

Note:

- (i) Attempt all questions
- (ii) Answers must be supported with sketches and graphs as applicable
- (iii) Questions 1 to 5 carry 15 Marks each
- (iv) Sub questions a, b, c, d & e carry 5 marks each

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|---|--|----|
| 1 | Attempt <b>ANY THREE :</b>   | 15 |
|   | a) Explain slipstream effect due to propeller                      | 5  |
|   | b) Write a note on T/O N1% thrust setting and G/A N1%              | 5  |
|   | c) write a note on throttle response in jet engine                 | 5  |
|   | d) Give advantages of POD mounting of engines on wing (under wing) | 5  |
|   | e) Explain the concept of FOD (Foreign Object Damage )             | 5  |
| 2 | Attempt <b>ANY THREE :</b>   | 15 |
|   | a) Explain the term coffin corner                                  | 5  |
|   | b) Describe Mach Trim system                                       | 5  |
|   | c) Effect of sweep back angle on wing drag and aircraft speed      | 5  |
|   | d) Explain the term Hydroplaning ( Acqua planning)                 | 5  |
|   | e) Describe the function of Yaw damper system                      | 5  |
| 3 | Attempt <b>ANY THREE :</b>   | 15 |
|   | a) Describe briefly, Take off from Contaminated runway             | 5  |
|   | b) V1 adjustment required for take off from wet runway             | 5  |
|   | c) Aircraft operation associated with Volcanic ash                 | 5  |
|   | d) Write a note of A/C Gear down despatch                          | 5  |
|   | e) Emergency Brakes system   | 5  |
| 4 | Attempt <b>ANY THREE :</b>   | 15 |
|   | a) Outline , Procedure on Bird-hit                                 | 5  |
|   | b) Landing gear steering system                                    | 5  |
|   | c) Write note on Noise measurement                                 | 5  |
|   | d) Explain the term Flex temperature                               | 5  |
|   | e) Explain the term , super stall                                  | 5  |
| 5 | Attempt <b>ANY THREE :</b>   | 15 |
|   | a) Explain the term jet upset                                      | 5  |
|   | b) Emergency Descent procedure for explosive decompression         | 5  |
|   | c) Write a note on noise generated by aircraft                     | 5  |
|   | d) When does the engine go into flight idle rpm, in flight?        | 5  |
|   | e) High speed buffet & high speed stall                            | 5  |

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