Quadrant II – Transcript and Related Materials

Programme	**: Bachelor of Science/ Arts (First year)**
Subject	**: Geography**
Paper Code	**: SGC101/GEC101**
Paper Title	**: Fundamentals of Geography**
	Introduction and Fundamentals of Geography
Unit	**: II**
Module Name	**: Phases of Moon**
Module No	**: 25/26**
Name of the Presenter	**: Mr. Anand S. Velip**

Notes

Moon, the only natural satellite of the Earth, is the 5th largest and 2nd densest satellite in our solar system. The orbital movement of the Moon is very eventful from the point of Earth and hence attracting attention of all.

The moon is having synchronous rotation leading to show same phase or side called near side to earth. Due to the phenomena of liberation, maximum 59% of moon's surface is visible from the earth.

Normally the moon completes its rotation and revolution around the earth in 27 days 7 hours 43 minutes and 11.5 seconds. However by that time the earth moves ahead in its revolution orbit around the sun and hence moon's synodic month span is 29 days 12 hours 44 minutes and 2.9 seconds.

The synodic month commences when the sun and the moon are in conjunction. At this time moon's phase is dark and is not visible. This phase of the moon is called New Moon. As the moon proceeds with its revolution around the earth, gradual increase in the illuminated phase appears from the earth. At 3.75 days, a Crescent Moon appears in the sky and at around 7.5 days, half of the moon becomes visible. This phase is referred as First Quarter. At 11.25 days, three quarters of moon becomes illuminated and is known as Gibbous Moon. When

moon is fully visible from the earth which happens around 14.75 days after conjunction, the phase of the moon is called as Full Moon. From the position of conjunction to full moon phase, the period is referred as waxing phase wherein an increase in moon's illuminated portion is observed from the earth.

The waning phase period starts from full moon and continues till new moon appears. During remaining part of the synodic month, the same phases of the moon are repeated in reverse direction like Waning Gibbous, the Third Quarter, Waning Crescent and finally the New Moon at the completion of synodic month.

All these phases of moon are the product of the moon's position in relation to the sun and the earth and its synchronous rotation. Depending upon the projection of illuminated portion of moon the phase of the moon matters. The most important effect of these phases is evident in the form of tides in oceans whose magnitude varies depending on the phase of the moon.