Revision In Cost Estimation for the Mid-Term

(Q1) Choose True or False and label them in your sheet.

(1) During estimation we assume resources will be productive for more than 80 percent of their time. ***(F)***

(2) As the number of rounds in the Wideband Delphi Estimation decreases the range of estimation will be narrower, and Results are converged to an acceptable range. ***(F)***

(3) The moderator generates a detailed (Wideband Delphi Estimation Sheet), estimates each task in the WBS, and documents the assumptions made. ***(F)***

(4) Estimation team members prepare a structured document containing problem specification, high level task list, assumptions, and the units of estimation. ***(F)***

(5) Milestones are points in the schedule to assess progress. ***(T)***

(6) Deliverables are work products delivered to the customer. ***(T)***

(7) One of the scheduling problems is to estimate time and resources for each task in the project. ***(F)***

(8) One of the scheduling activities is to minimize dependencies between tasks in the project. ***(T)***

(9) The algorithmic cost modelling is based on experience of past project and application domain. ***(F)***

(10) The size of the project is affected by the reused components and the programming language. ***(F)***

(11) Doubling the number of staff means that the duration of the project will be half the initial period. ***(F)***

(12) If 4 people can complete a project in 13 month, then 5 people can complete it in 11 month. ***(F)***

(13) Three-point Estimate (E) is based on the weighted average and follows triangular distribution. ***(F)***

(14) PERT Estimate (E) is based on the weighted average and follows beta distribution. T

(15) Analogous estimation is a better way of estimation in the initial stages of the project, even if the project is new, and no past project is similar. ***(F)***

(Q2) Choose the right answers and label them in your sheet.

(16) Estimation determines how much of the following it will take to build a specific system or product:

(a) Experience (b) Knowledge (c) Resources Identified Risks

(17) The four basic steps in Software Project Estimation are:

(a) Size, effort, schedule, and cost
(b) Input data, calculations, historical data, and good plan.
(c) Experience, Assumptions, Identified Risks, and Available Documents
(d) Money, time, resources, and effort

(18) Important factors that affect the accuracy of estimates are:

(a) Accuracy of input data, accuracy of calculation, how historical or industry data matches the project, and carefully planned project.
(b) Size, effort, schedule, and cost
(c) Experience, Assumptions, Identified Risks, and Available Documents
(d) Money, time, resources, and effort

(19) In a use case, transactions are classified as simple if their number is:

(a) ≤ 3 (b) ≥ 3 (c) ≤ 7 (d) ≥ 7

(20) In a use case, transactions are classified as complex if their number is:

(a) ≤ 3 (b) ≥ 3 (c) ≤ 7 (d) ≥ 7

(21) In a use model, actors are classified as complex if:

(a) There is no interaction with the system
(b) user interacting through GUI
(c) user interacting through API
(d) interacting through a protocol

(22) In a use case model, actors are classified as average if:

(a) There is no interaction with the system
(b) User interacting through GUI
(c) User interacting through API
(d) ***User interacting through a protocol***

(23) In the Wideband Delphi Estimation, the process is stopped after:

(a) Certain number of rounds and Achievement of consensus
(b) Achievement of consensus and Stability of results
(c) Stability of results, Achievement of consensus, and Certain number of rounds
(d) Certain number of rounds, achievement of consensus, or stability of results

(24) The Unadjusted Use-Case Points (UUCP) must be adjusted for :

(a) Estimation sheet, Technical and Environmental Complexity
(b) Environmental Complexity and Estimation sheet
(c) Technical Complexity, and Environmental Complexity
(d) Technical Complexity and Estimation sheet

(25) One of the following is a pricing strategy:

(a) Contractual terms ***(b) Market opportunity***

(c) Underpricing ***(d) Proposal planning***

(26) One of the following affects software pricing:

(a) Development plan ***(b) Pricing to win***

(c) Increased pricing ***(d) Requirements volatility***

(27) One of the planning stages:

(a) Requirement volatility ***(b) Contingency planning***

(c) Market opportunity ***(d) Proposal planning***

(28) Which of the of the following sub-models in the COCOMO method is based on the number of application points:

(a) Early design model ***(b) Reuse model***

(c) Post architectural model ***(d) Application decomposition model***

(29) Which of the of the following sub-models in the COCOMO method is based on the number of function points:

(a) Early design model ***(b) Reuse model***

(c) Post architectural model ***(d) Application decomposition model***

(30) Which of the of the following sub-models in the COCOMO method is based on the number of lines reused or generated:

(a) Early design model ***(b) Reuse model***

(c) Post architectural model ***(d) Application decomposition model***

(31) Which of the of the following sub-models in the COCOMO method is based on the number of lines of source code:

(a) Early design model ***(b) Reuse model***

(c) Post architectural model ***(d) Application decomposition model***

(32) The factors affecting the size of the project are:

(a) Reused components and Programming languages, and application domain
(b) Programming languages and application domain, and Reused components
(c) System distribution, application domain, and Programming languages
(d) Reused components, Programming languages, and System distribution

(33) While scheduling the project, when a task must occur in parallel with another this is called …

a) Precedence ***b) Concurrence*** ***c) Critical Path*** ***d) Outline***

(Q3) Attach a draft for solution of the following problems, choose the right answers.

(34) In the following project duration equation B = 1.17, PM = 50:
TDEV = 3 x PM $^{(0.33+0.2 \times (B-1.01))}$, the project duration will be:

(a) 13 months (b) 11 months (c) 12 months (d) 14 months

(35) If the scale factors affecting the exponent B in the effort equation are given as Precedentedness = 2, development flexibility = 4, risk resolution = 4, team cohesion = 4, process maturity = 3. If B is given by the following equation, its value will be: [B = (sum of scale factors/100) + 1.01]

(a) 1.18 (b) 1.17 (c) 0.18 (d) 1.19

(36) If the cost drivers affecting the multiplier M in the effort equation are given as reliability = 1.4, complexity = 1.3, memory constraint = 1.2, schedule = 1.3, and tool use = 1.2. The value of M will be:

(a) 6.4 (b) 3.4 (c) 3.9 (d) 2.2

(37) In the effort equation $PM = A \times Size^{B} \times M$, A = 2.49, Size = 230000 LOSC, B=1.16, M = 3.2, the effort estimate without cost drivers will be:

(a) 1367 (b) 4374 (c) 1524 (d) 5182

(38) In the effort equation $PM = A \times Size^{B} \times M$, A = 2.49, Size = 230000 LOSC, B=1.16, M = 3.2, the effort estimate with cost drivers will be:

(a) 1367 (b) 4374 (c) 1524 (d) 5182

(39) If the weights of simple, average, and complex use cases are 5, 10, and 15 respectively and number of simple, average, and complex use cases are 8, 12, and 6 respectively, then the unadjusted use case weight will be:

(a) 30 (b) 56 (c) 780 (d) 250

(40) If the weights of simple, average, and complex actors are 1, 2, and 3 respectively and number of simple, average, and complex actors are 5, 4, and 6 respectively, then the unadjusted actor weight will be:

(a) 21 (b) 31 (c) 90 (d) 720

(41) If the unadjusted use case weight is 280 and the unadjusted actor weight is 40 then the unadjusted use case points will be:

(a) 11200 (b) 7 (c) 320 (d) 1120

(42) If the technical complexity factor = 0.8, the environmental complexity factor = 0.9, and the unadjusted use case points = 325 then the adjusted use case points will be:

(a) ***234 (b) 326.7 (c) 191 (d) 552***

***Good Luck **Dr. Hamdy Heniedy*