

2023

AGS 4th Semester Examination

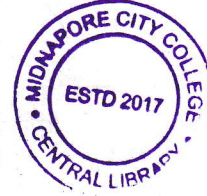
B.Sc. Hons. in Agriculture

Principles of Seed Technology

PAPER — 406

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 **all** questions.

1. Answer **any five** questions from the following :
2×5=10

(a) Define seeds and mention their role in agriculture.

(b) Write down the 'Harrington thumb rule'.

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(Turn Over)



(2)

- (c) Define transgenic crops citing an example.
- (d) Define orthodox and recalcitrant classes of seeds.
- (e) What is Seed Act and its enforcement?
- (f) Define microbiotic and macrobiotic seeds in respect of their longevity status. *2-3*
- (g) Mention the role of high temperature and high relative humidity for seed storage. *4-15*
- (h) What will be the treatments for Khaira disease infected rice field?

2. Answer any four questions from the following :
5x4=20

- (a) What are 'Foundation' and 'Certified' seeds? Write the procedure for seed certification. *2+3=5*
- (b) What is meant by postharvest management of crop seeds? Briefly state drying and processing of seed before storage. *2+3=5*

/578 (Continued)

(3)

- (c) Briefly discuss the role of WTO and OECD in seed marketing. *5*
- (d) Write a note on the duty and power of seed inspector including offenses and penalties. *5*
- (e) Explain the following points of seed production of wheat : *1x5=5*
 - (i) Isolation requirement
 - (ii) Time of sowing
 - (iii) Seed rate
 - (iv) Irrigation
 - (v) Seed yield
- (f) What is seed testing for quality assessment? Mention TTC test. *4+1=5*



3. Answer any two questions from the following :
10x2=20

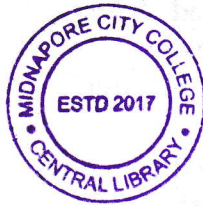
- (a) What is meant by deterioration of crop seeds? Write a detailed note on the various causes and control measures of seed deterioration under storage. *2+8=10*

/578 (Turn Over)

Handwritten marks: S, M, V, 1, 2, 3, 4, 5

(4)

(b) How does genetic purity of crop seeds differ from physical purity? What are GM and non-GM crops? Write the methods for detection of genetically modified crops. 3+2+5=10



(c) Briefly write the general principles of seed storage. Discuss the stages and factors affecting the longevity of seeds during storage. 4+6=10

(d) Define 'grow out' test of seeds. Write a comprehensive note on varietal identification of crop seeds employing molecular and biochemical tests. Mention seed production in sugarcane. 1+5+4=10

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