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| **Scheme of Valuation/Answer Key**  (Scheme of evaluation (marks in brackets) and answers of problems/key) | | | | | |
| **APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  V SEMESTER B.TECH DEGREE EXAMINATION, DECEMBER 2018 | | | | | |
| **Course Code: AE305** | | | | | |
| **Course Name: MICROPROCESSORS & MICROCONTROLLERS** | | | | | |
| Max. Marks: 100 | | |  | Duration: 3 Hours | |
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| **PART A** | | | | | |
|  |  | ***Answer any two full questions, each carries 15 marks.*** | | | Marks |
| 1 | a) | Definition- 3marks, ,5 directives with explanation-1mark each (5x1) marks | | | (8) |
|  | b) | Diagram 4 marks, min three points 1 mark each (3x1) marks | | | (7) |
| 2 | a) | Linker and locator use and explanation | | | ( 3) |
|  | b) | Any two instructions with example and explanation 2 marks each (2x2)marks | | | ( 4) |
|  | c) | Special functions of general-purpose registers-8 marks | | | (8) |
| 3 | a) | Architecture- 5 marks, explanation- 3 marks, pipelining implementation- 2 marks | | | (10) |
|  | b) | Macro definition 1 mark, advantages 2marks, disadvantages 2 marks | | | (5) |
| **PART B** | | | | | |
| ***Answer any two full questions, each carries 15 marks.*** | | | | | |
| 4 | a) | Architecture- 4 marks, explanation- 3 marks | | | (7) |
|  | b) | Detailed explanation with minimum 4 points (4x2) marks | | | (8) |
| 5 | a) | Any five features- 5 marks | | | (5) |
|  | b) | Method to distungush-3 | | | (3) |
|  | c) | Listing of features- 3 marks, explanation- 4 marks | | | (7) |
| 6 | a) | Listing of min 3 modes, 1mark , 3 marks each for explanation (3x3)marks | | | (10) |
|  | b) | Memory address decoding 1mark, diagram 3marks, 1mark explanation | | | (5) |
| **PART C** | | | | | |
| ***Answer any two full questions, each carries20 marks.*** | | | | | |
| 7 | a) | Formats- 3 marks each,(3x2) marks explanation -3 marks each (3x2) marks | | | (12) |
|  | b) | 8 marks for program, partial credit may be given for correct logic/algorithm | | | (8) |
| 8 | a) | 2 marks each for explanation with examples (2x5)marks | | | (10) |
|  | b) | Keyboard interfacing diagram- 4 marks, explanation- 6 marks | | | (10) |
| 9 | a) | Addressing modes listing- 4 marks, explanation with examples- 8 marks. | | | (12) |
|  | b) | 8 marks for program, partial credit may be given for correct logic/algorithm | | | (8) |
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