SUBJECT CODE NO:- P-333
FACULTY OF ENGINEERING AND TECHNOLOGY
F.E. Examination MAY/JUNE-2016
Elements of Mechanical Engineering
(Revised)

[Time: Two Hours]   [Max Marks:40]

"Please check whether you have got the right question paper."

N.B
1) Q.No.1 is compulsory.
2) Attempt any two questions from remaining.
3) Assume suitable data wherever necessary.
4) Figures to the right indicate full marks.
5) Use of non-programmable calculator is allowed.

Q.1	Solve any five of the following.	10
	a) What is meant by steady flow energy equation?	
	b) What is function of carburetor in I.C. engines?	
	c) Represent isentropic process on P-V and T-S planes.	
	d) State any four advantages of renewable energy sources.	
	e) Diesel engines are heavy as compared to petrol engines explain in brief.	
	f) Define specific heat of a substance.	
	g) Define entropy of a substance.	
	h) What is function of economizer in case of thermal power plant?	
Q.2	a) Explain the difference between heat and work.	07
	b) Explain two stage reciprocating air compressor with the help of neat sketch.	08
Q.3	a) Differentiate between renewable and non-renewable energy sources.	05
	b) $0.12m^3$ of an air has a pressure of $150KN/m^2$, it is compressed to $700KN/m^2$, according to the law $PV^{1.4} = C$ Determine work done of the process.	10
Q.4	a) Work is called as path function, explain?	07
	b) Explain the advantages and disadvantages of thermal power plant.	08
Q.5	a) What is $\int_1^2 P\, dv$ work? Explain	05
	b) Compare S.I and C.I engines.	05
	c) Explain the principle and operation of steam turbine.	05

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