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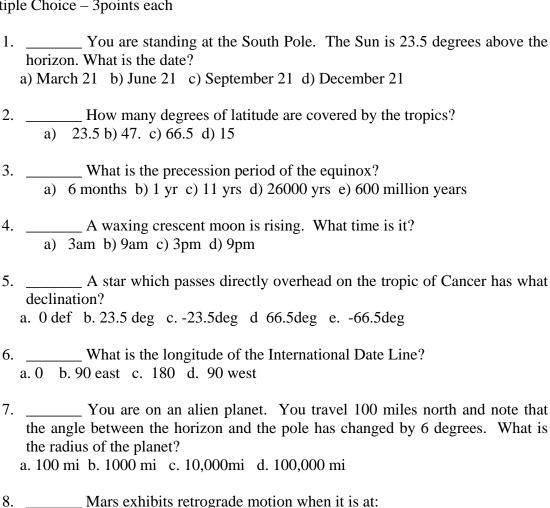
FIRST EXAM **APAS 1030 SECTION 001** October 4, 2006

Possibly Useful Information:

You must do all 21 multiple choice and one long answer. If you attempt both long answers we will use the higher score of the two.

Multiple Choice – 3points each

perihelion



a. opposition b. inferior conjuction c. quadrature d. superior conjunction e.

| 9 What is the phase of the Moon during a Solar Eclipse? a. new b. first quarter c. full d. third quarter |
|--|
| 10 You are living on the Moon, and the Sun is on the local meridian. You spouse calls to say he/she won't be home until sunset. How long will your wa be? a. 3 hours b. 6 hours c. one week d. one month e. forever (get a divorce) |
| 11 You are living on the Moon, and the Earth is on the local meridian Your spouse calls to say he/she won't be home until earthset. How long wi your wait be? a. 3 hours b. 6 hours c. one week d. one month e. forever (get a divorce) |
| 12 The great astronomer Ptolemy a) Lived in Egypt and was Roman b) Lived in Egypt and was Muslim c) Lived in Greece and was Roman d) Lived in Sicily and was Greek |
| 13 How many planets are visible to the unaided eye (not counting Earth)? a)2 b)3 c)4 d)5 e)6 |
| 14 What is the maximum number of planets that can be seen by th unaided eye at midnight in Boulder (not counting Earth)? a)2 b)3 c)4 d)5 e)6 |
| 15 Constellations: a)define the ecliptic b)must contain planets c)have fixed R.A. and Dec. d)are regions of the sky |
| 16 The purpose of an epicycle is to: a) predict retrograde motion b) predict brightness of the planets c) predict eclipses d) explain the number of visible planets |
| 17 You are in Boulder and call a friend long distance. It is 7pm here, an 9am there. Your friend is: a)75 degrees east of Boulder b)75 degrees west of Boulder c)150 degrees east of Boulder d)150 degrees west of Boulder |
| 18 At the Fall equinox the Sun has a Right Ascension of: a)0 hr b)6 hr c)12 hr d)18 hr e)none of these |

| 19 | Two weeks after the full moon the moon is: |
|----|---|
| | a)third quarter b) new c)gibbous d)crescent e)first quarter |
| 20 | An annular eclipse is: |
| | a) an eclipse that happens once per year |
| | b) a lunar eclipse with the moon at a distant orbit point |
| | c) a solar eclipse with the moon at a distant orbit point |

- d) a lunar eclipse with the moon at a close orbit point
- e) a solar eclipse with the moon at a close orbit point

Harder Multiple Choice – 15 points

- 21. _____ You are standing in some wooded mountains. Your watch, which is set to Greenwich Mean time, says it is 5pm on October 11. The Sun is on the meridian half way between the Southern horizon and directly overhead. Which mountains are these?
 - a) Appalachians b) Alps c) Himalayas d) Andes e) Atlas

Long Answer: 25 points

Answer one of the next two questions. Be as quantitative as possible. Continue onto the back of this sheet.

Explain how the ancient Greeks estimated the distance to the Moon. Use numbers to recreate their estimate.

Or

You are Magellan and have just discovered some islands somewhere in the middle of the Pacific Ocean. Your Captain's clock is known to drift up to a minute per day. Your sextant can measure star altitude to about half a degree. You have traveled from Portugal at about 150miles per day.

How accurately do you know your latitude? How accurately do your know your longitude? Is there any hope of finding the islands again?