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**M.Sc. DEGREE I SEMESTER EXAMINATION IN ENVIRONMENTAL TECHNOLOGY,
NOVEMBER 2008**

ENV/ENB 2103 PHYSICAL PROCESSES IN THE ENVIRONMENT

Time: 3 Hours

Maximum Marks : 50

PART - A

(All questions carry EQUAL marks)

(5 x ½ = 2 ½)

I. Fill in the Blanks

- (1) Major constituent present in the atmosphere is
- (2) Mean radius of the Earth is
- (3) pH in a substance stands for
- (4) Troposphere contains% of water vapour in the atmosphere.
- (5) Largest Ocean in the World is

II. State whether the following is TRUE or FALSE

(5 x ½ = 2 ½)

- (1) Ozone in the troposphere is considered as bad.
- (2) Rain does not occur from Cirrus clouds.
- (3) Water table is high over the coastal regions.
- (4) Geologic formations containing ground water are called aquifers.
- (5) Noise pollution causes high blood pressure in human beings.

III. Define the following

(5 x 1 = 5)

- (1) Anticyclone
- (2) Heat island
- (3) Acid rain
- (4) Salinity
- (5) Landslides

IV. Distinguish between the following:

(4 x 1 ½ = 6)

- (1) Land and Sea breezes
- (2) Scattering and Reflection
- (3) El Nino and La Nina
- (4) Upwelling and Sinking

V. Write short notes on any one of the following:

(1 x 3 = 3)

- (1) Concept of plate tectonics and continental drift.
- (2) Weather modification

VI. Write an essay on any one of the following:

(1 x 6 = 6)

- (1) Mean heat balance of the Earth-atmosphere system
- (2) Natural and anthropogenic causes of Climate Change
- (3) Soil survey, site planning and Land-use planning

PART - B

(Answer ALL questions)

(All questions carry EQUAL marks)

VII. Choose the most appropriate answer from the following :

(10 x ½ = 5)

- (1) Agulhas current is in which ocean
 - (a) Pacific
 - (b) Atlantic
 - (c) Indian
 - (d) Arctic

(Turn Over)

- (2) A contour line of equal rainfall is called an :
 (a) Isotach
 (b) Isobar
 (c) Isoyet
 (d) Isohypse
- (3) A rapid change in water density with depth :
 (a) Pycnocline
 (b) Halocline
 (c) Thermocline
 (d) Dycnocline
- (4) An inversion in atmosphere means
 (a) A wind shift with height
 (b) A temperature increase with height
 (c) A dewpoint increase with height
 (d) A temperature decrease with height
- (5) Low pressure systems spin ----- in the Southern Hemisphere
 (a) Clockwise
 (b) Vertical
 (c) Parallel
 (d) Anticlockwise
- (6) Clouds that develop due to convective uplift are termed :
 (a) Stratiform clouds
 (b) Noctilucent clouds
 (c) Cumulus clouds
 (e) Fair weather
- (7) A ring around the sun or moon will show when they shine through this cloud :
 (a) Nimbostratus
 (b) Altocumulus
 (c) Fair weather cumulus
 (d) Cirrostratus
- (8) Precipitation that vaporizes before making it to the earth's surface is :
 (a) Fog
 (b) Virga
 (c) Cloud droplets
 (d) Haze
- (9) After oceans, which of the following reservoirs contains the most water?
 (a) Atmosphere
 (b) Glaciers and polar ice
 (c) Lakes and rivers
 (d) Underground water
- (10) The lowering of the water table near the well is called
 (a) Aquiclude
 (b) Sinkhole
 (c) Influent zone
 (d) Cone of depression.

VIII. Write notes on any four of the following :

(4 x 2 ½ = 10)

- (1) Global warming
- (2) Noise pollution and human health
- (3) Ocean currents
- (4) Earthquakes
- (5) Ekman transport
- (6) Sedimentation
- (7) Radiation laws

IX. Elaborate upon any two of the following :

(2 x 5 = 10)

- (1) General circulation of the ocean
- (2) Meteorological factors affecting air pollution
- (3) Monsoon over India
- (4) Tropical cyclones.