

Department of Computer Applications
23MX21 – SE – Project Estimation Topic – Questions

1. Suppose that a certain software product for business application costs Rs. 50,000 to buy off-the-shelf [readymade software] and that its size is 40 KLOC. Assuming that in-house developers cost Rs. 6000 per programmer month (including overheads), would it be more cost-effective to buy the product or build it? [10]
2. If a software product of size S takes m months to develop, then according to the COCOMO estimation model, how long (in months) will it take to develop a product of size $2 \times S$? [5]
 - a) Greater than $2 \times m$ months
 - b) Greater than $3 \times m$ months
 - c) Less than $2 \times m$ months
 - d) Greater than $4 \times m$ months
3. Assume that the size of an organic type software product has been estimated to be 32,000 lines of source code. Assume that the average salary of a software developer is Rs. 15,000 per month. Determine the effort required to develop the software product, the nominal development time, and the cost to develop the product. [5]
4. A new project with estimated size of 400 KLOC embedded system has to be developed. Project Manager of this project has a choice of hiring from two groups of developers A & B:

Group A: Very high application experience, very little experience in the programming Language and very high skilled Analysts.

Group B: Very low application experience, very high experience in the programming Language and very low skilled Analysts.

Analyze and suggest to Project Manager, the impact of hiring the developers either from Group A or B.

Justify your suggestion to Project Manager with evidence. [20]