



Spring 2022

Quiz- 1 [Model – A]

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.

$$\int_0^{\pi/2} (\cot^5 \theta + \cot^7 \theta) e^{-\cot^2 \theta} d\theta$$

[2 marks]

**Question 2:**

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

$$(1 + x^2) y'' + xy' - y = 0$$

[3 marks]