2)
Read the following passage first. Zara is a fast-fashion company from Spain. Although the Spanish economy has crumbled, Zara is a rare success story. Fashion is highly perishable, quickly influenced by the latest thing seen on the catwalk or on the back of a celebrity. Zara’s designers follow such fashion trends closely, but whereas a typical clothing company manufacturing in Asia could take six to nine months to get a new design into the shops, Zara completes the process in around five weeks. It buys some garments and material from Asia, often partly finished or undyed, but approximately half of its clothing is manufactured in-house at its base in La Coruña in northwest Spain or by a cluster of small contractors in the same area. The clothing is delivered by truck to Europe and by air to the stores Zara is now opening in other parts of the world. Zara avoids mass production. Although some stock is replenished, its clothing, for both men and women, is deliberately made in small batches, which helps create a scarcity value: buy now in case it is gone tomorrow. It also keeps shops looking fresh and reduces markdowns. At Zara, the number of items that end up in a sale is about half the industry average.
a. Operation strategy needs to be aligned with overall business strategy. Discuss how Zara should develop its business and operational strategy. Highlight some important characteristics and issues that Zara should take into consideration when formulating its business strategy and operational strategy. (15 points)
b. Why is it important for Zara to have a proper product-process for manufacturing? Based on the case, identify key characteristics of Zara’s supply chain/ manufacturing process that helps Zara to stay competitive? (10 points)
c. Identify some key supply chain performance measures for Zara. Based on these performance measures, discuss any five approaches that Zara can use to integrate its supply chain that can further help Zara to strengthen its supply chain as well as operational performance. (15 points)

3) Project duration in days with precedence relationship is prepared as following –
Activity Immediate Predecessors Optimistic Most Likely Pessimistic

A None 5 6 7
B A 3 4 5
C A 5 5 7
D B,C 4 5 6
E B 6 7 8
F C 3 4 5
G E,D 4 5 6
H G,F 6 7 8

a)Prepare the network diagram
b) Calculate the estimated time and variance for each of the activities
c. Based on ES, EF, LS, and LF calculate slack
d. What is project duration? Comment on the variance of critical path.
e. What is the probability that project will complete in 24 days?