Name: Enrolment No:	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES

End Semester Examination, May 2019

Programme Name: B.Tech Production and industrial engineering **Semester : VIII**
Course Name : Reverse Engineering **Time : 03 hrs**
Course Code : IPEG 433 **Max. Marks : 100**
Nos. of page(s) :
Instructions:

SECTION A

S. No.		Marks	CO
Q 1	Write down the strategic considerations for reverse engineering	5	CO-1
Q 2	Classify CMM probes and explain their working.	5	CO-2
Q 3	Classify Reverse engineering hardware. Give the advantages of Contact type scanner over non-contact type.	5	CO-3
Q 4	Define Rapid Prototyping. Enlist the general advantages and disadvantages of rapid prototyping.	5	CO-4
	SECTION B		
Q 5	Explain the generic process of reverse engineering in detail.	10	CO1
Q 6	Explain source illumination technique in detail. Derive the relation of disparity with focus of charged coupled devices by using triangulation method.	10	CO 2
Q 7	Explain Passive illumination techniques of scanning in detail.	10	CO3
Q 8	Give the detail classification of reverse engineering software. Explain RE data processing phases in detail. **OR** What are the advantages of using NURBS surfaces? Explain various approaches for creating NURBS surfaces in Reverse engineering.	10	CO3
	SECTION-C		
Q 9	a) Explain basic process of rapid Prototyping. **(5)** b) Explain Stereo lithography, Selective laser sintering and fused deposition modelling in detail. **(15)**	20	CO4
Q 10	Classify Non-contact type scanning techniques. Explain each of them in detail. **OR** Give phase wise description of fundamental reverse engineering operations used in RE software.	20	CO3