## POLYTECHNIC, B.E/B.TECH, M.E/M.TECH, MBA, MCA & SCHOOL

Notes Syllabus Question Papers Results and Many more... Available @

www.binils.com

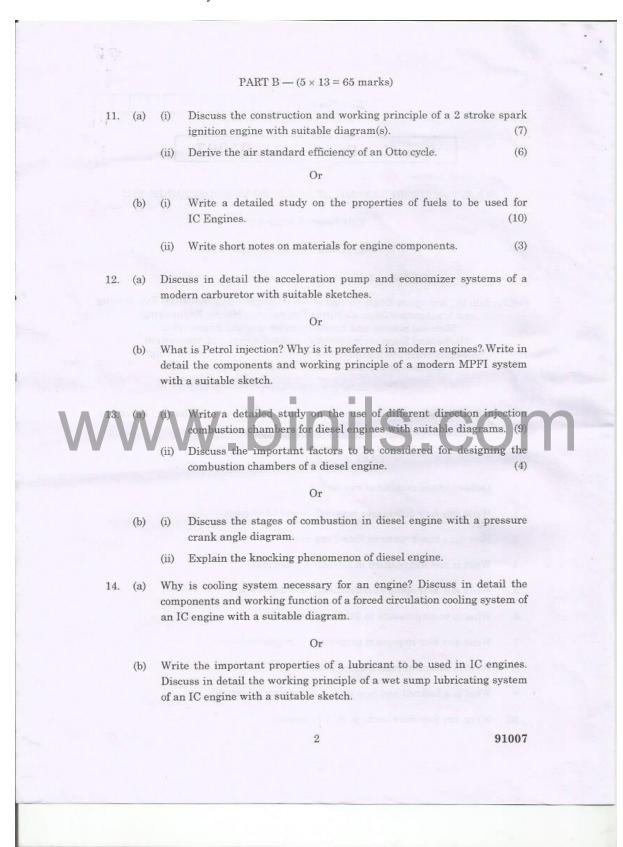
	Reg. No. :
2	Question Paper Code: 91007
	B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.
	Fifth/Seventh Semester
	Aeronautical Engineering
	OAT 552 — INTERNAL COMBUSTION ENGINES
(Co	ommon to: Aerospace Engineering/Industrial Engineering/Industrial Engineering and Management/Manufacturing Engineering/Marine Engineering/ Material Science and Engineering/Mechanical Engineering/ Mechanical Engineering (Sandwich)/Mechanical and Automation Engineering/Mechatronics Engineering/Production Engineering/ Robotics and Automation/Safety and Fire Engineering)
3	(Regulations 2017)
Tin	Answer ALL questions. Maximum : 100 marks $ PART A - (10 \times 2 = 20 \text{ marks}) $
1.	Define Octane number of any fuel.
2.	Write any four differences between SI and CI engines.
3.	How does knock occur in Petrol engines?
4.	What is mal distribution in Carbureted Engines?
5.	Write any four spray characteristics of a diesel spray.
6.	What is boost pressure in TC diesel engines?
7.	Write any four important properties of engine coolants.
8.	What is meant by mist lubrication?
9.	What is a fuel cell and how does it differ from a battery?
	Write any four drawbacks of HCCI Engines.

## POLYTECHNIC, B.E/B.TECH, M.E/M.TECH, MBA, MCA & SCHOOL

Notes Syllabus Question Papers Results and Many more...

www.binils.com

Available @



## POLYTECHNIC, B.E/B.TECH, M.E/M.TECH, MBA, MCA & SCHOOL

Notes Syllabus Question Papers Results and Many more...

Available @

www.binils.com

	10			(04)
	15.	(a)	(i) Write the important configurations of hybrid vehicles.	(3)
			(ii) Explain the components of a parallel hybrid vehicle and des the complete functioning of it with a neat sketch.	cribe (10)
	1.1		Or	
		(b)		
		(0)	(i) Homogeneous Charge Compression Ignition Engines	(7)
			(ii) Variable Compression Ratio Engines.	(6)
			PART C — $(1 \times 15 = 15 \text{ marks})$	
	16.	(a)	What is Gasoline Direct Injection? Discuss in detail the construction working of modern GDI system of an automobile. What are drawbacks of it over conventional carburetion system?	
			Or	
		(b)	Write the important requirements of a FIS of a diesel engine and ex in detail the components, working principle and functioning of a con rail direct injection system of a modern diesel engine with a sui diagram.	nmon
V	V	Λ	w.binils.co	m
V	<b>\</b>	<b>\</b>	w.binils.co	m
		٨	w.binils.co	m
			w.binils.co	m
V				
V				) M