

## Memoranda for Observers.

Standard Time of India is adopted in these Memoranda.

*For the month of March 1912.*

Sidereal time at 8 p.m.

	H.	M.	S.
<i>March 1st</i> . . . . .	6	36	36
„ <i>8th</i> . . . . .	7	3	41
„ <i>15th</i> . . . . .	7	31	17
„ <i>22nd</i> . . . . .	7	58	53
„ <i>29th</i> . . . . .	8	26	29

From this table the constellations visible during the evenings of March can be ascertained by a reference to their position as given in a Start Chart.

### Phases of the Moon.

	H.	M.
<i>March 3rd</i> Full Moon . . . . .	4	12 P.M.
„ <i>11th</i> Last Quarter . . . . .	1	26 A.M.
„ <i>19th</i> New Moon . . . . .	3	39 A.M.
„ <i>26th</i> First Quarter . . . . .	8	32 A.M.

### Meteors.

Date.	Radiant		Character.
	R.A.	Dec.	
<i>March 1-4</i> . . . . .	166°	+4°	Slow, bright.
<i>14th</i> . . . . .	250	+54	Swift.
<i>18th</i> . . . . .	316	+76	Slow, bright.
<i>24th</i> . . . . .	161	+58	Swift.
<i>27th</i> . . . . .	229	+32	Swift, small.
<i>March-May</i> . . . . .	263	+62	Rather swift.

The showers in the month of March are not likely to be very brilliant.

### Planets.

*Venus*.—Is a morning star. Its position on the 15th March at 8 P.M. will be R.A. 21 hrs. 52 mts. 45 secs. Dec. 13° 45' 32" S. The time of its rising will be 4 hrs. 19 mts. A.M. on the 16th March.

*Saturn.*—The position of the planet on the 15th March at 8 P.M. will be R.A. 2 hrs. 58 mts. 13 secs. Dec.  $14^{\circ} 46' 46''$  N. The time of its setting will be 9 hrs. 30 mts. P.M.

*Mars.*—The position of the planet on the 15th March at 8 P.M. will be R.A. 5 hrs. 11 mts. 50 secs., and Dec.  $25^{\circ} 0' 14''$  N. The time of its setting will be 0 hr. 4 mts. A.M. on the 16th March.

*Jupiter.*—The position of this planet on the 15th of March at 8 P.M. will be R.A. 16 hrs. 55 mts. 3 secs. Dec.  $21^{\circ} 49' 1''$  S. The time of its rising will be 11 hrs. 35 mts. P.M.

---

## Classes.

### ASTRONOMICAL QUESTIONS FOR BEGINNERS.

The following questions have been drawn up for the benefit of those who are beginning the study of astronomy, and especially for those who are availing themselves of the classes organised by the Scientific Sub-Committee of the Society. Members should answer them and send their answers to the Director of Classes, who will then help them over any difficulties they may experience. The answers and the correspondence will not appear in the JOURNAL but will be conducted direct with each member concerned. It is hoped therefore that members will not hesitate to make full use of Mr. B. N. Rakshit, the Director, and to communicate their difficulties to him so that he may assist them with their reading in a practical manner.

#### VERY ELEMENTARY QUESTIONS.

- (1) What are the right ascension and declination of the First Point of Aries ?
- (2) What is the declination of the North Pole ?
- (3) If the right ascension of a body is  $25^{\circ}$ , express it in time.
- (4) The right ascension of a star on the equator is 8 hrs. 20 mts. ; find that of one which is also on the equator but. 3 hrs. 40 mts. west of the first.

#### HARDER QUESTIONS.

- (1) What are right ascensions and declinations of the following points in the heavens :—
  - (a) Summer solstice, (b) Libra, (c) Winter solstice. Also what are the celestial latitudes and longitudes of these points ? Illustrate your answers by diagram.