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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 : 93479

Date of Examination : 30-05-23

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) Spark plug
 - b) Valve timing
 - c) Straw walker
 - d) Governor
 - e) Disc plough
 - f) Fuel injection pump
 - g) Tilt angle
 - h) Pre cleaner
 - i) Rotavator
 - j) Combine harvester

SECTION-B

2. Describe the farm mechanization and discuss in what ways it may be done in our country.
3. What is paddy transplanter? Discuss its various types available in the market.
4. Why cooling an engine is needed and give the working of forced circulation system.
5. Calculate the seed rate/hectare of a 13x20 cm seed drill, whose main drive wheel is 105 cm diameter and total weight of grain collected in 20 revolutions is 0.5 kg.
6. A diesel engine has a 3 cylinder giving one power stroke for every 2 revolutions of crankshaft, cylinder bore = 88.9 mm, stroke = 127 mm, compression ratio = 16.5:1, belt horse power = 32 and engine speed = 2000 rpm. Calculate :
 - a) Piston displacement
 - b) Displacement volume
 - c) Piston speed
 - d) Stoke bore ratio.

SECTION-C

7. Determine the cost of operation per hour of a tractor with the following parameters; price of tractor = Rs. 7,50,000/-, life of tractor = 15 years, salvage value = 10%, interest rate = 10%, shelter & insurance charges = 2 % of purchase price, Price of Diesel = Rs. 88/- per litre, driver charges Rs. 800 per day, annual use of tractor = 800 hr. Assume any other necessary assumptions, if required.
8. What is a harvesting? What are different harvesting actions? How could it be done? Discuss the simplest tool used for it with its labelled diagram.
9. What is a sprayer? Write its functions, purpose and desirable qualities. Discuss the various spray types and nozzles types along with their patterns.

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.