Astronomy Ranking Task: Star Evolution

Exercise #3

Description: The list below provides various stages of star formation and evolution for low mass stars (<8 \(M_{\text{Solar}}\)) and high mass stars (>8\(M_{\text{Solar}}\)).

A Planetary Nebula
B G Spectral Class Main Sequence Star
C Neutron Star
D Supernova Type II
E Nothing
F Giant
G O Spectral Class Main Sequence Star
H Molecular Cloud of Gas and Dust
I White Dwarf
J Black Hole
K Supernova Type I
L Nova
M Gravity Collapse of Gas/Dust Cloud

A) Ranking Instructions: Rank, from earliest to latest, the stages for a low mass stars without a companion. Do not include any stages that do not apply.

Ranking Order:

Earliest                          Latest

Information is insufficient to rank stages: _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

___________________________________________________________________________
___________________________________________________________________________

B) Ranking Instructions: Rank, from earliest to latest, the stages for a low mass stars with a companion. Do not include any stages that do not apply.

Ranking Order:

Earliest                          Latest

Information is insufficient to rank stages: _____ (indicate with check mark).

Carefully explain your reasoning for ranking this way:

___________________________________________________________________________
___________________________________________________________________________
C) **Ranking Instructions:** Rank, from earliest to latest, the stages for the least massive of the high mass stars. Do not include any stages that do not apply.

**Ranking Order:**

Earliest

Latest

Information is insufficient to rank stages: ______ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

D) **Ranking Instructions:** Rank, from earliest to latest, the stages for the most massive of the high mass stars. Do not include any stages that do not apply.

**Ranking Order:**

Earliest

Latest

Information is insufficient to rank stages: ______ (indicate with check mark).

**Carefully explain** your reasoning for ranking this way:

___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________