National University of Computer and Emerging Sciences, Lahore Campus

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Section:	ALL		**Page(s):**	10
Exam Type:	Final			

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

Instruction/Notes:

1. Read the questions carefully. Make sure to answer what is being asked and nothing else. Frame the answer in your mind first before starting to attempt.

2. Provide precise answers in the given space. Longer answers will be discarded.

Q1. [10 marks] You are the project manager of a project and you need to prioritize and manage time for tasks listed in the table below. Using the concept of The Eisenhower Matrix, categorize these items into four quadrants. Write down the quadrant number against each item as per your understanding.

Important / Urgent 1	Important / Not Urgent 2
Not Important / Urgent 3	Not Important / Not Urgent 4

#	Item	Quadrant #
1	Reply to email from the customer	1

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2	Plan next phase of the project to be started in three weeks	2
3	Project meeting to address an issue	1
4	Preparation for the upcoming meeting	2
5	Attend a meeting with no clear agenda	3
6	Compile work hours report due today	3
7	Spend time on your social media app timeline	4
8	Attend to visitors	3
9	Attend to a complaint of one of your team member	1
10	Discussions on the current political scenario	4

Q2. [10 marks] Draw an organizational chart for the following.

Consider the case of a medium-sized UK-based company providing bespoke software development and consultancy in the UK and operating in several other western European countries through subsidiary companies there.
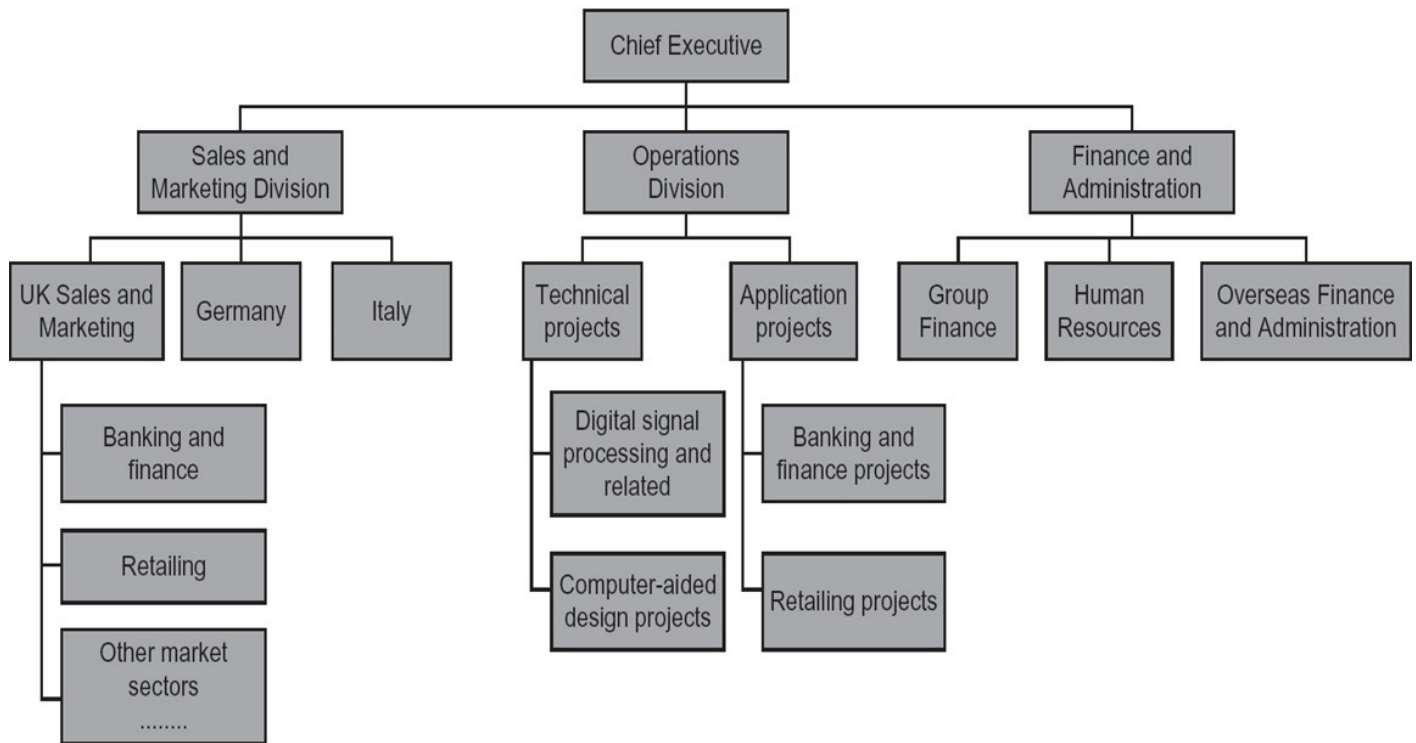
At the top level, the company decides to adopt a functional structure with a sales and marketing department and an operations department. In either case, it seems sensible to have a separate organization-level finance and administration department, probably under the management of the Finance Director.

The functional structure has the advantage of bringing together all the programmers, analysts, designers, and project managers in one group and all the sales and marketing staff in another. This offers great flexibility and should enable the head of each group to deploy its staff efficiently. Now probably this is necessary to structure the sales and marketing division according to the market sector (e.g. banking and finance, retail, etc.) because sales and marketing activity is usually only effective if aimed at specific sectors.

In order to sell in a country, it is almost essential to speak the language and to be familiar with the culture. Furthermore, despite the gradual harmonization of business regulations in the European Union, each country has its own laws, its own bureaucratic procedures, and its own way of producing accounts. All these factors suggest a need for a country-based organization. The best way of doing this may be to set up a subsidiary company in each country, with a small office, responsible for sales and marketing in that country. The subsidiary will be able to call on the sales and marketing division in the UK for specialist help.

The organizational structure within the operations division presents other difficulties. Although a project structure will obviously be used for carrying out individual contracts for customers, some higher-level structure is required. Do we group projects by market sector or by technical characteristics? It may be that both are appropriate, that is, projects, where the risks and problems are technical, are grouped into one or more units, depending on the technology required (e.g. digital signal processing, computer-aided design, etc.), while projects, where application considerations are more important, are grouped into units depending on market sector (e.g. banking and finance, retail, etc.).

[Space for Organizational Chart]

Chief Executive

Sales and Marketing Division | Operations Division | Finance and Administration

UK Sales and Marketing | Germany | Italy | Technical projects | Application projects | Group Finance | Human Resources | Overseas Finance and Administration

Banking and finance

Retailing

Other market sectors
....

Digital signal processing and related

Computer-aided design projects

Banking and finance projects

Retailing projects

Question 3: What is the difference between act utilitarianism and rule utilitarianism? [2+2]

Act utilitarianism looks only at the consequences of individual actions, whereas rule utilitarianism looks at the consequences of having or not having certain rules.

Question 4: Which kind of ethical theory, deontologist or consequentialist, works better for arguing that it is wrong to drive one's car on the left side of a road in a country where people normally drive on the right? Explain. [3]

Consequentialist because of the consequences related to it.

Question 5: Why is the human interface one of the most important but difficult areas of safety-critical systems? What must the system designer consider? [4]

Because a system that is made to perform a safety function can pose a safety risk to the user if an error or failure occurs in the system. In a system the performance of hardware and software can be predicted but human behavior cannot be predicted. The thing that must be

considered by the system designer is to load the design carefully in order to minimize errors that will occur later

Question 6: Do you think that spam is actually illegal? Why or why not? [3]

Spam is not illegal if content is not illegal and identity is not hidden.

Question 7: Do you think that law enforcement agencies should be able to use advanced surveillance technology, such as surveillance cameras combined with facial recognition software? Why or why not? [3]

Yes, I think that law enforcement agencies should be able to use advanced surveillance technology, such as surveillance camera combined with facial recognition software because it will be a useful tool to them in solving a case or crime. The footage that will be captured in the surveillance camera can be use as evidence. It can also help agencies and other companies in preventing crime inside the organization.

Cameras can have other uses beyond crime prevention. In the event of a disaster or terrorism attack, they also can help authorities coordinate evacuation routes and the dispensing of medicine. In detecting the identity of a person, facial recognition would be a great help. So it is really a useful tool.

Question 8 : Explain the concept that an idea cannot be copyrighted, but the expression of an idea can be, and why this distinction is a key to understanding copyright protection. [3]

The expression refers to the concept that an idea itself cannot be copyrighted, but the expression of an idea can. Basically, a movie can be copyrighted, but the idea behind the movie is not eligible for copyright. Copyrights can apply to a wide range of things, including: Literary works.

Question 9: What is a cross-licensing agreement? How do large software companies use them? Do you think their use is fair to small software development firms? Why or why not? [4]

A cross licensing agreement is a contract between two parties where each party grants rights to their intellectual property to the other parties.

Large software companies use them to avoid lawsuits and the monetary loss associated with them. They help each company use patents that they would otherwise have to go through a lot of litigation to gain access to. Also, large companies use them to promote their own research and development because then their research and development teams can work on creating other products instead of figuring out how to create products that are already invented.

I don't think it's fair for the smaller companies because it makes it a lot harder for these companies to break through into the industries and compete with these large research teams that have access to other large research teams. It is a situation of the rich getting richer.

Question 10: You are the vice president for software development at a small, private firm. Sales of your firm's products have been strong, but you recently detected a patent infringement by one of your larger competitors. Your in-house legal staff has identified three options: (1) ignore the infringement out of fear that your larger competitor will file numerous countersuits; (2) threaten to file suit, but try to negotiate an out-of-court settlement for an amount of money that you feel your larger competitor would readily pay; or (3) point out the infringement and negotiate aggressively for a cross-licensing agreement with the competitor, which has numerous patents you had considered licensing. Which option would you pursue and why? [4]

First choice : Option 2

In that case, I'll choose option no. 2. (my company is small). To solve the problem, I should try to negotiate with them since we are the true owner and I'll try to threaten them of filing them a case for patent infringement rather than ignoring the problem then it go to the point that they will us a case for patent infringement where in the first place, we have the original.

Second choice : Option 3`

Third choice : Option 1

Question 11: While writing a computer contract, why lawyers are considered pessimists and business clients as optimists? [2]

Hilary Pearson [1] made a very telling statement when she said that, while optimists make the best deal makers, pessimists make the best contract writers. When it comes to drafting a contract, lawyers in particular are born pessimists. This often gives rise to frustration on the part of a business client who is excited by the possibilities of a deal which may have taken considerable time and effort to negotiate

Question 12: Why and how do you think the following would work with LinkedIn as SEO tips? [2+2]

1: Expand your network.

- **LinkedIn search results depend heavily on your network of friends, colleagues, and business contacts**

- **The results show people who you either know or are connections of others that you know.**

So get aggressive and connect with as many people as you can

2: Join relevant groups and participate.

- **tells LinkedIn more about you and what search terms are relevant to you**
- **Invest the time to ask questions and provide well thought out and valuable answers**
- **Helping others is a fantastic way to contribute and it gets you noticed**

Question 13: Circle the one(s) that apply.

1. A hacker contacts your phone or E-mail and attempts to acquire your password is called

   a) Phishing

   b) Spoofing

   c) Spamming

   d) d. none of these

2. Plagiarism is _____?

   a) turning in someone else's work as your own

   b) copying words or ideas from someone else without giving credit

   c) failing to put a quotation in quotation marks

   d) All of these

3. The employee can not apply for patent if he is specifically employed for…………….
   a) R&D
   b) Management
   c) Surveillance of research

d) Clerical work

4. Which of the following is not the infringement of copyright?
   a) Copy the software to another computer by company
   b) To make backup copies
   c) Copy the software to another computer by educational institution
   d) Copy the software to another computer

5. Trademarks identifies………….
   a) Product and consumer
   b) Consumer and its origin
   c) Registrar and controller
   d) Product and its origin

6. The act regarding patent, trademark and copyright is known as ....
   a) Contract Act
   b) Intellectual Property Act
   c) Trademark Act
   d) License Act

7. Can lecture delivered in the classroom be copyrighted?
   a) No
   b) Occasionally with conditions
   c) Yes

8. The process of taking something apart in order to understand it, build a copy of it, or improve it is called

a) Plagiarism

b) reverse engineering

c) patent infringement

d) decompiling

9. Legally obtained information that is gathered to help a company gain an advantage over its rivals is called
____.
a) prior art
b) industrial espionage
c) competitive intelligence
d) trade secret

10. A primary cause of poor software quality is that ____.
a) development teams fail to use the latest design techniques
b) developers spend too little time testing

c) <mark>many developers do not know how to design quality into software from the very start</mark>
d) developers do not know how to test software effectively

18. When sued for negligence, a software developer is not held responsible for every product defect that could have been detected that causes customer or third-party loss. Instead, responsibility is limited to _____.

11. _____are debt instruments created by companies for the purpose of raising capital

a) soft loans

b) venture Capitalists

c) grants

<mark>d) corporate bonds</mark>

12. Some of the senior employees of a company decide to purchase the company from its existing owners.

a) Outsourcing

b) Takeover

<mark>c) Management buyouts</mark>

d) Merger

13. Which of the following statement is NOT True about Bureaucratic Model

a) It breeds boredom and can affect productivity

b) It sets no room for favoritism

c)It can result to inefficiency

<mark>d)Decentralization of decision</mark>

14. _____ defines five levels of software development maturity and identifies the issues that are most critical to software quality and process improvement.

a) <mark>Capability Maturity Model Integration-Dev</mark>
b) ISO 9000
c) Quality assurance
d) FMEA

15. Cybersquatters _____.

a) frequently launch denial-of-service attacks against popular Web sites
b) <mark>register domain names for famous trademarks or company names to which they have no connection</mark>
c) remain connected to popular Web sites for extremely long periods of time making it difficult for others to

obtain service

d) employ phishing tactics using the domain names of popular Web sites

16. 1000 Rs payable in 4 years' time with discount/interest

rate 8%. What would be the present value?

a) <mark>735</mark>

b) 725

c) 745

d) 755

17. A professional is someone who:
a. requires advanced training and experience
b. must exercise discretion and judgment in the course of his or her work
c. does work that cannot be standardized
d. <mark>all of the above</mark>

18. A good team lead should spend most of his own energy in which time management quadrants:
        a. 1st and 4th quadrant
        b. 1st and 3rd quadrant
        c. 2nd and 4th quadrant
        d. <mark>1st and 2nd quadrant</mark>

19. A set of programs that enables a hacker to gain administrative level access to a computer without the end user's consent or knowledge is called a(n):
        e. Trojan horse
        f. Logic bomb
        g. <mark>Rootkit</mark>
        h. Worm

20. You read online that snake oil has benefits for arthritis patients. Which of the following, if you see, will make a convincing case for these benefits:
        i. A Facebook post claiming these benefits
        j. <mark>A peer-reviewed (work evaluation study by people of similar competence) study showing its effects on a 1000 arthritis patients</mark>
        k. A news item on CNN
        l. An online article mentioning how using snake oil was an ancient Chinese practice