

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY****Scheme for Valuation/Answer Key**

Scheme of evaluation (marks in brackets) and answers of problems/key
FIRST SEMESTER B.TECH DEGREE EXAMINATION(S), MAY 2019

Course Code: ME100**Course Name: BASICS OF MECHANICAL ENGINEERING**

Max. Marks: 100

Duration: 3 Hours

PART A*Answer any two questions, each carries 15 marks.*

- | | | Marks |
|---|---------------------------------------------------------|-------|
| 1 | a) Statement - 3 marks | (5) |
| | Significance - 2 marks | (5) |
| | b) Kelvin Planck and Clausius statements only : 5 marks | (5) |
| | C) work definition – 4 marks | (5) |
| | Equation – 1 mark | (5) |
| 2 | a) Intensive - Extensive properties – 1.5 marks each | (5) |
| | Examples 1 mark each | (5) |
| | b) Diagram-3 marks | (10) |
| | Steam pressure and velocity variation-2 marks | (10) |
| | Working-5 marks | (10) |
| 3 | a) Any five comparison – 5 marks | (5) |
| | b) Diagram – 4 marks | (10) |
| | Working – 6 marks | (10) |

PART B*Answer any two questions, each carries 15 marks.*

- | | | |
|---|----------------------------------------------------------------------------------------|------|
| 4 | a) Impact of refrigerants – 5 points – 5 marks | (5) |
| | b) Diagram – 4 marks | (10) |
| | Working – 6 marks | (10) |
| 5 | a) 10 marks may be given to the figure/ equations/ even for brief description on gears | (10) |
| | b) Four classifications – 5 marks | (5) |
| 6 | a) Any four properties of refrigerants- 4 marks | (4) |
| | b) Diagram – 2 marks | (6) |
| | Working – 4 marks | (6) |
| | c) Five components – 5 marks | (5) |



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PART C

Answer any two questions, each carries 20 marks.

- 7 a) Diagram – 3 marks (8)
Working – 5 marks
- b) Definition 2 marks (6)
Direct and indirect process – 2 marks each
- c) Any four defects – 1.5 marks each (6)
- 8 a) Definition – 1 mark (5)
Steps in powder metallurgy - 4 marks
- b) Diagram – 04 marks (8)
Four operations performed on a drilling machine- 1 mark each
- c) Up milling and down milling process – 3.5 marks each (7)
- 9 a) Any four properties of moulding sand – 1 mark each (4)
- (b) 4 rolling mills – 2 marks each (8)
- (c) Diagram – 3 marks (8)
Operations – 5 marks

