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Total No. of Pages : 02

Total No. of Questions : 09

B.Sc- Honours (Agriculture) (Sem.–3)

FARM MACHINERY & POWER

Subject Code : BSAG-305-19

M.Code : 78660

Date of Examination : 23-12-2022

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) Horizontal Suction
- b) Low land paddy seeder
- c) Farm Mechanization
- d) Steam Engine
- e) Firing Order
- f) Specific fuel consumption
- g) Primary Tillage
- h) Concave
- i) Alignment
- j) Rocker sprayer.

SECTION-B

2. Describe working of 4-stroke petrol engine along with neat and labelled sketch.
3. A 4 cylinder, 4 stroke engine bore is 79 mm, stroke is 127 mm, compression ratio is 18.5:1, belt horse power is 56 and engine speed is 1600 rpm. Calculate, a) displacement volume, b) piston speed, and c) stroke bore ratio.
4. Discuss in detail about different types of sprays based upon discharge rate.
5. Calculate actual field capacity and field efficiency of a 3×35 cm plough. The speed of ploughing is 3.5 kmph and time lost during various factors is 20 % of the total time.
6. Discuss the oil bath type air cleaner along with neat and labelled diagram.

SECTION-C

7. What is combine harvester thresher & name different types? Name its major parts. Explain its working along with advantages and disadvantages.
8. Determine the cost of operation per hour of a tractor with the following parameters; price of tractor = Rs. 5,50,000/-, life of tractor = 12 years, salvage value = 10%, interest rate = 10%, shelter & insurance charges = 2 % of purchase price, Price of Diesel = Rs. 84/- per litre, driver charges= Rs. 75 per hour, annual use of tractor = 800 hr. Assume any other necessary assumptions, if required..
9. What is the disc plough and discuss its various types? Discuss its advantages and disadvantages over M.B. plough.

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.