2023

COMPUTER HARDWARE AND NETWORKING

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

*Answer **any five** questions.*

1.		Answer the following questions:	1x20=20
	a)	DDR-RAM stands for **(i)** Double data rate RAM **(ii)** Disk data rate RAM **(iii)** Double disk rate RAM **(iv)** None of the above	
	b)	Power supply forms are **(i)** XT **(ii)** AT **(iii)** ATX **(iv)** All of the above	
	c)	CD stands for **(i)** Compact Disk **(ii)** Compress Disk **(iii)** Compatible Disk **(iv)** None of the above	
	d)	SD-RAM is faster than **(i)** S-RAM **(ii)** DDR-RAM **(iii)** Both (i) & (ii) **(iv)** None of the above	
	e)	Flash Memory is a type of **(i)** EPROM **(ii)** EEPROM **(iii)** PROM **(iv)** None of the above	
	f)	SCSI is the specification of **(i)** Hard disk **(ii)** Motherboard **(iii)** Memory **(iv)** None of the above	
	g)	PS2 port is replaced by **(i)** Serial port **(ii)** USB port **(iii)** Parallel port	

		(iv) None of the above	
	h)	PCI can connect (i) Network card (ii) Video card (iii) Both (i) & (ii) (iv) None of the above	
	i)	AMD CPU families are (i) Athlon 64 FX (ii) Athlon 64 (iii) Athlon 64 x 2 Dual core (iv) All of the above	
	j)	Athlon 64 processor belongs to (i) Intel CPU family (ii) AMD CPU family (iii) Both (i) & (ii) (iv) None of the above	
	k)	Pentium processor belongs to (i) Intel CPU family (ii) AMD CPU family (iii) Both (i) & (ii) (iv) None of the above	
	l)	S-RAM is used as the computer's (i) cache memory (ii) flash memory (iii) Both (i) & (ii) (iv) None of the above	
	m)	Class A network mask of (i) 8 bits (ii) 16 bits (iii) 24 bits (iv) None of the above	
	n)	IEEE 802.11b devices can connect at top speed upto the (i) 11 Mbps (ii) 10 Mbps (iii) 5 Mbps (iv) 8 Mbps	
	o)	FHSS stands for (i) Frequency hopping speed spectrum (ii) Frequency hopping spread spectrum (iii) Fast hopping speed spectrum (iv) None of the above	
	p)	Network address with 24-bit mask is (i) .255.255.0.0 (ii) 255.255.255.0 (iii) 255.0.0.0 (iv) None of the above	
	q)	Class B network first octet values range from (i) 1 through 126 (ii) 128 through 191 (iii) 192 through 223	

		(iv)None of the above	

	r)	Class C network first octet values range from
		    (i) 1 through 126
		    (ii) 128 through 191
		    (iii)192 through 223
		    (iv) None of the above	

	s)	Class C networks with
		    (i) 16777214 hosts each
		    (ii) 254 hosts each
		    (iii)65534 hosts each
		    (iv) None of the above	

	t)	Soft cluster errors means
		    (i) Magnetic signal on the drive is weak
		    (ii) The format is messed up
		    (iii) Physical damage on the hard drive
		    (v) Both (i) & (ii)	

2.	**(a)**	Fill in the blanks	1x10=10
		(i) ATA stands for _____. **(ii)** POST stands for _____. **(iii)** DVD stands for _____. **(iv)** SATA cables are used to connect the _____. **(v)** SMPS stands for _____. **(vi)** AGP bus enables creation of _____. **(vii)** Front panel consists _____. **(viii)** _____ port transfers large amount of data at very fast speed. **(ix)** The essential components of motherboard are_____. **(x)** HAD stands for _____.	
	b)	**True or False:**	1x10=10
		(i) ATX is a form of Motherboard. **(ii)** SATA transfer speed is upto 500 MB/sec. **(iii)** SATA have master and slave settings. **(iv)** ATA doesn't have master and slave settings. **(v)** Celeron processor belongs to AMD CPU family. **(vi)** The life of data in D-RAM is very short for about milliseconds. **(vii)** If the system beeps more than once, the BIOS may be reporting a fatal error of some type. **(viii)** Bluetooth is not designed for ad hoc temporary networks. **(ix)** Bluetooth is a low speed, low power device. **(x)** Subnet masks are used to make more manageable and efficient class networks.	
3.	**a)**	Draw the diagram of back side panel of CPU with all type ports and jacks.	6
	b)	What are the benefits of USB port compare to PS/2 port?	4
	c)	Write down the types of physical memory.	6
	d)	What is disk checker? Mention it's all the functions.	4
4.	**a)**	What is wireless Ethernet? Discuss about the versions of wireless Ethernet.	6
	b)	What are disk cleaner? Mention it's all the functions.	5

	c)	Discuss about the all Local area network cabling in short.	5
	d)	Write down the steps for preparing crossover UTP cables.	4
5.		Write short notes on the following (*any four*):	4x5=20
	a)	Disk cleaner	
	b)	Windows OS issues	
	c)	BIOS	
	d)	Disk defragmentation	
	e)	Major components of Router	
6.		Differentiate between the following (*any four*):	4x5=20
	a)	TCP/IP and OSI model	
	b)	Bus topology and Ring topology	
	c)	SD-RAM and DDR-RAM	
	d)	Unshielded twisted pair and Fiber Optic cables	
	e)	Bridges and Routers	