B-2163

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SUBJECT CODE NO:- B-2163
FACULTY OF SCIENCE AND TECHNOLOGY
B.Sc. T.Y (Sem.-VI) Examination OCT/NOV 2019
Botany Paper- XIX
(Genetics and Biotechnology)

[Time:1:30 Hours]   [Max. Marks:50]

Please check whether you have got the right question paper.

N.B   i) Attempt all questions.
          ii) Draw neat & well labeled diagram wherever necessary.

Q.1   Discuss interaction of gene. Explain in details supplementary genes or recessive epistasis   20
          with suitable example?

OR

What is sex-linked inheritance? Add a note on colour blindness & haemophilia in man?

Q.2   Define gene cloning? Explain plasmids & phase vectors?   20

OR

Write short notes (any- four)

    a) Sex determination in birds.

    b) G.J. Mendel.

    c) Gynandromorphs

    d) Restriction endonucleases

    e) Alkaptonuria

    f) Bt- Brinjal.

Q.3   Multiple choice Questions   10

1) A cross between f_1 & its recessive parent is called

    a) Back cross   b) Test cross

    c) Dihybrid cross   d) Recessive cross

2) Genic balance theory was proposed by

   A) Calvin Bridges   B) Bateson   C) Mendel   D) Castle

3) In dihybrid cross, the number a gamets are?

   A) 2   B) 4   C) 6   D) 8

4) In incomplete dominance when Red flower (RR) are crossed with white flowers (rr), the f_1 hybrid have --------------- coloured   flowers.

   A) Red   B) White   c) Black   D) Pink

5) One of the gene present exclusively on the x chromosome in human is concerned with

   A) Baldness   B) Haemophilia

   C) Night blindness   D) none of these

6) In case of Man males are --------------

   A) Homogametic   B) Heterogametic   C) A&B   D) None

7) PCR was invented by?

   A) Boyer & Cohen   B) Watson & crick   C) Kary mullis   D) None of these.

8) The most commonly used bacterium in plant transformation is?

   a) Rhizobium   b) E. coil   c) Azotobacter   d) Agrobacterium

9) One gene one enzyme hypothesis was proposed by

   a) Beadle   b) morgan   c) Mendel   d) None of these

10) Sex determination in plants was studied in ------------------

   a) Cassia   b) Melandrium   c) Geranium   d) None of these.