STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI-86
(For candidates admitted during the academic year 2011–12 & thereafter)

SUBJECT CODE: 11PH/GE/AP44

B.A./B.Sc./B.Com. / B.V.A./ B.C.A. / B.S.W. DEGREE EXAMINATION
APRIL 2015

COURSE : GENERAL ELECTIVE
PAPER : ASTROPHYSICS
TIME : 3 HOURS MAX. MARKS: 100

SECTION – A

Answer ALL questions: (10 x 3 = 30)

1. What is Maunder minimum?
2. Define radial velocity and tangential velocity.
3. What is an asteroid?
4. Comment on cephid variable star.
5. What are irregular galaxies?
6. Explain cosmological principle.
7. With a diagram explain William Herschel's concept of our galaxy.
8. What is the leap year rule followed by the Gregorian calendar.
9. How was the presence of interstellar matter determined?
10. What happens inside a star when it ends its life on the main sequence? What is the next stage of its life?

SECTION – B

Answer any SIX questions: (6x 5= 30)

11. What are constellations? Write about the myths associated with the constellation Andromeda and five nearby constellation.
12. Differentiate between the term meteoroid, meteorite and meteor.
13. Define binary star. Write a note on Visual and spectroscopic binaries.
14. Describe open and globular clusters.
15. Describe the center of the galaxy.
16. Explain elliptical and spiral galaxy in detail.
17. What are local groups? Explain.
18. Write a note on supernovae and white dwarf.

..2

SECTION – C

Answer any TWO questions: **(2x 20= 40)**

19. a. How stars are classified according to spectra?

    b. Give the significance and results of H-R diagram.

20. Describe the following and discuss their significance in stellar evolution

    a) pulsars b) black holes c) neutronstars

21. Explain the internal structure of a star?

22. Give an account on the a) expanding universe and b) radio galaxies.

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