

SYLLABUS

B.A. / B.Sc. 2nd Year

THIRD SEMESTER

STATICS : (BM - 233)

Maharishi Dayanand University, Rohtak

Time Allowed : 3 Hours

Note. *The question paper will consist of **five** sections. Each of the first four sections will contain two questions and the students shall be asked to attempt one question from each section. **Section - V** will contain **six** short answer type questions without any internal choice covering the entire syllabus and shall be **compulsory**.*

Section - I

Composition and resolution of forces. Parallel forces. Moments and Couples

Section - II

Analytical conditions of equilibrium of coplanar forces. Friction. Centre of Gravity.

Section - III

Virtual work. Forces in three dimensions. Poinsot's central axis.

Section - IV

Wrenches. Null lines and planes. Stable and unstable equilibrium.

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Time Allowed : 3 Hours

Note. *The examiner is requested to set **nine questions** in all, selecting two questions from each section and **one compulsory question** consisting of five or six parts distributed over all the four sections. Candidates are required to attempt **five questions in all**, selecting **at least one question** from each section and the compulsory question.*

Section - I

Composition and resolution of forces. Parallel forces. Moments and Couples

Section - II

Analytical conditions of equilibrium of coplanar forces. Friction. Centre of Gravity.

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Virtual work. Forces in three dimensions. Poinsots central axis.

Section - IV

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CONTENTS

Chapter

Preliminaries

1. Forces Acting at a Point ✓	(i) -	act
2. Parallel Forces ✓	1.1 -	Me
3. Moments	....	2.1 -	eq
4. Couples	....	3.1 -	m
5. Analytical Conditions of Equilibrium of Coplanar Forces	....	4.1 -	S
6. Friction ✓	....	5.1 -	5.2
7. Centre of Gravity ✓	....	6.1 -	6.1
8. Virtual Work ✓	....	7.1 -	7.2
9. Forces in Three Dimensions ✓	....	8.1 -	8.2
10. Wrenches ✓	....	9.1 -	9.2
11. Null Lines and Null Planes ✓	....	10.1 -	10.11
12. Stable, Unstable and Neutral Equilibrium ✓	....	11.1 -	11.2
◆ Question Papers	....	12.1 -	12.2
	....	(i) -	(ii)

24/1/14
S/H/S