Faculty of Computers
&
Information

Introduction to Information System
(IS201)

Year 2017-2018
Second Level
First - term Exam
Date: 1/1/2018
3 Hours

Answer the following questions

Q1. Put True (T) or False (F) and correct the false sentences (12 points)

1. Prototyping involves the creation of an early working version of the information system or its components. ( )
2. Blogs are web pages that groups of people can edit and view together. ( )
3. Firewall used to connect two or more Intranet together to facilitate the secured transmission ( )
4. B2C defines online transactions between businesses. ( )
5. System boundary defines the way system elements are organized or arranged. ( )
6. A process model describes system logic that programmers use to develop necessary code modules. ( )

Q2. Give the scientific term for the following definition(18 points)

1. The exchange of goods, services, and money among firms, between firms and their customers via the Internet. (.....)
2. The process of understanding how an information system can support business needs, designing the system, building it, and delivering it to users. (.....)
3. Mechanism accomplished to determine whether probability of the project succeeding or not. (.....)
4. A private part of the Internet that is cordoned off from ordinary users, enables two or more firms to use the Internet to do business together. (.....)
5. Process includes transforming the internet data into suitable transaction form via preprocessing, transaction identification and pattern matching techniques. (.....)
6. Responsible for attracting, developing, and maintaining the firm's workforce. (.....)

Answer **only Two** questions of the following

Q3. **(15 Points)**

1- Define EDI and its uses? **(5 points)**
2- Write short notes about Components of DSS? Verify your answer by drawing. **(5 points)**
3- Discuss Relationship between Information Systems in an organization? , Show advantages and disadvantages of such relationship? **(5 points)**

Q4. **(15 points)**

1- What is the difference between competitive forces model & value chain model? **(5 points)**
2- Discuss the organization management levels, supportive information systems and in the four functional areas of an organization? (5 points)
3- Discuss four types for system development methods? **(5 points)**

Q5. **(15 points)**

1- Discuss with drawing the relationship between decision making and management systems? (5 points)
2- Write short notes about disciplines that contribute problems, issues, and solutions in the study of information systems? **(5 points)**
3- If the initial investment on a project is $150,000 with expected in flows of $15,000 per quarter for the first two years and $ 45,000 per quarter from then on. Calculate the payback period? **(5 points)**

مع تمنياتى بالنجاح و التوفيق
د/ منى جمال جعفر

صباح متقدم

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Discrete Structure (**CS201**)
2016/2017 (First term)
Date: 4/1/2018
Time: 3hrs (1pm:4pm)

Question(1) **Answer the following *sub-questions* as required at each of them:** **(12 marks)**

(1) Define *a Set, Subset, and Relations*?, Relation is *Symmetric* if ....., and *Transitive* if .....

(2) Define *Function* ? and *Explain with drawing* when and how a function is become *bijective*?

(3) Define: *Graph, Tree*, and *Spanning Tree*? with illustration by examples and drawing.

Question(2) **Write *only, the term that expresses* each of the following paragraphs:** **(12 marks)**

(1) A graph on n vertices where every pair of vertices is connected, where $V = \{1, 2, \ldots, n\}$ and $E=\{(i,i+1): 1 \le i \le n-1\} \cup \{(1,n)\}$, and the number of edges is equal to n.

(2) Starts by assuming that the conclusion ***Y*** is *false*, and deduce that the *premise* ***X*** must also be *false*.

(3) Let $a, b \in Z$ with a, b not both 0, it is the largest integer d such that $d|a$ and $d|b$.

(4) $f : S \to T$, if the image of f equals its range. Equivalently, for every $t \in T$, there exists some $s \in S$ such that $f(s) = t$.

(5) Are numbers that have the *absolute minimum number* of divisors; they are only divisible by *themselves* and *1*.

(6) Let $a, b \in Z$ with $a \neq 0$. We say that **a|b**, if there exist some $k \in Z$ such that $b = ak$.

Question(3) **Put sign(√) at correct and sign(×) at wrong with correction the wrong:** **(12 marks)**

(1) A *path* is a graph on n vertices where every pair of vertices is connected, where $V = \{1, 2, \ldots, n\}$ and $E = \{\{i, j\} : 1 \le i < j \le n\}$, and the number of edges is equal to $C(n,2)$.

(2) If $|A| = 6$, $|B| = 0$, $|C| = 7$, $|A \cap B| = 0$, and, $|A \cap C| = 4$, then $|A \cup B| = 9$ and $|A \cup C| = 13$.

(3) If $|X| = 7$ and $|Y| = 10$ and $|X \cup Y| = 17$, then $X \cap Y = \emptyset$ and $|X \cap Y| = 1$.

(4) $\neg \forall x \in A : P(x) \Leftrightarrow \forall x \in A : \neg P(x)$

(5) A directed graph $G =(V,E)$ is *strongly connected* if there exists *path* from any node u to any node v.

(6) The two positive integers 35 and 24 are *relatively prime*.

(7) If we have $V=\{3,5,7,9\}$, and $E=\{(3,5),(5,7),(7,9),(3,9)\}$, then the $G(V,E)$ is called *Path*, such that its *Size*=3, and *degree* of (3)=1, *degree* of (9)=1, *degree* of (5)=1.

Question (4) **Answer the following questions as required in each of them:** **(12 marks)**

(a) Express the following integers as the product of its *prime* factors: *150* and *360*.

(b) Compute: *gcd(414,662)*, *Ø(19)*, *Ø(20)*, and *Ø(240)*

(c) Write beside the following *Equivalence* or *Not-equivalence* relation with explain the reason:

(1) Equality "=" **(2) Not-Equality "≠"** **(3) Less than or equal "≤" as a relation(*R*) on *S={0,2,4}*.**

(d) If we have $sa + tb = gcd(a,b)$. Use the Euclid's algorithm to *find* $gcd(a,b)$ and the values of s , t such that $a=252$, $b=198$.

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Discrete Structure (**CS201**)
2016/2017 (First term)
Date: 4/1/2018
Time: 3hrs (1pm:4pm)

Question (5) : **(12 marks)**

(1) Prove the two following theorems:

(a) Let $a, b, c \in Z$, if $a|b$, and $a|c$, then $a|mb+nc$ for every $m, n \in Z$.

(b) (Pascal's Identity): *If* $0 < k \leq n$, *then* $C(n+1, k) = C(n, k) + C(n, k-1)$.

(2) If we have $T=\{1, 3, 5, 7\}$, **and** $V=\{4, 6, 8\}$, **then write the following:**

$\mathcal{P}(T)$, $T \times V$, $V \cap T$, $V - T$, $T \cup V$

(3) Explain your steps of ***encryption*** and ***decryption*** for using the *Private-key encryption scheme* (***Caesar Cipher***) to ***encrypt*** the text "**Welcome To Egypt**" and write the *encrypted-text* at private-key $k=3$, and ***decrypt*** the *encrypted-text* to obtain the *plain-text*.

With best wishes with success;

Dr. Osama M. Abu Zaid

البرجه الشيخ

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Object-Oriented Programming (**CS241**)
2016/2017 (First term)
Date: 8/1/2018
Time: 3hrs (1pm : 4pm)

Question(1) **Answer the following *sub-questions* as required at each of them:** **(12 marks)**

(1) Define: Object-Oriented Programming (OOP), *Class, Object,* and *Method* ?

(2) Write about *object relationships* (*Collaboration*) *diagram* in UML, with drawing for its types.

(3) What are the *main members* of *Classes* in C#?

(4) Is the inclusion of Namespaces *recursive* or *non-recursive*? and Why?

Question(2) **Write *only, the term that expresses* each of the following paragraphs:** **(12 marks)**

(1) It is a *container* for a group of classes, which are united by a common feature.

(2) Is a programming technique in which a *method* makes a call to *itself* to solve a particular problem.

(3) It is a special type of association. It models the relationship of kind "whole / part".

(4) Is a fundamental principle of object-oriented programming. It allows a class to possess (behavior or characteristics) of another, more general class.

(5) It is identifier which allows a child class to access the member variables and member functions of its base class.

(6) It means having many forms, and in OOP, it is often expressed as 'one interface, multiple functions', also it can be static or dynamic.

(7) Is the class that has only private constructors, and usually has only static members.

(8) Are *things* that you do not expect to occur during normal *execution* of a program.

Question(3) **Put sign(√) at correct and sign(×) at wrong with correction the wrong:** **(12 marks)**

(1) An *Encapsulation* means working with something we know how to use without knowing how it works internally.

(2) Increment or decrement as *Post-fix* meaning we place them immediately before the variable, i.e. the new value is calculated first and then the result is returned.

(3) *A logical operators* are an operators that acts on the binary representation of numeric types.

(4) *Passing by Value* is method of passing moves *copies* to the *memory location* of an argument into the formal parameter, such that *changes* made to the parameter *affect* the argument.

(5) *System.ArrayTypeMismatchException* handles errors generated when a method refers to an array index out of range.

(6) An *attribute* is a special method of the class, which is called automatically when creating an object, and it can take parameters or not.

(7) *Catch block* is used to *execute* a given set of statements, whether an *exception* is *thrown* or not *thrown*.

(8) *Protected internal* defines class members are visible within the entire assembly, and not visible outside the assembly, but visible to classes who inherit it (even outside the assembly).

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Object-Oriented Programming (**CS241**)
2016/2017 (First term)
Date: 8/1/2018
Time: 3hrs (1pm : 4pm)

Question (4) **Answer the following questions as required in each of them:** **(12 marks)**

(a) Write the general structure for *switch-case, do-while loop*, and *for loop*.

(b) Write the syntax structure for using *try/catch* in *Exceptions handling*.

(c) Briefly explain the meaning of "***Operator Overloading***" in Static Polymorphism, with illustration by example for ***summation*** *of two objects*.

Also, write C# code that ***create*** class called ***Box*** contains three fields (***length***, ***breadth***, and ***height***) and contains a **method** which ***overload*** *the operator* (+) to add two *Box objects* (***Box1***, ***Box2***) to *obtain* the *object* ***Box3*** which is *equal to* ***Box1*** + ***Box2***.

Question (5) **Write the code by C# for (a) and (b), and *only one* from (c) or (d):** **(12 marks)**

(a) Create an ***Abstract class*** called ***Shape*** , which contains: *An* ***abstract method*** : *getArea( )*;

Create a class called ***Circle*** that *is* ***inherited*** from ***Shape***, which contains:

1) ***A Public variables*** : radius.

2) ***An Override method****: getArea( )*, that calculate the **Area** of the ***circle***

Write ***CircleTest*** class to initialize an object for the ***Circle*** class and calculate the ***area***.

(b) Create a **Static class** called ***MathLib*** which Contains:

Public static method called ***CalculareSum(int x, int y)*** that calculate the **sum** of the two passed arguments ***(x, y)*** and **print** it.

Public static method called ***CalculareSqrt(double z)*** that calculate the **square root** of passed argument ***(z)*** and **print** it.

Write a ***Test*** Class to pass arguments and use the methods of the ***MathLib*** class.

(c) C# code that ***swaps*** two entered values using ***Passing Parameter by Reference***.

(d) Create a **class** called ***Test*** contains a **method** ***FindMin( )*** that accepts two integer numbers and returns the ***minimum*** of the two, such that this **class** *cannot* generates ***instances***.

With best wishes with success;
Dr. Osama M. Abu Zaid

نظم المعلومات وإدارة الأعمال

Date & Time: 11/1/2018 (1-4)pm Level: two Time Allowed: 3 Hours	Subject: Business Administration (HUM231) 2017-2018 (First semester exam)	Faculty of Computers & Information

Answer the following questions

Question1: (5 points)

Choose the correct answer:

1. ..... Leadership style enforces everything done according to rule or policy.

(a) Democratic (b) Purposeful (c) Bureaucratic (d) Autocratic

2. ..... is not an element for delegation of authority.

(a) Responsibility (b) Authority (c) Accountable (d) Reliability

3. ..... plans provide direction to operating personnel if unplanned events occu

(a) Functional (b) Contingency (c) Operating (d) Strategic

4. ..... is one of a decisional role of Henry Mintzberg approach.

(a) Liaison (b) Figurehead (c) Disseminator (d) Negotiator

5. In ..... production the lots pass through the functional departments in different routing.

(a) Mass (b) Batch (c) Continuous (d) Job shop

Question2: (15 points)

Write the difference between:

1. Autocratic and Democratic leadership style.
2. Reliability and maintenance.
3. Upper and lower level management.

Question3: (5 points)

Write the scientific term:

1. The planning which deals with facility planning, capital investment, location planning.
2. The right to act on behalf of a department, or agency.
3. The ability to inspire or influence others towards the leader's goal.
4. Procure suitable personnel for managing the jobs.
5. A group of skills help managers to handle stress and be persistent.

(20 points)

Question4:

Explain:

1. Henry Mintzberg roles of mangers.
2. A good investment decision rule has some characteristics.
3. Simon model for human decision making.
4. Stress level can effect on performance.
5. Delegation of authority elements.

(5 points)

Question5:

Mark the following sentences with True or False and correct the false ones:

1. Strategic planning is a way of making future decisions. ( )
2. Conceptual skill refers to a person's knowledge in any type of technique. ( )
3. Leaders usually conform to only one leadership style. ( )
4. Middle level managers are responsible to set long range objectives. ( )
5. Breakdown maintenance is an acceptable strategy for equipment with maximum importance to operations. ( )

(10 points)

Question6:

Write short notes:

1. Strategic planning
2. Opportunity costs
3. SWOT analysis
4. Goals approach.
5. Tangible outputs of an organization.

أنتهت الأسئلة

مع تمنياتى بالتوفيق

Dr. Diana Tharwat Mosa

Date & Time: 15/1/2018 (1-4)pm
Level: two
Time Allowed: 3 Hours

Subject: Project Management (IS221)
2017-2018
(First semester exam)

Faculty of Computers & Information

Answer the following questions

Question1: (5 points)

Choose the correct answer:

1- In RACI matrix, any task should have only one role .....

(a) responsible (b) accountable (c) informed (d) consulted

2- The predecessor activity must finish before the successor start is ..... relationship.

(a) Finish-to-Start (b) Start-to-Finish (c) Start-to-Start (d) Finish-to-Finish

3- The number of communication lines in network communication model is .....

(a) n(n-1) (b) n(n+1) (c) n(n-1)/2 (d) n(n+1)/2

4- .....skills help managers to handle stress and be persistent.

(a) Conceptual (b) Coping (c) Human relation (d) Technical

5- Forward information from outsiders to inside the organization is a ..... role.

(a) Liaison (b) Figurehead (c) Disseminator (d) Negotiator

Question2: (15 points)

Write the difference between:

1. Upper and lower management.
2. Danger and opportunity people.
3. Project manager and project sponsor.

Question3: (5 points)

Write the scientific term:

1. A schedule network analysis technique that estimates the minimum project duration.
2. Formalized road map to accomplish the project's objectives.
3. Model depicts how information is transmitted from the sender to receiver.
4. People or organizations who have a vested interest in the outcome of the project.
5. A group of skills helps manager to interact effectively with people at all levels.

Question4: **(15 points)**

Explain:

1. Different reasons for project failure.
2. The Relation between Project Activities.
3. Thomas Kilmann conflict mode instrument.
4. Fact-finding techniques are the formal process to collect facts about systems requirements.
5. Lesley Partridge developed the steps to manage developmental changes.

Question5: **(5 points)**

Mark the following sentences with True or False and correct the false ones:

1. Project sponsors are responsible to set long range objectives. ( )
2. The cost to produce the product in sound project is less than the financial benefits. ( )
3. Scope creep supports the success of a project. ( )
4. For any task in RACI Matrix, you should have only one accountable stakeholder. ( )
5. Milestones are the lowest level in a work breakdown structure. ( )

Question6: **(15 points)**

For an engineering project, the activity list is represented as:

		Duration in days		
Activity	**Dependency**	**optimistic**	**Most likely**	**Pessimistic**
A	---	1	3	5
B	A	3	4	5
C	A	2	3	5
D	B, C	3	5	8
E	D	1	2	4
F	D	2	3	6
G	E	5	8	10
H	F, G	2	4	6

When project begins on (June 12), find:

1. The estimated project duration using critical path method.
2. The expected time using PERT.
3. The predictions regarding this project.

أنتهت الأسئلة

مع تمنياتى بالتوفيق

Dr. Diana Tharwat Mosa