2022

APPLIED MATHEMATICS WITH OCEANOLOGY AND COMPUTER PROGRAMMING

[P.G.]

(M.Sc. Fourth Semester End Examination-2022)

PAPER-MTM 405 OM (A)

Full Marks: 25 ***Time: 01 Hr***

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

[Dynamical Meteorology – II]

1. Answer any two questions from the following: **2x2= 4**

a) Write a short note on Jet Stream. 2

b) What is dynamic and kinemetic boundary conditions for a front?. 2

c) What is the concept of Global Circulation? 2

2. Answer any two questions from the following: **2x4 = 8**

a) What is storm surge? How does it occur and derive the surge? 2+2

b) Derive the expression of amplitude for the stationary planetary waves?

c) Write the conditions for frontogenesis and frontolysis in a deformation field.

3. Answer any one question of the following: 1x8 = 8

a) Derive the perturbation equations of a two –dimentional gravity waves propagating in x, z plane neglecting coriolis force in incompressible atmosphere. 8

b) i) Give a brief outline on 'Rossty waves'

ii) What are the causes for the formation of the formation of 'hurricane'? 4+4

Internal Assessment - 05
