Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2015

(U.G.—CCSS)

Botany—Elective Course

BO 6B 11 (E02)—GENETICS AND CROP IMPROVEMENT

(2012 Admissions)

Time : Three Hours **Maximum : 30 Weightage**

Answer **all** *questions.*

I. Choose the correct answer :

1 _____ is not a method of breeding plants.

(a) Natural selection. (b) Hybridization.

(c) Polyploidy. (d) Artificial selection.

2 CTCRI is located at :

(a) Palode. (b) Kasargode.

(Srikaryom. (d) Kayamkulam.

3 Paraguay centre of origin of :

(a) Rice. (b) Coconut.

(c) Cashew. (d) Cassava.

4 The national gene bank for the conservation of plant genetic resource is :

(a) CCMB. (b) NBPGR.

(c) BARC. (d) RRII.

Fill in the blanks :

5 The acronym BARC stands for _____

6 An example of a wind pollinated crop is _____

7 _____type of photosynthesis is more susceptible to chilling stress.

8 _____ is an example of biofertliser.

Turn over

Answer in a single word :

9 Name a physical mutagenic agent.

10 Name an improved cultivar of Rubber.

11 The bacteria which grows in the roots of leguminous plants.

12 Name a diploid crop ?

(12 x $^1/_4$ = 3 w

II. Answer *all* questions. Short answer

13 What is inbreeding depression ?

14 Write a brief account on the mass selection.

15 Mention the any *four* biotic stresses on crop plants.

16 What is a chimera ?

17 Describe mating system of coconut.

18 What is green revolution ?

19 Explain heterobeltiosis.

20 Write a brief account on the genetics of photosynthesis.

21 Write a brief account on **TART.**

(9 x 1 = 9 wei

III. Answer any *five* questions. Short essay

22 Describe the means of managing saline soils.

23 Describe the adverse effect biotic stress on crop plants.

24 Differentiate between horizontal and vertical resistance.

25 Explain the problems in breeding cross fertilized crops.

26 Explain the various steps in plant introduction.

27 Differentiate between a clone and a pure line.

28 Describe the classes of plant genetic resources.

(5 x 2 = 10 we: ht

IV. Answer any *two* questions. Essay.

29 Describe heterosis breeding and seed certification.

30 Describe the achievements of breeding in the major crops of Kerala.

31 Describe the achievements of breeding crops against biotic and abiotic stresses.

(2 x 4 = 8 .