

## **CS 4001 Professional Practices in IT**

Saturday, September 27, 2025

### **Course Instructors**

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Serial No:  
**BSCS-All Sections**  
**SESSIONAL-1**  
**Total Time: 1 Hour**  
**Total Marks:40**

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Roll No	Degree	Section	Signature	Invigilator Signature
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**DO NOT OPEN THE QUESTION BOOK OR START UNTIL INSTRUCTED.**

### **INSTRUCTIONS:**

1. Verify at the start of the exam that you have a total of Four (04) Questions printed on Six (06) pages including this title page.
2. Attempt all questions on the this questions paper.
3. The exam is closed books, closed notes. Please see that the area in your threshold is free of any material classified as 'useful in the paper' or else there may a charge of cheating.
4. Read the questions carefully for clarity of context and understanding of meaning and make assumptions wherever required, for neither the invigilator will address your queries, nor the teacher/examiner will come to the examination hall for any assistance.
5. Fit in all your answers in the provided space. You may ask for extra space/sheet if required. If you do so, clearly mark question/part number on that page to avoid confusion.
6. Use only your own stationery and calculator. If you do not have your own calculator, use manual calculations. (If applicable)
7. Use only permanent ink-pens. Only the questions attempted with permanent ink-pens will be considered. Any part of paper done in lead pencil cannot be claimed for checking/rechecking.

	Question-1	Question-2	Question-3	Question-4	TOTAL
Total Marks	10	5	10	15	40
Marks Obtained					

**(Part- A)**

[CLO-1 Understand the basic concepts and importance of ethics that can be mapped in the professional lives.]

[CLO-3 Understand the making and implementation of framework for ethical decision making.]

**Question-1: Answer the following MCQs in the table given on the last page of paper. (10 Marks)**

1. A software engineer is caught violating data privacy laws. The company argues that internal training was given, but an external body revokes his right to practice. Which characteristic of a fully developed profession is most clearly at play here?
  - a. Certification
  - b. Licensing**
  - c. Code of ethics
  - d. Professional society
2. A government study concludes that “professionalism in Artificial Intelligence today has the same transformative effect on social structure as the rise of organized agriculture once did.” Which interpretation best aligns with this statement?
  - a. Both the Agrarian and ICT Revolutions reshaped professions by concentrating knowledge into elite groups.
  - b. The Agrarian Revolution enabled settled civilizations, while the ICT Revolution similarly created a knowledge-based economy.**
  - c. Unlike the Industrial Revolution, the ICT Revolution had minimal effect on the emergence of new professions.
  - d. Both the Agrarian and Industrial Revolutions directly replaced hunting and gathering as the dominant mode of survival.
3. A medical professional leaks patient data to a third party. The governing body suspends their license, stating that such behavior damages trust in the entire field. Which code has been violated most directly?
  - a. Professional Code: because adherence protects the image and integrity of the profession.**
  - b. Personal Code: because morality prohibits betrayal of trust.
  - c. Both codes equally: since professional duties are always identical to personal moral beliefs.
  - d. Neither code: since only legal systems, not codes, regulate data privacy.
4. A local court fines a software firm for not respecting community religious holidays in its mandatory work schedules. Which code is most clearly in effect here?
  - a. Institutional Code: because the penalty was applied to an organization.
  - b. Community Code: because the regulation stems from cultural/religious practices formalized by civil law.**
  - c. Institutional Code: because public confidence in the firm is threatened.
  - d. Both equally: because institutions always adopt community values as their own.
5. A project lead ensured a hospital system was delivered on schedule by personally working extra hours and reorganizing the team. However, they falsified QA reports, assigned unsupervised interns to critical tests, and later concealed error logs from stakeholders. Which one of the following pillars of professionalism is **NOT** being violated?
  - a. Responsibility**
  - b. Integrity
  - c. Commitment
  - d. Accountability

6. A developer is asked to design an app that collects medical data for research. Management insists on storing identifiable patient records “in case they are useful later.” What is the most ethically responsible response?
  - a. Agree, since future research may benefit society.
  - b. Encrypt the data but still store everything indefinitely.
  - c. Refuse, because retaining identifiable data beyond its immediate purpose violates user privacy.**
  - d. Collect only non-sensitive data to avoid all risks.
7. The Code of Ethics emphasizes “contributing to society and human well-being.” In the context of sensitive personal data collection, which action aligns best with this principle?
  - a. Prioritizing company profits to ensure the business survives.
  - b. Assuming users implicitly agree by downloading the app.
  - c. Outsourcing privacy compliance to legal teams instead of developers.
  - d. Designing systems where user consent is informed, meaningful, and revocable.**
8. Surveillance, monitoring, and transparency: A company installs employee monitoring software. Workers are told it improves productivity but are not informed that keystrokes and private messages are tracked. From a human rights perspective, this practice is problematic because:
  - a. Employees may not work as efficiently if fully informed.
  - b. Hidden monitoring undermines trust and violates the right to privacy.**
  - c. Employers own company systems, so monitoring is always justified.
  - d. Employees should expect all workplace activity to be tracked anyway.
9. A government requests a developer to add a hidden surveillance feature in a communication app, citing national security. Which ethical approach best aligns with professional codes of conduct?
  - a. Comply, since legal authorities take priority over ethical codes.
  - b. Implement it quietly, but ensure the data is strongly encrypted.
  - c. Refuse, as secret surveillance without user consent violates transparency and user trust.**
  - d. Add the feature only for some users, reducing the scope of the violation.
10. The city government wants to use facial recognition cameras to reduce crime. As the system’s lead engineer, which design choice would best balance ethical responsibility and practical use?
  - a. Allow unrestricted tracking since it serves public safety.
  - b. Keep the system proprietary so its functioning remains hidden from the public.
  - c. Focus only on accuracy improvements, leaving ethical issues to policymakers.
  - d. Limit used to verified investigations, with independent oversight and accountability.**

**(Part- B) Answer the following questions briefly**

[CLO-1 Understand the basic concepts and importance of ethics that can be mapped in the professional lives.]

**Question-2:** How would you define the term “Profession”. List and briefly explain the characteristics that qualify a profession. **( 5 Marks)**

A paid occupation, especially one that involves prolonged training and a formal qualification.

1. Expert Knowledge

Special Technical Knowledge, Skills

Substantial Education and Training in order to Practice

2. Autonomy

Independence in conducting Professional Practice

Members themselves decide Training Nature and control Entry

One or more Professional Bodies

Codes of Conduct

3. Internal Governance

Controlled by its Practitioners

No External Authority

4. Service to Society

[CLO-4 Understand professional ethical theories and code of ethics ]

**Question-3:** A senior software engineer at a multinational technology company has discovered that the company’s new artificial intelligence system, designed to assist governments with predictive policing, is producing biased results. In certain regions, the AI disproportionately flags individuals from minority communities as “high-risk,” despite insufficient evidence.

The company has already signed multi-million-dollar contracts with several governments, and the engineer is bound by strict confidentiality agreements. If the engineer raises these concerns publicly, it could lead to:

**(2 + 2 + 2 + 2+ 2 = 10 Marks)**

- Massive financial losses for the company
- Potential diplomatic conflicts between nations
- Loss of trust in the engineer’s profession
- Possible criminal charges against the engineer for violating contracts

On the other hand, remaining silent could:

- Allow continued harm to minority communities
- Protect the engineer’s career and financial security
- Maintain stability in ongoing international projects

Below are five possible lines of reasoning an engineer might follow in this scenario. For each line of reasoning:

1. Identify the ethical theory it represents.
2. Provide a one-line justification for why it fits that theory.

“I must choose the action that creates the greatest overall good for the most people, even if it causes losses to my company or myself.”

*Utilitarianism - Agreed*

*Because utilitarianism focuses on maximizing overall happiness or welfare, even if it requires personal or organizational sacrifice*

“I should put the welfare of the affected minority communities above all else, regardless of the consequences to myself or the organization.”

*Altruism- Agreed*

*In this statement the wording “regardless of the consequences to myself or the organization” makes it strongly Altruism (because it highlights self-sacrifice for others’ welfare).*

“My duty/will is to follow rules and obligations (like contracts and confidentiality) no matter the outcomes, because rules exist for a reason.”

*Deontology - Agreed*

*Deontology stresses adherence to rules, duties, and obligations regardless of the consequences.*

“The right decision is the one that maximizes my own personal satisfaction and comfort, even if it means ignoring the issue.”

*Hedonism – Not Agreed (Egoism)*

*In this statement, the focus is on personal satisfaction and comfort (not only pleasure, but overall well-being/self-interest). That fits Ethical Egoism more directly. Egoism prioritizes self-interest and personal well-being over others’ concerns.*

“My emotional reaction of outrage and empathy for those harmed tells me what is right, and that feeling guides my action.”

*Emotivism – Agreed*

*This theory argues that moral emotions and intuitions (like empathy and outrage) are valid guides to ethical action.*

[CLO-3 Understand the making and implementation of framework for ethical decision making.]

**Question-5:** Michael Vasquez was proud of his job as a new product & services manager for an ibeauty solutions based eCommerce startup, and he loved the high stakes and tough decisions that went along with the job. But as he sat in his den after a long day, he was troubled struggling over what had happened earlier that day and the information he now possessed. Just before lunch, Michael's boss had handed him a stack of private strategic documents from their closest competitor. It was a competitive intelligence goldmine-product & services plan, business process engineering blueprint of system workflows, partnership agreements, pricing strategies, and other documents most clearly marked "Proprietary & Confidential". When Michael asked where the documents came from, his boss told him with a touch of pride that he had taken them right off the competing firm's server. "I got into a private section of their intranet and downloaded everything that looked interesting", he said. Later realizing, Michael was suspicious, the boss would say only that he had obtained electronic access via an IT colleague and had not personally broken any password. May be not, Michael thought to himself, but this situation would not pass the 60-minute test. If word of this acquisition of the competitor confidential data ever got out to the press the company's reputation would be ruined.

Michael didn't feel good about using these materials. He spent the afternoon searching for answers to his dilemma but found no clear company's policies or regulations that offered any guidance. His sense of fair play told him that to use the information was unethical, if not downright illegal. What bothered him even more was the knowledge that this kind of thing might happen again. Using this confidential information certainly give him and his company a competitive advantage, but Michael wasn't sure he wanted work for the firm that would stoop such tactics.

**What would you do in this scenario if you were Michael Vasquez? Give at least two options to encounter this dilemma;**                      **( 5 + 5 + 5 = 15 Marks)**

**a) As a professional .....**                      **(5)**

**Option 1:** Refuse to use or disclose the confidential information; escalate internally                      **(2.5/2.5)**

Action: Do not access or rely on the leaked materials for any business decisions.  
Document your concerns and seek guidance through formal channels.

What you do next:

- Request a meeting with HR or a compliance officer to report the existence of the confidential materials and the questionable sourcing.
- Ask for written policy clarification on handling competitor information and for a temporary hold on decisions that could be influenced by these documents.
- If no clear policy exists, propose a principled framework for ethical decision-making and risk management related to competitive intelligence.

Pros:

- Aligns with professional ethics and reduces personal/legal risk.
- Signals to stakeholders that you value integrity.
- Helps establish or push for formal policies to prevent future issues.

Cons:

- May slow down decision-making and potentially miss short-term gains.
- Could create tension with leadership if they strongly prefer quick action.

**Option 2:** Seek independent legal/ethical counsel and request audit/review                      **(2.5/2.5)**

Action: Consult with external counsel or a compliance expert to understand legal exposure, potential violations (e.g., trade secrets, IP infringement), and recommended steps.

What you do next:

- Gather a concise, factual summary of what was received, how it was obtained, and by whom.
- With counsel, present a plan to management for handling or discarding the materials without using them, while protecting the company from liability.
- Push for an internal audit or exception review to ensure future access to competitive intelligence is legitimate.

Pros:

- Reduces personal risk; provides a clear legal footing.
- Demonstrates due diligence and prudent risk management.
- Helps prevent future episodes with clearer rules.

Cons:

- Could be perceived as impractical or escalating too early by some managers.
  - May reveal gaps in internal processes, requiring broader changes.
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**b) As a manager..... (5)**

**Option 1: Institute an immediate hold and formal ethics decision framework (2.5/2.5)**

Action: Put any use of the materials on pause and establish a temporary governance guardrail.

What you do next:

- Convene a cross-functional ethics/compliance task force (legal, risk, product, HR) to evaluate the situation and draft a policy on handling leaked or unclear-source information.
- Communicate to the broader team that integrity and regulatory risk management are priorities and that all competitive intelligence must come from sanctioned, ethical sources.
- Provide training or refreshers on IP/trade secret laws and internal policies.

Pros:

- Builds a strong ethical culture and reduces legal exposure.
- Sets a clear precedent for how similar situations are handled in the future.
- Limits potential PR damage by acting proactively.

Cons:

- May slow strategic initiatives in the short term.
- Requires time and resources to develop policies and training.

**Option 2:** Conduct a controlled risk assessment and create a remediation plan

**(2.5/2.5)**

Action: Perform a risk/benefit analysis of whether the company should use any information, and define a course to minimize risk.

What you do next:

- Engage legal and compliance to determine whether any portion of the materials constitutes legitimate “public domain” or legitimate competitive analysis and what protection exists for the company.
- If any use is deemed too risky, retire those materials and shift to alternatives (e.g., primary market research, customer insights, legitimate vendors).
- Communicate a transparent decision to stakeholders, including rationale and safeguards.

Pros:

- Balances competitive needs with risk management.
- Demonstrates thoughtful leadership and accountability.
- Improves processes to avoid similar issues.

Cons:

- If the assessment finds potential use is permissible, the company may still face reputational risk.
- Requires careful legal navigation to avoid ambiguities.

**c) Give your final decision after addressing all pros & cons with supporting arguments.**

**(5/5)**

I have observed the excitement and overconfidence of my boss while boosting about his unethical achievement, as I know he is not IT operations savvy, and in a hurry to take credit of hacked/ stolen strategy document to enjoy appreciations from the higher management for his career growth.

I would take at least a day gap to establish my working time (though I would not use the document), and take a professional manager’s maneuver.

As I know that any person acting on ethically compromised initiatives does not have moral grounds and always have fear and risks at the back of his/her mind and heart.

Hence his confidence is standing on weak premises, so the doubts should me created in his mind on the following points:

- a) “This document access seems like a catch (intentional attempt of competitor to trap our company with a false strategy document to mislead) and placed in their system with security vulnerabilities.”



The statement shall create strong doubts (understanding the weak standing of the boss's false confidence), hence diminishing his aggressive and unethical action to think of staying back as such possibility has dangerous consequences not only in company but industry, personal reputation and legal liabilities.

- b) If he still insists... will ask him to put his direction on the face of the document, so that I may ensure compliance.

In case he signs-off with instruction for compliance (means signing-off his criminal warrants), I will have all those options in hand to still not commit any unethical, immoral, illegal and above all unprofessional practices and act like an "Ethical Manager" to save my company's reputation and compete on fair competition in the market.

OR

In case he doesn't... the game is over. I can continue with my challenging dream job as manager with professional competence, practicing ethical code of conduct, dignity and honors to grow in career.

**Write MCQs answers in this Table. Overwriting is not allowed.**

MCQ Number	Correct Option	MCQ Number	Correct Option
1	B	6	C
2	B	7	D
3	A	8	B
4	B	9	C
5	A	10	D