ekeâmee ieeieÙe leejehepe keâe oje %eele keâjve keâe leejehepeeÙe ueyeve eJeeOe keâe JeCeve keâj~

5. Describe various ways of determining stellar temperatures. 7½

leeje keâ leeheceeve keâe %eele keâjve keâe eJeeYeVe eJeeOeÙee keâe JeCeve keâj~

Unit-III / FkeâeF-III

6. Describe various types of aberrations in refracting and reflecting telescopes. 7½

DeheJelee SJe hejeJelee ojyeevee ce eJeeYeVe keâ eJeheLeve keâe JeCeve keâj~

7. Describe in detail an astronomical spectrograph. 7½

Skeâ Keieeueeve mhekeše«eeheâ keâe eJemleej me JeCeve keâj~

Unit-IV / FkeâeF-IV

8. Describe in detail a photoelectric photometer and its components. 7½

Skeâ heâeŠeFueekeŠkeâ heâeŠeceeeŠj SJe Fmekeâ DeJeÙeJee keâe eJemleej me JeCeve keâj~

9. Define linear and angular dispersion and also the resolution and resolving power of a grating spectrograph. 7½

ekeâmee «eeŠie mhekeše«eeheâ keâ jKeeÙe SJe keâeCeeÙe e[mheMeve SJe ejmeeuÙeMeve heeJej keâe heejYeee<ele keâj~

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Roll No. _____

S-689

B.Sc. (Part-I) Examination, 2015

ASTRONOMY

Third Paper

(General 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 oeepeS~ ØeMve me.1 DeeveJeeÙe n~ ØelÙekeâ FkeâeF me Skeâ ØeMve keâeepeS~

1. Answer all parts.

meYee KeC[e keâ Gòej o : 20

(a) Define apparent and absolute magnitudes of a star.

ekeâmee leej keâ DeeYeemee SJe evejhe#e keâeeleceevee keâe hejYeee<ele keâj~

(b) Define trigonometric parallax. Show that if parallax of a star is one arc second then its distance from earth will be 206265 as

tronomical units.

e$ekeâeCeeceleeÙe keâe heejYeee<ele keâj~ eoKeeÙe ekeâ Ùeeo ekeâmee leej keâe ueyeve Skeâ Deekeâ mekeâ[n, lee heLJee me Fmekeâe oje 206265 Keieeueeùe FkeâeF neiee~

(c) Describe briefly galactic and globular clusters.

ieeieÙe SJe ieeueekeâej leeje hepee keâe me#ehe ce JeCeve keâj~

(d) In a diagram show any two types of focussing arrangements of a reflecting telescope.

Skeâ DeejKe Éeje ekeâmee hejeJelekeâ ojyeeve keâ ekeâvne oe heâekeâmeve Øekeâeje keâe oMeeÙe~

(e) What do you understand by the speed of a spectrograph?

Skeâ JeCe>eâce ceehee keâe ieele me Deehe keÙee ele n?

(f) A star is 10000 times brighter than the other. What is the difference in their magnitudes.

Skeâ leej keâe pÙeeele omej leej me 10000 ievee DeeOekeâ n~ oevee leeje keâ keâeeleceevee ce ekeâlevee Delej n~

(g) Define the quantum efficiency of a detector.

Skeâ meJeokeâ keâe keJeeŠce o#elee keâe heejYeee<ele keâj~

(h) A star emits most of its radiation at 5500 Å. Find the temperature of the star.

Skeâ leeje 5500Å hej DeeOekeâlece eJeekeâjCe keâjelee n~ Fme leej keâe leeheceeve %eele keâj~

(i) Define color-index of a star.

ekeâmee leej keâ jieekeâ keâe heejYeee<ele keâj~

(j) What are the drawbacks of a refracting telescope?

Skeâ DeheJelekeâ ojyeeve keâe keÙee keâeceÙee n?

Unit-I / FkeâeF-I

2. Find relation between apparent magnitude, absolute magnitude and the distance of a star.

Skeâ leej keâ DeeYeemee keâeeleceeve, evejhe#e SJe Fmekeâe oje ce mecyevOe %eele keâj~ 7½

3. Components of a binary star have apparent magnitudes of +3 and +5 respectively. Find the combined apparent magnitude of the system. 7½

ekeâmee Ùeice leej keâ DeJeÙeJee keâ DeeYeemee keâeeleceeve >eâceMe: +3 SJe +5 n~ Ùeice leej keâe meÙeòeâ keâeeleceeve keÙee n?

Unit-II / FkeâeF-II

4. Describe the method of cluster parallax for determining the distance of galactic clusters. 7½