V.P. & R.P.T.P. Science College

B.Sc.-IVth Semester

BOTANY-US04CBOT02

(Plant Anatomy, Plant Embryology, Genetics and Plant Biotechnology)

Date-12/03/2019 **Time-3.00-5.00 p.m.**

Day- Tuesday **Marks: 50**

Q-1 Multiple choice questions. (08)

(1)Laticiferous vessel is found in_____.

(a)Phloem tissue (b) Xylem tissue (c) Cortex (d) none of these

(2)Floral nectarines associated with_____.

(a) Root (b) stem (c) leaves (d) flowers

(3)A microspore is the first cell of_____.

(a)male gametophyte (b)male sporophyte

(c) female gametophyte (d)female sporophyte

(4)Double fertilization refers to the fusion of_____.

(a)two polar nuclei (b)egg & polar nuclei

(c) Secondary nucleus with male gamete

(d)one male gamete with the egg & another with two polar nuclei

(5)Synapsis is the pairing of_____.

(a)homologous chromosome (b)analogous chromosome

(c)acentric chromosome (d)all of these

(6)The ratio of dominant epistasis is_____.

(a)1:1:1:1 (b)3:1 (c)12:3:1 (d)none of these

(7)The process of sterilization may be achieved by_____.

(a) heating (b)chemicals (c)both (d)none

(8)White biotechnology is commonly known as _____ biotechnology.

(a)agricultural (b)industrial (c)both (d)none

Q-2Attempt any five. (10)

(i)Define: Storied cambium.
(ii)Explain:Laticiferous tissue.
(iii)What is cross-pollination?
(iv)Explain: Syngamy.
(v)Write the significance of Linkage.
(vi)Define: Test-cross.
(vii)What are transgenic plants?
(viii)Define: Gene theory.

Q-3 Describe anamolous secondary growth in Boerhavvia stem. (08)

OR

Q-3 Define: Stomata. Write their types and describe. (08)

Q-4Define: Placentation. Describe its types. (08)

OR

Q-4 Explain: (a) Pollination in Commelina and Sunflower. (04)
(b)Monosporic embryosac. (04)

Q-5 (a) Write a note on: Law of Segregation. (05)
(b)Define: Incomplete dominance. (03)

OR

Q-5 Describe: Mendel's experiment. (08)

Q-6 Write about: Application of biotechnology in agriculture and industry. (08)

OR

Q-6 Describe: Biotechnology in biodiversity and its conservation. (08)