User defined data types: -- 2 marks or 5marks.

The names of the data type can be given by the users. But these are dependent on the predefined data type.

1. typedef:

It is a kind of user defined data type in which an alias (short) name can be given to a data type according to the user to make the program more understandable.

syntax: typedef data\_type(original name) variable(short name);

typedef float num;

float a;

or

num a;

2. enumerated data type(enum): It is mainly used to assign names to integral constants, the names make a program easy to read and maintain. It consist of various elements or members(enumerators).

It is a data type in which the integer values are assigned to all the data members.

By default 1st data member has the value 0,2nd data member has the value 1 and so on, consecutively.

The keyword ‘enum’ is used to declare new enumeration types in C. Following is an example of enum declaration.

syntax:

enum enum\_name

{

const1,

const2,

const3...};

Just like structure but here is comma between all the members.

Example:

# include<stdio.h>

enum week //defination

{

sunday,

monday,

tuesday,

wednesday,

thursday,

friday,

saturday

};

main()

{

enum week day; //variable declaration. int a;

printf("%d %d %d %d %d %d %d",sunday,monday,tuesday,wednesday,thursday,friday,saturday);

day=tuesday;

printf("%d",day); // 2

}

output:0 1 2 3 4 5 6 2

2.

# include<stdio.h>

enum week

{

sunday,monday,tuesday=12,wednesday,thursday,friday,

saturday

};

main()

{enum week day;

printf("%d %d %d %d %d %d %d",sunday,monday,tuesday,wednesday,thursday,friday,saturday);

}

output: 0 1 12 13 14 15 16