PAPER ID-411031

Subject Code: MTCS053

Roll No: | | | | | | | | | | | | | |

MTECH

(SEM II) THEORY EXAMINATION 2023-24

PROFESSIONAL ASPECTS IN SOFTWARE ENGINEERING

TIME: 3 HRS **M.MARKS: 70**

Note: 1. Attempt all Sections. If require any missing data; then choose suitably.

SECTION A

1. Attempt *all* questions in brief. 2 x 7 = 14

a.	What are the main components of Intellectual Property rights relevant to software engineering?
b.	Define Confidential Information in the context of software development.
c.	What are the different types of Software Licenses commonly used?
d.	What are the key characteristics of the BSD License?
e.	What does a Proprietary License entail in software distribution?
f.	Differentiate between Free Software and Open Source Software.
g.	How are software service contracts different from custom-built software contracts?

SECTION B

2. Attempt any *three* of the following: 7 x 3 = 21

a.	Discuss the fundamentals of Copyright as it applies to software. What are the key rights granted to the copyright owner, and how do they apply in software development?
b.	Discuss the characteristics and implications of the MIT License in software development. How does it govern the distribution and use of software?
c.	Explain the process of dispute resolution in Software Contracts. What are the common methods used to resolve disputes, and how can parties mitigate risks through effective contract management?
d.	Explain the categories of misuse in computer systems. Provide examples of each category and discuss their implications for software security.
e.	Discuss the implications of data breaches on data protection regulations. How do regulatory bodies and organizations respond to data breaches, and what measures can software engineers take to prevent them?

SECTION C

3. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Differentiate between Licensing and Assignment of Copyright. When would a software developer choose one over the other?
(b)	Describe the significance of Patents in software engineering. What types of software innovations are eligible for patent protection, and what benefits does patent protection offer to software developers?

4. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Analyze the GNU General Public License (GPL) and GNU Lesser General Public License (LGPL). What are the main differences between these licenses, and under what circumstances would a software developer choose one over the other?
(b)	Explain the Sun Community License and its role in governing software developed by Sun Microsystems. What are its key terms and how does it impact the use and distribution of software

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5. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Outline the different types of software service contracts. How do these contracts differ from contracts for custom-built software, and what specific provisions are typically included?
(b)	Explain the importance of intellectual property rights in Software Contracts. How are intellectual property rights typically addressed and protected in software development agreements?

6. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Analyze the concept of obtaining unauthorized access to a computer system. What are the methods commonly used by attackers, and how can software engineers mitigate such risks?
(b)	Explain the legal and ethical considerations in investigating and prosecuting software-related crimes. What challenges do law enforcement agencies face in identifying and apprehending cybercriminals?

7. Attempt any *one* part of the following: 7 x 1 = 7

(a)	Define data protection and privacy in the context of software engineering. How are these concepts crucial for maintaining trust and compliance in the digital age?
(b)	Analyze the role of encryption and anonymization techniques in ensuring data protection. How do these technologies contribute to compliance with data privacy laws?