**Q.P. Code: 19ME3119** **R19**

**Reg. No:** | | | | | | | | | | |

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**

(AUTONOMOUS)

**M.Tech I Year II Semester Regular Examinations October-2020**

**MODELLING OF I.C ENGINES**

(Thermal Engineering)

Time: 3 hours Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

**UNIT-I**

| | | |
|---|---|---|
| **1** | Classify the petrol engine with engine geometry. | **12M** |
| | **OR** | |
| **2** | Explain with sketches the valve lift curves. | **12M** |

**UNIT-II**

| | | |
|---|---|---|
| **3** | Explain WIEBE functions of combustion heat release. | **12M** |
| | **OR** | |
| **4** | How wall heat transfer that affects engine performance? | **12M** |

**UNIT-III**

| | | |
|---|---|---|
| **5** | What are the various types of fuel injectors and explain any one in detail with a neat sketch. | **12M** |
| | **OR** | |
| **6** | What are the effects of droplet turbulence interactions? Explain. | **12M** |

**UNIT-IV**

| | | |
|---|---|---|
| **7** | Classify the turbo chargers and explain any one with neat sketch. | **12M** |
| | **OR** | |
| **8** | Identify the importance of compressor in the engine performance. | **12M** |

**UNIT-V**

| | | |
|---|---|---|
| **9** | What is mass burning rate estimation and explain? | **12M** |
| | **OR** | |
| **10** | Differentiate with brief note on friction estimation for warm and warm-up engines. | **12M** |

*** END ***