

GUJARAT TECHNOLOGICAL UNIVERSITY
M. Pharm. – SEMESTER – II • EXAMINATION – WINTER • 2015

Subject Code: 2920205**Date: 09-12-2015****Subject Name: Advances in Pharmaceutical Sciences****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) 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.2** (a) Discuss in detail insecticides from natural source. **06**
- (b) Give tests for saponins. Write about hemolytic index and froth index. **05**
- (c) Define Pest and write brief account on pest management **05**
- Q.3** (a) Discuss application of various chromatographic techniques used for phytochemical screening. **06**
- (b) Write chemical tests for identification of tropane, xanthine and indole alkaloids. **05**
- (c) What are urolithetics? Explain it with suitable example. **05**
- Q.4** (a) Enlist the antimalarials obtained from plant sources and explain any one in detail. **06**
- (b) Describe the mechanism of action of antimalarial drugs. **05**
- (c) Write brief note on Natural Brain tonic. **05**
- Q.5** (a) Enlist cardiotonics agents from plant origin. Give their botanical source, family and chemical constituents. **06**
- (b) Write a comparative note on Gum guggul and Salai guggul. **05**
- (c) 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**
- Q. 6** (a) Explain the differentiating chemical tests between following phytoconstituent. **06**
1. Cardenolide and bufadienolide
2. Steroidal saponin and triterpenoid saponin
3. O- glycoside and C- glycoside
- (b) Explain immunomodulating activity of Galo and Ashwagandha. **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) Enlist sources of camptothecin, Give its semi-synthetic analogues and write about important structural features essential for the anti cancer activity. **05**
- (c) Write a note on bryostatins and flavoparidol. **05**