Reg. No.					

M.E./M.TECH. DEGREE EXAMINATIONS, MAY/JUNE 2017 SECOND SEMESTER

INTERNAL COMBUSTION ENGINEERING

IC16007-SUPERCHARGING AND SCAVENGING

(Regulation 2016)

Q. Code: 687516

Time: Three Hours Maximum: 100 Marks

Answer **ALL** questions

PART A - $(10 \times 2 = 20 \text{ Marks})$

- 1. What are engine modifications required for accommodating supercharging?
- 2. List any two differences between positive displacement blower and centrifugal compressor.
- 3. Compare naturally aspired CI engine cycle with turbocharged CI engine cycle.
- 4. Sketch a pV diagram to show the gain in work obtained due to turbocharging.
- 5. What are different methods of scavenging?
- 6. What is the purpose of Sankey diagram?
- 7. Mention the importance of Kadenacy system of scavenging.
- 8. Comment on choice of Delivery ratio.
- 9. Define Scavenging efficiency.
- 10. Mention the effect of trapping efficiency on scavenging.

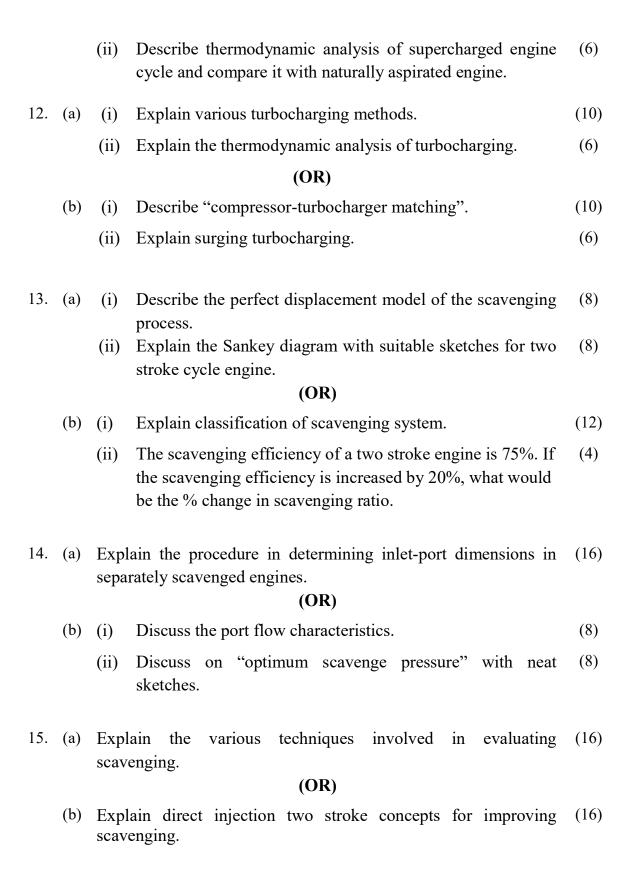
PART B - (5 X16 = 80 Marks)

11. (a) Draw the performance characteristics curves of a supercharged (16) engine and explain.

(OR)

(b) (i) Explain different supercharging arrangements with neat (10) sketches.

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2 Q. Code: 687516