

FEDERAL UNIVERSITY OF TECHNOLOGY, MINNA

SCHOOL OF PHYSICAL SCIENCES

DEPARTMENT OF GEOGRAPHY

SECOND SEMESTER 2015/2016 SESSION UNDERGRADUATE EXAMINATION

COURSE CODE: REM522

COURSE TITLE: Planetary Atmospheres (2units)

INSTRUCTION: Answer **any four** Questions (Credits will be given for proper usage of relevant illustrations and diagrams)

TIME ALLOWED: 2hrs

1. Describe and discuss the surface compositions of both the Near and Far sides of the Earth's Moon, giving the possible reason(s) for the non-uniformity of features distributions observed between the two sides.
2. Explain why Venus and Mars both have more than 95% CO₂ in their atmospheres, which is a major greenhouse gas, but CO₂ can be found as solid ice on Mars while it is absolutely gaseous on Venus.
3. Discuss the composition of the planet Jupiter, as being observed by remote sensors.
4. Planet 9 has recently been discovered in a region beyond the orbit of dwarf planet Pluto. Discuss, giving reasons, the type of sensors that could be used in studying the atmosphere and surface of the planet, at such a distance.
5. The New Horizons space probe was able to reach Pluto in 2015. Explain the discoveries made of the surface of the dwarf planet through remote sensing techniques.
6. Explain the reasons why the field of Space Medicine is a rapidly growing area of knowledge today, considering the future prospects of Space Settlements.