

EXAMEN INGENIERÍA DEL SOFTWARE 2 (10-Julio-2009)

Departamento Ciencia de la Computación e Inteligencia Artificial

Apellidos: _____ Nombre: _____

ECUACIONES Y TABLAS DEL MODELO DE COCOMO:

$$Size = \left(1 + \frac{REVL}{100}\right) \times (KNSLOC + KESLOC) \quad KESLOC = KASLOC \cdot \left(\frac{100 - AT}{100}\right) \cdot AAM$$

$$AAM = \begin{cases} \frac{AA + AAF \times (1 + [0.02 \times SU \times UNFM])}{100}, & \text{para } AAF \leq 50 \\ \frac{AA + AAF + (SU \times UNFM)}{100}, & \text{para } AAF > 50 \end{cases}$$

$$AAF = (0.4 \times DM) + (0.3 \times CM) + (0.3 \times IM)$$

$$PM_{NS} = \prod_{i=1}^{16} (EM_i) \times 2.94 \times size^E + \left(\frac{ASLOC \times (AT/100)}{ATPROD} \right) \quad E = 0.91 + 0.01 \times \sum_{j=1}^5 SF_j$$

$$TDEV = 3.67 \times (PM_{NS})^{(0.28 + 0.2 \times (E - 0.91))} \times \left(\frac{SCED\%}{100} \right)$$

Table 5. Rating Scale for Software Understanding Increment SU

	Very Low	Low	Nominal	High	Very High
Structure	Very low cohesion, high coupling, spaghetti code.	Moderately low cohesion, high coupling.	Reasonably well-structured; some weak areas.	High cohesion, low coupling.	Strong modularity, information hiding in data / control structures.
Application Clarity	No match between program and application world-views.	Some correlation between program and application.	Moderate correlation between program and application.	Good correlation between program and application.	Clear match between program and application world-views.
Self-Descriptiveness	Obscure code; documentation missing, obscure or obsolete.	Some code commentary and headers; some useful documentation.	Moderate level of code commentary, headers, documentation.	Good code commentary and headers; useful documentation; some weak areas.	Self-descriptive code; documentation up-to-date, well-organized, with design rationale.
SU Increment to ESLOC	50	40	30	20	10

Table 6. Rating Scale for Assessment and Assimilation Increment (AA)

AA Increment	Level of AA Effort
0	None
2	Basic module search and documentation
4	Some module Test and Evaluation (T&E), documentation
6	Considerable module T&E, documentation
8	Extensive module T&E, documentation

Table 7. Rating Scale for Programmer Unfamiliarity (UNFM)

UNFM Increment	Level of Unfamiliarity
0.0	Completely familiar
0.2	Mostly familiar
0.4	Somewhat familiar
0.6	Considerably familiar
0.8	Mostly unfamiliar
1.0	Completely unfamiliar