

Roll No. : (in figure) _____ (in words) _____
Student Index No. _____ Regn. No. _____ of _____

Time : Two Hours

Full marks : 40

Questions are of value as indicated in the margin

Part - I
(Objective and Short Answer Type)
(Use only ball point pen)

Time : 20 minutes

Full marks : 10

- Note:** 1. Answer in question paper itself.
2. Striking, rewriting or overwriting are not allowed in the objective type questions.

1. **Tick (✓) the correct alternatives :** 10×0.5=5
- i) Theoretical field capacity of a plow depends on a) Size of the plow b) Speed of operation
c) Size of plot d) both a) and b)
 - ii) Higher mechanization index is associated to a) Lower cost of cultivation
b) Higher time efficiency c) Higher field efficiency d) all of these
 - iii) Land holding of marginal farmers in India is a) <1ha b) 1-2 ha c) 2-4 ha d) 4-10 ha
 - iv) Cultivator comes under a) Primary tillage implement b) Secondary tillage implement
c) Intercultural operation implement d) harvesting implement
 - v) The firing order of 4s 4 cylinder is a) 1-3-4-2 b) 1-3-4-2 c) 1-4-2-3 d) 1-4-2-3
 - vi) In IC engine, FHP is a) IHP + BHP b) IHP – BHP c) IHP / BHP d) BHP / IHP
 - vii) In petrol engine the thermal efficiency is a) 25-30% b) 30-35% c) 40-50 d) 50-60
 - viii) Coulter and jointer are the attachment of a) MB plow b) Indigenous plow c) Seed drill
d) Disc harrow
 - ix) Lead and registration are associated with a) Seed drill b) Planter c) Cutter bar of mower
d) Sprayer
 - x) Tilt angle of disc plow varies from a) 10-15° b) 15-20° c) 5-10° d) 20-25°

2. **Write the utility of the following (short note) :**

5×1=5

- i) Fluted role of seed drill
- ii) Thermostat value of engine cooling system

(2)

iii) Coulter and jointer of plow

iv) Sparkplug

v) Concave of thresher

B.Sc. (Ag.) Honours Examination, 2019

Semester-IV

Course No: AEG-221 (Old)

(Farm Power and Machinery)

Part - II

(Descriptive Type)

Time : 100 Minutes

Full marks : 30

Questions are of value as indicated in the margin

Answer *any three* questions

3. a) What are the advantages and disadvantages of four stroke engine and two stroke engine? 5
b) Draw a line diagram of a four stroke IC engine and show any five components of it. 5
 4. a) What proper engine cooling is very important? Mention the various methods of engine cooling and explain briefly. 5
b) What do you mean by ignition system of IC engine Explain briefly. 5
 5. a) What are the objectives and advantages of farm mechanization in Indian condition? 5
b) In mechanized farming suggest the implements to be used in paddy cultivation in sequence. 5
 6. a) Mention various methods of seed sowing operations with their implements used. 5
b) What do you mean by calibration of seed drill and how it is done? 5
 7. a) What is secondary tillage implement? Briefly explain any two types of secondary tillage implement. 5
b) With a real sketch explain different components of a sprayer.
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