

CONTENTS

PART 1. INTRODUCTION

Unit 1. Atmospheric conditions	9
Unit 2. Principles of flight control	13

PART 2. AIRFRAME

Unit 1. Aircraft basic construction	19
Unit 2. Fuselage	23
Unit 3. Wings	27
Unit 4. Flight control surfaces	31
Unit 5. Landing gear	34

PART 3. PROPULSION

Unit 1. Propulsion – introduction	45
Unit 2. The piston engine – components and principles of operation	47
Unit 3. The piston engine – cycles of operation	52
Unit 4. Turboprop engine	55
Unit 5. Jet propulsion – introduction	58
Unit 6. Methods of jet propulsion	61
Unit 7. Bypass turbofans	66
Unit 8. Working cycle	69
Unit 9. Compressors	72
Unit 10. Turbines	79
Unit 11. Combustion chambers – introduction	83
Unit 12. Types of combustion chamber	87
Unit 13. Exhaust systems	94

PART 4. HELICOPTERS

Unit 1. Helicopters – components	101
Unit 2. Helicopters – principles of operation	105

ANSWER KEY	113
------------------	-----

WORKS CITED	147
-------------------	-----

IMAGES USED	148
-------------------	-----