National University of Computer and Emerging Sciences, Lahore Campus

Course:		Professional Issues in IT	Course Code:	CS449
Program:		BS(Computer Science)	Semester:	Fall-19
Duration:		1 Hr	Total Marks:	36
Paper Date:		07-11-2019	Weight	15 %
Section:		All	Page(s):	4
Exam Type:		Midterm-2		

Student: Name:_____ Roll No._____ Section:_____

Instruction/Notes: **Provide precise answers in the given space. Longer answers will be discarded. Think carefully before writing an answer. Use of calculator is allowed.**

Read the Instructions carefully

Q 1: Answer following questions:

(6 marks)

Define job evaluation

Job evaluation is used for comparing the relative worth of jobs and allocating jobs to specific grades

Name and define the two schemes used of job evaluations

Analytical job *evaluation schemes assess each job on the basis of the different elements that are involved.*

Non-analytical *schemes involve comparing whole jobs without considering the individual elements and skills that go to make up the job.*

Q 2: Consider Scrum process framework and answer the following questions

(6 marks)

What is the difference between "Product Backlog" and "Sprint Backlog"?

Product backlog is a prioritized list of all product features to be implemented.
Sprint backlog is the list of all features that will be implemented in the current sprint.

Does the framework allows changing the requirements in Product Backlog and why?

Yes because it provides flexibility of changing requirements during development.
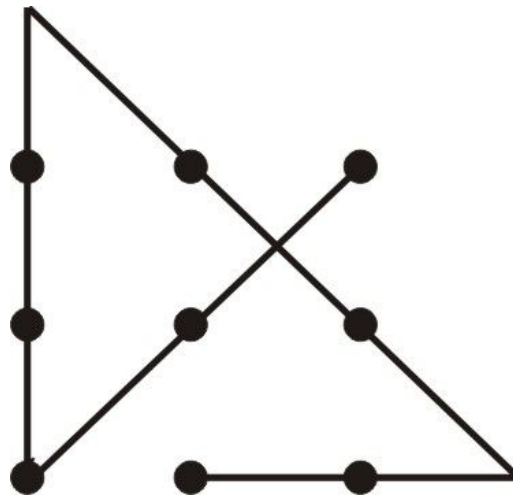
Does the framework allow changing the requirements in Sprint Backlog and why?

[Bonus Question] Q 3: By thinking "outside the box" devise a solution to the following problem:

(4 marks)

Link all 9 dots using four straight lines or less, without lifting the pen.

Q 4: Usually technical resources underestimate the effort required to complete a task. List top three aspects related to professional software development that they overlook while estimating?

(6 marks)

Thorough testing
Integration effort
Documentation

Q 5: What is Continuous Integration?

(4 marks)

Continuous Integration (CI) is a development practice where developers integrate code into a shared repository frequently, preferably several times a day. Each integration can then be verified by an automated build and automated tests. While automated testing is not strictly part of CI it is typically implied.

Q 6: Define following

(4 marks)

Opportunity Cost

When a resource (e.g money) is used for a certain purpose we lose the ability to gain from it using some other way (e.g. interest or profit), this is called opportunity cost.

Inflation

Inflation is a general rise in the price level in an economy over a period of time.

Q 7: You have the choice of buying a car today at $14000 vs buying it on installments with an immediate down payment of $4000 and yearly installments of $2000 over next 6 years. Perform a Discounted Cash-flow Analysis to find which option gets you better value for your cash given interest rate of 7%. (10 marks)

Year	Cost	Discounted Cost
0	4,000	4,000.00
1	2,000	1,869.16
2	2,000	1,746.88
3	2,000	1,632.60
4	2,000	1,525.79
5	2,000	1,425.97
6	2,000	1,332.68
		13,533.08

Since it costs less than 14000 on installments, we should go with the installments option.