

**B.Tech. AEROSPACE ENGINEERING
(BTAE)**

Term-End Examination

00188

June, 2016

**BAS-024 : INTRODUCTION TO ROCKETS AND
MISSILES**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **seven** questions. All questions carry equal marks.

1. What is a Rocket ? Classify and explain each type in brief. 10
2. What is area ratio ? Derive the expression for area ratio of a rocket nozzle. 10
3. Derive the expression for altitude at the end of powered flight for a rocket with vertical flight in fractional air. 10
4. Discuss composite propellant in detail. 10
5. Distinguish between homing command guidance and beam rider guidance. 10
6. What are the future trends in rockets ? Explain in detail. 10

7. Enlist various missiles developed in India. Write a note on any one of them. 10
8. Explain the significance of exhaust velocity and characteristic velocity in brief. 10
9. Write short notes on any *two* of the following : 5+5=10
- (a) Purpose and Utility of Rockets
 - (b) Missile Aerodynamics
 - (c) Solid Propellant Rockets
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