1) According to the graph, the Sun is classified as a
(1) main sequence star with a temperature of approximately 4,000ºC and a luminosity of 100
(2) main sequence star with a temperature of approximately 6,000ºC and a luminosity of 1
(3) white dwarf star with a temperature of approximately 10,000ºC and a luminosity of 0.01
(4) blue supergiant star with a temperature of approximately 20,000ºC and a luminosity of 700,000

2) An astronomer can estimate the temperature of a star by observing its
(1) size (3) color
(2) shape (4) brightness

3) A Red giant star would most likely have a temperature of
(1) 5,000ºC (3) 20,000ºC
(2) 10,000ºC (4) 30,000ºC

4) Which factor does not affect a stars absolute magnitude (Luminosity)?
(1) The star's temperature.
(2) The star's size.
(3) The star's distance.
(4) The star's shape.

5) Small cool stars would most likely appear to be
(1) blue (3) yellow
(2) red (4) white

6) What type of star is Polaris?
(1) White Dwarf (3) Red Giant
(2) Supergiant (4) Main Sequence

7) Which of the following stars is hottest?
(1) a red giant (3) the sun
(2) a white dwarf (4) a red dwarf

8) Red giant stars have greater luminosity than our sun mainly because they are
(1) hotter (3) larger
(2) farther away (4) older

9) The smallest stars on a H-R diagram are found
(1) at the upper left end of the main sequence
(2) at the lower right end of the main sequence
(3) at the upper right corner of the H-R diagram
(4) at the lower left corner of the H-R diagram

10) The vertical axis of an H-R diagram relates to the
(1) the color of the star
(2) the actual visual brightness of the star
(3) the apparent brightness of the star compared to our sun
(4) the speed of the star

11) The region of the H-R diagram occupied by most stars is the
(1) main sequence region
(2) red giant region
(3) white dwarf region
(4) quasar region

12) In order to position a star on an H-R diagram you must know at least the star's
(1) color and apparent brightness
(2) color, apparent brightness and distance
(3) apparent brightness and age
(4) color and distance

13) We know that red giant stars are larger in diameter than the sun because
(1) they are more luminous but have the same temperature
(2) they are less luminous but have the same temperature
(3) they are hotter but have the same luminosity
(4) they are cooler but have the same luminosity

14) Compared to our sun, the star Polaris is
(1) brighter (3) cooler
(2) smaller (4) hotter
15) What factor below usually determines whether a star will be on the main sequence?

- (1) age
- (2) mass
- (3) size
- (4) distance from our sun.

16) Two stars of the same color are plotted on an H-R diagram. Star A is more luminous than star B. Which one of the following statements could explain this?

- (1) Star A is hotter than star B.
- (2) Star A is more distant than star B.
- (3) Star A appears brighter in the sky than star B.
- (4) Star A is larger than star B.

17) In the H-R diagram, 90 percent of all stars fall

- (1) in the Red Dwarf region.
- (2) in the Supergiant region.
- (3) among the White Dwarfs.
- (4) on the Main Sequence.

18) Barnard's Star has a surface temperature of about

- (1) 300 ºC
- (2) 3000 ºC
- (3) 5000 ºC
- (4) 10,000 ºC

19) Which of the following is the same for all stars along a horizontal line on an H-R diagram?

- (1) temperature
- (2) diameter
- (3) mass
- (4) luminosity

20) Compared to the sun, stars near the top of the H-R diagram are always

- (1) about the same brightness
- (2) over 10,000 times brighter
- (3) much redder
- (4) much hotter

21) If we plot many stars on an H-R diagram, all with the same luminosity but different temperatures, they

- (1) would all lie on the main sequence
- (2) would be all over the diagram
- (3) would form a horizontal line
- (4) would form a vertical line

22) The apparent brightness of an object such as a star does not depend on

- (1) how fast the star is moving
- (2) the strength of the light emanating from the star
- (3) the distance from us to the star
- (4) the amount and kind of obstacles between us and the star

23) Compared to the sun a white dwarf star is

- (1) hotter and larger
- (2) hotter and smaller
- (3) cooler and larger
- (4) cooler and smaller

24) Which of the following stars is least bright?

- (1) the sun
- (2) a blue supergiant
- (3) a white dwarf
- (4) a red giant

25) Compared to other stars, the sun is

- (1) among the hottest stars
- (2) among the smallest stars
- (3) very unique
- (4) about average in all respects

26) Measurements indicate that a certain star has a very high luminosity (100,000 times that of our sun) and yet has a temperature that is cooler than the sun. What can you conclude about this observation?

- (1) It could be a main sequence star.
- (2) It may be quite large.
- (3) This is a typical characteristic of stars.
- (4) There must be an error in measurement.

27) Which star color indicates the hottest star surface temperature?

- (1) blue
- (2) white
- (3) yellow
- (4) red

28) Which two stars have the most similar luminosity and temperature?

- (1) Betelgeuse and Barnard's Star
- (2) Rigel and Betelgeuse
- (3) Alpha Centauri and the Sun
- (4) Sirius and Procyon B