**Question BanK PT1**

**Term: Jan2022-June2022**

**Program: Computer Engineering Semester: II**

**Course: pc Architecture Code: PCA190802**

**Unit1**

1) What are the major functions of CPU?

2) Draw the block diagram of computer system indicating control flow and data flow

3) Distinguish between primary memory and secondary memory

4) Explain parts of motherboard with functionality

5) Explain different types of motherboard

6) What is cache memory? What are different types of cache memory?

7) What is the need for cache memory? How does Cache work?

8) How to calculate hit and miss ratio of cache memory? Give example

9) What is overclocking? What are pros and cons of overclocking?

10) Draw the architecture of multicore processor? what are features, advantages and disadvantages of multicore processor?

11) Explain different types of expansion slots in motherboard?

12) write differences between PCI and PCI-Express slots

13) Explain different cooling techniques for processor?

14) How CMOS and BIOS work together?

15)Write steps for installing processor.

**Unit 2**

1) Draw architecture of 8085.

2) Draw and Explain Flag register of 8085.

3) Explain power supply and clock signals of 8085

4) Explain Addressing modes of 8085 with example.

5) Data Transfer Instruction/Arithmetic Instructions/Logical Instructions/Branching Instructions/Control Instructions with examples

6) Define processor.

7) Enlist and Explain basic functions of Processor

8) Enlist features of 8085 processors.

**Unit 3**

1) Draw and explain northbridge /southbridge architecture of chipset? (6)

2) Draw and explain hub architecture of chipset (4)

3) What are advantages and disadvantages of hub architecture?

4) Give difference between PATA and SATA

4) Enlist features of Intel 945g Chipset. (3)

5) Enlist features of Intel 915g Chipset. (3)

6) Compare Northbridge and Southbridge chipset (4)

**Unit 4**

1) Explain the parts of a hard disk with the help of a diagram (6)

2) Explain fragmentation and defragmentation of HDD? (4)

3) What are the reasons for fragmentation in HDD? (3)

4) Explain the significance of hard drive landing zone? (4)

5) Explain FM recording technique of HDD with example (4)

5) Explain MFM recording technique of HDD with example (4)

6) Explain RLL recording technique of HDD with example (3)

7) Draw and explain the structure of MBR? (3)

8) List the functions of MBR? (3)

9) Explain the flow from BIOS to BOOT using MBR with the help of diagram? (4)

10) Distinguish b/w SSD and HDD (4)

11) Explain the parts of SSD with diagram? (4)

12) Draw the waveforms using FM, MFM (data bits will be on the time of exam)

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**Unit 5:**

1)Explain following type of maintenance

Predictive 2mks

Preventive 4mks

Corrective 2mks

2)Explain Diagnostic tools for PC Maintenance.4mks

3) Explain System utilities for maintaining PC .4mks

4) Explain problems arise related to following components

(i)Motherboard 2mks

(ii)CpU 2mks

(iii)Input/output devices 2mks

5)Explain storage device management utilities for PC 3mks

6) Explain File management utilities for PC maintenance 3mks

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**Unit 6:**

1. What is SMPS? Major functions of SMPS?(4 marks)
2. Explain the need of earthing? (3 marks)
3. What are the considerations of Power line in power supply?(3 marks)
4. What are factors affecting PC operations? (4 mks)
5. Draw and Explain power supply block diagram (3 marks)
6. Explain types of UPS with diagram (each for 3 marks)
7. UPS applications (3 marks)
8. Factors affecting computer performance? 4mks