Name: _____ **Registration# _____**

Long Questions:

Question 01 [Marks 10] **[CLO-2]**

Pakistan International Airways has recently conducted a survey on its services and revenues. The surveys show that there was constant revenue of $ **1,000,000** for the first ten years since **2001** and it reduced with constant rate of $ **100,000** every year for next **10 years (i.e. 2021)**. PIA wants to calculate what cumulative sum would be equivalent to these revenues at the end of **2021** if the budget had an interest rate of **9.5%** compounded annually**.** Draw cash flow for this scenario.

Question 02 [Marks 15] **[CLO-2]**

Microsoft lends **$10,000,000** for small projects in rural areas of India. The loan has to be refunded at **8.5%** interest rate compounded annually. Repayment should be made in such a way that an amount **A** must be paid for the first **8 years,** amount **3A** for next 5 **years** and amount **5A** for remaining years, keeping the interest rate **8.5%.** Total time period for which the loan is allotted is **20 years**. Find the value of A and draw cash flow diagram.

Question 03 [Marks 10] **[CLO-3]**

Evaluate the **range of profitable demand** for a new project by **EWALL Pvt. Ltd**. The variable cost **(c_v)** per unit item of particular electronic component is **$850**, the intercept on price **(a)** is **4500** and negative slope **(b)** is **80** and the fixed costs **(C_F)** sums up to **$8,500** per month.

Question 04 [Marks 15] **[CLO-3]**

Nike is constructing a mall near industrial estate. The initial investment includes land costs **$500,000**, working capital **$650,000,** building costs **$550,000** and other materials required costs **$250,000.** It is expected that the sales of the mall will reach up to **$600,000** per year for **12 years** at which time the land can be sold for **$500,000,** the building for **$250,000,** the materials for **$60,000** and all the working capital will be recovered **(Hint: Salvage values)**. The annual expenses for labor and other items will sum up to **$435,000** per year. If the company requires an **MARR** of **9.5%** on return, determine if it should invest in this mall? Use **AW** method to support your argument.

Good Luck