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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**  SIXTH SEMESTER B.TECH DEGREE EXAMINATION, MAY 2019 | | | | | |
| **Course Code: AE364** | | | | | |
| **Course Name: MEMS/NEMS** | | | | | |
| Max. Marks: 100 | | |  | Duration: 3 Hours | |
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| **PART A** | | | | | |
|  |  | ***Answer any two full questions, each carries 15 marks.*** | | | Marks |
| 1 | a) | Any 5 difference(5) | | | (5) |
|  | b) | Figure(5), working (5) | | | (10) |
| 2 | a) | No change in acceleration(2)  3.16 reduction in time(4)  0.3 times reduction in power(4) | | | (10) |
|  | b) | Any 2 differences (5) | | | (5) |
| 3 | a) | Any 2 applications (5) | | | (5) |
|  | b) | Any two mechanical problems(5 mark each) | | | (10) |
| **PART B** | | | | | |
| ***Answer any two full questions, each carries 15 marks.*** | | | | | |
| 4 | a) | Figure(2)  Working(6) | | | (8) |
|  | b) | Any two applications(5) | | | (5) |
|  | c) | Basic principle (2) | | | (2) |
| 5 | a) | 3 forces with equation (3) and diagram(2) | | | (5) |
|  | b) | Diagram (2), working(5);advantages(2);limitation(1) | | | (10) |
| 6 | a) | Diagram (2); working(7) | | | (9) |
|  | b) | Any three signal processing techniques (3\*2=6). | | | (6) |
|  |  |  | | |  |
| **PART C** | | | | | |
| ***Answer any two full questions, each carries 20 marks.*** | | | | | |
| 7 | a) | Any four types(4\*3=12) | | | (12) |
|  | b) | Any three applications(3) | | | (3) |
|  | c) | Any two design equations(5) | | | (5) |
| 8 | a) | Explanation-8  Simulation flow chart representation (2) | | | (10) |
|  | b) | Packaging introduction (1)  Three levels of packaging (9) | | | (10) |
| 9 | a) | Introduction(1)  Any three types(9) | | | (10) |
|  | b) | Any two reliability issues(5) | | | (5) |
|  | c) | Any two advantages(5) | | | (5) |
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