Marking Scheme

1. What is a red giant?

Answer: A normal star that has evolved into a very large, reddish star

2. What is a planetary nebula?

Answer: B

3. What is the main consequence of nuclear fusion?

Answer: Radiation pressure increasing.

4. What is a cepheid variable?

Answer: A star of variable luminosity

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6. What is a neutron star?

Answer: A star made entirely of neutrons

7. What is a white dwarf?

Answer: The remnant of a white dwarf after it has cooled down

8. What is a supernova (Type II)?

Answer: The explosion of a red supergiant star

9. What is a main-sequence star?

Answer: A type of star that is undergoing nuclear fusion of hydrogen into helium

10. What is a brown dwarf?

Answer: C

11. What is the unit of apparent brightness?

Answer: Watts per metre squared.

12. What is a main-sequence star?

Answer: B

13. What is a brown dwarf?

Answer: Gas and dust that did not reach a high enough temperature to initiate fusion

14. What is a galaxy?

Answer: B

15. Which of the following is not a type of nebula?

Answer: Stellar Nebula

16. What is a supernova (Type Ia)?

Answer: The explosion of a white dwarf that has accreted mass from a companion star exceeding its stability limit.

17. Which of the following is the correct description of a star?

Answer: A celestial object that emits light through nuclear fusion reactions in its core

18. What is a neutron star?

Answer: C

19. What is a cluster of galaxies?

Answer: B

20. What is a main-sequence star?

Answer: A normal star that is undergoing nuclear fusion of hydrogen into helium.

21. What is a cepheid variable?

Answer: A star with variable luminosity that varies in brightness in a well-defined pattern

22. Which statement best justifies the existence of dark matter?

Answer: Its existence is inferred from techniques other than direct visual observation.

23. Which of the following objects is made up mainly of ice and dust?

Answer: Comet

24. What is a planetary nebula?

Answer: The ejected envelope of a red giant star.

25. What is a comet?

Answer: A small body mainly composed of ice and dust that orbits around a star

26. What is a black hole?

Answer: A singularity in space-time that is the end result of the evolution of a very massive star.

27. Which statement best defines a binary star?

Answer: Two stars orbiting a common centre.

28. What is a cluster of galaxies?

Answer: Galaxies close to one another and affecting one another gravitationally, behaving as one unit.

29. What is dark matter?

Answer: A

30. What is the purpose of nuclear fusion in a star?

Answer: A