2022

Physiology

[HONOURS]

(CBCS)

(B.Sc. Fifth Semester End Examination-2022)

PAPER-C12T

Full Marks: 40 ***Time: 02 Hrs***

The figures in the right hand margin indicate marks

Candidates are required to give their answers in their own words as far as practicable

Illustrate the answers wherever necessary

1. Answer any five questions of the following: 5x2=10

a) What is linked gene?

b) Mention any four main differences between prokaryotic and eukaryotic Translation.

c) Explain Wobble hypothesis. How it contributes for the degeneracy of genetic code?

d) What do you mean by 'Semi conservative mode of replication'?

e) What do you mean by Okazaki fragment?

f) Name any in hibitor of translation and its mode of action.

g) What is the lac operon?

h) How Arabinose Operon is different from other operons?

i) Mention the function of gyrase?

2. Answer any four questions of the following: 4x5 = 20

a) What do the codons UGA, UAA and UAG mean in normal translation? Why is genetic code said to be degenerate? The codon AGG normally codes for argine but in altered translation it codes for stop. Where does it occur? 2+2+1

b) Differentiate between euchromatin & hetrochromatin. 5

c) List the proteins/ enzymes involved in the process of replication. How does replication start? Who prevents the unwound DNA for twisting back? 2+2+1

d) Describe the initiation process of translation. What is redundancy of genetic code? 4+1

e) What is operon? Discuss the mechanism of action of lacoperon. 1+4

f) What is inhibitor? What is the most important property of a cancer cell?

3. Answer any one question: 1x10 = 10

a) What is RDT? How does recombinant DNA technology work? Application of Recombinant DNA Technology. 2+3+5

b) Describe the process of transcription in prokaryotes. Mention two inhibitors of this process. 8+2

c) What role do oncogenes play in cancer? How do oncogenes affect cells? Which property is lost in cancer cells? 4+4+2
