C 80146 (**Pages :** 2)

Name...................................

Reg. **No**..........................

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

(UG–CCSS)

Core Course

Biotechnology

BT 6B 03—RECOMBINANT DNA TECHNOLOGY

'rime : Three Hours

Maximum : 30 Weightage

1. Object type questions. Answer *all* questions :

    1 Which among the following is a sticky end cutter ?

      (a) EcoRI.

      (b) Sma I.

      (c) Both (a) and (b).

      (d) None of the above.

    2 The Buffer used for extracting RNA is generally.

      (a) Slightly acidic.

      (b) Slightly alkaline.

      (c) pH neutral.

      (d) None of the above.

    3 Which among the following is a phasmid

      (a) 2 EMBL.

      (b) X. WESWB'.

      (c) λgt 10.

      (d) X, ZAP.

    4 Which among the following is an anionic detergent :—

      (a) SDS.

      (b) CTAB.

      (c) Triton x 100.

      (d) All of the above.

    5 Which among the following is an exclusive feature of replacement vector :—

      (a) Marker.

      (b) Promoter.

      (c) Terminator.

      (d) Stuffer.

    6 Which among the following is the odd one :—

      (a) T_4 DNA ligase.

      (b) *E.Coli* DNA ligase.

      (c) Vaccinica topoisomerase II.

      (d) EcoRI.

    Say True *or* False :

    7 Maxam and Gilbert sequencing is a chain synthesis procedure.

    8 RFLP is a codominant molecular market.

Turn over

9 Golden Rice is carotenoid rich.

10 First cloned Buffalo is Ghairma.

11 Flavr Savr works by antisense RNA technology.

12 OD value of one at A_{260} = 40 ug/m/DNA.

(12 x ¼ = 3 weightage

II. Short answer type questions. Answer all *nine* questions :

13 Triparental mating.

14 Binary vector.

15 Dolly.

16 Reverse transcriptase.

17 X insertion vectors.

18 Phagemids.

19 Cosmids.

20 a complementation.

21 Virgenes.

(9 x 1 = 9 weight&

III. Short answer *or* Paragraph questions. Answer any *five* questions :

22 What is Western Blotting ? Outline the principle of Western Blotting ?

23 Briefly explain the sanger's dicleoxy sequencing ?

24 Compare and contrast pBR 322 and puc18 ?

25 What is qRT PCR ? What are its applications ?

26 What are the different types of ends produced by type II enzymes ?

27 What is the principle of polymerase chain reaction ?

28 Comment on molecular pharming.

(5 x 2 = 10 weightag

IV. Essay questions. Answer any *two* questions :

29 Briefly explain development, features and applications of M13 mp vectors ? Compare the with phagemids ?

30 Briefly explain the applications of transgenic plants ?

31 What is DNA finger printing ? What are its applications ?

(2 x 4 = 8 weightage)