

**R18**

Code No: 158AC

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD**

**B. Tech IV Year II Semester Examinations, July/August - 2022**

**AERO ENGINE DESIGN  
(Aeronautical Engineering)**

**Time: 3 Hours**

**Max.Marks:75**

**Answer any five questions  
All questions carry equal marks**

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1. Discuss the most prominent compressible flow relationships. [15]
2. Explain the mission profile by phases in detail. [15]
3. Discuss in detail the constraint analysis with an example. [15]
4. Establish the relation between thrust loading and wing loading for horizontal acceleration case. [15]
5. What are the assumptions to be employed for engine performance analysis? And write about engine performance analysis. [15]
6. What are the different performance parameters need to consider for component behavior and explain each? [15]
7. Discuss the sizing the inlet area and sizing the exhaust nozzle. [15]
8. Explain the combustion systems components with neat sketches. [15]

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