1100CST307122105
FINAL SCHEME

Total Pages: 2

Scheme of Valuation/Answer Key

(Scheme of evaluation (marks in brackets) and answers of problems/key)

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY

FIFTH SEMESTER B.TECH DEGREE EXAMINATION, MARCH 2022

Course Code: CST 307

Course Name: MICROPROCESSORS AND MICROCONTROLLERS

Max. Marks: 100 Duration: 3 Hours

PART A

(Answer all questions; each question carries 3 marks) Marks

1 Pipelined architecture definition – 1mark

implementation of it in 8086 – 2 marks

2 Three differences – 3 marks

3 Addressing mode definition – 0.5 mark each

example and effective address calculation - 0.5 mark each

4 PUSH explanation 1 mark

POP explanation – 1 mark

diagram – 1 mark

5 interrupt vector table definition – 1 mark

structure in 8086 – 2 marks

6 1 mark each

7 For each control signal 0.5 mark each

8 Explanation – 2 marks

diagram – 1 mark

9 Explanation – 2 marks

diagram – 1 mark

10 Program – 3 marks

PART B

(Answer one complete questions from each module)

Module -1

11 a) Block diagram – 7 marks

Explanation of each block – 7 marks

12 a) read cycle timing diagram - 4 marks
read cycle timing diagram explanation – 3 marks

write cycle timing diagram - 4 marks
write cycle timing diagram explanation – 3 marks

Module -2

13 a) Assembly language program to find the largest and smallest number from an unordered array of 16-bit numbers with assumptions given in question paper – 14 marks

14 a) Assembly language program to find the total number of even and odd numbers from an array of 16-bit numbers with assumptions given in question paper – 14 marks

Module -3

15 a) interrupt cycle of 8086 – 8 marks

b) Difference between maskable and non maskable interrupt – 6 marks

16 a) Block diagram – 7 marks

Explanation of each block – 7 marks

Module -4

17 a) different modes of operation of 8255 – 14 marks

18 a) Block diagram – 7 marks

Explanation of each block – 7 marks

Module -5

19 a) addressing modes of 8051 with example – 10 marks

b) Program – 4 marks

20 a) diagram – 3marks

Explanation - 7 marks

b) Program – 4 marks

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