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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**FIFTH SEMESTER B-TECH(S) DEGREE EXAMINATION, MAY 2019 |
| **Course Code: ME305** |
| **Course Name: MECOMPUTER PROGRAMMING & NUMERICAL METHODS** |
| Max. Marks: 100 |  | Duration: 3 Hours |
| **PART A** |
|  |  | ***Answer any three full questions, each carries 10marks.*** | Marks |
| 1 |  | Program – 6 marks, statement to display numbers – 2 marks, data file – 2 marks | (10)  |
| 2 | a) | 32 bits – 2, significant digits = 6 (1 mark),  | (3) |
|  | b) | 1 bit for sign, 1 bit for sign of exponent, 7 bits for exponent, 23 bits for fraction – (7 marks for all correct, 11/2 marks for each correct) | (7) |
| 3 | a) | What are control statements 2 marks, 1 mark for each example (1x4=4marks). | (6) |
|  | b) | 4 marks | (4) |
| 4 |  | Computer program 5 marks, declaration - 11/2 marks, initialization - 11/2 marks, output – 2 marks | (10) |
| **PART B** |
| ***Answer any three full questions, each carries 10marks.*** |
| 5 | a) | 1 mark for each advantage, pointer in 1D array – 3 marks. | (6) |
|  | b) | Call by value – 2marks, call by reference – 2 marks | (4) |
| 6 |  | Declaration - 11/2 marks, initialization - 11/2 marks, correct program – 7 marks | (10) |
| 7 | a) | 4 marks for correct answer | (4) |
|  | b) | Correct computer program – 6 marks | (6) |
| 8 |  | Public inheritance – 5 marks, private inheritance -5 marks | (10) |
| **PART C** |
| ***Answer any four full questions, each carries 10marks.*** |
| 9 |  | x=3, y=2, z=1, three marks for each correct answer(3x3=9marks), 1 mark for naming the method | (10) |
| 10 |  | What is a system of linear equation- 2 marks, what is the condition for a unique solution- 2 marks, Name three methods for solving system of equations- 1 mark for each method (3x1 = 3marks), three points of comparison -1 mark for each point (3x1 = 3 marks) | (10) |
| 11 |  | 2 marks each for each parts (2x5 = 10 marks) | (10) |
| 12 | a) | Correlation – 21/2 marks, difference with regression – 21/2 marks | (5) |
|  | b) | measure of correlation 1 mark, equation -4 marks | (5) |
| 13 |  | Correct program (declare and initialize) – 3 marks, Correct program to interpolate – 7 marks | (10) |
| 14 |  | Declaration (11/2 marks), initialization (11/2 marks), program to compute the coefficient of correlation -7 marks  | (10) |
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