**Hint: Q.2 (Network Design for Short Life-Cycle Product)**

Refer to the data provided in the assignment, there are eight supply chain configurations possible.

**#Taking the one configuration for demonstration purpose**

**Configuration 1:** Disk-Germany; Motherboard-Mexico; PC Box-Canada

**(i) Calculation of total cost** (Select the minimum cost)

VA (DK) + TCST(DK-PC) + VA(MB) + TCST (MB-PC) + VA(PC) + TCST(PC-USA)

=68+5+150+5+50+8 =286

**(ii) Calculation of cycle time** (take the longest path)

Max{[PLT(DK) + TLT (DK-PC)], [PLT(MB) + TLT (MB-PC)]} + PLT(PC) + TLT (PC-USA)

Max [(2+2),(3+1)] + 2 +1 =7 weeks

**(iii) Calculation of weighted activity time** (select the minimum time)

(sum of the processing/transporting times for each individual segment of the network multiplied by the number of units processed by the node or shipped through the link. This includes all the paths not just the longest path in network)

VA (DK)\*PLT(DK) + [VA(DK) + TCST (DK-PC)]\*TRLT (DK-PC)

+ VA (MB)\*PLT(MB) + [(VA(MB) + TCST (MB-PB)]\*TRLT (DK-PB)

+ [VA (DK) + TCST (DK-PB) + VA (MB) + TCST (MB-PB) + VA (PB)]\*PLT (PB)

+ VA (DK) + TCST (DK-PB) + VA (MB) + TCST (MB-PB) + VA (PB) + TCST (PB-USA)]\*PLT (PB)

=68\*2 + (68+5)\*2 + 150\*3 + (150+5)\*1 + (68+5+150+5+50)\*2 + (68+5+150+5+50+8)\*1

=1728