BRAINWARE GROUP OF INSTITUTIONS - SABITA DEVI EDUCATION TRUST
Theory Assignment 1
CS403 – Computer Architecture
4th Semester

1. Write a short note on Page Map Table (PMT). Explain Belady's Anamoly with an example.

2. Consider the following reservation table --

S1	X		X				X
S2				X		X	
S3			X		X		

Find the i) Forbidden Latency   ii) Collision vector iii) Draw State Diagram iv) Find MAL v) Greedy Cycle

3. What is Hazard in pipeline? Explain the arithmetic and instruction pipelines. Explain the Flynn's classification.

4. State the importance of Amdhal's law. If a CPU is improved by 10% and 30% jobs are CPU bound, then calculate the total improvement of the system.

5. Find the RAW, WAR, WAW for the following instruction set.

        ADD R5, R0, R1
        MUL R6, R2, R5
        SUB R5, R3, R6

6. The occurrence of page reference are given below:
        7 9 8 7 6 5 8 7 6 7 3 2 7 2 1 0 0 1 4 2 3
    Find out hit ratio using FIFO, LRU, Optimum page replacement algorithms.