Name: Debashis Majumder **Enrolment No: 40001419**	UPES

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2018

Course: Transportation Design & Development
Semester: VII
Programme: Automotive Design Engineering
Time: 03 hrs. **Max. Marks: 100**
Instructions: ADEG 354

SECTION A

S. No.	Statement of question (All questions)	Marks	CO
Q 1	Describe 3D printing. Describe usage and technology involved in 3D printing.	**4**	**CO1**
Q 2	.Describe Trend Analysis. Describe it's use in vehicle design.	**4**	
Q 3	Describe the elements of Vehicle Styling.	**4**	
Q 4	Describe differences of characteristics of Personal Transportation design and public transportation system design.	**4**	
Q 5	Describe importance & applications of graphic design in vehicle design.	**4**	

SECTION B

	Statement of question(Any 5 Questions)		**CO4**
Q 6	Describe Ergonomics. Illustrate its use in automotive design.	**8**	
Q 7	Describe different steps in Vehicle Design Process and analyze how they contribute.	**8**	
Q 8	Describe future trends in Automotive. Illustrate with examples.	**8**	
Q 9	Describe the principles of Vehicle Exterior Design. Illustrate with examples.	**8**	
Q 10	Describe the principles of Vehicle Interior Design. Illustrate with examples.	**8**	
Q 11	Explain Biomimicry. Describe how it contributes in automotive design.	**8**	
Q 12	Describe Digital sculpting. Illustrate advantages of digital sculpting in vehicle design.	**8**	

SECTION-C

	Statement of question (Any two)		**CO5**
Q 13	Describe different design considerations for Vehicle Body Engineering.	**20**	
Q 14	Define Aerodynamics, drag, lift & spoilers. Describe its application in vehicle design.	**20**	
Q 15	Describe difference between automotive design engineering and Transportation design.	**20**	

Alternate Set of Model Question Paper

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SECTION A

S. No.	Statement of question (All questions)	Marks	CO
Q 1	Describe importance of Transportation design research Methodology. Describe usages.	4	CO1
Q 2	.Describe ethnographic research. Describe it's utility in transportation design.	4	
Q 3	Describe the usages of Vehicle Styling.	4	
Q 4	Describe the differences in design process for public transportation design & personal transportation design.	4	
Q 5	Describe vehicle aesthetics and list down parameters responsible for vehicle aesthetics.	4	

SECTION B

	Statement of question(Any 5 Questions)		CO4
Q 6	Describe how Anthropometry is different from Ergonomics.	8	
Q 7	Describe percentile value. Illustrate the percentile values used for Automobile design.	8	
Q 8	Describe role of technology and role of design for future vehicle. Illustrate how they are connected.	8	
Q 9	Describe process of development of Vehicle Exterior Design. Illustrate with examples.	8	
Q 10	Describe the importance of color & finish in vehicle interior design. Illustrate with example how design can enrich vehicle interior.	8	
Q 11	Explain process of getting inspiration from Biomimicry. Describe how it contributes in automotive design.	8	
Q 12	Describe differences between CAD Design & Digital sculpting. Illustrate advantages	8	

	of digital sculpting in vehicle design.		
	SECTION-C		
	Statement of question (Any two)		**CO5**
Q 13	Illustrate Biomimicry designing a racing car with the help of drawing. Show character transformation in product.	**20**	
Q 14	Define Aerodynamics, drag, lift & spoilers. Describe its application in vehicle design.	**20**	
Q 15	Draw one futuristic vehicle. Illustrate with drawing different parts & characters	**20**	