Printed Pages-1 **Roll No.** | | | | | | | | | | | **NOE044**

B.TECH.

THEORY EXAMINATION (SEM–IV) 2016-17

SPACE SCIENCE

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Attempt the following : **(10×2=20)**

a) Write the Kepler's law of planetary motion.

b) What are the distinguishing features of a galaxy and active galaxy?

c) Write some key notes on meteorites and asteroids.

d) Write a short note on black hole and white dwarf.

e) Distinguish between radio quiet and radio loud galaxies.

f) Define the term perturbations of stars.

g) Define a variable star and a composite star. Also give examples.

h) Pin down the role and goal of space science.

i) Illustrate the reason behind the origin and evolution of planetary system.

j) Explain the Hubble expansion model.

SECTION-B

2. Attempt any five of the following : **(10×5=50)**

a) In a suitable diagram explain the Harvard classification system

b) Write a detailed note on the Supernova.

c) How will you define and differentiate the Quasars and microquasars?

d) State the early evolution of the Universe in respect to big-bang theory.

e) What is the nebular theory of formation of Solar System?

f) Classify the stars with the help of Hertzsprung-Russel diagram.

g) Show the analytical proofs and corrections made to Kepler's law with its mathematical calculations

h) Narrate the various phases and life cycle of a Sun. Also describe the solar winds.

SECTION-C

Attempt any two of the following : **(15×2=30)**

3. Write down the salient features of a galaxy and active galaxy?

4. Define and state the Bode's law with all its mathematical calculations?

5. What do you understand by the term Unification? Also write the various types of Unification patterns in the formation of active galaxies.