

2015

M.Sc.

1st Semester Examination

**APPLIED MATHEMATICS WITH
OCEANOLOGY AND COMPUTER PROGRAMMING**

PAPER—MTM-104

Full Marks : 50

Time : 2 Hours

The figures in the right-hand margin indicate full marks.

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

Illustrate the answers wherever necessary.

(Advanced Programming in C and MATLAB)

1. Answer any five questions : 5×1

(i) What are the functions of 'margin' and 'nargout' functions ?

(ii) How is a numeric array converted into a cell array ?

(Turn Over)

- (iii) Suppose x is a cell array, what does $[x{:}]$ means?
- (iv) What is pointer variable?
- (v) What is the difference between '4' and "4" in C?
- (vi) What is the function of 'typedef'?
- (vii) What is the function of 'malloc'?
- (viii) Explain 'comma' operator in C.

2. Answer any *seven* questions :

7×5

- (i) What are the types of variables in MATLAB? Explain each with example.
- (ii) Write a program which reads a line of characters using `getchar ()`. Each character entered from the keyboard is tested for determining its case, and is then written to a datafile in the opposite case.
- (iii) What do you mean by sub-function and nested function? How is it defined in MATLAB? Explain with an example.

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