

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT
 TEST-1 EXAMINATION – September 2018
 B.Tech, VIIth Semester, ECE

COURSE CODE: 18B1WEC735

MAX. MARKS: 15

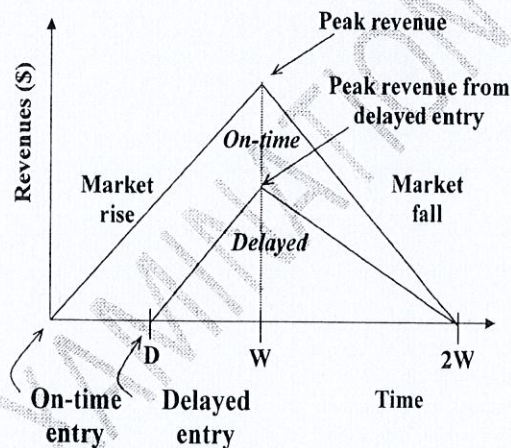
COURSE NAME: EMBEDDED SYSTEM DESIGN

COURSE CREDITS: 3

MAX. TIME: One Hr

Note: All questions are compulsory. Carrying of mobile phone during examinations will be treated as case of unfair means. Missing data, if any, can be appropriately assumed.

- 1(a) List and define the three main characteristics of embedded system that distinguish such system from other computing systems. (3)
- (b) Using the revenue model of the figure given below, compute the percentage revenue loss due to late entry of a product. The delayed entry, $D = 5$ Weeks and life time $2W = 20$ Weeks. (2)



- 2(a) What are the three main processor technologies? What are the benefits and disadvantages of using these three processor technologies? (3)
- (b) Distinguish between the performance metrics, Latency and Throughput. (2)
- 3(a) With a neat sketch, explain the advantages of four-element strain gauge sensor over single element strain gauge sensor. (3)
- (b) A robot uses gyroscope and accelerometer for self balancing. With a neat schematic explain how a complementary filter can be used to combine the measurements of the two sensors for better accuracy of the measurement. (2)