

Astronomy Term 2 Final Exam 2023

Name _____

1. The sun is composed primarily of...
a. Hydrogen b. Oxygen c. Carbon Dioxide d. Skittles
2. The process that powers the sun is called...
a. fission b. fusion c. internal combustion d. dark energy
3. In what part of the sun do nuclear reactions that release energy take place?
a. the core b. the radiation zone c. the convection zone
4. The process in which heated plasma rises from the interior of the sun and then cools and sinks back down is called...
a. radiation b. conduction c. convection d. photosynthesis
5. Photons created in the interior of the sun take about how long to reach the surface of the sun?
a. a few seconds b. a few minutes c. a few years d. thousands of years
6. Dark spots visible on the surface of the sun are called...
a. sun spots b. blemishes c. freckles d. black holes
7. Spots visible on the surface of the sun are associated with...
a. dark matter b. dark energy c. magnetic fields d. age
8. What is the name of the force that holds the sun together?
a. magnetism b. dark energy c. the strong force d. gravity
9. What will be the final fate of our sun?
a. it will become a black hole
b. it will become a neutron star
c. it will become a white dwarf
d. it will shine forever

10. In the movie Contact, what part of the electromagnetic spectrum are researchers scanning?
a. gamma waves b. x rays c. optical light d. radio waves
11. What is the name of the organization in the movie that is Searching for ExtraTerrestrial Intelligence?
a. SETI b. BETI c. YETI d. FETI
12. What is the name of the US Government programs that funds science research?
a. National Security Administration
b. Science Partners United
c. National Space Force
d. National Science Foundation
13. What is the name of the facility Dr. Arroway is initially using?
a. Arecibo b. VLA c. NASA d. The Event Horizon Telescope
14. What is the name of the facility where Dr. Arroway first detects an alien signal?
a. Arecibo b. VLA c. NASA d. The Event Horizon Telescope
15. Where is the source of the alien signal?
a. the moon b. mars c. the star Vega d. the star Altair
16. The alien signal contains plans to build a device. What kind of device is it?
a. a radio b. a transport c. a bomb d. a time machine
17. When the device is activated, what does it create?
a. an alien b. an explosion c. a worm hole d. nothing
18. The alien that communicates with Dr. Arroway appears as...
a. her father
b. a big iPhone
c. a squid
d. a burning bush
19. Dr. Arroway experiences a series of events spanning a time of 18 hours. How much time passes on earth?
a. less than a second b. 18 hours c. years
20. Which of the following is an ongoing project to determine the distribution of galaxies in the universe?
a. Arpa Net Sky Map
b. Event Horizon Radio Telescope Consortium
c. Sloan Digital Sky Survey
d. Space X Starlink Project

21. As far as we can tell, the distribution of galaxies and galaxy clusters is...
- roughly spherical
 - web-like
 - spiral
 - fractal
22. The force that determines the large scale structure of the universe is...
- gravity
 - electromagnetism
 - the weak force
 - the strong force
23. The currently accepted cosmological model of the universe includes a form of matter called...
- antimatter
 - red matter
 - mad matter
 - dark matter
24. Referring to question 23, this form of matter has been identified as neutrinos.
- true
 - false
25. Currently, there is no evidence that our universe is one of an infinite number of universes.
- true
 - false
26. LCDM stands for...
- lowest common denominator matrix
 - low cryonic dynamic model
 - least capacitance distance model
 - lambda cold dark matter
27. The Ekpyrotic cosmological model is a type of _____ model.
- cyclic
 - steady state
 - big bang
 - multiverse
28. The rate of expansion of the universe is made by observing....
- black hole gravitational waves
 - neutron star mergers
 - type IA supernovas
 - GBRs