



*Michigan*

TEST FOR TEACHER CERTIFICATION  
**STUDY GUIDE**

**08 Geography**



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National Evaluation Systems, P.O. Box 226, Amherst, MA 01004

## **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

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### 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.

## TEST OBJECTIVES

Subarea	Approximate Percentage of Questions on Test
Foundations of Geography	28%
World Processes	16%
World Regions and Events	16%
Historical, Civic, and Economic Perspectives	20%
Inquiry, Public Discourse, and Decision Making	20%

### FOUNDATIONS OF GEOGRAPHY

#### **Describe and apply basic geographic themes, terms, and concepts.**

Includes describing and applying the five basic geographic themes (i.e., location, place, human-environment interaction, movement, and region) and fundamental geographic terms and concepts (e.g., habitat, cultural diffusion, assimilation, spatial distribution).

#### **Identify characteristics of maps and globes and use maps, globes, and other geographic representations to answer geographic questions.**

Includes identifying basic properties of maps and globes (e.g., grid systems, symbols, scales); recognizing the characteristics, uses, and limitations of commonly used maps; locating places on maps using latitude and longitude; understanding the purposes of, and recognizing distortions in, common map projections; and understanding the techniques used to represent geographic phenomena (e.g., cartography, remote sensing, geographic information systems).

#### **Describe and compare major physical features of the earth and explain the natural processes that create and modify them.**

Includes recognizing the shape and location of major landmasses and bodies of water and their significant physical features; explaining the geologic and hydrologic processes that shape the earth's surface; and analyzing the effects of natural processes (e.g., plate tectonics, volcanic activity, erosion, hydrologic cycle).

#### **Describe and compare the location and characteristics of ecosystems and climate regions and explain the interrelationships among them.**

Includes recognizing the locations, characteristics, and processes of major ecosystems (e.g., food chains, energy flows, biodiversity, plant succession); demonstrating knowledge of global and regional climatic patterns; describing the main elements of climate (e.g., temperature, precipitation, seasonality); and examining ways in which climatic conditions affect plant and animal life and human societies.

#### **Describe, compare, and explain the characteristics and locations of resources and global and regional patterns of resource distribution.**

Includes distinguishing between renewable and nonrenewable resources; analyzing the geological, biological, and climatic factors that determine the location of water, soil, mineral, fossil fuel, and living resources; and identifying the location of major concentrations of important natural resources.

## WORLD PROCESSES

### **Describe, compare, and explain the characteristics and locations of places, cultures, and settlements.**

Includes describing the human characteristics of places and analyzing factors that affect these characteristics; demonstrating a knowledge of major cultural groups associated with particular regions and recognizing and comparing important cultural variations within and among the peoples of those regions (e.g., in language, religion, traditions, gender roles); identifying diverse types of communities and examining factors that influence their characteristics and locations; and using knowledge of world cultures to analyze interactions of human societies with one another and the environment.

### **Demonstrate a knowledge of basic demographic concepts and describe and explain patterns of population growth, distribution, and migration.**

Includes demonstrating a knowledge of basic demographic concepts (e.g., dependency ratio, doubling time, population density); examining economic, environmental, and cultural factors that influence demographic change; analyzing the causes and consequences of population increase and decline in world history; analyzing the causes and consequences of contemporary and historical patterns of human migration within and among world regions; and examining physical and cultural factors that have influenced patterns of rural and urban settlement.

### **Identify major types of economic systems and describe and explain the geographic context of various economic activities.**

Includes identifying major characteristics of different types of economic systems (e.g., traditional, command, mixed, market); examining patterns of economic activity and trade; analyzing factors that influence transportation and communication within and among major world regions; recognizing patterns and networks of economic interdependence (e.g., transnational corporations, cartels, regional economic organizations) and analyzing factors that encourage and discourage economic self-sufficiency and interdependence; and evaluating international economic issues from a spatial point of view.

### **Identify major types of political systems and describe and explain the geographic context of various political activities.**

Includes recognizing characteristics of major historical and contemporary political systems (e.g., oligarchy, monarchy, democracy, dictatorship); examining physical, cultural, and historical factors that influence the location of political boundaries; explaining the geographic context for political developments (e.g., Balkanization, regionalism, ethnic separatism) in different world regions; identifying the effects of geographic context on foreign and domestic policy; recognizing the structure and goals of major international organizations (e.g., United Nations, NATO); and analyzing ways in which the forces of cooperation and conflict influence the development and control of political entities.

## WORLD REGIONS AND EVENTS

### **Describe and explain the relationship between humans and the environment.**

Includes examining interrelationships between the physical environment and the development of specific human societies; analyzing ways in which people adapt to, affect, and are affected by their environment; assessing the effect of technological innovations on the physical environment; and recognizing sources of pollution and the human and environmental effects of pollution.

**Describe major human and physical characteristics of Michigan and explain the causes and consequences of cultural patterns and land use.**

Includes identifying major state landforms and bodies of water and recognizing principal climate and vegetation patterns; demonstrating a knowledge of the political, economic, social, ethnic, and religious characteristics that have shaped the cultural development of Michigan; examining economic, technological, political, and historical factors that have shaped patterns of human settlement, population growth, land use, and economic development within the state; and examining human-environment interactions within Michigan.

**Describe major human and physical characteristics of the United States and explain the causes and consequences of cultural patterns and land use.**

Includes identifying major landforms and bodies of water and recognizing principal climate and vegetation patterns in the regions of the United States; demonstrating a knowledge of the political, economic, social, ethnic, and religious characteristics that have shaped the cultural development of our country; examining economic, technological, political, and historical factors that have shaped patterns of human settlement, population growth, land use, and economic development within the United States; and examining human-environment interactions within our country.

**Describe major human and physical characteristics of world regions and explain the causes and consequences of cultural patterns and land use.**

Includes locating major human and physical characteristics; describing major cultural characteristics (e.g., language, religion, population, economic development, land use); describing historical, natural, and/or cultural characteristics that define the area as a region; and comparing and contrasting the human and physical characteristics of major world regions.

**Describe and explain the causes, consequences, and geographic contexts of major global issues and events.**

Includes recognizing geographic aspects of contemporary and historical events that have occurred in various regions of the world; analyzing how geography and world processes influence major world events; analyzing the potential global consequences of social changes or scientific and technological developments; and identifying the origins and importance of global issues involving cultural stability and change, refugee populations, economic development and international trade, resource use, environmental impact, and conflict and cooperation.

## **HISTORICAL, CIVIC, AND ECONOMIC PERSPECTIVES**

**Demonstrate an understanding of geographic aspects of major events in different eras of U.S. history.**

Includes describing defining characteristics of major eras of U.S. history, including The Meeting of Three Worlds: Africa, Europe, and the Americas (prehistory to 1620), Colonization and Settlement (1585–1763), Revolution and the New Nation (1754–1815), Expansion and Reform (1801–1861), Civil War and Reconstruction (1850–1877), The Development of the Industrial United States (1870–1900), The Emergence of Modern America (1890–1930), The Great Depression and World War II (1929–1945), Postwar United States (1945–1970), and Contemporary United States (1968–present); and examining relationships, including cause and effect, among important events.

**Describe the structure and functions of American government, explain the meaning and origin, including the core democratic values, of foundational documents of the United States (e.g., Declaration of Independence, U.S. Constitution), and recognize the rights and responsibilities of citizens.**

Includes describing the structure of the U.S. system of government; comparing the organization and operation of local, state, and federal governments in the United States; identifying the major ideas expressed in the Declaration of Independence and the origins of these ideas from multiple sources; recognizing the basic principles of the U.S. Constitution; interpreting the meaning of the rights and liberties guaranteed by the U.S. Constitution; identifying the responsibilities of citizens in upholding constitutional rights; and evaluating political behavior, conduct of citizens and residents, practices of government, and issues of diversity according to the principles expressed in the Declaration of Independence and the U.S. Constitution.

**Apply basic economic concepts to geographic topics.**

Includes applying basic economic concepts (e.g., scarcity and choice, supply and demand, opportunity cost); making economic decisions; describing the roles and relationships of business, labor unions, and households in the U.S. economic system; and recognizing the relationship between a domestic economy and the international economic system (e.g., trade, exchange rates, tariffs).

## **INQUIRY, PUBLIC DISCOURSE, AND DECISION MAKING**

**Acquire information from books, maps, newspapers, data sets, and other sources and organize and present the information in maps, graphs, charts, and time lines.**

Includes recognizing the characteristics of various sources of social science information (e.g., people, books, primary documents, newspapers, tables) and methods of locating specific information in these sources; recognizing the role of traditional and electronic technologies in accessing and managing social science information; and organizing and communicating social science information using a variety of formats (e.g., outlines, maps, tables, graphs).

**Interpret the meaning and significance of information from various sources.**

Includes recognizing the strengths and weaknesses of various sources of information; interpreting the meaning and significance of information from various sources; evaluating the reliability of information and analyzing factors that affect reliability; using various sources (e.g., maps, charts, electronic media, texts, oral histories) to interpret relationships; and developing generalizations about social science topics by interpreting and synthesizing information from a variety of sources.

**Apply methods of conducting geographic investigations by formulating a clear statement of a question, gathering and organizing information from a variety of sources, formulating and testing hypotheses, and reporting results.**

Includes formulating questions or hypotheses to serve as the basis for social science investigations; identifying procedures for gathering, analyzing, and interpreting information to investigate a given research question or hypothesis; applying methods for organizing and reporting results; recognizing alternative interpretations of results; and drawing conclusions based on evidence and results.

**Evaluate ways to use data to support a position on a public policy issue that has geographic implications.**

Includes stating public policy issues and their related ethical, definitional, and factual issues as questions; tracing the origins of a public issue; analyzing various perspectives people bring to an issue and factors that influence their perspectives (e.g., cultural experiences); analyzing factors that need to be considered when formulating possible resolutions to a public issue; and evaluating possible alternative resolutions to public issues.

**Describe core democratic values and explain how they relate to public policy issues.**

Includes describing ways to apply democratic values, anticipate consequences, and work toward making decisions.

**SAMPLE MULTIPLE-CHOICE TEST QUESTIONS**

1. Traditionally, nomadic peoples moved from place to place in search of water, food, and grazing land for their livestock. This kind of human-environment interaction is an example of:
  - A. adaptation.
  - B. evolution.
  - C. symbiosis.
  - D. diffusion.

2. Use the map below to answer the question that follows.



Which of the following is a common misunderstanding caused by this map of the United States?

- A. the location of bordering countries to the United States
- B. the location and size of Alaska and Hawaii
- C. the distinction between a continent and a country
- D. the size of the United States in the Northern Hemisphere

3. Which of the following is primarily responsible for the jagged peaks and steep valleys that characterize many mountain ranges in the western United States?
- A. ongoing uplift of these relatively young mountain ranges
  - B. the volcanic origin of most of the rocks in the region
  - C. climatic factors that affect the type and rate of erosion
  - D. the structural nature of the bedrock in the region
4. Although most of the tundra environment in the northern hemisphere is located north of the Arctic Circle, winter temperatures in the tundra are usually not as cold as temperatures within the continental interior to the south. This is primarily due to the:
- A. low elevation of most tundra environments.
  - B. compression and warming of air descending over the Arctic Ocean.
  - C. moderating influence of nearby ocean water.
  - D. tundra's minimal snow cover and related greater absorption of solar energy.
5. Limestone formations have frequently proven to be good sources of groundwater primarily as a result of:
- A. the high porosity and solubility of limestone.
  - B. the presence of water contained within limestone since its formation.
  - C. limestone's ability to trap water that drains from the surface.
  - D. limestone's usual proximity to water-rich sandstone deposits.
6. From which of the following primary cultural hearths did the cultivation of wheat and barley and the domestication of sheep and cattle originate?
- A. West Africa
  - B. Southeast Asia
  - C. Andean America
  - D. Southwest Asia

7. Between 1650 and 1974, the world's population doubled three times, a rate of increase considerably more rapid than population growth before that time. This increase in the world's population growth is generally considered a consequence of:
- A. the success of new global trade networks in redistributing agricultural products.
  - B. improving health practices and industrialization.
  - C. the utilization of land for the expansion of agriculture.
  - D. advances in travel and communications technology.
8. One significant impediment that often hinders a developing country's efforts toward economic development is that:
- A. a significant portion of the territory in developing countries is either unsettled or unsuitable for settlement.
  - B. most developed countries are unwilling to establish trading relations with developing countries.
  - C. the prosperity of many developing countries is linked to world commodity prices over which they have little control.
  - D. most developing countries lack harbors or ports from which to operate merchant shipping.
9. Which of the following best describes the reason for the founding of the Organization of American States in 1948?
- A. With the start of the Cold War, a unified front was needed in the Western Hemisphere to confront the perceived threat of the spread of communism.
  - B. After World War II, a common set of laws was needed throughout the hemisphere to extradite war criminals who had fled to South America.
  - C. With the onset of the Cold War, the United States needed naval bases in Latin America for its aircraft carriers that were too large to pass through the Panama Canal.
  - D. After World War II, Latin American countries balked at joining the United Nations and sought instead to establish a similar organization that focused exclusively on the needs of the Western Hemisphere.

10. During the 1990s, population blooms of a particularly toxic and previously unknown microorganism were identified as the cause of serious fish kills in estuaries in North Carolina and in sections of the Chesapeake Bay. Which of the following factors has been identified as the most likely cause of the population explosion of this harmful microorganism?
- A. decreased sediment loading from heavy precipitation
  - B. increased temperature of estuarine waters
  - C. decreased salinity of estuarine waters
  - D. increased nutrient loading from agricultural runoff
11. The abundant lake-effect snowfall that accumulates in parts of Michigan's Upper Peninsula is the result of which of the following meteorological phenomena?
- A. Arctic air masses absorb moisture as they cross the relatively warm waters of Lake Superior, producing snow when the air is lifted and cooled upon encountering land.
  - B. The jet stream's flow over the Great Lakes supports the upward flow of moist air over the waters of Lake Superior, creating snow-producing low pressure systems.
  - C. Moist air from central Canada cools as it crosses the cold waters of Lake Superior, producing heavy snowfall along the downwind shores of the lake.
  - D. Low-pressure systems from the west stagnate and intensify over the relatively warm waters of Lake Superior, absorbing moisture and producing snowfall.
12. Which of the following best represents both a political boundary and a natural boundary separating two countries?
- A. the border between North Korea and South Korea
  - B. the border between Libya and Egypt
  - C. the border between Haiti and the Dominican Republic
  - D. the border between France and Spain

13. During the latter half of the twentieth century, many Latin American cities experienced tremendous population growth in contrast to surrounding rural areas. Which of the following best explains the reasons for this population shift?
- A. Latin American cities became centers of technological innovation, attracting investment and immigrants from abroad.
  - B. The increase in white collar jobs available in urban areas attracted great numbers of rural residents to the cities.
  - C. Birth rates in Latin American cities outpaced birth rates in rural areas because of better nutrition and health care available in cities.
  - D. Civil strife, natural disasters, and poverty led rural populations to flee to poor urban neighborhoods in search of work and safety.
14. The sudden movement of colonial settlers from the coastal portions of the English colonies to the northern and western frontiers in the 1760s and 1770s was largely a consequence of:
- A. the British victory in the French and Indian Wars.
  - B. British regulations articulated in the Proclamation of 1763.
  - C. resistance to increasing demands of British officials in cities and towns.
  - D. the creation of a firm boundary between the colonies and Indian Territory.

15. Which of the following statements best describes a benefit of the multi-tiered system of federal, state, and local governments in the United States?
- A. Government is able to respond to the diverse conditions that prevail in different regions of the country.
  - B. Individual citizens are more likely to vote in local governmental elections.
  - C. Local governments may override federal regulations if a local majority supports the decision.
  - D. The political power of local governmental authority is kept to a minimum.
16. In general, soft drink bottlers haul concentrated syrup to bottling plants near major cities where it is combined with water. Which of the following best explains why this is the preferred method for bottling soft drinks?
- A. It is best to assemble the product near where recycled bottles are collected and cleaned.
  - B. It is very expensive to transport water, so it is added to the syrup as close as possible to the market.
  - C. To ensure compliance with local environmental regulations, it is best to use local water for preparing foodstuffs intended for local consumption.
  - D. To be able to respond quickly to local consumption demands, bottlers can create the product that is in greatest demand at the moment.

17. A researcher is studying the process and effects of suburban development and wishes to compare development in European countries with that in the United States. She decides to use census statistics from five countries to assess historical patterns of suburban spread. Which of the following characteristics of national censuses is most likely to affect the accuracy of her comparison?
- A. Census data are often collected to provide population distribution figures for use in apportioning legislative seats.
  - B. Census data include statistics about age, gender, ethnicity, marital status, and previous residence, as well as place of residence.
  - C. Census enumerations are extremely expensive and labor intensive and so occur rather infrequently in some countries.
  - D. Census enumerations are based on different criteria in different countries and so may not represent comparable populations.
18. A researcher interested in quantifying the agricultural productivity of a rural region in Indonesia interviews a representative sample of local farmers to determine the acreage of each of their farms. Assuming the total area of land cultivated in the region is known, which of the following kinds of information would be most useful in establishing the agricultural productivity of the region from this sample of farmers?
- A. the number of people living on each farm actively participating in food production
  - B. the total amount of agricultural goods produced during the year on each farm
  - C. the area of each farm devoted to regular crop production, orchards, and pastureland
  - D. the annual income received for all agricultural goods produced on each farm

19. Scientists tracked the migration routes of caribou and polar bears in the Alaskan wilderness and then mapped the data. All the migration routes were indicated on the map. In which of the following ways could geographers planning oil pipeline routes through the region best use these data?
- A. using animals' movement patterns to locate sources of water in the region
  - B. scheduling work to avoid seasonal encounters with migrating polar bears
  - C. determining pipeline routes that would cause the least interference with animals' normal migration
  - D. determining the most easily traveled routes through the region
20. Which of the following is likely to be the most effective strategy for a U.S. citizen to use to express support for controversial environmental legislation being considered by Congress?
- A. Seek out others with similar views and plan civil disobedience strategies.
  - B. Attend the legislative session during which the bill is debated and applaud favorable arguments.
  - C. Visit the site of the area that would be affected to demonstrate interest in the issue.
  - D. Organize constituents to express their views by writing letters to or calling elected officials.

## ANSWER KEY FOR THE SAMPLE MULTIPLE-CHOICE TEST QUESTIONS

Item Number	Correct Response	Objective
1.	A	Describe and apply basic geographic themes, terms, and concepts.
2.	B	Identify characteristics of maps and globes and use maps, globes, and other geographic representations to answer geographic questions.
3.	A	Describe and compare major physical features of the earth and explain the natural processes that create and modify them.
4.	C	Describe and compare the location and characteristics of ecosystems and climate regions and explain the interrelationships among them.
5.	A	Describe, compare, and explain the characteristics and locations of resources and global and regional patterns of resource distribution.
6.	D	Describe, compare, and explain the characteristics and locations of places, cultures, and settlements.
7.	B	Demonstrate a knowledge of basic demographic concepts and describe and explain patterns of population growth, distribution, and migration.
8.	C	Identify major types of economic systems and describe and explain the geographic context of various economic activities.
9.	A	Identify major types of political systems and describe and explain the geographic context of various political activities.
10.	D	Describe and explain the relationship between humans and the environment.
11.	A	Describe major human and physical characteristics of Michigan and explain the causes and consequences of cultural patterns and land use.
12.	D	Describe major human and physical characteristics of world regions and explain the causes and consequences of cultural patterns and land use.
13.	D	Describe and explain the causes, consequences, and geographic contexts of major global issues and events.
14.	A	Demonstrate an understanding of geographic aspects of major events in different eras of U.S. history.
15.	A	Describe the structure and functions of American government, explain the meaning and origin, including the core democratic values, of foundational documents of the United States (e.g., Declaration of Independence, U.S. Constitution), and recognize the rights and responsibilities of citizens.
16.	B	Apply basic economic concepts to geographic topics.
17.	D	Interpret the meaning and significance of information from various sources.
18.	B	Apply methods of conducting geographic investigations by formulating a clear statement of a question, gathering and organizing information from a variety of sources, formulating and testing hypotheses, and reporting results.
19.	C	Evaluate ways to use data to support a position on a public policy issue that has geographic implications.
20.	D	Describe core democratic values and explain how they relate to public policy issues.