PRACTICE EXAM

Difficulty: MEDIUM

Questions: 10

Star Deaths Exam

Instructions: Please answer all questions to the best of your ability.

Multiple Choice Questions (4 points each, 40 points total)

Instructions: Choose the best answer for each question.

Question 1: What are stars primarily composed of?
A) Iron and Nickel
B) Carbon and Oxygen
C) Hydrogen and Helium
D) Gold and Silver

Question 2: What is the source of energy for stars?
A) Chemical Reactions
B) Gravitational Contraction
C) Nuclear Fission
D) Nuclear Fusion

Question 3: What is a planetary nebula formed from?
A) A supernova explosion
B) The core of a neutron star
C) The shed outer layers of an average-sized star
D) Colliding galaxies

Question 4: Which of the following is a characteristic of neutron stars?
A) They are very hot.
B) They are not very dense.
C) They emit light from nuclear fusion
D) They are extremely dense.

Question 5: Which of these elements is produced in the core of massive stars, leading to a supernova?
A) Helium
B) Hydrogen

C) Iron
D) Oxygen

Short Answer Questions (6 points each, 30 points total)

Instructions: Answer each question in 2-3 sentences.

Question 6: Briefly describe the process of nuclear fusion in stars.

Question 7: What is the main difference between the death of an average star and the death of a massive star?

Question 8: Explain how pulsars are useful to astronomers.

Problem-Solving Questions (10 points each, 30 points total)

Instructions: Answer each question with a detailed explanation.

Question 9: Describe the steps involved in the formation of a star, starting from a stellar nebula.

Question 10: Explain why the study of star deaths is important to our understanding of the universe and the elements found on Earth.