

T.E. (EXTC) - VI (OLD)

12/07/2015

MPMC - II

(OLD COURSE)

Q.P. Code: **4410**

(3 Hours)

Total Marks : 100

N.B : (1) Question No. 1 is compulsory.

(2) Solve any four questions from the remaining six questions.

(3) Figures to the right indicate full marks.

(4) Assume suitable data where necessary.

1. (a) Explain rotate instructions of PIC 18F microcontroller. 5
- (b) How many registers are available as stack in PIC 18F microcontroller? 5
- What is the size of stack pointer in PIC 18F microcontroller?
- (c) Explain Flag register of 8086. 5
- (d) Explain significance of RESET and READY signal in 8086 5
2. (a) Explain the following instructions of PIC 18F microcontroller. 10
- (i) DAW (ii) BTG PORT C,4,0 (iii) SLEEP (iv) TBLRD*+ (v) MULWF 0x25,0
- (b) Draw and explain interfacing of 8086 with 8255. 10
3. (a) With the help of flowchart/algorithm write assembly language program for 8086 10
- to find largest number from a data block of ten 8 bit numbers. Assume the necessary data.
- (b) Explain the instruction format of PIC 18F microcontroller. 10
4. (a) Explain interrupt structure of 8086. 10
- (b) Explain addressing modes of PIC 18F microcontroller. 10

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5. (a) Explain interfacing of 8259 with 8086 in minimum mode. 10
- (b) Design 8086 microprocessor based system using minimum mode with following specifications 10
- (i) 8086 microprocessor working at 8 MHz.
 - (ii) 32 KB EPROM using 16 K x 8 devices.
 - (iii) 32 KB SRAM using 16 K x 8 devices.
- Clearly show memory map with address ranges.
6. (a) Explain string instructions and prefix of 8086. 10
- (b) Interface two common.cathode seven segment display to PIC 18F microcontroller using PORT B and PORT C. Explain interfacing with the help of neat block diagram. 10
7. Write note on any four of the following 20
- (a) PIC 18F microcontroller Reset.
 - (b) Comparative study of salient features of 8086 and Pentium.
 - (c) Assembler directives for 8086.
 - (d) PIC 18F STATUS register.
 - (e) Memory segmentation in 8086.
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T.E EXTC sem V (old)

18/5/15

AWP

(OLD COURSE)

Q.P. Code : 4413

(3 Hours)

[Total Marks : 100

- N.B.:** (1) Question no. 1 is compulsory
(2) Answer **any four** questions from remaining questions.
(3) Assume **suitable** data of required.

1. (a) Explain the significance of directivity & radiation pattern of an antenna. 05
(b) Explain Isotropic, omnidirectional & directional antenna with suitable examples. 05
(c) Explain radiation pattern of short dipole. 05
(d) Explain the principle of pattern multiplication with suitable example. 05
2. (a) Derive the expression for vector potential wave equation. 10
(b) What is folded dipole antenna? Explain its operation, equation & properties. 10
3. (a) Explain in brief the working of helical antenna with neat diagram. 10
(b) Explain & derive equations for total electric field, directivity, half power beamwidth in case of same amplitude but opposite phase 10
4. (a) Explain important features of loop antenna. Explain how a loop antenna can be used for direction finding. 10
(b) Explain V antenna & rhombic antenna. List their advantages & disadvantages. Mention their applications. 10
5. (a) A broadside array consists of 4 isotropic sources with distance of $\lambda/2$ between them. Find array factor, directions of major lobe, directions of minor lobe maxima & minima HPEW & FNBW. Plot the pattern. 10
(b) Explain ducting effect. Under what conditions this effect takes place? 10
6. (a) Explain the following terms :- 10
(i) Critical frequency
(ii) Virtual height
(iii) Maximum usable frequency.
(b) Explain different types of horn antennas. Find the directivity & beamwidth. 10
7. Write short notes on 20
(a) Log periodic antenna.
(b) Ground Interference effects.
(c) FRISS Transmission equation
(d) Sleeve dipole

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3/6/15

QP Code : 4423

(OLD COURSE)

(2 Hours)

[Total Marks : 50]

INSTRUCTION

1. Attempt any five questions

- Q1a) What are the types of market . Explain monopoly with example [5]
Q1b) Define money. What are the functions of money? [5]
- Q2a) Explain stages of economic growth. [5]
Q2b) Define inflation and what are the causes that lead to inflation? [5]
- Q3a) Explain Maslow's hierarchy of needs theory of motivation. [5]
Q3b) What are the types of organisational structure. Explain any one. [5]
- Q4a) What are the 5 P's of marketing? Explain [5]
Q4b) Explain Taylor's Scientific Management Theory [5]
- Q5a) Explain TRAI regulation. [5]
Q5b) Explain National Telecom Policy 1994. [5]
- Q6a) What are the functions of R.B.I. [5]
Q6b) Explain law of demand & law of supply. What are the exceptions to these laws. [5]
- Q7a) Explain guidelines of DTH transmission laid down by the government [5]
Q7b) Explain various barriers to communication. [5]

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