

M.sc 1st Semester Examination,2021**Applied Mathematics With Oceanology And Computer Programming****Paper: MTM-197****(MATLAB Practical)****Full Marks:25****Time:1 hour**1. Answer any *five* questions:

5x5=25

(a) Write a script of computation of a square root of a positive number N using $x_n = \frac{1}{2} \left(x_{n-1} + \frac{N}{x_{n-1}} \right)$.

(b) Write a script to generate a Fibonacci sequence.

(c) Write a script to generate a pascal triangle.

(d) Write a script to draw the pie chart of the marks obtained by each student in the four subjects.

Label the names of the subjects in the resulting pie chart.

(e) Write a script function that would convert a given temperature in Fahrenheit into centigrade and centigrade into Fahrenheit.

(f) Write a script to find the prime factors of a positive number and to indicate the given number is prime.

(g) Write a script to find the median of a set of data.

(h) Write a script to find the value of $\int_a^b f(x)dx$ using Simpson's 1/3rd rule.(i) Write a script to plot the function $y = e^{at-1}$ considering the axes limited to a range.(j) Write a script to represent $z = x^2 + y^2$ pictorially.