

M.Sc.- I (Computer Science) (NEP Pattern) Semester-II
02MSCCS04-1 - Elective-I Paper-IV - Cyber Security & IPR

P. Pages : 2

Time : Three Hours



GUG/S/25/15362

Max. Marks : 80

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- Notes :
1. All questions are compulsory and carry equal marks.
 2. Draw a neat and labelled diagram and uses supporting data wherever necessary.
 3. Avoid vague answers and write specific answers related to questions.

Either:

1. a) What is the primary need for internet security in today's digital world? 8
- b) Define security threats and levels explain in detail. 8

OR

- c) What are botnets? How do they function in carrying out cyber attacks? 8
- d) Explain the role of firewalls in network security. How do they protect against unauthorized access? 8

Either:

2. a) What is the role of circuit-level gateways in network security? How do they manage connections? 8
- b) What are dynamic packet filters and distributed firewalls? How do they enhance network security? 8

OR

- c) Explain how firewalls use rulesets and proxies to filter network traffic effectively. 8
- d) Identify common problems faced when configuring and maintaining firewalls. 8

Either:

3. a) How do design rights differ from patents and copyrights? 8
- b) What is trademark? Explain the key functions of a trademark. 8

OR

- c) What are the basic rights granted under copyright law? 8
- d) What are the essential steps in filling a patent application? 8

Either:

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| 4. | a) | What are the main objectives of design protection law? | 8 |
| | b) | Explain patent infringement. Describe types of infringement. | 8 |

OR

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|-----------|----|---|----------|
| | c) | What are the main international agreement governing trademark protection? | 8 |
| | d) | Differentiate between economic rights and moral rights under copyright law? | 8 |
| 5. | | Solve all the questions. | |
| | a) | Discuss the security implications of using wireless networks. | 4 |
| | b) | Explain the difference between virus and worms. | 4 |
| | c) | What are the key components of a well drafted patent specification? | 4 |
| | d) | What rights does a copyright owner have? | 4 |
