

## 2020 USGO Written Examination - Key and Marking Scheme (Middle School)

### Section 1 [10 points]

1. In a paragraph, describe the effect of immigration on the demographics of the United States since 1965. Be as specific as possible. (5 points)
2. In a paragraph, describe the effect of immigration on the economy of the United States since 1965. Be as specific as possible. (5 points)

**Grading notes:** Questions 1 and 2 are level marked.

### Expected answers:

1. [5 points] Answers to this question should acknowledge the different immigrant groups (Latin American, Asian, Middle Eastern and African) that have come to the US since 1965 and should briefly discuss their effect on American cities and the population as a whole. [accept reasonable answers and award liberal partial credit]
2. [5 points] Answers to this question should discuss the contribution of these recent immigrants to the agricultural, service, manufacturing and technology sectors and may point out the economic and social mobility of the US, as well as the large number of educational opportunities as pull factors for economic immigration [accept reasonable answers and award liberal partial credit]

**Section 2 [15 points]**

3. Are the landforms marked 3-7 on this picture made by deposition or erosion? (2 points)
4. If the arrow in the picture is pointing East, what direction is the longshore drift? (2 points)
5. Define the term longshore drift. (3 points)
6. Match the following landforms with the appropriate numbers – tombolo, spit, lagoon, wave-built platform, wave-cut terrace (5 points)
7. Define the term tombolo. (3 points)

**Grading notes:** Questions 3, 4 and 6 are point marked, questions 5 and 7 are level marked.

**Expected answers:**

3. [2 points] deposition

4. [2 points] south

5. [3 points] a geological process that consists of the transportation of sediments (clay, silt, pebbles, sand, shingle) along a coast parallel to the shoreline, which is dependent on oblique incoming wave direction [accept reasonable equivalents, award partial credit where necessary]

6. [1 point per answer] tombolo – 4, spit – 5, lagoon – 6, wave-built platform – 2, wave-cut terrace – 1

7. [3 points] a tombolo is a sandy isthmus, a deposition landform by which an island becomes attached to the mainland by a narrow piece of land such as a spit or bar [accept reasonable equivalents, award partial credit where necessary]

**Section 3 - [15 points]**

8. Define the term 'smart city'. (3 points)

9. Which of the following are key to the development of smart cities around the world? Select all that apply. Public transportation, cellphones, bicycle-sharing systems, parks and green space, flexible street lighting, highway construction, WiFi networks, new suburbs, electric car infrastructure (6 points)

Answer the following true / false statements. (4 points)

10. Smart grid technology helps integrate wind and solar power into existing power grids in smart cities.

11. Most smart cities ban ridesharing services like Uber and Lyft.

12. Smart cities usually ban the collection of cellphone data from their citizens.

13. Cities like Singapore, Taipei and Shanghai are leaders in the smart city movement.

14. What are two reasons that the use of CCTV cameras (video surveillance systems) in smart cities would be controversial? (2 points)

**Grading notes:** Question 8 is level marked. All others are point marked.

**Expected answers:**

8. [3 points] an urban area that uses different types of electronic methods and sensors to collect data. Insights gained from that data are used to manage assets, resources and services efficiently; in return, that data is used to improve the operations across the city. [accept reasonable equivalents, award partial credit for incomplete answers]

9. [1 point per answer] correct answers - public transportation, cellphones, bicycle-sharing systems, flexible street lighting, WiFi networks, electric car infrastructure

10. [1 point] T

11. [1 point] F

12. [1 point] F

13. [1 point] T

14. [2 points] CCTV systems are considered by some an invasion of privacy and a violation of basic rights of free expression, especially in cities where CCTV is used to curtail political dissent or protest [accept reasonable answers, award partial credit where necessary]

**Section 4 - [10 points]**

15. Match the following environments with their climate graphs. Tropical rainforest, temperate rainforest, coniferous forest, temperate deciduous forest (4 points)

16. This graph represents the city of Mangalore, India. Based on the graph, describe the rainfall and temperature patterns in this city. (2 points)

17. What is the term for the type of rain received by cities like Mangalore? (1 point)

18. This graph represents the city of Tindouf, Algeria. Based on the graph, describe the rainfall and temperature patterns in this city. (2 points)

19. In what type of climate is Tindouf, Algeria located? (1 point)

**Grading notes:** Questions 16 and 18 are level marked. All others are point marked.

**Expected answers:**

15. [1 point per answer] tropical rainforest – 1, temperate rainforest – 2, coniferous forest – 3, temperate deciduous forest – 4 [NB - these pictures appear in order from left to right in the resource guide, they were mixed on the electronic exam on ClassMarker]

16. [2 points] Average temperatures are high year-round with very high rainfall in the late spring, summer and early fall (monsoon season) [accept reasonable equivalents, partial credit awarded for accurate description of either temperature or rainfall]

17. [1 point] monsoons

18. [2 points] Average temperatures peak in the summer months (particularly July and August), virtually no measurable rainfall is recorded throughout the year with a very small amount of precipitation expected in the fall and winter months [accept reasonable equivalents, partial credit awarded for accurate description of either temperature or rainfall]

19. [1 point] hot desert