

Astronomy and geography: Quick reference

vishvAs vAsuki

February 19, 2012

Contents

Contents	1
I Astronomy	1
1 Star patterns	1
1.1 Constellations	2
1.1.1 Zodiac	2
1.1.1.1 nakShatra-s	2
1.1.1.2 Astrology	3
2 Observation	3
2.1 Unaided observation	3
II Geography	3

Part I

Astronomy

1 Star patterns

Over the lifetime of a person, stars (excluding the sun), despite their high speeds relative to earth, appear stationary - fixed points in the sky.

1.1 Constellations

Aka maNDala by hindu-s. Constellations are patterns of stars which aid in describing locations of various celestial objects. They are associated with colorful tales which motivated the ancients of various cultures.

1.1.1 Zodiac

Aka rAshi by hindu-s. This is a series of 12 constellations (one for each month, roughly) which form a band in the sky, through which visible objects of the solar system (saura-maNDala) wander. This is a result of the thin shape of the solar system. Each of these occupies roughly 30 degrees of the 360 degree band.

1.1.1.1 nakShatra-s

Hindu-s divided the zodiac into 27 equal sections, each subdivided into 4 pAdas (identified by a unique syllable). Each nakShatra naturally falls within one or two rAshi-s, and is associated with 1+ stars.

- Aries/ meSha
nakShatra-s: ashvinI bharaNI kRRitikA
- Taurus/ vRRiShabha
nakShatra-s: kRRitikA rohiNI mRRigashirA
- Gemini/ mithuna
nakShatra-s: mRRigashirA AdrA punarvasu
- Cancer/ karkaTa
nakShatra-s: punarvasu puShya ashleShA
- Leo/ siMha
nakShatra-s: ashleShA maghA purvA-phAlgunI uttarA-phAlgunI
- Virgo/ kanya
nakShatra-s: uttarA-phAlgunI hasta chitra
- Libra/ tula
nakShatra-s: chitra svAti vishAkhA
- Scorpio/ vRRiShchika
nakShatra-s: vishAkhA anurAdhA jyeShThA
- Sagittarius/ dhanuSha
nakShatra-s: jyeShThA mUla purvAShADhA uttarAShADhA
- Capricorn/ makara
nakShatra-s: uttarAShADhA shravaNA dhaniShThA
- Aquarius/ kumbha
nakShatra-s: dhaniShThA shatabhiShA purvAbhAdrapadA
- Pisces/ mIna
nakShatra-s: purvAbhAdrapadA uttarAbhAdrapadA revatI

Mnemonic: Artagecaleviliscapacpi.

1.1.1.2 Astrology

Aka jyotiShya by hindu-s. Ancients of various cultures hypothesised that the position of planets/ moon/ sun in various rAshi-s have predictive ability. This is rejected within the scientific method due to lack of evidence and the Occam razor.

janma-nakShatra is determined by the position of the moon; while western astrology relies on position of sun to make predictions.

2 Observation

2.1 Unaided observation

The stars (including the sun), various moons (including chandra, the moon of earth) and planets are visible in the night sky.

Part II

Geography