Roll-35

New method

PG CBCS

M.Sc. Semester-III Examination, 2022

Physics

PAPER: PHS-396D

AstroPhysics (Practical)

Full Marks: 50 **Time: 3 Hours**

Answer any one question

(Theory 7, Execution 10, Method 10, Discussion 8, Viva-10, Notebook-5)

1. Make RGB image of a given astronomical source combining images at three different wavebands. Discuss what you learn from the RGB image.
2. Draw simultaneous lightcurve of a given astronomical objects using X-ray data from a space telescope.
3. Study correlation, anti-correlation and time-delay between signals from two different wavelengths.
4. Study power density spectrum of a given astronomical source using data in X-ray band.
5. For a given data, use linear and non-linear method of fitting. Find the goodness of fit.
6. Identify Sun spots with a solar-filter or a mirror.
7. Identify any five objects from the following list with naked eyes or a binocular.
   a) Mercury, b) Venus, c) Mars, d) Jupiter e) Saturn, f) North Pole, f) The Big Dipper (Ursa Major) g) The Little Dipper (Ursa Minor), h) Betelgeuse and i) Cassiopeia.

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