

# Holt Invitational Road Scholar Test – 2017

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***[ Total Time: 50 minutes, Max Points: 50]***

## **Welcome to Road Scholar!**

- ❖ You will need pens, pencils, ruler, protractor, calculator, and UTM slot tool.
- ❖ You may use any printed resources.
- ❖ You can't use a computer or smart-device.
  
- Your names, team name, and team number must be written on the answer sheets.
- You may write in this booklet for scrap, but your final answers must be written on the answer sheets provided. All questions and answer sheets must be attached and in order.
- Your answers must be complete – for example, measurements must have units; and/or along with any other appropriate identification.
- Place a transparent piece of paper or plastic to put over the maps. You may clip this to the maps, and mark on the transparency.

### **Cautions: Avoid penalty points or disqualification!!!**

- Make sure you do not make any marks on any maps provided to you!
- Make sure you start working only when told to do so, and stop exactly when told to do so by the event supervisor.

We have handed you the following material:

- ✓ This Exam Test Paper
- ✓ Response/Answer Sheets
- ✓ AAA Detroit / South-East Michigan Map [AAA Map]
- ✓ Official Michigan State (MDOT) Highways Map [MDOT Map]
- ✓ Wayne, Michigan Quadrangle (7.5 Minute) Map [QUAD Map]

Return all provided material back to event supervisor.

Wishing you the best for this exam. 😊

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1. On a nice Saturday morning, Jeeves was driving his car on the Telegraph Road north and he had a flat tire occurrence at the intersection of Ford Road and Telegraph Road in Dearborn Heights. He called AAA roadside assistance service and he found out that nearest assistance is available on the intersection of Telegraph Road and Huron River Drive in Flat Rock, who can come and fix the flat tire at Jeeves's car location in Dearborn Heights. If speed limit on Telegraph Road is 55 miles/hour, then how much time (in minutes) will be taken by AAA roadside assistance service driver to reach to Jeeves? **[Reference: MDOT Map] Points: 1**
2. Jeeves starts driving North on the Telegraph Road after repairs, as he has to meet his friend Dyami on the Pontiac Municipal Golf Course. How many miles Jeeves has to drive from Dearborn Heights to the Golf Course's entrance at Telegraph Road and Square Lake Road? **[Reference: AAA Map] Point: 1**
3. Jeeves and Dyami had a great time on the greens, and then they called Ahawi and Julie to meet them at Andiamo Restaurant in Renaissance Center in Detroit downtown. Which is the nearest State Route for them to go to Detroit Downtown if Interstate Route is closed for construction? **[Reference: AAA Map] Point: 1**
4. Ahawi and Julie live in riverfront apartments close to Joe Luis Arena, and they do not have car for transportation so which public transport system they will utilize to go to Renaissance Center in Detroit downtown? **[Reference: AAA Map] Point: 1**
5. Ahawi and Julie wanted to know how many miles Jeeves has to drive to drop Dyami in Pontiac as he lives there. What is the distance between Pontiac and Detroit? **[Reference: MDOT Map] Point: 1**
6. Dyami tells his friends that he is going to Mackinac City to meet his uncle Honani on Easter and he will take I-75 North from Pontiac, as construction will be complete on I-75 by Easter. How many Rest Areas with Family Bathroom Facilities are there in his way to Mackinac City? **[Reference: MDOT Map] Point: 1**
7. Dyami and Honani made plans to attend festive fair in Sault Ste. Marie and stop at Indian Reservation, near at state route 129, to meet Honani's childhood friend Keme. What is the name of Indian Reservation where Keme lives? **[Reference: MDOT Map] Point: 1**
8. Dyami and Honani had supper with Keme's family and they remembered their childhood days when they used to live on the Isle Royale which is an isolated island, far from the sights and sounds of civilization and surrounded by beautiful Lake Superior. What type of ferry is used to commute from Cooper Harbor to Isle Royale? **[Reference: MDOT Map] Point: 1**
9. What type of park is there at Isle Royale? **[Reference: MDOT Map] Point: 1**
10. What is the name of the airport in Sault Ste. Marie? **[Reference: MDOT Map] Point: 1**

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11. One degree of latitude equals how many seconds? Point: 1
12. How many approximate acres of land is available in any section of a survey township?  
[1 Point]
13. What is the name of an imaginary line extended east and west on a parallel of latitude and crossing a Principal Meridian at an Initial Point, used for surveyors in locating and describing land under the Public Land Survey System? [1 Point]
14. How many degrees of longitudes are there in a single UTM zone? [1 Point]
15. How many separate horizontally oriented projects are there in Michigan State Plane Coordinate System? [1 Point]
16. What is value of the northing in UTM reading: 10 S 0559741 4282182? [1 Point]
17. Draw Contour Map from the Elevation (in meters) Points given on Answer # 28 (in Answer Sheet). [3 Points]
18. What is the value of Magnetic Declination along with direction in the topographic Map?  
**[Reference: QUAD Map]** Point: 1
19. What is the name of cemetery in Plymouth? **[Reference: QUAD Map]** Point: 1
20. What is the elevation of this cemetery in Plymouth? **[Reference: QUAD Map]** Point: 1
21. What are the UTM coordinates of Post Office in Plymouth? **[Reference: QUAD Map]** Points: 2
22. What are the geographic coordinates (latitude, longitude) in degree/minute/seconds of the school on Ford Road in Westland? **[Reference: QUAD Map]** Points: 2
23. What kind of hydrography is depicted in Newburgh Lake? **[Reference: QUAD Map]** Point: 1
24. What is the name of adjoining quadrangle in North-West of Wayne? **[Reference: QUAD Map]**  
Point: 1
25. In which UTM Zone Wayne Quadrangle is located? **[Reference: QUAD Map]** Point: 1
26. What is the name of Mapping Agency? **[Reference: QUAD Map]** Point: 1
27. How many schools are there in seventh sector? **[Reference: QUAD Map]** Point: 1

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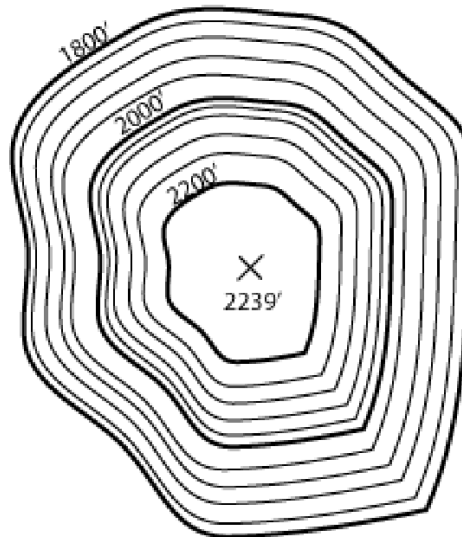
28. What do we call contour lines on which elevation is noted? [*Reference: QUAD Map*] Point: 1

29. Draw the map in the Square Box (in the answer sheet):

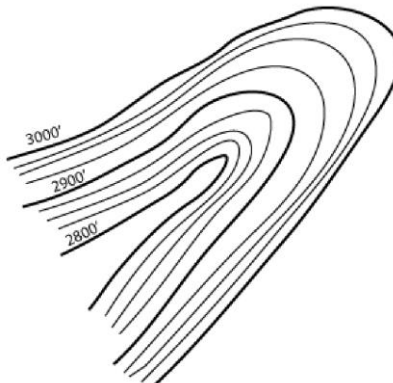
The Square shown represents Section 10. Write the Section Number on the map section and use a USGS Topographic Map Key to draw your symbols for the features requested.

- a) Draw a Quarry in NW  $\frac{1}{4}$  / SE  $\frac{1}{4}$  / 10. [ 1 Point]
- b) Draw a Picnic area in SE  $\frac{1}{4}$  / SW  $\frac{1}{4}$  / 10. [1 Point]
- c) A secondary highway enters the section 12,000" east of NW corner, and crosses the section at an azimuth of 135 degrees. Draw in the secondary highway. [Map Scale= 1:24,000] [1 Point]
- d) In the NE  $\frac{1}{4}$  / SE  $\frac{1}{4}$  / 10, draw a church on the north side of the secondary highway. [1 Point]
- e) Draw a standard gauge railroad, single track from the SW corner of the section across the map at an azimuth of 83 degrees. [1 Point]

30. What kind of topographic landform is represented in the following illustration? [1 Point]

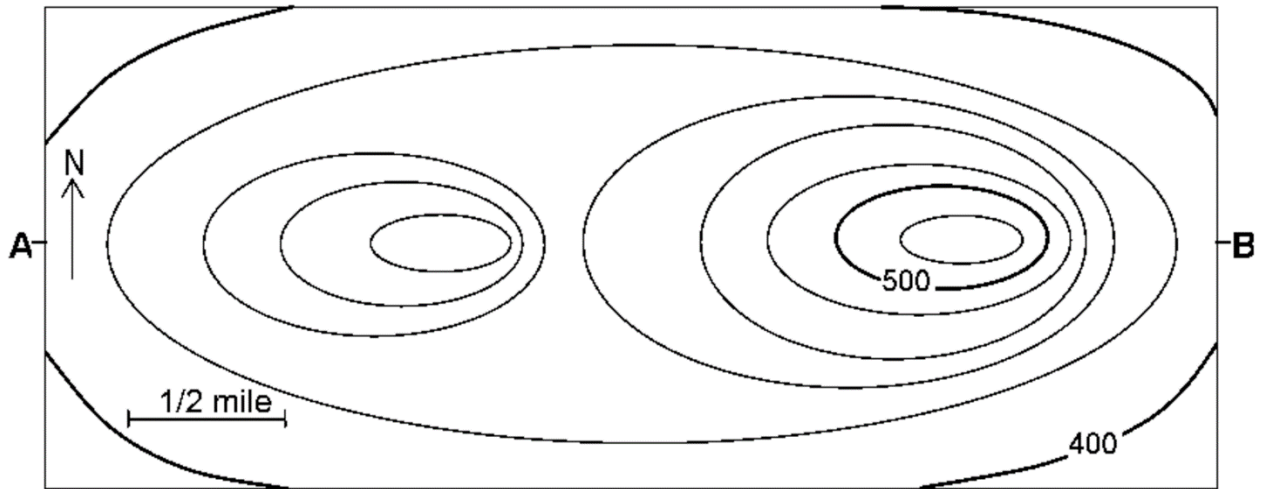


31. What kind of topographic landform is represented in the following illustration? [1 Point]

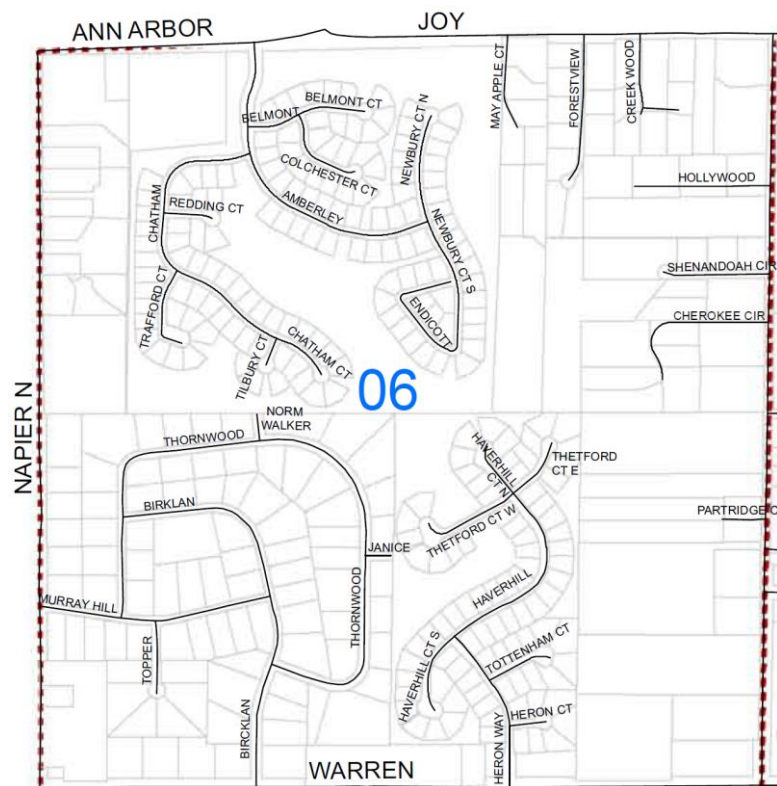


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32. Construct topographic profile of following contour map on the answer-sheet where space has been provided: [Points: 3]

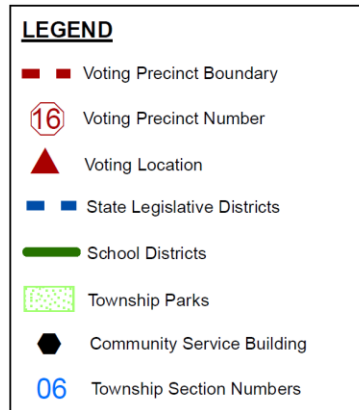


33. Putle Homes as Real Estate Developer wants to purchase land for new subdivision and city clerk has told Putle Homes that there is a piece of land available at E  $\frac{1}{2}$  of SE  $\frac{1}{4}$  of Sec 6 T.02S – R.08E. How many acres of land is available to Putle Homes in this scenario. Refer the following area of Canton Township Section Map: [1 Point]

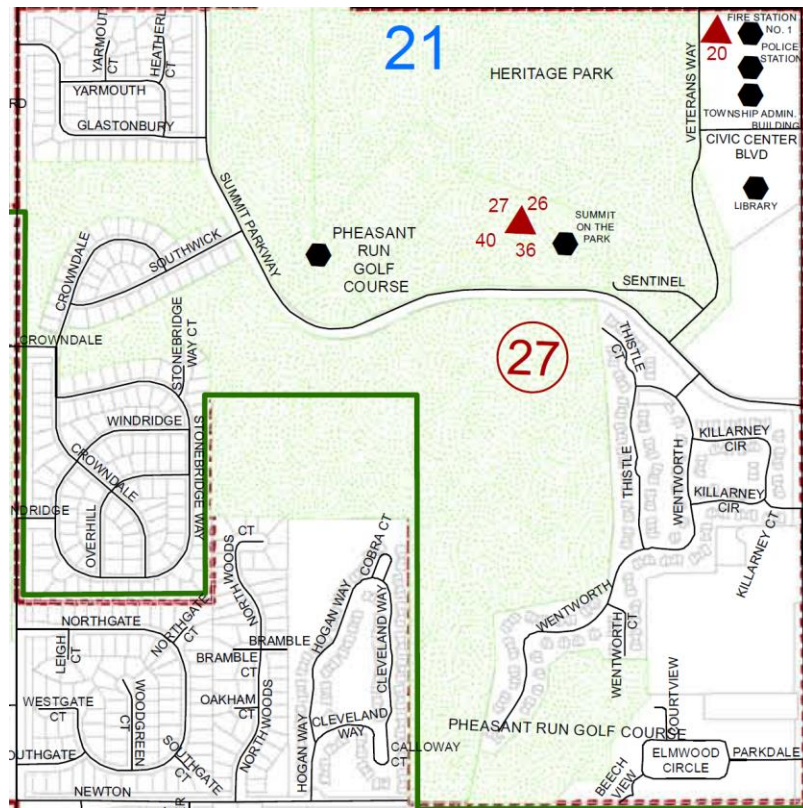


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34. Since Canton Township is R.08E, then the western-most side of Canton Township must be how many miles east of this north-south main survey line? [1 Point]
35. The following Legend explains the notations used in Canton Township Section Map as used in question 29.



What map feature(s) is present in SE ¼ of NW ¼ of Section 21 T.02S – R.08E? [1 Point]



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## **Knowledge Test for Tie Breaker (will be used in the order of questions)**

- 36. Which is the longest Interstate Route in USA? [1 Point]
- 37. How many counties are there in Michigan? [1 Point]
- 38. Name all bordering states of Michigan? [1 Point]
- 39. Which is the longest suspension bridge in North America? [1 Point]
- 40. Which was the first zoo in America to feature cage-less, open-exhibits that allowed the animals more freedom to roam? [1 Point]