

**R09**

Code No: 56071

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech III Year II Semester Examinations, November/December - 2020**

**CONCEPTUAL DESIGN OF FLIGHT VEHICLES**

**(Aeronautical Engineering)**

**Time: 2 hours**

**Max. Marks: 75**

**Answer any five questions**

**All questions carry equal marks**

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1. Explain the important phases of aircraft design with required flow chart and figures. [15]
2. Derive the expressions for wing loading for different phases of aircraft. [15]
3. Discuss about lofting and explain isobar tailoring. [15]
4. Explain various types of landing gear arrangements. [15]
5. Discuss about the various aircraft loads acting on the aircraft. [15]
6. Explain the following:  
a) Level turning  
b) Instantaneous turn rate. [7+8]
7. Explain about the following:  
a) Production cost  
b) RDT and TE cost  
c) Production cost. [5+5+5]
8. Explain the design features that must be focused in designing a hypersonic vehicle, delta wing and blended wing aircraft. [15]

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