Unit-IV / FkeâæF-IV 7½

8. Write a short notes on:

(i) Neutron stars

(ii) X-ray binaries

mee#ehle eŠhheeCeÙee eueKe:

(i) vÙeŠeve leej

(ii) Skeme-j Ùeicee

9. Describe Super-Novae and their characteristics.

mehej-veeJe keâe eJemleej heJekeâ JeCeve keâj GvekeâÛ DeeYeue#eCee keâe Yee oMeeÙe~

A (Printed Pages 4)

Roll No. _____

S-692

B.Sc. (Part II) Examination, 2015

ASTRONOMY

Paper-III

(Stellar Astronomy-II)

Time Allowed : Three Hours] [Maximum Marks : 50

Note : Answer five questions in all. Question No. 1 is compulsory. Attempt one question from each Unit.

keâue heeÙe ØeMvee keâ Gòej oeepeÙe~ ØeMve me. 1 DeeveJeeÙe n~ ØelÙekeâ FkeâeF me Skeâ ØeMve keâeepeS~

1. Answer all parts : 20

meYee Yeeiee keâ Gòej o :

(a) Orbital elements of a binary system.

Ùeice leej keâ keâ#eeÙe DeJeÙeJe

(b) Radial velocity of a star

leej keâe e$epÙe Jeie

(c) Luminosity class of a star

leej keâe keâeele Jeie

(d) RR-Lyrae stars

Deej Deej-ueeFj leej

(e) W-Virginis stars

[yue-Jeepeeveme leej

(f) Pulsars

heumeme

(g) Stellar Magnitudes

leejkeâeÙe keâeeleceeve

(h) Proton-Proton reactions

ØeeŠeve-ØeeŠeve DeeYee›eâÙeeÙe

(i) Colour-index of a star.

leeje keâe jieekeâ

(j) Stellar clusters

leejkeâeÙe hepe

Unit-I / FkeâeF-I 7½

2. Describe a method of determining orbital elements of a visual binary system.

ekeâmee Ûe#e Ùeicee leej keâ keâ#eeÙe DeJeÙeJee keâe %eele keâjve keâe eJeeOe keâe JeCeve keâj~

3. Describe the Lehman-Filhes method of finding the elements of a spectroscopic binary.

ekeâmee JeCe›eâceeÙe Ùeice leej keâ keâ#eeÙe DeJeÙeJee keâe %eele keâjve keâe Lehman-Filhes eJeeOe keâe JeCeve keâj~

Unit-II / FkeâeF-II 7½

4. What are the intrinsic variable stars? Write a note on Cepheid variables.

Deeleejkeâ Ûejkeâeele leej keÙee n? meeeheâS[Ûejkeâeele hej Skeâ eŠhheCee eueKe~

5. Write an essay on Novae.

veeJe hej Skeâ eveyevOe eueKe~

Unit-III / FkeâeF-III 7½

6. Discuss the classification scheme for galaxies.

veeneejkeâeDee keâ Jeieekeâjce JÙeJemLee keâe JeeCele keâj~

7. Find the speed of the galaxy if it shows a Doppler shift of 5 $\overset{o}{A}$ for a line at 5000 $\overset{o}{A}$.

Gme veeneejkeâe keâe ieele keâe %eele keâj, Ùeeo Jen Skeâ jKee 5000 $\overset{o}{A}$ hej 5 $\overset{o}{A}$ keâe [ehuej eMeheŠ keâj olee n~