



*Gaurav Pandey*

# INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR

Mid-Autumn Semester Examination 2022-23

Date of Examination: \_\_\_\_\_

Session: (FN/AN) \_\_\_\_\_

Duration: 2 hrs Full Marks: 40

Subject No.: AG 31 201

Subject: DESIGN OF FARM MACHINERY

Department/Center/School: AGRICULTURAL & FOOD ENGINEERING DEPARTMENT

Specific charts, graph paper, log book etc., required NIL

Special Instructions (if any): ANSWER ALL QUESTIONS

## Questions

- 1) An implement/ equipment has to be designed for the following purpose: Sowing maize crop. Design the implement/ equipment. Power source/ mode of operation is: tractor mounted. Explain the design following the steps studied. (Marks will not be given wherever the design is incomplete or not clear.) (12 marks)
- 2) An implement/ equipment has to be designed for the following purpose: Primary tillage for annually cultivated land. Design the implement/ equipment. Power source/ mode of operation is: tractor mounted. Explain the design following the steps studied. (Marks will not be given wherever the design is incomplete or not clear.) (12)
- 3) Explain the relationship between energy input in agriculture and yield of the crop. (4)
- 4) List objectives of tillage. (4)
- 5) Sketch and explain forces acting on a mould board plough bottom. (4)
- 6) Explain how a belt type seed metering device works. (4)

END

