V.P & R.P.T.P SCIENCE COLLEGE
MICROBIOLOGY
USO5CMIC01
INTERNAL TEST

DATE : 30/09/2013
Time : 3:30 p.m to 5:00 p.m TOTAL MARKS : 30
Note: Figures on the right indicate marks

QUE 1 : Attempt the following multiple choice questions: (06)

A) Ribosome recognition site on tRNA is present on this arm.
   i) DHU arm iii) Acceptor arm
   ii) TUC arm iv) None of these

B) 23S rRNA is present on this bacterial component.
   i) Ribosome iii) Cell membrane
   ii) Cell wall iv) All of these

C) This subunit of RNA Polymerase binds DNA template.
   i) β iii) ω
   ii) β' iv) α

D) Catabolite repression refers to the inhibitory effect of this metabolite.
   i) Lactose ii) Glucose
   ii) Galactoside iv) Allolactose

E) DNA replication origin in *E.coli* is known as ,
   i) OriA iii) OriC
   ii) OriB iv) OriD

F) DNA replication follows this mode.
   i) Semiconservative iii) Dispersive
   ii) Conservative iv) All of these

Que 2: Attempt the following short questions: (06)

i) Draw the structure of ATP.
ii) Name any two unusual bases present in tRNA
iii) Define : a) operon
   b) okazaki fragments
iv) State the function of Primase and ligase.
v) Write the contribution of : a) Howard Temin b) Arthur Kornberg
vi) Name the structural genes of lac operon.

Que 3: Discuss the experiments that helped in proving DNA as a genetic material. (06)

OR

Que 3 : Explain Watson & Crick model of DNA. (06)

Que 4: Explain initiation of DNA synthesis in *E.coli*. (06)

OR

Que 4: Describe Meselson & Stahl Experiment and mention its significance. (06)

Que 5: Explain termination of transcription in *E.coli*. (06)

OR

Que 5: Write a note on intron splicing. (06)