

CS-4001: Professional Practices in IT (CS)

Serial No:

Final Exam

Total Time: 3 Hours

Total Marks: 100

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Signature of Invigilator

Student Name

Roll No

Section

Signature

Question 1 [25 Marks]

For the following 25 multiple choice questions, select only one option (best statement) to answer your question and fill in the following table with your preferred option. Cutting is not allowed.

ANSWER SHEET:

Q#	Correct Option	Q#	Correct Option	Q#	Correct Option	Q#	Correct Option	Q#	Correct Option
1	a ✓	6	a ✓	11	a ✓	16	d ✓	21	c ✓
2	c ✓	7	b ✓	12	d ✓	17	b ✓	22	c ✓
3	a ✓	8	d ✓	13	d ✓	18	c ✓	23	b ✓
4	b ✓	9	a ✓	14	b ✓	19	d ✓	24	b ✓
5	a ✓	10	d ✓	15	d ✓	20	d ✓	25	b ✓

1. A revenue model is:

- a) ✓ A framework for generating income.
- b) Exactly the same as a business model
- c) Not applicable for software companies
- d) None of the above.

2. The idea that the pursuit of happiness is the highest ethical aim

- a) Egoism
- b) rationalism
- c) ✓ hedonism
- d) utilitarianism

3. Whistleblowers

- a) make an unauthorized disclosure about a harmful situation or fraud.
- b) enjoy the respect and admiration of their managers.
- c) are usually financially rewarded by their organizations for their integrity.
- d) All of the above

c) Routine information is exchanged
d) Goals are defined and assessed
13. Succession
a) Creation

4. Moral principles of a society are always aligned with the law.
a) True
☒ b) False
5. Which of the following statements are correct?
1 - Utilitarianism is a consequentialist ethical theory focusing on outcomes and collective welfare:
2 - Egoism is a duty based ethical theory based on the principles of altruism and care for others:
3 - Deontology is an ethical theory attributed to Emmanuel Kant.
a) 1,3
b) 2,3
c) 1,2
d) 1,2,3
6. Trademark can be used as domain name:
☒ a) Yes
b) No
c) Yes, but it should never be used like that
d) None of the above
7. Loosely referred to as "the greatest good for the greatest number"
a) deontology
☒ b) utilitarianism
c) egoism
d) hedonism
8. _____ mean the area covered by a single legal system and set of laws.
a) Executive
b) Legislature
c) Torts
☒ d) Jurisdiction
9. Ethical theories help us/are:
☒ a) A formula to solve ethical problems
b) Judge involuntary actions committed by people
c) Not important for business success
d) Both a & c
10. Which of the following is not a common objective of code of conduct in ethics:
a) Discipline
b) Inspiration
c) Education
☒ d) Enforcement
11. According to ACM code of conduct: Give comprehensive and thorough evaluations of computer systems and their impacts, including analysis of possible risks.
☒ a) True
b) False
12. Planning is the managerial function where
a) Employees are monitored for better performance
b) Resources are gathered for the tasks at hand

- c) Routine information is exchanged
- ☒ d) Goals are defined and a strategy is established

13. Succession generally falls under

- a) Criminal Law
- b) Civil Law
- c) Public Law
- ☒ d) Substantive Law

14. With respect to the legal system of courts of Pakistan, civil courts fall directly under the jurisdiction of high courts.

- a) True
- ☒ b) False

15. The legislative process of Pakistan consists of which of the following:

- a) Superior judiciary
- b) The three pillars of the state
- c) National Assembly and Senate
- ☒ d) All of the above

16. Firing an employee who does not perform according to expectation or fails to follow contractual obligations.

- a) Not ethical and legal
- b) Ethical and illegal
- c) Not ethical and illegal
- ☒ d) Ethical and legal

17. Collaborative filtering is a form of:

- a) Credit reports
- b) Data mining
- c) Flash Cookie
- d) All of the above

18. Political campaigns determine voters most likely to support particular candidate is by using:

- a) Micro targeting
- b) Credit reports
- ☒ c) Data mining
- d) Implanted chips

19. Making unauthorized copies of copyrighted software planting viruses in someone else's computer

- a) Ethical and legal
- b) Not ethical and legal
- c) Ethical and illegal
- ☒ d) Not ethical and illegal

20. _____ is a model where some features of a product are offered free of charge while advanced features require a premium or payment.

- a) Commission model
- b) Donationware
- c) Crippleware
- ☒ d) Freemium

21. A non-compete clause in employment contracts generally ensures that
- a) current employees do not work for direct competitors of a business
 - b) former employees do not work for direct competitors of a business for a period of time
 - ☒ c) A and B
 - d) None of the above
22. A non-solicitation clause generally ensures that
- a) Employees do not encourage other employees to move to another company
 - b) Employees do not encourage an organization's customers to move to another company
 - ☒ c) A and B
 - d) None of the above
23. _____ is a process by which candidates are evaluated to determine their readiness to enter the profession.
- a) Licensing
 - ☒ b) Certification
 - c) Accreditation
 - d) None of the above
24. A value proposition in a business is
- a) Its business model
 - ☒ b) The promise of value to be delivered to a customer
 - c) Its revenue model
 - d) All of the above
25. Management functions in an organization generally fall into these categories:
- a) Strategizing, communicating, punishing
 - ☒ b) Planning, Organizing, Controlling, Leading
 - c) Technical leadership
 - d) Non-technical leadership

Question 2 [25 Marks]

Ethical Decision Making- 4 Step Process

An E-Mail-Based Effort to Boost Morale Backfires

The Qaswa Corporation had a reputation for manufacturing heavy-duty trucks. Its 18-wheeler Truck Division was very successful. For many years, it sustained the corporation by its aggressive marketing overseas. During the late 2000s and early 2010s, however, it experienced decreased orders. Because Qaswa was so dependent on its revenues, management was faced with the task of significantly reducing the workforce.

The Board of Directors of Qaswa had never experienced such tough economic times. The directors issued a memorandum, which called for a reorganization to reduce the payroll in each division by 10 percent over a six-month period. The severity and speed of the cut left little room for compromise. In some departments, workers were laid off without consideration of the value or length of their service at Qaswa. The drastic downsizing was certain to cause resentment and ill will. At Qaswa's world headquarters in Islamabad, Pakistan, Khalid Khan worked as a software engineer. He designed and installed graphics modelling programs. His department had suffered its share of cuts, and it seemed to everyone that the workload was greater than ever. Employee morale was at an all-time low.

In Khalid's eyes, what his department needed was a good laugh, preferably at the company's expense. Maybe that would boost morale. He approached the department's test data designer, Maryam Chaudhry, who was his closest friend and confidante. He told her about his idea for distributing a document that would be good for a laugh. Maryam thought it was a grand idea and even offered to help, but Khalid said he preferred to work alone.

Khalid spent an entire evening at his terminal, composing a memo mocking the reorganization. This memo poked fun at the upper levels of management and contained some slang four-letter words. After composing the memo and signing it "Management," Khalid distributed it through e-mail to all workers in the department. Due to his knowledge of software engineering, he could bypass the system security software and send the memo anonymously.

The effect of the memo was immediate. Several people in Khalid's department e-mailed it to other departments, and it travelled throughout the company. It was the sole topic of conversation at all gatherings. People laughed at some phrasings and wandered from one office to another to share discovered double meanings. A few workers blushed at some of the words, and some said, "I just don't find it funny." But because so many co-workers enjoyed it, Khalid sensed success. When asked who wrote it, however, he said he didn't know. Maryam also said nothing, though of course she knew who had written it. The memo was reprinted and copied, and it continued to spread like fire in dry grass.

Eventually, the division director, Shahzeb Shaukat, got a copy. He didn't like the memo at all. It was difficult enough to reduce the size of the division without what he called "this kind of insensitive criticism." Shahzeb promptly ordered technicians to identify the workstation from which the memo originated. They had no difficulty identifying the source, and when he confronted Khalid, he freely admitted his actions.

Harriet is concerned. Should he fire Khalid? Khalid's job is crucial to the division, and Shahzeb would be obliged to replace him immediately. However, Maryam Chaudhry could do Khalid's job, and this would be fortunate for Maryam because her position as test data designer is due to be eliminated by the reorganization.

Step I. Understanding the situation

[3+3+3=9]

- A. List and number the relevant facts.
- B. Which of these raises an ethical issue? Why? What is the potential or resulting harm?
- C. List the stakeholders involved.

Step II. Isolating the major ethical dilemma - What is the ethical dilemma to be resolved NOW? [3]

Step III. Analyzing the ethicality of both alternatives in Step II using Consequentialism, Rights and duties and Deontology [2+2+2=6]

Step IV. Making a decision and planning the implementation [2+2+1+2=7]

- A. Make a defensible ethical decision.
- B. List the specific steps needed to implement your defensible ethical decision.
- C. Show how the major stakeholders are affected by these actions.
- D. What other longer-term changes (political, legal, technical, societal, organizational) would help prevent such problems in the future?

Question 3[15 Marks]

- a) What is the 'veil of incorporation' and what does it do? [3]
- b) How would you define and compare the following company structures: [4+4+4]

- i. Sole proprietorship,
- ii. (SMC Pvt. Ltd) in Pakistani Context,
- iii. Public limited company.

Question 4 – Short questions [15Marks]

- a) What purpose does licensing serve in a profession? [3]
- b) What is the purpose behind business attacks, in the context of computer crime? [3]
- c) What challenges related to jurisdiction can Internet crime present for law enforcement? [3]
- d) What is the meaning of indemnity in a contract? [3]
- e) Describe a scenario that shows the difference between cost-plus contracts and fixed price contracts in software? [3]

Question 5 [5*2=10 Marks]

Scenario: In an organization, informal "grapevine" communication among employees (i.e. horizontal) spreads rumors about layoffs, causing anxiety and decreased productivity. The CEO must address this.

- a. Evaluate the reasons grapevine communication thrives in an organization.
- b. Suggest a proactive communication plan that an organization can use to reduce the impact of rumors in the future.

Question 6 [10 Marks]

Scenario: KangarooCorp is a medium-sized Australia-based company. It provides three different software packages for its animal farm software; FarmingBasics, FarmingPremium and FarmingAnalytics. These products are sold out to three different countries (Australia, USA and Pakistan). KangarooCorp has its head office located in Sydney with in-house software development and centralized customer services. KangarooCorp also established two other sub offices in the USA & Pakistan to manage the country level operations such as business development, sales and marketing. National level business development, sales and marketing departments are working within the head office. Moreover, inside its Head office, KangarooCorp has developed three subdivisions with the name, FB division (FarmingBasic), FP (FarmingPremium) and FA (FarmingAnalytics). Each division is following flat hierarchy for organizational structure and increment model for software development. Software Development operations are Analysis & Design, Development, Quality Assurance and Maintenance (also known as SCM- Software Configuration Management). To manage software technical aspects, a centralized Technology department is formed which is headed by Chief Technology Officer (CTO). Similarly, a centralized Project Management Office (PMO) also established to manage software PM activities.

Suggest a suitable structure with due justification for KangarooCorp, illustrating your answer with an organization chart.

FB FP FA

Best wishes ☺