

VP & RPTP Science College-Vallabh Vidyanagar

First Internal Test: 2013

T Y B.Sc. [Semester-V]

Subject-Physics US05CPHY06

Date: 07/10/2013 Monday Time: 3.30 pm to 5.00 pm

Total Marks-30

Q-1 Multiple Choice Questions: [One mark each] 6 X 1 =6

6

- (i) Mesosphere ranges from _____ to _____ km above sea level.
- (a) 1 to 8 (b) 8 to 15
(c) 15 to 25 (d) 50 to 90
- (ii) Which telescope does not use primary mirror?
- (a) Newtonian Reflector (b) Cassegrairian
(c) Coude (d) Galilean
- (iii) Roche lobes are associated with phenomenon of _____
- (a) Mass transfer in binaries (b) Stellar luminosity
(c) Stellar temperature (d) Stellar magnetic field
- (iv) The Sun according to H-R diagram falls in category of _____ stars.
- (a) main sequence (b) dwarf
(c) Cepheid variable (d) red giants
- (v) Solar magnetic field cycle has approximate period of _____ years.
- (a) 5.5 years (b) 11 years
(c) 22 years (d) 100 years
- (vi) Flares are believed to have origin in _____
- (a) Convection (b) Prominences
(c) Ejection of solar mass (d) X type neutral point

Q-2 Answer the following questions in short [Attempt any three].

6

- (a) What is diffracted image of a star?
(b) Define color index and heat index.
(c) Differentiate active and eruptive prominences.
(d) How does coronagraph work?
(e) What is difference between optical binary and true binaries?
(f) What is the meaning of R, N, and S class in H-D classification system for stars.

Q-3 Explain difference between slit spectrograph and slit less spectrograph.

6

OR

Q-3 Discuss stellar parallax method for measurement of stellar distances.

6

Q-4 Write a note on 11 year Sunspot cycle.

6

OR

Q-4 Write a detailed note on flares and their origin.

6

Q-5 Explain luminosity effect on stellar spectra.

6

OR

Q-5 Discuss mass transfer in close binary system.

6

