

Spring 2021

Quiz- 1

Time Allowed: 20 min.

**PHM 212s: Special Functions [5 Marks]**

Name:

ID:

G:

S:

**Question 1:**

Evaluate the following integral in terms of Gamma function.

$$\int_0^{\pi/2} (\csc^4 x - \csc^3 x)^{1/6} \cos x dx$$

**[2 marks]**

**Question 2:** *(Please start the solution in the Back of the paper)*

Find a series solution for the following D.E. in powers of x.

$$(3 - x^2) y'' - xy' + 4y = 0$$

**[3 marks]**