

2023

AGS 3rd Semester Examination

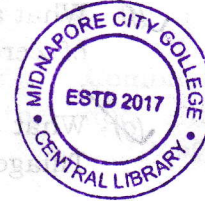
B.Sc. Hons. in Agriculture

Farm Machinery and Power

PAPER — AGS-305

Full Marks : 50

Time : 2 hours



The figures in the right-hand margin indicate marks.

*Candidates are required to give their answers
in their own words as far as practicable.*

Illustrate the answers wherever necessary.

Answer from **all** the Groups as directed.

GROUP—A

1. Answer **any five** questions from the following :

2×5=10

(a) What is the purpose of a Flywheel in a Tractor engine?

(b) Which type of Clutch is used in a Tractor engine?

/848

(Turn Over)

(2)

(c) What is S.F.C.? How much fuel is consumed in a Diesel engine?

(d) Why a Tractor engine possesses differential?

(A) What are the functions of Mower and Reaper?

(B) What are the advantages and disadvantages of Zero Tillage?

(C) What are the main objectives of Secondary Tillage operations?

(D) What are the advantages and disadvantages of Knapsack type sprayer?

GROUP—B

2. Answer any four questions from the following :
5×4=20

(A) What are the differences between 4-stroke and 2-stroke I.C. engines? 5

(B) Describe the Hydraulic brake system. What is meant by transmission system of a tractor engine? (4+1=5)

/848 (Continued)



(3)

(c) State the following terms :
1+1+1+1+1

(i) Disc angle

(ii) Tilt angle

(iii) Gang angle

(iv) Camber angle

(v) Throat clearance

(A) What are the main functions of a Combine Harvester Thresher? Name the important parts of it. 2½×2

(e) Write short notes on :- 2½×2

(i) Ballasting

(ii) Turbocharger

(B) What is Carburetor? How does it work? Name the different components of a common Carburetor with the help of a neat sketch. 1+2+2=5

GROUP—C

3. Answer any two questions from the following :
10×2=20

(a) Describe the working principle of 4-stroke C.I. engine with the help of a neat sketch. 10

/848 (Turn Over)

(4)

(b) Write down the differences between Diesel and Petrol engines. 10

(c) What are the main objectives of Tillage? What is function of M. B. Plough? Explain the different components of M. B. Plough. 5+2+3=10

(d) Mention several types of Harrows used in India. Describe the working of offset disc Harrow. 4+6=10

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