Paper II - A

Answer sheet and marks allocated.

(1) (a). Second generation - Transistors
Fourth generation - Microprocessor

(1 marks)

Advantages of Fourth Generation computers

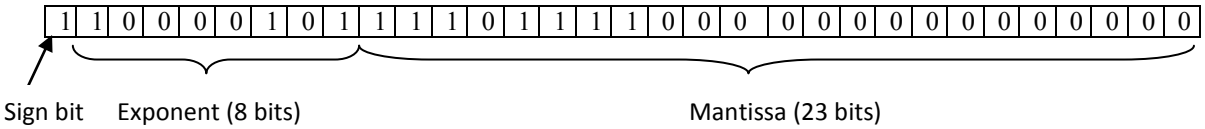
- low cost
- small in size
- low power wastage
- low heat generation
- high capacity for storing data
- high speed

(1 marks)

(b). CISC – This technique was used in processor architecture by Intel.
Introduced in as X86.
Used in Intel AMD processors.
Took long time to execute as they contain complex instructions.
RISC- Used Simple set of instructions.
So computer could be executed faster.
Used in Apple Macintosh.

(1 marks x 2 =2)

(c). -123.75 floating point single precision
(i) sign bit – 1
(ii) 1111011.11_2
(iii) 1.11101111×2^6
(iv) 6
(v) 11101111
(vi)



(1 marks x 6 =6)

(2) (a).

Software	Classification
Disk Defragmentation	Utility program
Opera	Application software
Mac	Operating system
Screen Server	Utility software
Joomla	Application software
Mint	Operating system

(0.5 marks x 6 =3)

(b). (i) Memory Allocation

In program execution digital output should be received and it should be connected to memory. So there should be enough space in primary memory.

(ii) Memory swapping

A program in memory for a long period of time is transformed to cash memory where there is an urgent program to run. Again the previously transferred program comes to line after the urgent program finished execution.

(1 marks x 2 =2)

(c). (i) Total no. of pages) = $2^8 = 256$

(1 marks)

(ii) [01011101|0100111101]

Pages displacement

(1 marks) (1 marks)

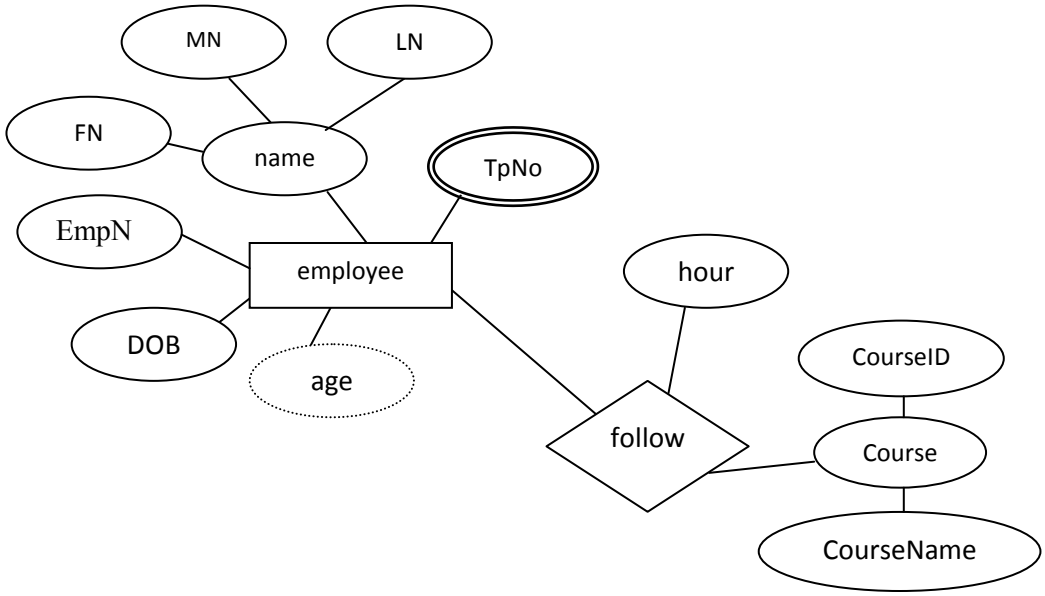
(d).

	Fat 32	NTFS
1	Maximum file size is limited	File size is unlimited.
2	Length of the file name is limited.	Length of the file name is unlimited.
3	No security	Secured
4	Can not work with unicode	Compatible with unicode

(1 marks x 2 =2)

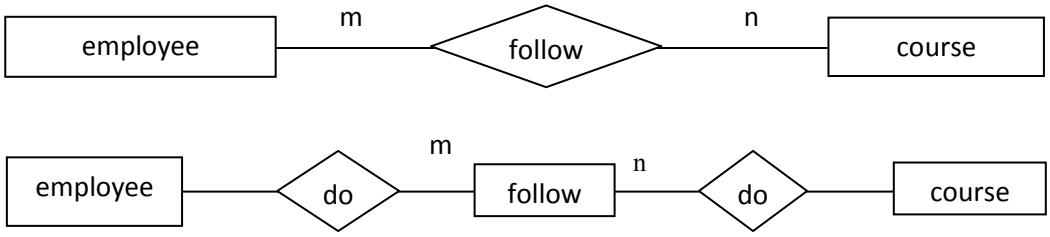
(3)

(a).



(4 marks)

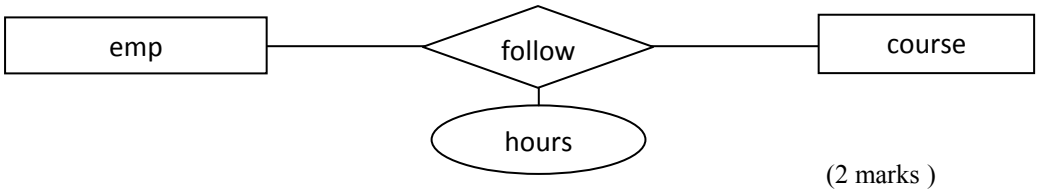
(b). The relation between employee and courses m:n



(1 marks)

(c). Descriptive attribute

No of hours is not a attribute of course of employees. It depends on the relationship .Thus it's a descriptive attribute.



(2 marks)

(d). Employe (EmpNo, FN, MN, LN, DOB, Age)
TpNo (EmpNo, TelNo1, TelNo2)
Flow (EmpID, CourseID, hours)
Course (CourseID, CourseName)

(3 marks)

(4) (a).

Memory type	Criteria				
	Physical size	Access time	Access speed	Capacity	Cost per byte
Register	1	1	5	1	5
Cache memory	2	2	4	2	4
Secondary storage memory	4	4	2	4	2
Remote secondary storage memory	5	5	1	5	1
Random Access Memory	3	3	3	3	3

(0.2 marks X20=4.0)

(b). (i)

Dynamic random access memory (DRAM)	Static random access memory (SRAM)
1. Frequent refreshing is necessary keep data stored. 2. Speed is less. 3. More data can be stored.	1. Frequent refreshing is not necessary 2. Speed is higher. 3. Less data can be stored.

(1 marks X 2 = 2)

(ii) High data access speed. (1 marks)

(c). (i) Create Table Student

(

Ad_NO Varchar (10) Not Null,

Std_name Varchar (50),

Grade Varchar (10),

Gender Varchar (7),

Primary Key (Ad_No));

)

(ii). insert into Student (Ad_No, Std_name, Grade, Gender)

Values ('A005','Nimal','12 sc','male');

(iii). Alter Table Student Add Tel-No Varchar (10);

(1 marks x 3 = 3)