Kafrelsheikh University — Mathematics III — Time: 3 Hours
Faculty of Computers &Information — Second year
The first semester exam (2019-2020) — Date : 29-12-2019

Answer the following questions

1- (a) **Find the Laplace transform of the function**

$f(t)=t^n$ .where n is positive integer

(b) **If** $F(s)=\dfrac{25}{s^3(s^2++4s+5)}$ **Find the inverse Laplace transform of the function** $F(s)$.

2- Find the Fourier Cosine series of the function $f(x)=x$ **for** $x\in[0,\pi]$

3- Choose the correct answer

(I) $L\{f(t)\}=L\{t\cosh 3t\}=$ .....

(a) $F(s)=\dfrac{s^2+9}{(s^2-9)^2}$ (b) $F(s)=\dfrac{s^2}{s^2-9}$ (c) $F(s)=\dfrac{s^2}{(s^2-9)^2}$

(II) $L\{h(t)\}=L\{shin\ at\}=$ .....

(a) $H(s)=\dfrac{s^2}{(s^2+a^2)}$ (b) $H(s)=\dfrac{a}{(s^2-a)^2}$ (c) $F(s)=\dfrac{a}{(s^2-a^2)}$

Where L is Laplace transform

4- Find the Fourier series of the function

$$f(x)=\begin{cases}0\ , & -\pi\le x\le 0\\ \pi\ , & 0\le x\le\pi\end{cases}$$

5- (a) Find Z-transform of unit step sequence $u(n)$:

$$x(nT)=\begin{cases}1 & ,n\ge 0\\ 0 & ,n<0\end{cases}$$

(b) Prove that $F_x[f^{(n)}(x)](k)=(2\pi i k)^n F_x[f(x)](k)$.

where the Fourier transform $F_x[f(x)](k)=\int_{-\infty}^{\infty} f(x)e^{-2\pi i kx}\,dx$

With my best wishes
Prof. Dr. Osama Abo-Seida

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Technical Writing (HUM 232)
2019/2020
Date: 1/1/2020
Time: 3 hrs.

Answer the following Questions

Q1) Why is it important to study technical and professional communication?

Q2) Mention 3 key differences between the abstract and introduction in academic or scientific paper?

Q3) Explain in details the five Steps to Successful Writing?

Q4) Explain in details the factors involved in Technical communication?

Q5) Which of the following is not a measure of excellence for effective technical communication?

a) Accessibility
b) Conciseness
c) Consistency
d) Clarity
e) Accuracy

Q6) The study of technical communication will NOT enable you to do which of the following?

a) Improve your ability to create documents that make information accessible to your readers
b) Assist you in identifying the kinds of people who will read your document
c) Make you a more skilled computer user
d) Help you write effective documents that minimize the need for communication skills

Q7) If you don't know whether to write too, two, or to, use the spell checker to help you decide?

a) TRUE
b) FALSE

Q8) Which of the following will most likely be included in the first paragraph of a memo?

a) Purpose statement
b) Specific action items
c) Background information
d) Recommendations summary

Q9) Which of the following is NOT included in the standard format of most memos?

a) Date
b) From
c) Address
d) Subject

Q10) The typical type size for technical manuscripts is?

a) 10-12 points
b) 14-16 points
c) 16-20 points
d) 22-24 points

Q12) Which element of a letter contains the recipient's full name and job title?

a) Heading
b) Salutation
c) Inside address
d)) End notation

Q12) Write an abstract for an academic or scientific paper. Don't panic! your abstract is simply a short, stand-alone summary of the work or paper that others can use as an overview. An abstract describes what you do in your essay, whether it's a scientific experiment or a literary analysis paper. It should help your reader understand the paper and help people searching for this paper decide whether it suits their purposes prior to reading. Your abstract should be accomplished as a summary that identifies the purpose, problem, methods, results, and conclusion of your work?

With my best wishes;

Dr. Haitham Samy ELwahsh

Kafrelsheikh University
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Department of Computer Science

Question(2) **Answer the following *sub-questions* as required at each of them: (10 Marks)**

(1) **Define:** ***(a) Namespace. (b) Interfaces*, and How are *interfaces* declared and used?**

(2) **Write about *Design Patterns* in OOP, and Write two types of *Design Patterns*.**

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

Question(3) **(15 Marks)**

(I) **Write C# code for an example of *throwing* an exception when *dividing by zero* condition occurs.**

(II) **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***.

(III) **Write C# code** to create an ***Abstract class*** called ***Shape*** , which contains: *An* ***abstract method*** : *Area( )*; Create a classes (***Circle, and Rectangle***) that *are* ***inherited*** from ***Shape***, which contain *an* ***Override method*** *Area( )*, that calculate the **Area** of the ***circle*** and ***Rectangle*** respectively.

With best wishes with success;

Dr. Osama M. Abu Zaid

22/12/2019

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Object-Oriented Programming (CS241)
2019/2020 (First term)
Date: 12/1/2020
Time: 3 hrs

(12) Which among the following can restrict class members to get inherited?

(a) Protected (b) Private (c) Public (d) All three

(13) ..... 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.

(a) Passing by Output (b) Passing by Reference (c) Passing by Value (d) Heap

(14) ..... is modifier which allows a child class only to access the member variables and member functions of its base class.

(a) Public (b) Protected (c) Private (d) Nothing of them

(15) ..... is the class that has only private constructors and cannot be instantiated.

(a) Protected Class (b) Private Class (c) Public Class (d) Utility Class

(16) ..... is a receptacle for a group of classes, which are united by a common feature.

(a) Derived Classes (b) Namespace (c) Interfaces (d) Nothing of them

(17) ..... is part in exception handling which used to execute a given set of statements, whether an exception is thrown or not thrown.

(a) Try (b) Throw (c) Catch (d) Nothing of them

(18) ..... is 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).

(a) protected (b) Protected internal (c) internal (d) private

(19) ..... is a textual/graphical description of how the system will behave from the user's perspective.

(a) SRS (b) Class Diagram (c) Use Case (d) Nothing of them

(20) ..... is a view of how objects are organized to work together as the program executes, i.e. (the communications that occur between the objects).

(a) Activity Diagram (b) Sequence Diagram (c) Class Diagram (d) Nothing of them

(2) Which Feature of OOP illustrates the code reusability?

(a) Polymorphism (b) Abstraction (c) Encapsulation (d) Inheritance

(3) Which of the two principles needs or match each other?

(a) Inheritance and Encapsulation (b) Encapsulation and Polymorphism (c) Encapsulation and Abstraction (d) Abstraction and Polymorphism

(4) Class and its objects are pass by .....

(a) Value (b) Reference (c) Value or Reference (d) Nothing of them

(5) Which class can have member functions without their implementation?

(a) Default class (b) Template class (c) Abstract class (d) String class

(6) Which among the following is false for class features?

(a) Classes may/may not have both data members and member functions (b) Class can have only member functions with no data members (c) Class can have only one or more constructors (d) Nothing of them

(7) If a function can perform more than one type of tasks, where the function name remains same, which feature of OOP is used here?

(a) Encapsulation (b) Inheritance (c) Polymorphism (d) Abstraction

(8) Which feature in OOP is used to allocate additional function to a predefined operator in any language?

(a) Function Overloading (b) Operator Overloading (c) Operator Overriding (d) Function Overriding

(9) Which among doesn't illustrate Polymorphism?

(a) Function Overloading (b) Function Overriding (c) Operator Overloading (d) Nothing of them

(10) Which among the following is not a necessary condition for constructors?

(a) Its name must be same as that of class (b) It must not have any return type (c) It must contain a definition body (d) Nothing of them

(11) In which access should a constructor be defined, so that object of the class can be created in any function?

(a) Protected (b) Private (c) Public (d) Any access specifier

Kafrelsheikh University
Faculty of Computers and Information
Department of Computer Science

Final Exam of
Object-Oriented Programming (CS241)
2019/2020 (First term)
Date: 12/1/2020
Time: 3 hrs

Question (1) (35 Marks)

(I) *Check True* or *False* and *Fill (T)* if *True*, or *(F)* if *False* in Answer Sheet: (15 Marks)

(1) Pure OOP can be implemented without using class in a program.

(2) Objects must be created before using members of a class, and can't be passed by reference.

(3) The feature by which one object can interact with another object is Message reading.

(4) Exception handling is a feature of OOP as it includes classes concept in most of the cases.

(5) Default constructor must be defined, if parameterized constructor is defined and the object is to be created without arguments.

(6) Protected should be used so that all the parent class members can be inherited and accessed from outside the class.

(7) Interfaces are things that you do not expect to occur during normal execution of a program.

(8) Catch block identifies a block of code for which particular exceptions is activated.

(9) 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.

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

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

(12) Private defines class members which are not visible to users of the class (those who initialize and use it), but are visible to all inheriting classes (descendants).

(13) System.IO.IOException handles errors generated from dividing a dividend with zero.

(14) Code within a finally block is referred to as protected code.

(15) Internal members are visible to the inheriting class, only if the base class and the inheriting class are in the same assembly (the same Visual Studio project).

(II) *Chose* the correct answer and *Fill A, B, C, or D* in Answer Sheet: (20 Marks)

(1) Which is not feature of OOP in general characteristics?

(a) Duplicate/Redundant data (b) Modularity (c) Code reusability (d) Efficient Code

الفرقة الثالثة
ترم أول

Kafrelsheikh University
Faculty of Computers & Information
Subject: Business Administration
Time Allowed: 3 Hours
Code: HUM231

Full marks: 60
Date: 15/1/2020
Pages (2)

Answer the following questions

(5 points)

Question1:
Write the scientific term:

1- An acceptable strategy for maintenance of equipment with maximum importance.
2- Procure suitable personnel for managing the jobs.
3- Actions necessary for restoring a machine, or system to the specified operable condition.
4- Plans provide direction to operating personnel if unplanned event occurs.
5- The right to act on behalf of a department, or agency.

(15 points)

Question2:
Write the difference between:

1. Batch and job shop production.
2. Servant and creative Leadership.
3. Power and competence.
4. Tangible and intangible outputs of an organization
5. Planning and organizing.

(10 points)

Question3:
Write short notes:

1. Strategic planning
2. SWOT analysis
3. Reliability
4. Opportunity costs
5. The delegation of authority
6. Multicultural leadership
7. Management skills
8. Upper level management
9. Democratic leadership style
10. Mission of an organization

(باقى الأسئلة فى الخلف)

Question4: (15 points)

Explain:

1. Henry Mintzberg roles of mangers.
2. An enterprise may have different levels of management depend upon its size.
3. A good investment decision rule has some characteristics.
4. Simon model for human decision making.
5. Stress level can effect on performance.

Question5: (10 points)

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

1. Upper level managers must have human relations skill more than lower level. ( )
2. Conceptual skill refers to a person's knowledge of any type of technique. ( )
3. Leaders usually conform to only one leadership style. ( )
4. Lower level managers are responsible to set long range objectives. ( )
5. Laissez-Faire leadership is effective for untrained staff. ( )

Question6: (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. .....skills help managers to handle stress and be persistent.

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

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

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

4. Strategic planning is .....

(a) not a way of making future decisions. (b) a static process.

(c) a blueprint future. (d) resolve critical situations in the organization.

5. ..... leadership style is effective for untrained staff who do not know the tasks.

(a) Democratic (b) Hands-off (c) Bureaucratic (d) Autocratic

أنتهت الأسئلة

مع تمنياتى بالتوفيق

Dr. Diana TharwatMosa

Kafrelsheikh University
Faculty of Computers & Information
Subject: Project Management
Time Allowed: 3 Hours
Code: IS221

Full marks: 60
Date: 19/1/2020
Pages (2)

Answer the following questions

Question1: (8 points)

Write short notes:

1. Costs benefit analysis method.
2. Project complexity.
3. Work breakdown structure
4. SF relationship
5. Reprioritization of projects
6. Technical skills
7. Scope creep
8. Project constraints

Question2: (20 points)

Explain the following sentences:

1. Thomas Kilmann conflict mode instrument.
2. Fact-finding techniques collect facts about systems requirements.
3. Lesley Partridge developed the steps to manage developmental changes.
4. Different reasons for project failure.
5. Organizations usually have to prioritize the projects based on some criteria.

Question3: (5 points)

Choose the correct answer:

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

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

2. ..... skill refers to a person's knowledge and proficiency in any type of technique.

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

3. ..... calculate no. of communication lines in network communication model.

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

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

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

5. The ..... forecasts based on the results of questionnaires sent to a panel of experts then shared with the group after each round.

(a) brainstorming (b) questionnaire (c) delphi (d) interviewing

(باقى الأسئلة فى الخلف)

Question4: (5 points)

Write the scientific term:

1. Formalized road map to accomplish the project's objectives.
2. Model depicts how information is transmitted from the sender to receiver.
3. A schedule network analysis technique that estimates the minimum project duration.
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.

Question5:

Mark the following sentences with True or False and correct the false ones: (10 points)

1- The cost to produce the product in sound project is more than the financial benefits. ( )

2- Project complexity is low, when requirements are stable and difficulty is low. ( )

3- There should be no overlap between any elements in a work breakdown structure. ( )

4- Upper level managers are responsible to set short range objectives. ( )

) Entrepreneur role is an interpersonal role of Mintzberg's managerial roles. ( )

Question6:

For an engineering project, the activity list is represented as: (12 points)

		Duration in days		
Activity	Dependency	optimistic	Most likely	Pessimistic
1	____	8	9	14
2	1	5	7	9
3	2	2	5	6
4	1	10	12	16
5	4	1	2	4
6	5	5	7	10
7	3, 6	3	6	9
8	7	3	5	8
9	8	2	3	6

When project begins on (April 1):

1. Use a schedule network analysis technique to estimate the minimum project duration.
2. Calculating expected time using PERT.
3. Make your predictions regarding this project.

أنتهت الأسئلة

مع تمنياتى بالتوفيق

Dr. Diana TharwatMosa