

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Define Computing. Explain the major milestones in the history of Computing? 8
b) Advancement of Technology is today's demand of society. Briefly explain the impact of technology on the society? 7
2. a) What is Digital? Is it actually not a thinking divide? Give your opinion. 7
b) Define Philosophical and professional ethics. Explain the descriptive & normative claims. 8
3. Chinese web users are being denied access to a range to a range of religious sites based abroad as the Chinese government's "Golden Shield" firewall is used to censor The Internet. While blocking undesirable sites promoting pornography and violence, the firewall also limits religious web content such as sites related to the Dalai Lama, the Falun Gong Cult and various Buddhist and Muslim movement. Also blocked are sites covering persecution of religious communities in China and number of Catholic sites, including the website of the Hong Kong diocese and the Divine Word missionaries in Taiwan. Not blocked are sites in European languages covering religious freedom issues, even those covering repression within China. While overall Internet usage in China may be low by developing country standards, it has been rapidly growing, especially in the capital of Beijing and the coastal region. The official China Internet Network Information Center puts the number of Chinese with access to the Internet in June 2003 at 79.5 million. 5+5+5

The number has been doubling every six months. Internet censorship is part of a comprehensive attempt to censor all means of communication. While printed publications have long been censored in China,

authorities also have tried to keep up with technological developments. The Global Internet Policy Initiative warned in June of new technology from a Chinese firm that monitors "subversive" text messages sent by mobile phone.

Questions:

- i. The government practices the Right to Information Act and the government itself denies access to a range of sites. Isn't it conflicting to one another?
 - ii. Based on the above scenario provided in the case above, do you think it is correct to enforce censorship in the cyberspace? Elaborate your opinion.
 - iii. Put your views on the relevancy of the control over the internet?
4. a) What are Professional Rights and Responsibilities? How can you avoid the whistle blowing in the organization? 8
 - b) Put your views on accuracy vs democracy in Internet with relevant 7
 5. a) What is personal privacy? Explain with suitable example how technology is affecting one's personal privacy. 8
 - b) What do you mean by denial of service? Explain different types of malicious program? 7
 6. a) What do you mean by digital forensics? Explain different cybercrimes and the way to overcome. Put your own views? 8
 - b) What are the trademarks and trade secrets? How important are they in context of protecting intellectual properties? 7
 7. Write short notes on: (Any two) 2×5
 - a) E- Governance
 - b) Code of Ethics of Nepal Engineering Council
 - c) I.T Policy of Nepal.

POKHARA UNIVERSITY

Level: Bachelor

Semester: Fall

Year : 2022

Programme: BE

Full Marks: 100

Course: Social and Professional Issues in IT

Pass Marks: 45

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Define Computing. Explain all the major innovations in the field of hardware, software and networking. 8
- b) What do you understand by "Social Context of Computing"? Explain the impacts of technology on society and vice versa. 7

2. **Case Study: Government websites going down question Nepal's cyber security status. What are solutions anyway?**

All the government websites of Nepal with ".gov.np" URLs were down on Saturday (January 28). As per the reports, they were down because of server failure. It lasted for almost two hours, questioning the country's cyber security status. Moreover, there have been other recorded histories of government websites going down after having a failure in the past also. With the increase in the number of users of government websites for official works, these cases might increase as well in the future. Hence, it is time concerned government agencies paid attention to the issue. So, what are the possible causes? Here, we discuss briefly.

What might be the cause of the crash?

According to multiple reports, there was a server-down issue with the government websites. Also, some reports suppose that there were hackers trying to steal data.

According to Central Information Officer Ramesh Pokhrel, there was a server issue in the Government Integrated Data Centre on track after the issue in GIDC was solved. During the website crash, important government websites such as those of the departments of passport, transportation and immigration, the Ministry of Foreign Affairs and others displayed a statement-This site can't be reached-while trying to access them.(GIDC). The websites were back

- a) Why do such incidents happen in Nepal? Who are responsible for the issue? Discuss the issue from the ethical, moral and legal perspective in above case. 7
 - b) The trends of misuses of ICT have been in rise. What are other similar criminal activities related to forgery and frauds? List them and explain few solutions to overcome such issues. 8
- a) Define Whistle blowing. Explain the types of whistle blowing. How can you prevent whistle blowing? 10
 - b) What is code of ethics? Mention any five codes of ethics proposed by NEC? 5
- a) Can a software risk be mitigated completely beforehand? Suggest ways to manage software complexity with the approach of decomposition, hierarchy, and abstraction. 8
 - b) "Accuracy vs Democracy" has been a raising concern on the internet. Express your views with your preference. 7
- a) What are offensive speech and censorship? Explain the importance of censorship by illustrating an example. Is it possible to enforce censorship in cyberspace? 8
 - b) What does the famous symbol © mean? When does a copyright begin and how long is it preserved? What do you know about international copyright? 7
- a) What do you mean by computer crime and digital forgery? Describe the current scenario and the effect of pornography on children and state the best approaches to reduce cybercrime in cyberspace in the context of Nepal. 7
 - b) What is the need of IT Policy and ETA in Nepal? Discuss. 8
7. Write short notes on: (Any two) 2×5
 - a) History of OS
 - b) Professional responsibilities
 - c) Ethical Relativism

POKHARA UNIVERSITY

Level: Bachelor

Semester: Spring

Year : 2021

Programme: BE

Full Marks: 100

Course: Social and Professional Issues in IT

Pass Marks: 45

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Discuss some of the major breakthroughs in the history of hardware, software and networking. 8
b) Define E governance. Discuss various e governance initiatives taken by government of Nepal and its various challenges. 7
2. a) What are the social implications of Information Network? Explain in details. 7
b) What do you mean by a professional code of ethics? Explain the code of ethics of the Nepal Engineering Council. 8
3. a) How risks in critical systems can be minimized? Discuss with examples. 8
b) "Accuracy vs Democracy" has been a raising concern in the internet. Express your views with your preference. 7
4. a) What do you mean by Privacy risk? Illustrate the importance of censorship in cyberspace with relevant examples. 8
b) What is Ethical Relativism? Compare and contrast "Utilitarianism and Deontological" theory in the light of ethical relativism. Give examples to support your answers. 7
5. a) What do you mean by Digital Forensic? Explain about Digital Forgery and Phising. 8
b) What are the different social-media related cyber-crimes that are commonly seen in Nepal? How can the government handle this issue? 7
6. Read the following case study and answer the questions at the end.
True Soft is a large company that sells computers, computer components, and software. Rajesh is hired as an entry-level software engineer at True Soft. His first project was to assist in writing the code for True Soft's new hard disc controller. He had previously worked on a similar system interning

at a start-up and had written a code which greatly enhanced the performance of their product. Rajesh quietly re-uses this same code in the True Soft product, and does not think to tell anyone that he has used the code from his last job. His manager is thrilled with the speed improvements this code brings to the product.

Before the product is released, it has to undergo a four-month long quality assurance process review. During the review of the product, it was found the code which Rajesh developed had been copyrighted by the start-up he had previously worked for. Even though Rajesh had developed the code, his previous company still owned the intellectual property rights to it.

When his manager informed Rajesh of the problem, Rajesh admits he did not realize he had made a mistake because he was not familiar with copyright laws. Rajesh then goes on to explain that the start-up he used to work for is now out of business and is unsure if True Soft would be able to get in contact with the owner of the copyright. If True Soft can't use Rajesh's code, then it will have to rewrite the entire code of the product, delaying its release by many months.

- a) Discuss prevalent laws in such situations in context of Nepal. 8
- b) If you were in position of Rajesh, what would you do in such situation? 7
Explain your answer with ethical lenses of rights, utilitarianism and deontology?

7. Write short notes on: (Any two) 2×5

- a) Digital divide
- b) Email Privacy
- c) Descriptive Claims and Normative Claims

POKHARA UNIVERSITY

Level: Bachelor

Semester: Fall

Year : 2021

Programme: BE

Full Marks: 100

Course: Social and Professional Issues in IT

Pass Marks: 45

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Discuss the contribution of Conrad Zuse in the field of computing. 8
b) Discuss the relationship between society and the technology with real world examples. 7
2. a) Is "Gender Divide" making the Digital Divide even larger? Explain the cross-gender communication in the Internet. 8
b) What are the common Legal and Moral issues faced by a Software Engineers. Explain with example. 7
3. a) Why is Engineering termed as a profession? Give reasons. 8
b) What do you mean by a professional code of ethics? Explain the code of ethics of the Nepal Engineering Council. 7
4. a) "Software risks are considered critical in case of life critical systems as the developer is the only one to blame if an accident occurs." Do you agree or disagree? Justify your opinion. 8
b) Is whistleblowing a professional act? What are the conditions required to blow a whistle? 7
5. a) What do you mean by Intellectual Property Rights. Explain different types of Intellectual Property in detail. 8
b) Cyber Terrorisim has been increasing with the advancement of technology. Express your view on it with the measures that can be taken to control this issue. 7
6. a) What do you mean by Cyber crime and Digital Forgery? Discuss your view on current situation of online harassment and measures to prevent it. 5

- b) Read the following case study and answer the questions at the end. 5×4
= 20

Virtual Class

"... In 1978 ..." "Like most people with real jobs, I had to travel a lot which meant that I was frequently out of town on the nights I was supposed to be teaching. So I had to develop some strategies for coping with this problem. One was to participate in the class via an audio conference. I would have someone set up a speakerphone in my classroom and call in from wherever I happened to be. I could give lectures and engage students in discussions. It worked quite well." "Another strategy was to ask colleagues to "cover" for me by going to the class and giving a guest lecture. I would pick out people with expertise on the topic to be taught so their contribution to the class was usually very worthwhile and enjoyed by the students. I found that having 5 or 6 guest lectures in a course made it much more interesting to the students than being taught by a single person." "The third strategy involved the use of computer bulletin board systems to provide a way for students to contact me and each other via email and online conferences. Not only was this useful for me, but it was helpful to the students as well since many of them also traveled a lot and this gave them a way to keep up to date with course work."

Questions:

- i) In what aspects do you consider this class as a virtual one?
 - ii) Can you think of applying the online education in this context? How?
 - iii) Analyze the implications of technology on students and professor in this case.
 - iv) If you were the professor, what improvements would you make in this situation?
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Level: Bachelor

Semester: Fall

Year : 2020

Programme: B E

Full Marks: 100

Course: Social and Professional issues in IT

Pass Marks: 45

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Discuss the contributions of Konrad Zuse in the field of computing. 7
 b) What is digital divide and how can you minimize or mitigate digital divide? How can be technology used for poverty alleviation? 8
2. a) Society evolves with time, and technology changes with social demand. How has technology impacted society and vice versa? Explain. 8
 b) Define computing? Describe how the programming languages changes with the evolution in computer technology. 7
3. a) Describe the professional ethics for a software engineer. Explain descriptive and normative claims. 8
 b) What are professional rights and professional responsibilities? Explain in brief. Briefly explain how can we avoid whistleblowing? 7
4. a) Define the terms conflict of interest and whistleblowing? Explain values in design. 8
 b) Discuss the central theme of code of ethics of ACM. 7
5. a) What are the best ways to protect an individual's privacy in internet space? Explain different privacy risks in detail. 7
 b) Define the terms cyber crimes and digital forgery? Describe current scenario and effect of online pornography on children and state best approaches to reduce cyber crime in cyber space in the context of Nepal compared to rest of the world. 8
6. a) What are Intellectual Property and Intellectual Property Rights? List out the different types of IP and explain any two of them. 8
 b) Explain different acts related to IPR in Nepal. State in brief about Right to Information act and Electronic Transaction Act in Nepal. 7

7. Write short notes on: (Any two)

2×5

- a) Cyber terrorism
- b) Ethical Relativism
- c) Accuracy vs. Democracy in the Internet

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Describe the contribution of Edward Dijkstra in the field of computing. 7
- b) How has society and technology affected each other? Discuss. 8

2. **Case: Facebook-related crimes on rise: Police**

Kathmandu, Dec. 13: Cyber crimes arising from the misuse of social networking sites like Facebook are on the rise, police said Monday. Police investigation shows that cases of phishing, using fake Facebook accounts, email thieving, data hacking and blackmailing have increased.

Lately, the police arrested two Nepali Facebook defrauders – a male and a female - on alleged charges of cheating people through Facebook by promising valuable gift items. Fraudsters – Anilnath Boki Shrestha of Sundhara, Lalipur district and Anita Maharjan of Banasthali, Kathmandu - were arrested for illegally taking money from innocent people. According to the police, Shrestha and Maharjan, posing themselves as gentlemen, promised the people valuable gifts on condition that they first deposited a small amount in fees in the said bank accounts to obtain the gifts.

Nearly half a dozen victims had deposited their money in the bank accounts of the fraudsters after becoming a friend on Facebook. Superintendent of Police (SP) Meera Chaudhari of the Central Investigation Bureau (CIB) said that the Facebook defrauders had created fake Facebook identities. SP Chaudhari said that Shrestha was arrested from Thamel and Maharjan from her own home at Banasthali on Saturday. The swindlers had collected Rs. 500,000 from the victims, said the police. According to police statistics, over three to four years, the number of cybercrimes stood at 19 in 2013, which reached more than 130 by the end of 2016. There were 39 cyber crime cases in 2014 and 89 in 2015, the report stated. Two months ago, the Metropolitan Police Crime Division (MPCD) had arrested Tul Bahadur Tamang of Mankha VDC of Sindhupalchowk district for swindling Rs. 3.1 million from various people with promises of jobs in the USA and Canada. The CIB said that it had

registered more than 90 cases of Facebook cheating that include financial and Facebook blackmailing. Cases of cyber crime are increasing fast with each passing year along with the rise in the number of internet and social media users.

The Nepal Police statistics show that the number of cyber crimes surged by 105 per cent during the last fiscal 2014-15. Prakash Jung Karki, spokesperson at the Metropolitan Police Crime Division of the Nepal Police, said that there was a need for a comprehensive cyber law, establishment of a Nepali Computer Incident Response Team (CIRT) and capacity building of all the stakeholders to combat cyber-crime. Till date, the Nepal Police have been handling cases related to cyber-crime under the Electronic Transaction Act 2006.

- a) Taking the reference of the given case, discuss the current status of issues related to IT in Nepalese society. Relate ethical issues with the scenario. 10
 - b) What should be the role of professionals in dealing with the aforementioned condition? 5
3. Read the following case study and answer the questions below: 15

Many losses of skills are unintended side effects of computer but Microsoft made a conscious decision that has the effect of diminishing vocabulary and the richness and humor of languages. The thesaurus in Microsoft Word 2000 lists "trick" as the only synonym for "fool". It omits "clown", "blockhead", "idiot", "ninny", "dunderhead", "ignoramus" and others, all present in earlier versions.

Because of the popularity of Word and the ease of using its reference utilities, fewer people will consult standard references such as dictionaries and Roget's Thesaurus (which also contains "dupe" and "simpleton", for example).

Microsoft said that it eliminated words "that may have offensive uses".

Questions:

- a) Do producers of widely used reference works have an ethical responsibility to report the substance of their field accurately, or a social responsibility to remove potentially offensive words from the language?
- b) Should software engineers concern themselves with ethical issues any more than other individuals in society?

- c) Do computers and computer related technology really raise new ethical problems or do they just present old issues in a new form?
4. a) "Software risk is considered sensitive in case of life critical systems as the developer is the only person to blame if an accident occurs". Do you agree or disagree? Justify your opinion. 8
- b) Is it possible to enforce censorship in cyberspace? Justify your opinion with relevant example. 7
5. a) IPR (Intellectual Property Rights) have become a serious concern with the advancement in computing technology. What are some of the intellectual properties? Describe. 8
- b) What do you mean by digital forensics? Explain different cybercrimes. How would you prevent your computer from crime? Discuss. 7
6. a) Some people think that technology has made life easier; others claim the opposite. What is your opinion on this issue? 8
- b) Cyber Terrorism has been a major issue in today's context. What do you think how to deal with this issue? Put your views. 7
7. Write short notes on: (Any two) 2×5
- a) Contributions of Mark Zuckerberg
- b) Safety in Critical Systems
- c) Use of E-government systems in Nepal

Level: Bachelor
 Programme: BE
 Course: Social and Professional Issues in IT

Semester: Spring

Year : 2019
 Full Marks: 100
 Pass Marks: 45
 Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) What do you mean by computing? Describe how the computing changes with the evolution in computer technology. 7
 b) Discuss in brief about the elements of a society. Explain about digital divide and governance of internet. 8
2. a) State major role of Von Neumann and Lady Ada in the field of computing. Explain about the history of Operating System. 7
 b) What is digital divide and how it can be minimized? Explain Health related issues for IT Professionals 8
3. a) Define the terms conflict of interest and whistleblowing. Explain the code of ethics of Nepal Engineering Council. 7
 b) Government has issued Secure Password Practices. Describe its gist. Also put some light on objectives of IT policy of Nepal. 8
4. a) Why is it important to focus continuously in safety of critical systems? Explain value centered design. 7
 b) What do you mean by computer crimes and digital forgery? Describe current scenario and effect of online pornography on children and state best approaches to reduce cyber crime in cyber space. 8
5. a) Explain about the Safety critical system. Define responsibility and accountability of computer users? Explain hardware design issues. 7
 b) What is offensive speech and censorship? Illustrate with relevant example for the importance of censorship in cyberspace. 8
6. Read the following case study and answer the questions below: 15
 Jan and Keith, both engineers, are faculty members at a major university. Both are seeking tenure from the university, and as part of the requirement,

they are required to publish original articles in scholarly and technical journals.

As a graduate student, Jan developed a paper that he had never published, but now feels would be an excellent topic to publish in a journal. Jan discusses this idea with Keith, and they agree to work together on revising the paper.

Jan does most of the work of revising the paper to bring it up to date. Keith's contributions are minimal, but Jan agrees to include Keith's name as co-author, so as to enhance Keith's chances of obtaining tenure. The article is accepted and later published in a scientific journal.

Questions:

- i. Is it ethically acceptable for Jan go back to his graduate work for an article to publish?
- ii. Should Jan's thesis supervisor be credited in some way, and if so, how?
- iii. How much should Jan and Keith have agreed upon at the start of their collaboration? Was it either unethical or unwise for Jan to include Keith's name as co-author?

7. Write short notes on: (Any two)

2×5

- a) IT policy of Nepal
- b) Trademark
- c) Online Harassment

POKHARA UNIVERSITY

Level: Bachelor

Semester: Spring

Year : 2018

Programme: BE

Full Marks: 100

Course: Social and Professional Issues in IT

Pass Marks: 45

Time : 3hrs.

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Attempt all the questions.

1. a) Write an essay on prehistory of computing and programming. 8
b) "Information Technology has a major impact on poverty Alleviation and women empowerment" Do you agree or disagree? Justify with your opinion. 7
2. a) What do you understand by digital divide and how can we bridge the digital divide? Explain. 7
b) Define computer Ethics. Explain three different ways of organizing ethical issues. 8
3. a) Explain engineering and computing as a profession. List out the major responsibilities of an ICT Professional. 8
b) Write a note on Hacker ethics and netiquette. 5
4. a) Suppose, you are a project manager in implementing a predictive modelling software to know the behaviors of teenagers. What could be possible risks and how will you resolve them. 8
b) Privacy can still be maintained even when the individuals are exposed to social networking sites. Do you agree or disagree? Justify your opinion. 5
5. a) Cyber Crime has increased significantly with the increase in internet users. Elaborate this statement with reference to various types of crimes reported in Nepal. 9
b) What is fishing? Mention Types of Computer Crimes? 5
6. a) What do you know about IT Related laws of Nepal? Explain highlighting the IT Policy of Nepal. 7

b) What do you understand by Intellectual Property Right? Discuss Trademark, patent, Design and Copyright. 8

7. Write short notes on: (Any Three) 3×5

- a) Code of Ethics of NEC
- b) Descriptive and Normative Claims
- c) E-Government
- d) Offensive speech and censorship in cyberspace