Seat No.: Enrolment No

Subject Code: 173606

GUJARAT TECHNOLOGICAL UNIVERSITY

Date:07/12/2015

BE - SEMESTER-VII EXAMINATION - WINTER 2015

Tir	ne: 1	Name: Medicinal Chemistry-II and Technology of Sterile Products 0:30am to 1:00pm Total Marks: 70 ons: Attempt all questions.	S
	2. 3.	Make suitable assumptions wherever necessary.	
Q.1	(a) (b)	Justify the statement- 'Biotin is a coenzyme of carboxylase enzymes' Explain the formulation of opthalmics products with suitable examples. Describe the formulation of eye drops in detail.	07 07
Q.2	(a)(b)	Define the following terms: (a) Amphoteric (b) Isoelectric point (c) Peptide (d) N-terminus (e) C-terminus (f) Zwitterions (g) Ylide Outline the synthesis of (a). Pyridoxine from oxazole derivative, (b) Menadione	07 07
		(Vitamin K3) OR	
	(b)	(i) Outline the synthesis of Niacinamide (non-enzymatic route). (ii) Outline the synthesis of Lipoic acid	04 03
Q.3	(a) (b)	Discuss the biosynthesis of Prostaglandins from Archidonic acid. Write short notes on (a) Solid phase synthesis (b) Diabetic Ketoacidosis OR	07 07
Q.3	(a) (b)	What is Oxidative decarboxylation? What happens to pyruvate immediately after this reaction? Name the enzymes involved in this reaction. Explain the mechanism of oxidative decarboxylation depicting each step. Draw (a) the two dipeptides made from Leucine & Cysteine and (b) the amino	07 07
		acids Serine & Tyrosine in their zwitterionic form.	
Q.4	(a) (b)	Describe the tests performed for evaluation of Parentral Products Write short notes on (a) Preformulation study for the sterile dosage forms (b) Antithyroid drugs.	07 07
Q.4	(a)	Write short notes on any two (a) Storage of blood and blood products (b) Role of Vitamin A in Wald's visual cycle (c) FMOC protection & deprotection of	07
	(b)	amino acids What are hormones? Give classification and explain different male sex hormones.	07
Q.5	(a)	What is the difference between "Lente" & "Ultralente" Insulin? Describe in brief Insulin isolation from animal pancreas and its storage	07
	(b)	What are the major symptoms of Diabetic mellitus? Explain Structure Activity Relationship (SAR) of Sulfonylureas. OR	07
Q.5	(a)	How do you classify oral antidiabetic drugs? Discuss the mechanism of action of Thiazolidinediones and Biguanides.	07
	(b)	Give synthesis of : (a) Metformin, (b) Pioglitazone HCl, (c) Glibenclamide.	07
