

Roll No. 22i-2505 Name Tayyab Kamran Section SE-5A

### (In-class) Assignment 1

Weight: 5%; CLO 3

FASTHealth is a software house that specializes in developing Django-based web apps for hospitals and clinics desiring to automate their information management systems. It is considering adopting the following SQA plan (see Table 1) for its next client.

Table 1: SQA Plan

No.	SQA Activity	Defect Removal Effectiveness	Cost of Removing a Detected Defect (Cost Units)
1	Requirements specification review	70% ✓	1
2	Design inspection	50% ✓	2
3	Design review	70% ✓	2
4	Code inspection	50% ✓	8
5	Unit test - code	60% ✓	8
6	Integration test	50% ✓	16
7	System test	50% ✓	64
8	Operation phase	100% ✓	256

Using the defect origin distributions in Table 2, complete the process-oriented illustration of the above SQA Plan on the following page assuming the removal of 500 defects. All values should be accurate to 3 decimal places.

Table 2: Distribution of Software Defect Origins

No.	Software development phase	Average percentage of defects originating in phase
1	Requirements specification	40%
2	Design	30%
3	Coding (coding 10%, integration 10%)	20%
4	System test	10%

There is **no** partial credit in this question. Therefore, check your answers carefully.

## Requirements specification review

POD = 200	PD = 0	%FE = 70%
		RD = 140
		CDR = 1
		TRC = 140

## Design Inspection

POD = 75	PD = 60	%FE = 50%
		RD = 67.5
		CDR = 2
		TRC = 135

## Design review

POD = 75	PD = 67.5	%FE = 70%
		RD = 99.75
		CDR = 2
		TRC = 199.5

## Code Inspection

POD = 25	PD = 42.75	%FE = 50%
		RD = 33.875
		CDR = 8
		TRC = 271

## Unit test

POD = 25	PD = 33.875	%FE = 60%
		RD = 35.325
		CDR = 8
		TRC = 282.6

## Integration test

POD = 50	PD = 23.55	%FE = 50%
		RD = 36.775
		CDR = 16
		TRC = 588.4

## System test

POD = 50	PD = 36.775	%FE = 50%
		RD = 43.388
		CDR = 64
		TRC = 2776.832

## Operation

POD = 0	PD = 43.387	%FE = 100%
		RD = 43.387
		CDR = 256
		TRC = 11,107.072

POD = Phase Originated Defects

PD = Passed Defects

%FE = % of Filtering Effectiveness

RD = Removed Defects

CDR = Cost of Defect Removal

TRC = Total Removal Cost