

## SB-0610

## First Year B. Sc. Examination

March / April - 2011

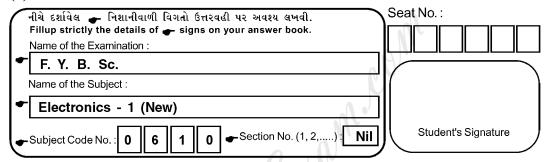
Electronics: Paper - I

(Computer Science) (New Course)

Time: 3 Hours] [Total Marks: 70

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(1)



- (2) All questions are compulsory.
- (3) Figures to the right indicate full marks.
- (4) Assume data wherever necessary.
- 1 Write very short answers:

14

6

8

6

- (1) Write down the first 15 numbers of decimal, binary and hexadecimal number systems.
- (2) Write (237)<sub>10</sub> in BCD.
- (3) State the De Morgan's Theorem.
- (4) What is the use of CS line in the memory.
- (5) What are partitions on a HDD.
- (6) Give the full form UART and USB.
- (7) A 64KB ram will have how many address lines.
- 2 (a) What is the scheme of representing negative numbers 8 in a computer? Why the 2's complement system preferred?
  - (b) Discuss any two applications of XOR Gates.

OR

- **2** (a) Describe how DOS logically divide the disk in tracks and sectors.
  - (b) What is partition table and master boot record?

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3	(a) (b)	Describe the organization of a semiconductor memory used in microcomputers. Describe the memory modules and memory packages used in microcomputer.  Explain in brief RAM, ROM, NVRAM.	10
		OR	
3	(a)	Describe the PCI and the ISA bus standards.	8
	(b)	Explain the high speed serial bus standards.	6
4	(a)	Do as directed:	10
		(1) Convert $(264)_{10} = $	
		(2) $(010010100)_2 + (11001011)_2 = $	
		(3) Subtract using 2's complement $(0110)_2$ - $(0011)_2$	
		$(4)  (23AC)_{16} + (1100)_{2} = \underline{\hspace{1cm}}$	
		(5) $(12.25)_{10}$ represent as floating point number.	
	(b)	Prove the De Morgan's Theorem.	6
		OR	
4	(a)	What do you mean by input output device?	8
	, ,	Discuss the impact and non impact printers	
	(b)	What are video displays? Discuss the CRT technology	6
		in brief.	
5	Wri	te short notes : (any two)	14
	(1)	Basic Logic Gates	
	(2)	Reading and writing on an optical device	
	(3)	Pointing device and their types	
	(4)	Hamming code.	

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