62 Hearing Impaired
# TABLE OF CONTENTS

## PART 1: General Information About the MTTC Program and Test Preparation

**OVERVIEW OF THE TESTING PROGRAM** ............................................................... 1-1
- Contact Information
- Test Development Process
- Characteristics of the Tests
- Test Administration
- Score Reporting

**HOW TO PREPARE FOR THE TESTS** ............................................................... 1-4
- Plan Your Course of Study

**THE DAY OF THE TEST: HELPFUL HINTS** ...................................................... 1-5
- Preparing for the Test Administration
- Test-Taking Tips
- Test Directions

## PART 2: Test Objectives and Sample Test Questions

**INTRODUCTION** ............................................................................................. 2-1

**TEST OBJECTIVES** ....................................................................................... 2-3

**SAMPLE MULTIPLE-CHOICE TEST QUESTIONS** .............................................. 2-11

**ANSWER KEY FOR THE SAMPLE MULTIPLE-CHOICE TEST QUESTIONS** ........... 2-15
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PART 1: General Information About the MTTC Program and Test Preparation

The first section of the study guide is available in a separate PDF file. Click the link below to view or print this section.

General Information About the MTTC Program and Test Preparation
PART 2: Test Objectives and Sample Test Questions

INTRODUCTION

This section includes a list of the test objectives, immediately followed by sample test questions and an answer key for the field covered by this study guide.

Test Objectives

As noted, the test objectives are broad, conceptual statements that reflect the knowledge, skills, and understanding an entry-level teacher needs in order to teach effectively in a Michigan classroom. Each field's list of test objectives represents the only source of information about what a specific test will cover and, therefore, should be studied carefully.

The test objectives are organized into groups known as "subareas." These subareas define the major content areas of the test. You will find a list of subareas at the beginning of the test objective list. The percentages shown in the list of subareas indicate the approximate weighting of the subareas on the test.

Sample Multiple-Choice Test Questions

The sample multiple-choice test questions included in this section are designed to give the test-taker an introduction to the nature of the test questions included on the MTTC test for each field. The sample test questions represent the various types of test questions you may expect to see on an actual test; however, they are not designed to provide diagnostic information to help you identify specific areas of individual strengths and weaknesses or predict your performance on the test as a whole. Use the answer key that follows the sample test questions to check your answers.

To help you identify which test objective is being assessed, the objective statement to which the question corresponds is listed in the answer key. When you are finished with the sample test questions, you may wish to go back and review the entire list of test objectives and descriptive statements once again.
**HEARING IMPAIRED**

**TEST OBJECTIVES**

<table>
<thead>
<tr>
<th>Subarea</th>
<th>Approximate Percentage of Questions on Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Development and Students with Special Educational Needs</td>
<td></td>
</tr>
<tr>
<td>Hearing Impairments</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment</td>
<td>16%</td>
</tr>
<tr>
<td>Program Development and Intervention</td>
<td>31%</td>
</tr>
<tr>
<td>Professional Knowledge</td>
<td>13%</td>
</tr>
</tbody>
</table>

**HUMAN DEVELOPMENT AND STUDENTS WITH SPECIAL EDUCATIONAL NEEDS**

**Understand normal human development from infancy to 11 years.**

Includes the characteristics and sequence of physical, sensory, motor, cognitive, and language development from infancy to 11 years; social and emotional characteristics of individuals from infancy to 11 years; and other developmental issues of particular importance from infancy to 11 years.

**Understand normal human development during adolescence.**

Includes characteristics of physical and cognitive development during adolescence; social and emotional characteristics of adolescents; and other developmental issues of particular importance during adolescence.

**Analyze the effects of physical, biological, and environmental factors on human development.**

Includes the effects of physical, biological, and environmental factors on cognitive, language, social, emotional, physical, and sensorimotor development.

**Apply theories of human development and behavior.**

Includes theories of human development and behavior; characteristics of human development and behavior as they relate to various theories; and the different approaches of various theories of language acquisition and development.

**Understand mental impairments.**

Includes types, levels, characteristics, and known causes of mental impairments; and the effects of mental impairments on human development, learning, and behavior as they relate specifically to students with hearing impairments.

**Understand specific learning disabilities.**

Includes types of learning disabilities and their characteristics; theories and assumptions related to the causes of learning disabilities; and the effects of learning disabilities on human development, learning, and behavior as they relate specifically to students with hearing impairments.

**Understand emotional impairments.**

Includes types of social/emotional and behavioral disorders and their characteristics; theories and assumptions related to the causes of emotional impairments; and the effects of emotional impairments and behavior disorders on human development, learning, and behavior as they relate specifically to students with hearing impairments.
Understand speech and language impairments.

Includes speech and language impairments and their characteristics, causes, and effects on human development, learning, and behavior as they relate specifically to students with hearing impairments.

Understand physical and health impairments.

Includes types of physical and health impairments and their characteristics, causes, and effects on human development, learning, and behavior as they relate specifically to students with hearing impairments.

Understand visual impairments.

Includes visual impairments and their characteristics, causes, and effects on human development, learning, and behavior as they relate specifically to students with hearing impairments.

HEARING IMPAIRMENTS

Identify characteristics and levels of hearing impairment.

Includes terms related to hearing impairment; types and levels of hearing impairment and their characteristics; behaviors that may indicate the presence of a hearing impairment; and audiological assessment data that illustrate specific hearing impairments.

Analyze the influence of hearing impairments on human development.

Includes psychological aspects of hearing impairments; and the influence of hearing impairments on cognitive development, language and speech development, communication systems, and social and emotional development.

Understand the causes of hearing impairments and their consequences on the individual.

Includes the causes of hearing impairments; the role of physical factors, diseases, drugs, and birth trauma that result in hearing impairments; and the variables that affect the impact of hearing impairment on the individual.

Understand the prevention and rehabilitation of hearing impairments.

Includes methods of preventing hearing impairments and preserving auditory function; surgical procedures for improving hearing and treating hearing impairments; rehabilitation measures for hearing impairments; and personnel involved with the treatment of hearing impairments.

Identify linguistic features of English.

Includes phonemic, morphemic, semantic, and syntactic features of English; and the forms and functions of language in communication.

Apply principles of phonetics.

Includes the classification of consonant sounds according to manner and place of production; and the classification of vowel sounds according to relative tongue placement for production.
Understand the hearing mechanism.
Includes anatomical structures involved in hearing and their functions; and the processes involved in auditory perception.

Understand the process involved in speech production.
Includes anatomical structures involved in speech production and their functions.

Understand the basic principles of acoustics.
Includes properties of sound; and speech sounds and units used to measure sound.

Identify acoustic and visible aspects of speech.
Includes acoustic aspects of speech; visible aspects of speech and factors that influence their visibility; and distinctive features of speech that are used to discriminate among speech sounds.

Understand the historical development of education for individuals with hearing impairments.
Includes trends in the education of individuals with hearing impairments; the achievements of persons who have influenced the education of individuals with hearing impairments; and major goals and philosophies of education for individuals with hearing impairments.

ASSESSMENT

Understand legal requirements relating to assessment.
Includes state and federal requirements related to screening, referral, and assessment; the rights of children and parents; and procedures for addressing and correcting violations of rights in relation to assessment.

Understand formal assessment instruments.
Includes types, characteristics, uses, advantages, and disadvantages of formal assessment instruments; criteria for their evaluation; and principles and procedures for their selection.

Understand methods of informal assessment.
Includes methods, characteristics, uses, advantages, and disadvantages of informal assessment; and principles and procedures for selecting or creating informal assessment methods.

Understand methods used to assess auditory functioning.
Includes types, uses, and characteristics of tests and procedures for assessing auditory functioning; procedures for administering auditory assessments to students with hearing impairments; and the interpretation and use of auditory test data in the development of intervention procedures.

Understand instruments used in assessment of cognitive functioning.
Includes types, characteristics, examples, and uses of instruments appropriate for the assessment of cognitive functioning of students with hearing impairments; the interpretation and use of data from assessments of cognitive functioning in the development of IEPs; and advantages and disadvantages of instruments used in intellectual assessment.
Understand methods used to assess the speech and language development of children with hearing impairments.

Includes types, characteristics, and uses of speech and language tests for children with hearing impairments; appropriate procedures for administering speech and language tests to children with hearing impairments; and the interpretation and use of speech and language assessment data in intervention procedures.

Apply ongoing classroom assessment procedures.

Includes procedures and methods for using and maintaining ongoing classroom assessment; and the interpretation and use of ongoing classroom assessment data in the revision of classroom intervention procedures.

PROGRAM DEVELOPMENT AND INTERVENTION

Identify procedures for conducting a comprehensive evaluation.

Includes components of a comprehensive evaluation to determine eligibility for special education and related services; and requirements and procedures for conducting a comprehensive evaluation.

Understand the development of Individualized Education Programs (IEPs) for students with hearing impairments.

Includes members of the multidisciplinary evaluation team and the individualized educational planning committee and their roles; information that must be specified in an IEP; requirements for reviewing and revising an IEP; and the rights of students and parents in the development of an IEP.

Understand the implementation of Individualized Education Programs (IEPs) for students with hearing impairments.

Includes appropriate activities and curriculum components to meet various IEP objectives; procedures for evaluating progress toward IEP objectives and goals; appropriate ways of communicating with persons involved in the implementation of an IEP; and procedures for modifying and updating an IEP.

Analyze the continuum of alternative placements and programs available to individuals with hearing impairments.

Includes school and community placement options for students with hearing impairments; community-based services and their characteristics; employment opportunities for youths and adults with hearing impairments; and the advantages and disadvantages of placement options and programs within the continuum of services.

Identify the roles of personnel who provide ancillary and other related services to students with hearing impairments.

Includes the roles of ancillary and related service personnel who provide direct services and consultative services for students with hearing impairments.

Understand early intervention for young students with hearing impairments.

Includes procedures used to identify and refer students who may have hearing impairments; and theories relating to early intervention for young students with hearing impairments.
Understand personal and group methods of utilizing amplification systems and other assistive listening devices.

Includes the components of a hearing aid; types of amplification and assistive listening devices; and procedures and criteria for maintaining and monitoring the appropriate use of hearing aids and other assistive listening devices.

Apply techniques for developing the listening skills of students with hearing impairments.

Includes techniques, activities, and appropriate sequences of activities for developing listening skills; instructional media and materials for teaching listening skills in various situations; and activities and techniques appropriate for family members to use to aid the development of listening skills in students with hearing impairments.

Apply techniques for stimulating the language development of students with hearing impairments.

Includes techniques, activities, and appropriate sequences of activities for stimulating language development; instructional media and materials for stimulating language development in various situations; and activities and techniques appropriate for family members to use to aid language development in students with hearing impairments.

Understand techniques for developing and improving the speech production of students with hearing impairments.

Includes techniques and activities for teaching speech production in an appropriate skill-level sequence; instructional media and materials for improving speech production in various situations; and activities and techniques appropriate for family members to use to help improve speech production in students with hearing impairments.

Understand modes of communication used by individuals with hearing impairments.

Includes modes of communication and their characteristics; the components of total communication; characteristics of forms of manual communication; and techniques used in teaching receptive communication skills.

Understand techniques for content-area instruction for students with hearing impairments.

Includes appropriate techniques and activities for content-area instruction; appropriate ways to adapt instructional methods and materials for students with hearing impairments; and ways to integrate reading and language development in content-area instruction.

Apply intervention and instruction techniques to the education of hearing-impaired students with additional handicapping conditions.

Includes appropriate intervention and instruction techniques; and ways to adapt the classroom environment to meet the needs of students with hearing impairments who have additional handicapping conditions.

Understand ways to develop the social skills of students with hearing impairments.

Includes the social needs of students with hearing impairments; appropriate techniques for developing their social skills; and ways to counsel parents and involve them in meeting the social and emotional needs of students with hearing impairments.
**HEARING IMPAIRED**

Apply techniques for providing prevocational and vocational training to students with hearing impairments.

Includes appropriate techniques for providing prevocational and vocational training; appropriate methods for assessing prevocational and vocational interests and skills; prevocational and vocational training objectives and activities; and prevocational and vocational needs and opportunities for students with hearing impairments.

Understand various types of behavior management techniques.

Includes types of behavior management techniques and their characteristics; the advantages, disadvantages, and applications of behavior management techniques in classroom situations; and appropriate ways to ensure coordination of a behavior management program among persons involved in the implementation of an IEP.

Understand techniques for managing a classroom effectively.

Includes techniques for managing a classroom effectively; features that contribute to the safety, comfort, and usefulness of a classroom; appropriate ways of adapting a classroom to meet the needs of a student with a hearing impairment; and classroom factors that may affect learning.

**PROFESSIONAL KNOWLEDGE**

Identify technological advances in special education.

Includes appropriate uses of new technology related to materials and equipment in special education; and appropriate equipment and materials for various situations.

Understand the rights of students with special educational needs, and the rights and responsibilities of their parents, teachers, administrators, and other advocates.

Includes the rights of students with special educational needs; and the rights and responsibilities of parents, teachers, administrators, and other advocates.

Apply procedures and processes for consulting with school personnel.

Includes appropriate procedures for consulting with regular education personnel; and appropriate methods for reporting information to teachers and other professionals.

Identify organizations involved with special education.

Includes national, state, and local organizations that provide services to augment the special education program.

Understand methods of communicating with and counseling students with hearing impairments and their families.

Includes appropriate ways to discuss assessment results and convey information about a student's educational program and progress to family members; appropriate ways of helping parents to understand child development and the special needs of children at all ages; appropriate ways of providing counseling and guidance services to students with hearing impairments; and appropriate methods of coordinating techniques used in the school with those used at home.
Demonstrate sensitivity to cultural differences among students and their families.

Includes cultural similarities and differences that exist among various racial, ethnic, religious, disabled, and socioeconomic groups; and the impact of cultural group differences on student learning and behavior, and on placement decisions in special education.

Understand current research on hearing impairments.

Includes criteria for evaluating research; sources of current research on hearing impairments; recent research findings on hearing impairments; and appropriate ways to apply research findings in the school.
SAMPLE MULTIPLE-CHOICE TEST QUESTIONS

1. Which of the following activities reflects the highest degree of language development likely to be demonstrated by most five-year-old children?
   A. understanding children's stories
   B. asking simple questions
   C. singing songs from memory
   D. following two-step commands

2. Which of the following speech behaviors would be considered an articulation disorder?
   A. stuttering
   B. sound substitution
   C. excessive nasality
   D. inappropriate vocal volume

3. A student with a sensorineural hearing loss is most likely to experience which of the following?
   A. reduced ability to hear what is said in noisy settings
   B. periodic ringing in the ears
   C. extreme sensitivity to high-pitched sounds
   D. episodes of temporary hearing loss

4. Which organ of the ear is primarily responsible for converting the mechanical action of the middle ear into an electrical signal in the inner ear that is then transmitted to the brain?
   A. tympanic membrane
   B. vestibule
   C. Eustachian tube
   D. cochlea

5. In assessing auditory functioning, a bone-conduction test is primarily used to:
   A. measure overall level of hearing sensitivity.
   B. determine the threshold of speech awareness.
   C. measure the level of hearing in the middle ear.
   D. determine if loss is conductive or sensorineural.
6. Use the student speech assessment data below to answer the question that follows.

**KEY**

<table>
<thead>
<tr>
<th>Sound is produced:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(✓) = consistently</td>
</tr>
<tr>
<td>(+) = inconsistently</td>
</tr>
<tr>
<td>(–) = not at all</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Speech Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>b ✓ d ✓ g ✓ p ✓ t ✓ k +</td>
</tr>
<tr>
<td>ŕ ✓ ţ – k + b ✓ d ✓ g +</td>
</tr>
<tr>
<td>m – n – ŋ –</td>
</tr>
<tr>
<td>w ✓ j + ŋ ✓</td>
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<tr>
<td>l ✓ r ✓</td>
</tr>
<tr>
<td>h ✓ f ✓ θ + ſ ✓ s + v ✓</td>
</tr>
<tr>
<td>ō ✓ ſ ✓ z +</td>
</tr>
<tr>
<td>tʃ ✓ dʒ ✓</td>
</tr>
</tbody>
</table>

According to these assessment data, the student is experiencing most difficulty with which type of consonants?

A. liquids
B. nasals
C. plosives
D. semivowels
7. The IEP of a student with a hearing impairment and special education needs must include:

A. evidence from research findings documenting the appropriateness of approaches selected for use.

B. lesson plans to meet stated IEP objectives.

C. a summary of projected annual costs and staff hours required for implementing the IEP.

D. annual goals for the student's program.

8. Family members could best increase the vocabulary and oral language skills of an elementary student with a hearing impairment by:

A. placing labels on items in the home used by the child and encouraging the child to repeat the word on a label when using each item.

B. reviewing each day's language lessons with the child after he or she returns home from school.

C. exposing the child to new activities and experiences and discussing them with the child.

D. having the child practice songs sung by family members and repeat phrases and sentences spoken by family members.

9. A student with a hearing impairment emits excessive breath when pronouncing the letter \( h \). Which of the following is a visual medium that would be especially helpful in addressing this problem?

A. a paper strip placed in front of the face

B. a mirror

C. a light activated by a microphone

D. a Visi-Pitch machine

10. A special education teacher wishes to help the parents and guardians of students with hearing impairments gain a better understanding of how to address the special needs of their children. This objective could be met most effectively by organizing a parent workshop that focuses on which of the following topics?

A. the etiology of types of hearing impairments

B. instructional techniques for students with hearing impairments that can be applied in a variety of settings

C. the interpretation of student hearing assessment results

D. procedural requirements related to the development of IEPs for students who have hearing impairments
## Answer Key for the Sample Multiple-Choice Test Questions

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Correct Response</th>
<th>Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>C</td>
<td>Understand normal human development from infancy to 11 years.</td>
</tr>
<tr>
<td>2.</td>
<td>B</td>
<td>Understand speech and language impairments.</td>
</tr>
<tr>
<td>3.</td>
<td>A</td>
<td>Identify characteristics and levels of hearing impairment.</td>
</tr>
<tr>
<td>4.</td>
<td>D</td>
<td>Understand the hearing mechanism.</td>
</tr>
<tr>
<td>5.</td>
<td>D</td>
<td>Understand methods used to assess auditory functioning.</td>
</tr>
<tr>
<td>6.</td>
<td>B</td>
<td>Understand methods used to assess the speech and language development of children with hearing impairments.</td>
</tr>
<tr>
<td>7.</td>
<td>D</td>
<td>Understand the development of Individualized Education Programs (IEPs) for students with hearing impairments.</td>
</tr>
<tr>
<td>8.</td>
<td>C</td>
<td>Apply techniques for stimulating the language development of students with hearing impairments.</td>
</tr>
<tr>
<td>9.</td>
<td>A</td>
<td>Understand techniques for developing and improving the speech production of students with hearing impairments.</td>
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<td>10.</td>
<td>B</td>
<td>Understand methods of communicating with and counseling students with hearing impairments and their families.</td>
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