

## **NSO Astronomy C Event 2007 – ANSWER KEY**

- 1) eclipsing binary
- 2) shorter period – slowing down at constant rate
- 3) mass transfer
- 4) 14
- 5) Algol beta Persei
- 6) two stars in the same orbital plane/ total eclipse of one star by the other
- 7) Z Cam
- 8) dwarf novae
- 9) mass transfer rate too large to produce lots of small outbursts
- 10) 9
- 11) SS Cygni
- 12) sun-like star, white dwarf, accretion disk
- 13)  $1.5 \times 10^6$  km
- 14)  $1.37 \times 10^6$  km
- 15) ANSWER ON H-R DIAGRAM
- 16) semi-regular
- 17) 6
- 18) 12; alpha Orionis
- 19) red supergiant
- 20) 5
- 21) 11
- 22) 7
- 23) Mira

24) 3

25) 10

26) RR Lyrae

27) 18

28)

A Cepheid

B eclipsing binary

C RR Lyrae

D eclipsing binary

E Cepheid

F RR Lyrae

29)

A 7 days

B 0.5 - 1 day

C 1 day

D 13-14 days

E 5 days

F 12 hours (1/2 day)

30) A, D, E

31) D

32) C