Report on Bridge Course for Internal Combustion Engine

Subject : Internal Combustion Engine

Prerequisite: Thermodynamics, Fluid Mechanics

Sr. No.	Topic Covered	Date	Number of Students
1	Thermodynamic System, Properties, Equilibrium, Work and Heat Transfer	02/07/2018	20
2	Gas Laws, laws of Thermodynamics, Non Flow Process	03/07/2018	20
3	Specific Heat, Enthalpy, Entropy	04/07/2018	17
4	Thermodynamic Cycles (Carnot, Auto, Diesel, Duel,Rankine, Braton)	05/07/2018	29
5	Energy Equation, Continuity Equation , Specific Gravity, API Density	06/07/2018	20
6	Application of Basics to Internal Combustion Engine, Unit Conversions, Tmperature Pressure and Volume Relationship	07/07/2018	35
7	Objective Test	07/07/2018	35

Subject Incharge

Mr. Suware A. R.

RAJENDRA MANE COLLEGE OF ENGINEERING & TECHN

ACADEMIC YEAR : 2018-19 / ODD

CLASS : T.E. (MECHANICAL)

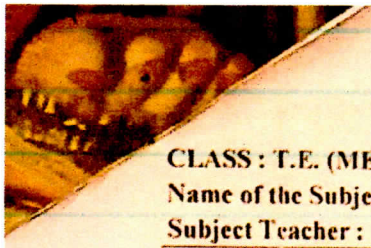
Name of the Subject : I C Engine

Subject Teacher : ARS.

Basics

01 02 03 04 05 06 07

ROLL.NO.	NAME	Lecture No. / Date→						
						11:15	9:00	10:00
		02/07	03/07	04/07	05/07	06/07	07/07	07/07
1	AMBEKAR KAUSTUBH KISHORE							
2	ANERAO SUMIT RAVINDRA							
3	ANERAO SUYOG KASHINATH							
4	ANKUSHRAO SAYALI SUHAS							
5	BETKAR AKSHAY ANIL							
6	BHOSALE MANISH MURLIDHAR							
7	BHUJBALRAO ANIKET ANANT							
8	BHURAVANE SIDDHESH RAMKRISHNA							
9	CHARI VISHAL SANGAM							
10	CHAVAN SANKET SANTOSH							
11	CHAVAN SIDDHI PRAMOD							
12	CHOUGULE KAKASAHEB ASHOK							
13	DABHOLKAR VAIBHAV RAGHUNATH							
14	DONGARE AKSHADA ANAND							
15	DONGARE SHREYAS SANTOSH							
16	DUDYE AMOL ANIL							
17	FUTAK SOURABH KASHINATH							
18	GAIKWAD SURAJ DEEPAK							
19	GHAG RIDDHESH SANTOSH							
20	GHAG SIDDHESH BHALCHANDRA							
21	GOSAVI ABHIJIT AJIT							
22	GURAV SANDESH MUKUND							
23	JADHAV ADITYA RAVIKANT							
24	JADHAV KIRAN SHARAD							
25	JOGALE SURAJ SUDHIR							



RAJENDRA MANE COLLEGE OF ENGINEERING & TECH

ACADEMIC YEAR :2018-19; EVE

CLASS : T.E. (MECHANICAL)

Name of the Subject : IC Engine

Subject Teacher : A R S

ROLL.NO.	NAME	Lecture No. / Date→	02/7	03/7	04/7	05/7	06/7	07/7	07/7
26	KADAM ANIKET VIKAS					Akadam	Akadam	Akadam	Akadam
27	KADAM JINIT PRAMOD		Jkadam	Jkadam	Jkadam		Jkadam	Jkadam	Jkadam
28	KADWAIKAR SHARAD MARUTI							SMK	SMK
29	KAMTEKAR AMIT ARUN								
30	KATKAR CHINMAY CHANDRASHEKHAR								
31	KATKAR DINESH RAMESH								
32	KEDARI RAJESH SURESH							Rkedari	Rkedari
33	KERKAR MANISH LADOBA								
34	KHAMKAR TEJAS BHARAT					Tkhamkar			
35	KHATU SARVESH SANJAY								
36	KOTRE NAYAN CHANDRAKANT								
37	KULKARNI OMKAR DAMODAR					Okulkarni	Okulkarni	Okulkarni	Okulkarni
38	LINGAYAT PRATHAMESH SANJAY								
39	MADANE KOMAL SHIVRAM								
40	MANORKAR PRATHAMESH BHALCHANDRA								
41	MESTRI SHWETA RAMESH						Shweta	Shweta	Shweta
42	MOHITE SURAJ NANDKUMAR								
43	MULE KAPIL KRISHNAKANT		KKMule	KKMule	KKMule		KKMule	KKMule	KKMule
44	NAGALE SHASHANK PRAKASH					SNagale			
45	NIMUNKAR SHRIYA SANJAY		SNimunkar	SNimunkar	SNimunkar	SNimunkar	SNimunkar		
46	OKATE ANIKET SANTOSH					Akate			Akate
47	PADYE AMIT CHANDRAKANT								
48	PAL DEEPAK SUBHASH								
49	PANGARIKAR VINAY UDAY		VUP	VUP					
50	PAWAR YASH SHANTARAM								

...RATNAGIRI ... COLLEGE OF ENGINEERING & TECHN...

ACADEMIC YEAR :2018-19; EVEN...

...SS : T.E. (MECHANICAL)

Name of the Subject : IC Engine

Subject Teacher : ARS

ROLL NO.	NAME	Lecture No. / Date→						
		01/7	03/7	04/7	05/7	06/7	07/7	07/7
51	PHONDAKE SAISH SANTOSH							
52	RAJPURKAR MOHAMMED SAIF MOH. SALIM	Mail	Mail	Mail	Mail		Mail	Mail
53	RAJUDKAR TAUQEER TAJUDDIN	Rajudk	Rajudk	Rajudk	Rajudk			
54	RAUT SHREYAS ATMARAM							
55	RAVRANE VIJAYA HARISHCHANDRA						V.Hex	V.Hex
56	REWALE SACHIN SURESH	R.Rawale	R.Rawale		R.Rawale	R.Rawale	R.Rawale	R.Rawale
57	ROTHE SUSHANT EKANATH							
58	SANGARE ASHISH MOHAN							
59	SARVEKAR DHANANJAY VISHNU			Sarvekar		Sarvekar	Sarvekar	Sarvekar
60	SAWANT SAMIR SANTOSH							
61	SAWANT SULOCHANA SURESH							
62	SHAIKH SAULEHA MUZAMMIL							
63	SHETYE SIDDHESH PRASHANT							
64	SHINDE PARAG PRAMOD							
65	SHINDE RHUSHIKESH JAGANNATH				Shinde			
66	TAMKE ZAID ABDULJALIL	Zaidt	Zaidt	Zaidt	Zaidt		Zaidt	Zaidt
67	TAVADE ROSHAN RAVINDRA							
68	TRIBHUVANE RUPAK RAJESH							
69	VARGAONKAR ANIRUDDHA JAYANAND							
70	VASTA NIHAR SALAUDDIN			Vasta	Vasta			
71	VIBHUTE VIVEK DEEPAK							
72	WADKAR SAIF AHMED	S.A.Wadkar	S.A.Wadkar	S.A.Wadkar	S.A.Wadkar		S.A.Wadkar	S.A.Wadkar
73	ZAGADE MAYUR GANESH				Mzd			
74	BARASKAR PRASAD NAVANATH							
75	BERDE SIDDHESH SADANAND							
76	LOTANKAR VIVEK ANANT							
77	PATIL SAHIL ANANDRAO							
78	SAWANT PRATIK RAMESH							
79	VISHARIA DARSHAN PARESH							

20 20 17 29 20 35

Quiz

Internal Combustion Engine

Mod 01 Introduction

Q1) In a Rankine Cycle, the enthalpies at the turbine entrance and outlet are 3159 kJ/kg and 2187 kJ/kg resp. If the specific Pump work is 2 kJ/kg, the specific fuel consumption (kg/ kW-h) of the cycle based on the net output is _ 01 M

Q2) for same values of peak pressure, Peak temperature and heat rejection, the correct order of efficiency for Otto, Duel, and Diesel Cycles is ___ 01 M

a) $\eta_{Otto} < \eta_{Duel} < \eta_{Diesel}$
b) $\eta_{Diesel} < \eta_{Duel} < \eta_{Otto}$
c) $\eta_{Duel} < \eta_{Diesel} < \eta_{Otto}$
d) $\eta_{Diesel} < \eta_{Otto} < \eta_{Duel}$

Q3) For Air- Standard Diesel Cycle if γ and T stands for specific heat ratio and temperature, resp. the efficiency of the cycle is 01M

a) $1 - \frac{T_4 - T_1}{T_3 - T_2}$
b) $1 - \frac{T_4 - T_1}{\gamma(T_3 - T_2)}$
c) $1 - \frac{\gamma(T_4 - T_1)}{T_3 - T_2}$
d) $1 - \frac{T_4 - T_1}{(\gamma - 1)(T_3 - T_2)}$

Q4)Air Enters the Diesel Engine with a density of 1.0 kg/m^3. The compression ratio is 21. At steady state, the air intake is 30 X 10^{-3} kg/s and the Net Work Output is 15 kW. The mean Effective Pressure in (kPa) is _____ 01M

Q5) In an air Standard Otto Cycle, air is supplied at 0.1 MPa and 308 K. The ratio of the specific heats γ and Specific gas Constant R of air are 1.4 and 288.8 J/kgK, resp. if the compression ratio is 8 and the maximum temperature in the cycle is 2660 K, heat supplied to the engine in kJ/kg is _____. 02 M

Q6) In a Compression Ignition Engine, the inlet air pressure is 1 bar and the pressure at the end of isentropic compression is 32.42 bar the expansion ratio is 8. Assuming ratio of specific heat as 1.4, the air standard efficiency is _____. 02 M

Q7) a Diesel engine has a compression ratio of 17 and cutoff takes place at 10% of the stroke. Assuming the ratio of specific heats as 1.4, the air standard efficiency is _____ 02M

07/07/18

Quiz Result

Sr. No.	ROLL NO	NAME OF STUDENT	Quiz
1	1	ANERAO SUMIT RAVINDRA	10
2	2	ANERAO SUYOG KASHINATH	10
3	3	ANKUSHRAO SAYALI SUHAS	10
4	4	BETKAR AKSHAY ANIL	10
5	5	BHOSALE MANISH MURLIDHAR	10
6	6	BHUJBALRAO ANIKET ANANT	10
7	7	BHURAVANE SIDDHESH RAMKRISHNA	9
8	9	CHAVAN SANKET SANTOSH	9
9	10	CHAVAN SIDDHI PRAMOD	10
10	13	DONGARE AKSHADA ANAND	10
11	14	DONGARE SHREYAS SANTOSH	9
12	17	GAIKWAD SURAJ DEEPAK	9
13	18	GHAG RIDDHESH SANTOSH	9
14	20	GOSAVI ABHIJIT AJIT	8
15	21	GURAV SANDESH MUKUND	9
16	22	JADHAV ADITYA RAVIKANT	9
17	23	KADAM ANIKET VIKAS	10
18	24	KADAM JINIT PRAMOD	9
19	25	KADWAIKAR SHARAD MARUTI	9
20	28	KEDARI RAJESH SURESH	9
21	33	KULKARNI OMKAR DAMODAR	10
22	36	MESTRI SHWETA RAMESH	9
23	38	MULE KAPIL KRISHNAKANT	9
24	39	NIMUNKAR SHRIYA SANJAY	10
25	40	OKATE ANIKET SANTOSH	9
26	44	RAJPURKAR MOHAMMED SAIF MOH. S.	9
27	47	RAVRANE VIJAYA HARISHCHANDRA	9
28	48	REWALE SACHIN SURESH	9
29	49	ROTHE SUSHANT EKANATH	9
30	50	SARVEKAR DHANANJAY VISHNU	8
31	53	SHAIKH SAULEHA MUZAMMIL	9
32	54	SHETYE SIDDHESH PRASHANT	9
33	55	SHINDE PARAG PRAMOD	9
34	57	TAMKE ZAID ABDULJALIL	9
35	61	VIBHUTE VIVEK DEEPAK	10

Sub 1/c

07/07/18

M. Suware A.R