**西南大学**

### 《高等数学IA》课程

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| **2017～2016学年 第****学期** | | | | | | | | | | | | | | | **期** | | | | | | | |
| **考试时间** | | | **120分钟** | | | **考核方式** | | |  | | **学生类别** | | |  | | | | | | **人数** | | **230** |
| **适用专业或科类** | | | | **计信院软件专业、自动控制专业** | | | | | | | | | | | | **年级** | | **2014 级** | | | | |
| **题号** |  |  | | |  | |  |  | |  | |  |  | | | |  | |  | | **合计** | |
| **得分** |  |  | | |  | |  |  | |  | |  |  | | | |  | |  | |  | |
| **签名** |  |  | | |  | |  |  | |  | |  |  | | | |  | |  | |  | |

**阅卷须知：阅卷用红色墨水笔书写，得分用阿拉伯数字写在每小题题号前，用正分表示，不得分则在题号前写0；大题得分登录在对应的分数框内；统一命题的课程应集体阅卷，流水作业；阅卷后要进行复核，发现漏评、漏记或总分统计错误应及时更正；对评定分数或统分记录进行修改时，修改人必须签名。**

**特别提醒：学生必须遵守课程考核纪律，违规者将受到严肃处理。**

**1**(15 points). (1)e; (2) ; (3) (1,1); (4) ; (5) 

**2**(15 points). (1)—(5): CCACC

**3.** (1) **Solution**  (4 points)

 (4 points)

(2) **Solution**  (2 points)

 (4 points)

 (2 points)

(3) **Solution**  (8 points)

(4) **Solution** let ,(2 points)

(4 points)

(2 points)

(5) **Solution** We set  ,  ,  (2 points)

(4 points)

(2 points)

**4.** (1) **Solution** (3 points)

(3 points)

Find or from .

So the functionis continuous at every *x* ifor .(4 points)

(2) **Solution**

 (3 points)

*f*  is decreasing on and,increasing on.(3 points)

so the value of the local maximum is , the value of the local minimum is (4points)

(3)**Solution** Volume=(5points)

(5points)