Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharm. Semester – IIND Examination –June/July- 2011

Subject code: 920205

Subject Name: Advances in Pharmaceutical Sciences

Date:04/07/2011 **Time: 10:30 am – 01:30 pm**

Total Marks: 80

Instructions:

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Discuss vinca alkaloids and their semi-synthetic derivatives keeping in view their anti-cancer potential.	**06**
	(b)	Enlist sources of camptothecin, Give its semi-synthetic analogues and write about important structural features essential for the anti cancer activity.	**05**
	(c)	Give sources of podophyllotoxin. Write a comparative note on them. Write a note on semi-synthetic derivatives of podophyllotoxin.	**05**
Q.2	**(a)**	Discuss giving suitable examples about probiotics and prebiotices of natural source.	**06**
	(b)	Discuss anti-oxidants as neutraceuticals.	**05**
	(c)	Discuss various Omega 3-fatty acids of natural origin, enlist their sources and write about their importance.	**05**
Q.3	**(a)**	Write a detailed note on ginseng and its adulterant.	**06**
	(b)	Write a note on drugs available under the name of brahmi and common adulterant.	**05**
	(c)	Write a note on (i) Huperazine, (ii) Galanthamine.	**05**
Q.4	**(a)**	Enlist cardiotonics agents from plant origin.Give their botanical soure, family and chemical constituents.	**06**
	(b)	Write a comparative note on Gum guggul and Salai guggul.	**05**
	(c)	Give sources of quinine, its mechanism of action (as an anti-malarial agent) and essential structural features for the activity.	**05**
Q.5	**(a)**	Discuss anti- HIV drugs of following categories: (i) Flavonoids, (ii) Coumarins and (iii) Alkaloids.	**06**
	(b)	Discuss Borntrager's test and its modification.	**05**
	(c)	Write a note on *Sylibum marianum* or *Gingko biloba*.	**05**
Q. 6	**(a)**	Write a note on urolithiatics and diuretics of plant source.	**06**
	(b)	Give details about following chemical tests, the working principle and the name/ type of compound responding them: (i) Kedde's test, (ii) Grignard reaction.	**05**
	(c)	Write a note on taxol.	**05**
Q.7	**(a)**	Write in detail about mechanism of action of curcumin in prevention of inflammation and essential structural features for the anti-inflammatory activity.	**06**
	(b)	Discuss insecticides of plant origin.	**05**
	(c)	Write general tests for following category of phytoconstituents: (i) Alkaloids and (ii) Tannins	**05**

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