8. Over exploitation of groundwater leads to lowering of -

A. Tide table. B. Groundwater table. C. Organic levels.

9. The last mineral to crystallise in Bowens's reaction series -

A. Olivine. B. Quartz. C. Feldspar.

10. Gutenberg discontinuity separates -

A. crust and mantle. B. crust and core. C. core and mantle.

II. Differentiate briefly between ***any four*** of the following: (4 x 2.5 = 10)

a) Surface water and groundwater.

b) Earthquakes and Landslides.

c) Transgression and Regression.

d) Sial and Sima.

e) Igneous and Metamorphic rocks.

f) Tidal waves and Tides

III. In about 500 words, elaborate upon ***any two*** of the following:- (2 x 5 = 10)

a) Weathering, transportation and deposition of earths materials.

b) The hydrological cycle.

c) Scope and application of marine geological investigations.

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ET.1
00.3

M. Sc. DEGREE I SEMESTER EXAMINATION IN
ENVIRONMENTAL TECHNOLOGY, APRIL 2000

PHYSICAL PROCESS IN THE ENVIRONMENT

Time : 3 Hours. Maximum Marks : 50

(Answer each part in a separate Answer Book)

PART- A

Time : 1.5 Hours Maximum Marks : 25

I. Choose the most appropriate answer: (5 x 0.5 = 2.5)

1. With respect to the wavelengths, radiations from the Sun are referred to as -

A. longwave radiations. B. terrestrial radiations.
C. shortwave radiations. D. sky radiations.

2. A rocket, during its upward motion, crosses different layers of atmosphere in the order of -

A. thermosphere, mesophere, stratosphere and troposphere.
B. troposphere, stratosphere,mesosphere and thermosphere.
C. troposphere, mesosphere, stratosphere and thermosphere.
D. heterosphere and homosphere.

3. Thunder is associated with -

A. Cumulus cloud. B. Altocumulus cloud.
C. Cirrocumulus cloud. D. Cumulonimbus cloud.

4. Surface winds in between 0^0 and 30^0 north latitudes are -

A. north easterlies. B. north westerlies
C. south easterlies. D. south westerlies.

5. Tricellular model of general circulation was put forward by -

A. Rossby. B. Ferrel.
C. Palmen. D. Hadley.

(Turn Over)

II. Fill in the blanks: (5 x 0.5 = 2.5)

1. The zone where the two trade winds meet is known as .....

2. Coriolis force acts on a moving air parcel, perpendicularly ..... in the northern hemisphere.

3. The direction of winds in a cyclone is .....in the northern hemisphere.

4. The value of D.A.L.R. is.....

5. Ozone is abundant in the .....

III. Write short notes on ***any four*** of the following: (4 x 2.5 = 10)

1. Classification of clouds.
2. Thermal structure of the atmosphere.
3. Seasons of India.
4. Ozone in the atmosphere.
5. Gradient motions.
6. Air pollutant measurements

IV. Answer ***any two*** of the following: (2 x 5 = 10)

1. Explain the heat balance of the Earth - atmosphere system.

2. Describe the general circulation of the earth - atmosphere system.

3. Write an essay on the composition of the atmosphere.

Contd.....3

PART - B

Time : 1.5 Hours Maximum Marks : 25

I. Answer ***all*** questions choosing the most appropriate one. (10 x 0.5 = 5)

1. Intrusion is a body of igneous rock that has penetrated -

   A. Older rocks. B. Sedimentary rocks. C. Soil.

2. Apatite has a hardness of -

   A. 4. B. 5. C. 6.

3. Darcy is a measure of rock -

   A. porosity. B. permeability. C. hardness.

4. Pedology relates to study of -

   A. Soils. B. Minerals. C. Rivers.

5. Leucocratic minerals are -

   A. Light coloured. B. Dark coloured. C. Green.

6. Igneous rocks are -

   A. Pervious. B. Impervious. C. Porous.

7. Dunite is a monomineralic rock comprising entirely of -

   A. Quartz. B. Feldspar. C. Olivine.

Contd.....4