**DIRECTORATE OF ADVANCE STUDIES**

**All page margins at 0.5"(narrow), Times New Roman font, line spacing 1.0**

**Upper-case, bold, centred, font size 12, line spacing 1.0, space before and after paragraph 6 pt**

**Select one title of the degree**

**SINDH AGRICULTURE UNIVERSITY, TANDOJAM**

**SUMMARY OF SYNOPSIS FOR M.SC./M.S.(I.T)/M.E./M. PHIL./PHD DEGREE PROGRAM**

**Bold, capitalize each word, font size 12**

**Not bold, capitalize each word**

**indent at 0.5", line spacing 1.0**

**Name of student:** Name In Full **Reg. No:** PH.D.-2KXX-XY-63

**Department:** Name of Department **Faculty:** A. H. & Vet. Sciences

**Title: Lysine and *Bacillus subtilis* E. supplementation ameliorate dexamethasone-stress induced changes in histomorphology of small intestine of broiler**

**Font size 12, sentence case, justified, line spacing 1.0, space before & after paragraph 6 pt**

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| **Rationale / Problem Statement**  **font size 11, bold, no semicolon, line spacing 1.0, capitalize each word**  The demand for the inexpensive proteins is increasing dramatically and poultry uptake is forecasted to rise faster worldwide in the coming decade (Abd-El-Sameeet al.,2013). The long-term use of dexamethasone leads to dexamethasone stress (DS) which may produce many problems in the poultry (Aengwanich*,* 2007). The supplementation of the synthetic lysine elevates the nitrogen retention and the protein accretion, which improves the animal growth performance and the immune function (Salteret al., 1990; Roy et al., 2000; Fraga et al., 2008*;* Shelton et al., 2011; Faluyi et al; 2015). Probiotics are live micro-organisms, which if given in the adequate amount, produce the health benefits to the host by the improvement of the intestinal microbial balance (FAO/WHO, 2002; Foulquiéet al., 2006). Therefore, this study has been designed to find out the potential of dietary Lysine and Probiotic (*Bacillus subtilis*) preparation alone and in combination to study the ameliorative effects in dexamethasone induced stress in broiler chicken.  **Indent at 0.5", line spacing 1.0**  **Bold, left alignment, line spacing 1.0** |
| **Objectives**   1. Effects of lysine and *Bacillus subtilis* supplementationagainst dexamethasone-stress induced changes in histomorphology of small intestine of broiler 2. Effects of lysine and *Bacillus subtilis* supplementationagainst dexamethasone-stress induced changes in antioxidant enzymes of broiler   **Bold, left alignment, line spacing 1.0, Capitalize each word**  **Indent at 0.5", line spacing 1.0** |
| **Brief Methodology**  Total 336 broiler chicks will be initially weighed and randomly divided into seven groups, i.e., positive control; negative control; *B. subtilis* (dose of 100 mg/kg diet+DS); lysine (dose of 5 g/Kg diet+DS); *B. subtilis* (dose of 100 mg/Kg diet) and lysine (dose of 5 g/Kg diet) + DS; lysine (dose of 11 g/Kg diet+DS); *B. subtilis* (dose of 100 mg/ton diet) and Lysine (dose of 11 g/Kg diet) +DS in combination. Whereas, from day 21- 28, dexamethasone in powder form will be added at the dose of 3 mg/L of drinking water daily to produce dexamethasone stress (DS). Total duration will be 42 days. Histomorphology and biometry of small intestine will be done using tissue samples. Antioxidant status in response to dexamethasone stress will be evaluated and compared with control on day 28 and at the end of the trial (42 days)  **indent at 0.25", space after each parag-raph 6 pt**  **Statistical Design**  Data shall be analyzed by one-way analysis of variance (ANOVA) and presented as mean ± SEM |

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| **Signature of student: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | | **Date: \_\_\_\_\_\_\_\_\_\_\_\_\_** |
| **Supervisory committee**  **bold, font size 12, capitalize each word, line spacing 1.0, space before para 6 pt** | **Name and designation** | **Signature with remarks (if any)** |
| **Supervisor** | **Dr. Xyz Xyz Xyz**  **font size 11, bold, sentence case, line spacing 1.0, space before paragraph 6 pt**  Designation | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Co-Supervisor-I** | **Dr. Xyz Xyz Xyz**  Designation | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| **Co-Supervisor-II** | **Dr. Xyz Xyz Xyz**  Designation | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| ***Date of Submission of 1st draft***  ***Date of BOS meeting***  ***Date of Submission of final draft***  **Forwarded By** | **Date of meeting**  **font size 12, non-bold** | **Signature with date** |
| **Chairman BOS** | **Dr. Xyz Xyz Xyz** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. **Coordinator PG** | **Dr. Xyz Xyz Xyz** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 1. **Dean** 2. **DAS** | **Dr. Xyz Xyz Xyz**  **Dr. Xyz Xyz Xyz**  **Summary page should not exceed one page for Master’s synopsis and two pages for PhD synopsis** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |