

**BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)**

**CLASS: BTECH  
BRANCH: CE/MECH/ECE/EEE**

**SEMESTER : VI<sup>th</sup>  
SESSION : SP/2025**

**SUBJECT: IT363 CRYPTOGRAPHY & NETWORK SECURITY**

**TIME: 3 Hours**

**FULL MARKS: 50**

**INSTRUCTIONS:**

1. The question paper contains 5 questions each of 10 marks and total 50 marks.
  2. Attempt all questions.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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		CO	BL
Q.1(a)	Briefly discuss Computer Network security with the help of a suitable diagram.	[5]	3 2
Q.1(b)	Write the role of classical encryption technique to secure data in computer network system with steps.	[5]	2 3
Q.2(a)	Discuss Euclidean algorithm with a suitable example.	[5]	2 3
Q.2(b)	State and prove Chinese Remainder theorem with its application in cryptography.	[5]	3 4
Q.3(a)	Differentiate between Advance Encryption Standard(AES) and Data Encryption Standard(DES) with suitable points.	[5]	1 1
Q.3(b)	How does Diffie Hellman Key exchange technique helpful to secure the message? Explain it.	[5]	2 3
Q.4(a)	What is socket secure layer? Discuss it with a suitable diagram.	[5]	4 4
Q.4(b)	Write the role of wireless application protocol to secure data transmission.	[5]	5 5
Q.5(a)	Briefly discuss the work flow of firewall with any suitable diagram.	[5]	5 5
Q.5(b)	What is intrusion in network system? Write different techniques to detect intrusion in computer network system.	[5]	5 4

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