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Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700125

## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Sc.(Ag)-Hons-2022/B.Sc.(Ag)-Hons-2023

Course Name – Farm Machinery and Power

Course Code - CC-BAG375(T)

( Semester III )

Full Marks : 50

Time : 2:0 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 20=20

1. Choose the correct alternative from the following :

- (i) Infer the correct option : In 4-stroke engine there is one power stroke for every \_\_\_\_\_ revolutions of the crank shaft.
 

|      |      |
|------|------|
| a) 1 | b) 2 |
| c) 3 | d) 4 |
- (ii) Infer one instrument that is not a hand tools?
 

|               |            |
|---------------|------------|
| a) M.B Plough | b) Shovel  |
| c) Spade      | d) Mattock |
- (iii) Infer one tools that is not a tractor drawn tillage tools?
 

|               |                 |
|---------------|-----------------|
| a) Cultivator | b) Auger plough |
| c) Harrow     | d) Plank        |
- (iv) Infer one tool that is not the secondary tillage tool?
 

|                |                  |
|----------------|------------------|
| a) Disc plough | b) Disc harrow   |
| c) M.B Plough  | d) None of these |
- (v) Show the correct option : What is the Vertical section of plough influences.
 

|                  |                      |
|------------------|----------------------|
| a) Pulverization | b) Depth of cut      |
| c) Width of cut  | d) Direction of pull |
- (vi) Relate the two primary tillage equipment's are \_\_\_\_\_.
 

|                               |                                |
|-------------------------------|--------------------------------|
| a) M.B plough and disc harrow | b) Disc plough and disc harrow |
| c) Disc harrow and cultivator | d) M.B Plough and disc plough  |
- (vii) Demonstrate the correct option : The mowers are designed to cut \_\_\_\_\_.
 

|            |            |
|------------|------------|
| a) Wheat   | b) Paddy   |
| c) Mustard | d) Grasses |
- (viii) Infer the correct option : Working width of disc plough can be increased by \_\_\_\_\_.
 

|                 |                       |
|-----------------|-----------------------|
| a) Disc angle   | b) Gang angle         |
| c) Disc section | d) Horizontal section |
- (ix) Show a option that is known as Correcting the seed rate \_\_\_\_\_

- a) Standardization  
c) Calibration  
(x) Interpret the tillage pattern.  
a) Head land pattern  
c) Casting  
(xi) Infer a option that is not relate to spark ignition engine.  
a) Spark plug  
c) Fuel injector  
(xii) Relate the most effective air cleaner in the case of diesel engine?  
a) Whirl type  
c) Wet type  
(xiii) Interpret the correct option : A carburettor is used to supply \_\_\_\_\_  
a) Petrol, air and lubricating oil  
c) Petrol and lubricating oil  
(xiv) Illustrate what happen If petrol engine is used in diesel engine.  
a) Low power will be produced  
c) Higher knocking will occur  
(xv) Show one type of engine there has maximum compression ratio.  
a) Diesel engine  
c) Gas engine  
(xvi) Demonstrate the correct answer : The heart of the tractor engine is \_\_\_\_  
a) Clutch  
c) Gear box  
(xvii) Interpret the correct option : Tillage is the mechanical manipulation of the \_\_\_\_\_  
a) Soil  
c) water  
(xviii) Infer one scientist name that was invented a traction engine or tractor.  
a) J.watt (1894)  
c) N.Hudson (1798)  
(xix) Demonstrate the correct answer : Thermostats are designed to start opening at \_\_\_\_ to \_\_\_\_ Celsius.  
a) 82°-85°C  
c) 70°-72°C  
(xx) Infer the correct temperature of optimum engine temperature is \_\_\_\_\_  
a) 60°C  
c) 100°C

b) Filtration  
d) Testing

b) Gathering  
d) All of these

b) Carburetor  
d) Ignition coil

b) Oil bath type  
d) Dry type

b) Air and diesel  
d) Petrol and air

b) Efficiency will be low  
d) Black smoke will be produced

b) Petrol engine  
d) All of these

b) Transmission gear  
d) Differential

b) Crop  
d) Air

b) Rodolph(1895)  
d) H.harries(1890)

b) 70°-75°C  
d) 72°-78°C

b) 82°C  
d) 120°C

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### Group-B

(Short Answer Type Questions)

2.5 x  
10=25

2. Illustrate about disadvantages of disc plough? (2.5)
3. Explain about Hydraulic control system. (2.5)
4. Briefly explain the Theoretical field capacity. (2.5)
5. Illustrate about different intercultural equipment's. (2.5)
6. Explain about seed cum fertilizer drill. (2.5)
7. Illustrate the calibration of seed drill? (2.5)
8. Distinguish between knapsack sprayer and power sprayer. (2.5)
9. Distinguish benefits and limitations of farm mechanization. (2.5)
10. Discuss the benefit of farm mechanization? (2.5)
11. Discuss about cost calculation of farm tractor by using straight line method. (2.5)

OR

Discuss about nozzle of sprayer.

(2.5)

**Group-C**

(Long Answer Type Questions)

5 x 1=5

12. Discuss about the power transmission system of the tractor.

(5)

**OR**

Discuss about the mouldboard plough implement.

(5)

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