RAMAKRISHNA MISSION VIDYAMANDIRA

(Residential Autonomous College under University of Calcutta)

B.A./B.Sc. THIRD SEMESTER EXAMINATION, SEPTEMBER 2014

SECOND YEAR

Dat	e :	: 15/09/2014	MICROBIOLOGY (Honours)	
Tim	ne :	: 2 pm – 4 pm	Paper : III	Full Marks : 50
1.	a) b) c)	How can y replication? How many a State the even phase?	you prove the discontinuous DNA synthesis on lagging-strand template active sites are present in DNA polymerase I? State their functions. ents when RNAP-DNA complex switched onto the elongation phase from ini	during (3) (3) tiation (2)
2.	a) b) c)	What is mease Which mease Which featur rho (ρ) pro-	ant by degeneracy of the genetic code? State its biological significance. sures are taken by the cell to increase the fidelity of DNA replication? ares of the synthesised RNA facilitates it to be terminated at proper site without tein?	(2) (3) out the (2)
3.	a) b) c)	Why chloro Name two n Mention im	plast is considered as a semi-autonomous organelle? Explain with proper exam narker enzymes of mitochondria. portant differences between prokaryotic and eukaryotic ribosomes.	(3) (1) (3) (3)
4.	a) b)	Draw the di What do yo	agram of Anderson sampler. Write down its mechanism of action. u mean by droplet nuclei?	(2+3) (2)
5.	a) b)	State the rol below the p Both lipids appropriate	e of cholesterol in controlling fluidity/viscosity of biological membranes abore hase transition temperature. and proteins are asymmetrically oriented in biomembranes – elaborate examples.	ve and (2) e with (3)
6.	In a) b) c)	a typical mor Is the rate o Can [ES] be Can [P] be g	nosubstrate uninhibited enzyme catalysed reaction, (In Vivo) f reaction a linear function of reactant concentration? e greater than [P]? greater than [S]?	(4) (2) (2)
7.	a) b) c) d) e)	What do you What are the Enzyme rea Define K _{cat} . Coenzyme c	u mean by E.C 1.1.1.27. e limitations of double reciprocal plot? ction varies with substrate concentration – Justify. can be considered as special class of substrate – Justify.	(2) (2) (2) (1) (1)

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