cincinnati: South-Western Publishing Company. Monthly, October through May.

Business Education Forum. Washington: National Business Education Association. Monthly, October through May.

Business Education World. New York: Gregg Division of McGraw-Hill Book Company. Five issues yearly.

Chemical and Engineering News. Washington: The American Chemical Society. Monthly.

Electronics World. New York: Ziff-Davis Publishing Co.

Journal of Business Education. Wilkes-Barre: Robert C. Trethaway. Monthly, October through May.

Pitman Journal. New York: Pitman Publishing Corporation. Four issues a year.

X. RESOURCES FOR TEACHERS, Continued

Science Newsletter. Washington: Science Services, Inc. Monthly.

Today's Secretary. Teacher's Edition. New York: Gregg Division of McGraw-Hill Book Co., Monthly.

Tranis, C. C. STWP Review, "Aids for the Typist Mean Better, Faster Equations Composition," Columbus: Society of Technical Writers and Publishers, October, 1964.

E. Transparencies (Personal Development--South-Western Publishing Co.)

- | | |
|-------------------|------------------------|
| 1. Dress-Ability | 5. Job-Getting Ability |
| 2. Employ-Ability | 6. Personality-Ability |
| 3. Ethics-Ability | 7. Promote-Ability |
| 4. Image-Ability | 8. Quality-Ability |
| | 9. Time-Ability |

A P P E N D I X

SUGGESTED TEST ITEMS

A. Spelling Test

1. capsule
2. ballistics
3. velocity
4. saponification
5. mercaptan
6. viscosity
7. pneumatic
8. extrapolate
9. acceleration
10. quantitative
11. athodyd
12. ampere
13. cantenary
14. cosecant
15. ionization
16. permeability
17. perpendicular
18. skitron
19. reciprocal
20. theorem

SUGGESTED TEST ITEMS, Continued

B. Definitions and Pronunciation Test

Directions: Match the word on the left with the correct definition on the right. Use a separate answer sheet. When you are finished, bring your test to the teacher and pronounce the list of technical words.

- | | |
|-----------------|--|
| 1. weir | A. term applied to a salt which absorbs moisture from the atmosphere. |
| 2. truncation | B. a liquid mixture which shows a maximum or a minimum boiling point. |
| 3. doldrums | C. science which deals with motions considered themselves or apart from their causes. |
| 4. deliquescent | D. proceeding by threes |
| 5. colloid | E. a dam in a river |
| 6. azeotrope | F. concurrent in time |
| 7. eccentric | G. tropical zone of calms |
| 8. equinox | H. addition of substances to a product by which it becomes unfit for human consumption |
| 9. denaturation | I. a color trace tube |
| 10. kinematics | J. cutting off |
| 11. inertia | K. tendency of an object to continue in whatever motion it possesses |
| 12. oscillate | L. a grooved wheel or pulley |
| 13. vector | M. movement back and forth between two points |
| 14. viscous | N. a radar beacon |
| 15. triggatron | O. a circular disc having a strap or a cast ring fitted to the outer circumference. |
| 16. synchronous | P. characterized by flow; said of liquids. |
| 17. ternary | Q. high pressure spark-gap modular |
| 18. skitron | R. quantity; amount |
| 19. sheave | S. name given to each of the two opposite points at which the line of intersection of the equator intersects the celestial sphere. |
| 20. racon | T. gelatinous |
| | U. a complex quantity possessing both magnitude and direction and represented by any of a system of equal and parallel line segments |

SUGGESTED TEST ITEMS, Continued

C. Word Division Test

Directions: Assume the bell on the typewriter rings at the point at which the word is underacored. Indicate the first acceptable point of division by placing a hyphen between the appropriate letters according to the typewriting rules.

1. parameter
2. oxidation
3. ratio
4. reactance
5. torque
6. transcend
7. viscous
8. magnetism
9. meteorite
10. nebula
11. pinion
12. weightlessness
13. selenoid
14. propellant
15. gantry
16. missile
17. booster
18. petroleum
19. pollution
20. extraction

SUGGESTED TEST ITEMS, Continued

D. Technical and Scientific Shorthand Word Test

Directions: Write a shorthand outline for each of the words listed.

- | | |
|---------------------------------|-------------------------------|
| 1. contamination _____ | 26. gyration _____ |
| 2. exhausters _____ | 27. synchronous _____ |
| 3. pollution _____ | 28. variables _____ |
| 4. titrate _____ | 29. apogee _____ |
| 5. spectrum _____ | 30. satellite _____ |
| 6. aniline _____ | 31. amper _____ |
| 7. anopheles _____ | 32. residual _____ |
| 8. rcentgen _____ | 33. perchloroethylene _____ |
| 9. synthesis _____ | 34. pneumatic _____ |
| 10. velocity _____ | 35. liquefaction of gas _____ |
| 11. polyethylene _____ | 36. impingement _____ |
| 12. molecule _____ | 37. inert _____ |
| 13. naphthene _____ | 38. solvent _____ |
| 14. cryogenic liquid _____ | 39. saturation _____ |
| 15. ballistics _____ | 40. skitron _____ |
| 16. oblique _____ | 41. reciprocal _____ |
| 17. quantum _____ | 42. segment _____ |
| 18. trigometric functions _____ | 43. sine _____ |
| 19. kinetic _____ | 44. gravity _____ |
| 20. trapezoid _____ | 45. spectograph _____ |
| 21. perpendicular _____ | 46. sheave _____ |
| 22. ratio _____ | 47. rhomboid _____ |
| 23. quadratic _____ | 48. interpolation _____ |
| 24. tangent _____ | 49. thermostat _____ |
| 25. truncation _____ | 50. hydrogen chloride _____ |

KEY TO SUGGESTED TEST ITEMS

A. Spelling Test (Key found on page 13)

B. Key to Definitions and Pronunciation Test

- | | | | | |
|------|------|-------|-------|-------|
| 1. E | 5. T | 9. H | 13. U | 17. D |
| 2. J | 6. B | 10. C | 14. P | 18. I |
| 3. G | 7. O | 11. K | 15. Q | 19. L |
| 4. A | 8. S | 12. M | 16. F | 20. N |

Correct pronunciation of these technical words may be found in a dictionary.

C. Key to Word Division Test

- | | |
|---------------|---------------------|
| 1. para-meter | 11. pin-ion |
| 2. oxi-dation | 12. weightless-ness |
| 3. ratio | 13. sele-noid |
| 4. react-ance | 14. propel-lant |
| 5. torque | 15. gan-try |
| 6. trans-cend | 16. mis-sile |
| 7. vis-cous | 17. booster |
| 8. magne-tism | 18. petro-leum |
| 9. mete-orite | 19. pol-lution |
| 10. nebula | 20. extrac-tion |

SUGGESTED TEST ITEMS, Continued

D. Technical and Scientific Shorthand Word Test

Directions: Write a shorthand outline for each of the words listed.

- | | |
|---------------------------|-------------------------|
| 1. contamination | 26. gyration |
| 2. exhausters | 27. synchronous |
| 3. pollution | 28. variables |
| 4. titrate | 29. apogee |
| 5. spectrum | 30. satellite |
| 6. aniline | 31. amper |
| 7. anopheles | 32. residual |
| 8. roentgen | 33. perchloroethylene |
| 9. synthesis | 34. pneumatic |
| 10. velocity | 35. liquefaction of gas |
| 11. polyethylene | 36. impingement |
| 12. molecule | 37. inert |
| 13. naphthene | 38. solvent |
| 14. cryogenic liquid | 39. saturation |
| 15. ballistics | 40. skitron |
| 16. oblique | 41. reciprocal |
| 17. quantum | 42. segment |
| 18. trigometric functions | 43. sine |
| 19. kinetic | 44. gravity |
| 20. trapezoid | 45. spectograph |
| 21. perpendicular | 46. sheave |
| 22. ratio | 47. rhomboid |
| 23. quadratic | 48. interpolation |
| 24. tangent | 49. thermostat |
| 25. truncation | 50. hydrogen chloride |