

GDN 123  
24  
Separate

SLOT: F2

CLOSED BOOK

SEPARATE



VIT

Vellore Institute of Technology  
(Deemed to be University under section 3 of U.G.A. Act, 1956)

SCHOOL OF MECHANICAL ENGINEERING

CONTINUOUS ASSESSMENT TEST – II - WINTER SEMESTER 2019-2020

Programme Name & Branch: B.Tech, BME & BEM

Course Code: MEE3004-

Course Name: Internal Combustion Engines

Faculty Name: Dr. M.A.Asokan

Class Number: VL2019205002036

Exam Duration: 90 mins Maximum Marks: 50

Section – A			Marks
Sl.No.	Question	Course Outcome (CO)	
1.	A four cylinder four stroke engine has a cubic capacity of $1490 \text{ cm}^3$ . it develops maximum power at 4200 rpm and air fuel ratio is 13:1. The air speed at venture is limited to 90 m/s. The volumetric efficiency of engine is 70%. Nozzle lip is 6 mm and atmospheric pressure and temperature are 1.013 bar and 293 K. An allowance is to be made for emulsion tube whose diameter should be taken as $1/2.5$ of venture diameter. Taking following data, calculate the diameter of venture and nozzle. $C_{da}=0.85, C_{dt}=0.66$ and density of fuel= $740 \text{ Kg m}^3$	1	20
2.	What is meant by supercharging? What is its effect on engine performance with suitable diagram?	3	10
3.	Give a brief account of emissions from CI engines.	4	10
4.	What are catalytic converters? How they are helpful in reducing HC, CO and NOx emissions?	4	10



SCAN ME

Search for VIT Question Papers on Telegram