Roll No. | | | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 09

B.Sc. (Hons) Aircraft Maintenance (2018 Batch) (Sem.–3)

PISTON ENGINES AND PROPELLERS

Subject Code : BSCARM-304-18

M.Code : 76602

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

a) Define mechanical efficiency.

b) Define compression ratio.

c) What is pre-ignition?

d) What is the use of cam shafts?

e) Define magneto.

f) Define supercharging.

g) Define fuel additives.

h) Define manifold pressure.

i) Define cowlings.

j) Define feathering of propellers.

SECTION-B

2. Compare four-stroke and two stroke cycle engines.

3. Describe the construction of a single cylinder I.C. engine.

4. Explain the function of a simple carburetor of an I.C. engine with the help of a neat figure.

5. Explain the function of a fuel injection system, with the help of a neat figure.

6. Describe the construction of a wooden propeller with the help of a neat figure.

SECTION-C

7. A 4 cylinder four-stroke petrol engine develops 14.7 kW at 1000 rpm. The mean effective pressure is 5.5 bar. Calculate the bore and stroke of the engine, if the length of the stroke is 1.5 times the bore.

8. Describe blade element theory for propellers in details.

9. Explain the working of any two engine indication systems with the help of neat figures.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.