

17580

16117

3 Hours / 100 Marks

Seat No.

--	--	--	--	--	--	--	--

**Instructions :** (1) All Questions are *compulsory*.

(2) Answer each next main question on a new page.

(3) Illustrate your answers with neat sketches wherever necessary.

(4) Figures to the right indicate full marks.

(5) Assume suitable data, if necessary.

(6) Use of Non-programmable Electronic Pocket Calculator is permissible.

(7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

**Marks**

**1. Attempt any FIVE :**

**20**

(a) Define farm mechanisation. State its objectives.

(b) (i) How are tillage classified ?

(ii) State benefits of tillage.

(c) Explain concept of field capacity and field efficiency.

(d) State and explain forces acting on tillage tools.

(e) Describe calibration of seed drill.

(f) Draw a diagram of Trencher.

(g) What are the safety precautions to be considered for plant protection equipments ?

**2. Answer any TWO :****16**

- (a) (i) State the purpose of disc plough. What are its types ?
- (ii) Describe construction and adjustment of any one type of disc plough.
- (b) Explain the principles of fruit harvesting tools and machines.
- (c) (i) Prepare a trouble shooting chart of power wheat and paddy thresher.
- (ii) Write about repair and maintenance procedure of it.

**3. Answer any TWO :****16**

- (a) Explain the status of farm mechanisation in India and scope for its development.
- (b) (i) What are the selection criterion of farm machines and matching equipments of farm needs ?
- (ii) How is cost of operation of farm-machines calculated ?
- (c) Explain construction and working of manure spreaders.

**4. Answer any TWO :****16**

- (a) Explain measurement of draft and fuel consumption for different implements under different soil conditions.
- (b) Explain construction, working and adjustments of windrower or reaper.
- (c) (i) Compare olpad thresher and power wheat and paddy thresher.
- (ii) Write the material and adjustment of maize harvesting and shelling equipment.

**5. Answer any TWO :****16**

- (a) Describe repair and maintenance procedure of animal and tractor driven harrow.
- (b) Explain construction and working principle of a bulldozer with a diagram.
- (c) (i) Write selection criteria of plant protection equipments.  
(ii) State functions and adjustment of a sprayer.

**6. Answer any FOUR :****16**

- (a) Compare in general, primary tillage equipments and secondary tillage equipments.
  - (b) State and explain the need of elevators.
  - (c) Explain repair and maintenance procedure of plant protection equipments.
  - (d) Explain the working of potato and groundnut digger.
  - (e) Name horticulture tools and gadgets.
  - (f) Name metering devices. Explain the method of planting.
-

