Department of Electronics and Telecommunication

Time: 1 hr | Class Test - I | ETU504- Microcontroller and it's Applications | Marks: 15

Qu.1. Compulsory questions — 10 Mks

a) Write an ALP using 8051μC to count the odd numbers in an array of 'n' numbers starting from external memory location BEFEh.

b) Explain the working of a parallel I/O port, with the various operations that can be performed.

Qu.2. Solve any **one** (1) — 5 Mks

a) Define **addressing modes** and explain each one of them in detail.

b) Write a note on the **ON-chip memory organization** of 8051μC

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Date: 05th Aug.,2016 ETU504 Microcontroller and Applications Class Test 1 Mks.: 15

Qu.1. Write a well commented program to count the numbers of 0's and 1's in an 8-bit number stored at external memory location 0FEEh. Store the count of 0's and 1's in the next consecutive memory locations respectively. 5

Qu.2. Explain the stepwise execution and specify the contents of carry and 22h. 5

```
MOV 22H,#0AAh;
MOV A,22h;
CLR C;
CPL C;
MOV 10h,C;
MOV 0F0h,22h;
XRL A, 0F0h;
SETB 0E0h.7;
SETB C;
RRC A;
MOV 22h,A;
```

22h 0AAh.

A 0AAh

10h C

0f0h 22h.

Qu.3. Define **addressing modes** and explain each with suitable example. 5

OR

Qu.4. Write a note on the ON-chip memory organization of 8051μC 5

A 56

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Date: 04th Aug.,2017 ETU504 Microcontroller and Applications Class Test 1 Mks.: 15

Solve any **three** (3)

Qu.1. Assume an array of 5 bytes is stored from external memory location 3000h. Write an ALP to store largest number in array into the next consecutive location. 5

Qu.2. Write an ALP to accept 5 numbers from port 1 and store them in on-chip RAM locations starting from 30h. 5

Qu.3. Assume an 8-bit number is stored in on-chip RAM location 30h. Write an ALP to store the number of zeroes (0's) in the number in the next memory location. 5

Qu.4. Explain the working of True Bidirectional I/O port. 5

Department of Electronics and Telecommunication Engineering

Date: 27th Aug., 2019 Session Class Test - I Marks: 15

Time: 4.30pm to 5.30pm ETU504 - Micro-Controller and Its Applications

All questions are compulsory.

Q1. Write an ALP to implement the expression f = (a+b+c) x d and store the value of 'f' in the given expression. The numbers are stored from memory locations 3000h. 03

Q2. Explain the significance of PSEN and EA 02

Q3. Explain how the flags of PSW would be affected if 01111111b in accumulator is added with 00000001b. 05

Q4. Twenty bytes of data are stored in locations from 6Ch to 7Fh of internal RAM. Count the number of bytes which contains 00h and store this count of NULL bytes in the next consecutive RAM location. 05