

OLABISI ONABANJO UNIVERSITY, AGO-IWOYE
DEPARTMENT OF GEOGRAPHY AND REGIONAL PLANNING
2013/2014 HARMATTAN SEMESTER EXAMINATION

Course Code: GRP 313
Course Title: CLIMATOLOGY
Time Allowed: 90 MINUTES
Instruction: Attempt ALL questions in section A and any other one in Section B.

SECTION A

- i. List the disposal of insolation by the earth's atmosphere and surface. ① Absorption
② Reflectivity
③ Albedo
- ii. The mean sunshine hours for Lagos, Ibadan, Kano and Sokoto on the 20th October 2014 are respectively 6.9, 6.4, 7.9 and 7.7. Using the angstrom - type equation calculate the global (Q+q) radiation for the locations when the maximum possible sunshine hours and solar radiation (Q₀) are respectively 12 hours and 750 W m⁻² day⁻¹ and the value of constant a and b are respectively - 0.041 and .878 where a is the intercept.
- iii. Distinguish between climate problems and problem climate. p12 = Q₀(q + b/s)
Climate problems can be solved while problem climate cannot be solved but minimise natural force. e.g. of climate problem inadequate equipment
- iv. List any 4 consequences of either global warming or Ozone depletion.
- v. List three indicators and three causes of paleoclimates.

paleoclimates = study of past climate.

SECTION B

1. Examine the Types, causes and effects of pollution in Nigerian cities.
2. With the aid of annotated diagrams, examine the relative merits and limitations of any four instruments for measuring evaporation or evapotranspiration

~~at problems~~

Pollution is a introduction of Contaminants into the natural environment which has adverse effect on the environment. Pollution is a process of introducing into the environment of a substance which is harmful or poisonous effects. It can take the form of chemical substances or physical agents like noise, heat or light. Water pollution is caused by a discharge of wastewater, industrial waste into surface water, discharges of chemicals & industrial contaminants such as chlorine, from the release of waste & contaminants into surface runoff flowing to the water bodies making water poisonous. Thermal pollution involves a accumulation of plastic products in the environment which affects wildlife, water habitat or humans. Thermal pollution as use of water as coolant in a power plant. Noise pollution encompasses roadway noise, aircraft noise, industrial noise as high-intensity sound. Soil contamination occurs when chemicals & particulates into the atmosphere. Common gaseous pollutants are carbon monoxide, sulfur dioxide, & nitrogen oxides produced by motor vehicles. Light pollution include light trespass, over-illumination and astronomical interference. Littering & Criminal dumping of inappropriate man made objects, unremoved into public places.