



KEEPING MOBILE PHONE/SMART WATCH, EVEN IN 'OFF' POSITION, IS EXAM MALPRACTICE

Answer ALL Questions

(10 X 10 = 100 Marks)

1. You are the project manager of your organization and in your upcoming project, you aim to use an agile software development model that aims to provide iterative and frequent small releases throughout the project allowing both team members and customers to examine and review the project's progress throughout the entire SDLC. Identify the process model under the Agile manifesto that would be applicable and highlight its unique practices. Also discuss the advantages and disadvantages of the model. [5+5]
2. Consider the scenario of a Library Information System (LIS). The library lends books and magazines to members, who are registered in the system. Also, it handles the purchase of new titles for the Librarians. Popular titles are bought in multiple copies. Old books and magazines are removed when they are out of date or in poor condition. A member can reserve a book or magazine that is not currently available in the library, so that when it is returned or purchased by the library, that person is notified. The library can easily create, replace and delete information about the titles, members, loans and reservations in the system. Identify the functional and non-functional requirements for the above mentioned system. Also draw the use-case diagram for the same. [5+5]
3. For the scenario in Question 2. draw the class diagram and Sequence Diagram. [5+5]
4. Given the following code, construct the "Branch Coverage" and "Statement Coverage" with test matrix and control flow graph: [5+5]

read a,b,c

type="scalene"

if(a==b || b==c || a==c)

type="isosceles"

if(a==b && b==c)

type="equilateral"

if(a>=b+c || b>=a+c || c>=a+b)

type="not a triangle"

if(a<=0 || b<=0 || c<=0)

type="bad inputs"

print type
5. Discuss the various activities involved in the corrective maintenance cycle in details. [10]

SEARCH VIT QUESTION PAPERS
ON TELEGRAM TO JOIN



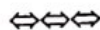
6. Calculate the productivity of each of the projects in the table and also organization as a whole. If the project manager for the project 'c' and 'e' had correctly estimated the SLOC and then used the average productivity of the organization to calculate the effort needed to complete the project how far their estimates differ from the actual effort? Also a new analyst Kitty has joined the organization and she would be working on Project "a". If the work rate of Kitty is 40 days per SLOC. How much time would she need to finish project "a"? [10]

	Design		Coding	Testing		Total		
Project	wm	(%)	wm	(%)	wm	(%)	wm	SLOC
a	3.9	23	5.4	32	7.4	44	16.7	6050
b	3.7	12	14.4	59	7.5	26	25.6	8365
c	3.5	11	26.8	83	1.9	6	32.2	13320
d	1.8	21	3.4	62	1.7	18	6.9	5942
e	1.8	10	7.7	44	7.8	45	17.3	3315
f	19	28	29.7	44	19	28	67.7	38988

7. Write Short Notes on : [5+5]

- Six Sigma
- CMMI

8. Discuss the scrum process highlighting its artefacts. [10]
9. Why is it necessary to develop test cases for both valid and invalid input condition? Assuming a user wants to purchase of a product with credit card from online vendor using web based software. With use case, design a set of tests you would use during system test. [3+7]
10. Elucidate the phrase "A Low coupling combined with High cohesion supports the mission of high readability and maintainability". Also justify the fact that data coupling is the best portraying a comparative analysis with other forms of coupling with example. [5+5]



*Lowest coupling
Common External
coupling
shards
narrow*