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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**FOURTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2019 |
| **Course Code: FT208** |
| **Course Name: ENGINEERING THERMODYNAMICS AND REACTION KINETICS (FT)** |
| Max. Marks: 100 |  | Duration: 3 Hours |
| **PART A** |
|  |  | ***Answer any threefull questions, each question carries 10 marks.*** | Marks |
| 1 | a) | Definition (2) derivation (3) | (5) |
|  | b) | Definition  | (5) |
| 2 |  | 5 statements of second law of thermodynamics-(1.5\*5)2 limitations of first law –(2.5) | (10) |
| 3 | a) | Definition explanation | (5) |
|  | b) | State the law | (5) |
| 4 | a) | Pressure volume graph –(4) pressure temperature graph –(3) | (5) |
|  | b) | η=W /Q1= T1 –T2 /T1 =0.5 | (5) |
| **PART B** |
| ***Answer any threefull questions, each question carries 10 marks.*** |
| 5 |  | Explanation  | (10) |
| 6 |  | Four equations | (10) |
| 7 | a) | 2.8\*10 4 moles/m3 ,1.415\*10 4 moles /m3 | (10) |
| 8 | a) | Definition(3) explanation(7) | (10) |
| **PART C** |
| ***Answer any fourfull questions, each question carries 10 marks.*** |
| 9 | a) | Explanation | (10) |
| 10 | a) | Derivation | (10) |
| 11 |  | Figure (3)explanation (7) | (10) |
| 12 | a) | 5\*2 points | (10) |
| 13 | a) | Figure (3)explanation (7) | (10) |
| 14 | a) | Explanation(4) graph(3) equations(3) | (10) |
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