

**Roll No.**

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**Total No. of Pages : 02**

**Total No. of Questions : 09**

**B.Voc. (Agriculture) (Sem.-6)**

## FARM POWER AND MACHINERY

**Subject Code : BVAG-603-18**

**M.Code : 79429**

**Date of Examination : 04-01-2023**

**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) Piston rings
  - b) Thermostat valve
  - c) Electrical power
  - d) Thermosiphon method
  - e) Impact cutters
  - f) Olpad thresher
  - g) Header
  - h) Rack loss
  - i) Ridger
  - j) Check row planting.

## SECTION-B

2. Discuss the working of the fuel supply system of SI engine by giving suitable diagram.
3. A Massey Fergusson 1035 diesel engine has a 4 cylinder, 4 stroke engine. The cylinder bore is 79 mm, stroke = 127 mm, compression ratio = 18.5:1, belt horse power = 56 and engine speed = 1600 rpm. Calculate, i) piston displacement, ii) displacement volume, iii) piston speed, iv) stroke bore ratio.
4. What is thresher? Discuss about the working of a power thresher.
5. Discuss the working of forced feed system of lubrication.
6. Calculate the seed rate/ hectare of a 11×18 cm seed drill, whose main drive wheel is 124 cm diameter and total weight of grain collected in 20 revolutions is 0.525 kg.

## SECTION-C

7. What is the disc plough and discuss its various types? Discuss its advantages and disadvantages over M.B. plough.
8. What is the seed-cum-fertilizer drill? Write its various functions. Discuss various components of seed-cum-fertilizer drill.
9. 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.

**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.**