

Printed Pages—3

EOE—034/EOE—044

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 0930

Roll No.

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B.Tech.(SEM IV) EVEN SEMESTER THEORY EXAMINATION,
2009-2010**SPACE SCIENCES**

Time : 3 Hours

Total Marks : 100

- Note :** (i) Attempt *all* questions.
(ii) All questions carry *equal* marks.
(iii) Draw neat diagrams at suitable places.

1. Write a note on **any four** of the following : (4x5=20)
- (a) Asteroids
 - (b) Kepler's law of planetary motion
 - (c) Jovian Planets
 - (d) Formation of elements beyond Iron
 - (e) Energy generation in Sun
 - (f) Dark Matter
2. Attempt **any two** parts of the following : (2x10=20)
- (a) Telescopes of different types that are used in different region of EM radiation had significantly contributed in study of space - discuss each of them.

- (b) Comment on the problems associated with human eye while observing the spectrum of stars hence discuss new detecting devices to address these problems.
- (c) Discuss Nebular Theory of formation of Solar System with special emphasis on the formation of celestial objects inside the frost line.
3. Attempt **any two** parts of the following : (2x10=20)
- (a) Discuss in detail the formation and structure of
- (i) Red Giant and
 - (ii) White Dwarf.
- (b) Define Active and Normal Galaxies. Differentiate between Seyferts and Quasars and hence, discuss the high luminosity of Quasars.
- (c) Mass plays a vital role in stellar evolution - discuss it for Massive Stars.
4. Attempt **any two** parts of the following : (2x10=20)
- (a) Discuss Harvard Classification system and Hertzsprung - Russel diagram for stars along with its utility in study of Space.
- (b) Discuss dark energy and some of its indirect evidences and finally its role in deciding the nature of our universe.
- (c) The farthest we see, the earliest time is that we observe - Elaborate this statement in general and in particular with reference to CMBR by discussing its importance in developing our understanding of Universe.

5. Write a note on **any four** of the following : (4x5=20)

- (a) Apparent and Absolute Magnitude <http://www.uptuonline.com>
- (b) Bode's Law of Planetary position
- (c) Nucleosynthesis
- (d) Comets
- (e) Solar Wind
- (f) Black Holes

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