

22398

23124

3 Hours / 70 Marks

Seat No.

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- 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.

Marks

1. Attempt any FIVE :

10

- (a) Enlist various sources of farm power used in India.
- (b) Differentiate two stroke and four stroke Engine.
- (c) Define connecting rod.
- (d) Enlist different utility tractors.
- (e) Explain the purpose of differential unit.
- (f) Define Carburation.
- (g) Enlist functions of the fuel injector.

2. Attempt any THREE :

12

- (a) Give classification of tractor based on utility.
- (b) Enlist and explain various factors considered while selecting tractor.
- (c) Enlist different tractor system along with its functions.
- (d) Write note on following cost of tractor :
 - (i) Fixed cost
 - (ii) Variable cost



- 3. Attempt any THREE :** **12**
- (a) Explain characteristics of good fuel.
 - (b) Write note on different types of cooling system.
 - (c) Differentiate between forced circulation and splash lubrication system.
 - (d) Explain components of cooling system.
- 4. Attempt any THREE :** **12**
- (a) Give classification of governor in detail.
 - (b) Describe working of starting system in Tractor.
 - (c) Enlist any six advantages of hydraulic steering system.
 - (d) Write note on following :
 - (i) Governor Hunting
 - (ii) Governor Regulation
 - (e) Explain different components of clutch.
- 5. Attempt any TWO :** **12**
- (a) Explain working of differential unit with neat sketch.
 - (b) Enlist and explain various components of power transmission system used in tractor.
 - (c) Enlist various types of gear box used in tractor and explain any one of them.
- 6. Attempt any TWO :** **12**
- (a) Write note on :
 - (i) PTO (Power Take Of Shaft)
 - (ii) Drawbar in tractor
 - (b) Enlist different tractor control systems and explain any one in detail.
 - (c) Describe briefly different types of brakes.
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