(Time: 03 HOURS) **(MAX. MARKS : 80)**

Note:

1. Question **No. 1** is compulsory.
2. Attempt **any three** questions out of remaining **five** questions.
3. Assume suitable data wherever necessary.
4. Figures to right indicate full marks.

			Marks
Q.1		Answer the following **(Any four)**	
	a.	What is the need for data compression?	05
	b.	Discuss the various security attacks in cryptography.	05
	c.	Find 7^{100} mod 13 using Fermat's little theorem	05
	d.	Find the primitive roots of 7.	05
	e.	What do you mean by ethical hacking?	05
	f.	Write short notes on AAC	
Q.2	a.	With neat diagram, explain JPEG. What is the use of DCT in JPEG?	10
	b.	Encode the sequence '1000100111011001100000' using LZ78 dictionary approach.	10
Q.3	a.	What are the differences between video broadcasting and video conferencing? Draw the block diagram of H.264 Encoder and decoder.	10
	b.	Explain A-law and μ-law companding.	10
Q.4	a.	With necessary diagram, explain AES.	10
	b.	What are the various steps involved in RSA Encryption process? Give one example.	10
Q.5	a.	With neat block diagram, explain the role of public key cryptography in authentication application.	10
	b.	Discuss the role of hash functions and MAC functions in ensuring data integrity and authentication.	10
Q.6		Write short notes on any two	
	a.	Secure Electronic Transaction	10
	b.	Biometric Authentication	10
	c.	MPEG 4 Audio Layer	10

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