

**RANI CHANNAMMA UNIVERSITY, BELAGAVI.****Department of Post Graduate Studies and Research in Commerce****Syllabus of Master of Commerce****(With effect from Academic Year 2017-18)****IV Semester**

### M.Com Course Structure

Sem	Paper Code	Course	IA Marks	Sem End Marks	Total	Hrs/Week	Credits	
III	3.1	Business Research Methods	20	80	100	04	04	
	3.2	International Financial Management	20	80	100	04	04	
	<b>Group- A : Accounting and Finance</b>							
	3.3 A	Financial Markets and Institutions	20	80	100	04	04	
	3.4 A	Corporate Accounting	20	80	100	04	04	
	3.5 A	Accounting for Specialised Institutions	20	80	100	04	04	
	<b>Group- B: Cost Accounting</b>							
	3.3 B	Production and Operation Management	20	80	100	04	04	
	3.4 B	Cost Management	20	80	100	04	04	
	3.5 B	Cost Accounting Standards	20	80	100	04	04	
	<b>Group - C: Banking</b>							
	3.3 C	Bank Marketing	20	80	100	04	04	
	3.4 C	Banking in India	20	80	100	04	04	
	3.5 C	Management Accounting for Bankers	20	80	100	04	04	
	<b>Open Elective Course</b>							
	3.6	To be chosen from the other Department	20	80	100	04	04	
		<b>Open Elective Course meant for other Departments - Personal Financial Planning</b>	20	80	100	04	04	
	<b>Total Marks/Credits</b>			<b>120</b>	<b>480</b>	<b>600</b>	<b>24</b>	<b>24</b>
IV	4.1	E-Commerce	20	80	100	04	04	
	4.2	International Business	20	80	100	04	04	
	4.3	Project Report	50	50	100	04	04	
	<b>Group A: Accounting and Finance</b>							
	4.4 A	Security Analysis and Portfolio Management	20	80	100	04	04	
	4.5 A	Innovations in Accounting	20	80	100	04	04	
	4.6 A	Mutual Funds	20	80	100	04	04	
	<b>Group- B: Cost Accounting</b>							
	4.4 B	Techniques of Costing	20	80	100	04	04	
	4.5 B	Strategic Cost Management	20	80	100	04	04	
	4.6 B	Recent Developments in Cost Accounting	20	80	100	04	04	
	<b>Group - C: Banking</b>							
	4.4 C	Foreign Exchange and Risk Management	20	80	100	04	04	
	4.5 C	Financial Management in Commercial Banks	20	80	100	04	04	
	4.6 C	Fund Management in Commercial Banks	20	80	100	04	04	
	<b>Total Marks/Credits</b>			<b>150</b>	<b>450</b>	<b>600</b>	<b>24</b>	<b>24</b>



**A PROJECT REPORT ON  
"A STUDY ON EMPLOYEES SATISFACTION TOWARDS  
SHAKUNTALA HONDA MOTARS GOKAK"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
Course code - 003  
Academic Year-2018-19**

**SUBMITTED BY**

**MISS. ARATI R. BHANGARI**

**REG.NO: MC171802**

**INTERNAL GUIDE**

**Prof. S.A.DESHPANDE**



**K.L.E. SOCIETY'S  
G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE  
COLLEGE, NIPANI.**



**KLE SOCIETY'S**  
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*Department of Post graduate studies in Commerce.*

(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)



**CERTIFICATE**

This is to certify that the project report entitled "**A STUDY ON EMPLOYEES SATISFACTION TOWARDS SHAKUNTALA HONDA MOTORS GOKAK**" is submitted by **Miss. ARATI R.BHANGARI (REG.NO: MC171802)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
**Prof.S.A.Deshpande**

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PRINCIPAL  
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**A PROJECT REPORT ON  
“ A STUDY ON RECRUITMENT AND SELSCTION PROCESS IN  
SHREE RENUKA SUGARS LTD RAIBAG”**



**VIDYASANGAMA**

**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF MASTER  
OF COMMERCE  
Course Code- D03  
Academic Year-2018-19**

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This is to certify that the project report entitled **"A STUDY ON RECRUITMENT AND SELECTION PROCESS IN SHREE RENUKA SUGARS LTD RAIBAG"** is submitted by **Mr. Ashok .M. Vadagole (REG.NO: MC171803)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, **KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE** (Department of post graduation studies in commerce), Nipani .

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**A PROJECT REPORT ON  
"A STUDY ON IMPACT OF LABOUR ABSENTEEISM ON  
PRODUCTIVITY AT SHIVSHAKTI SUGARS LTD, SOUNDATTI"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

Course Code - P03

Academic Year-2018-19

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**REG.NO: MC171804**

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This is to certify that the project report **"A STUDY ON IMPACT OF LABOUR ABSENTEEISM ON PRODUCTIVITY AT SHIVSHAKTI SUGARS LTD. SOUNDATTI** is submitted by **Mr.Bandu S Mali (REG.NO: MC171804)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
"A STUDY ON CUSTOMER SATISFACTION TOWARDS  
YAMAHA BIKES AT SRI DARISHWAR AUTO'S CHIKODI."**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
course code - P03  
Academic Year-2018-19**

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**CERTIFICATE**

This is to certify that the project report entitled **“ A STUDY ON CUSTOMER SATISFACTION TOWARDS YAMAHA BIKES AT SRI DARISHWAR AUTO'S CHIKODI”** is submitted by **Miss. BHARATI R.BHANAJ (REG.NO: MC171805)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
A STUDY ON RISK MANAGEMENT IN MICRO FINANCE  
AT IDF FSPL HUKKEI REGION**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
course code - 003  
Academic Year-2018-19**

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**MISS. DEEPA S MAGADUM**

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**CERTIFICATE**

This is to certify that the project report entitled **A STUDY ON RISK MANAGEMENT IN MICRO FINANCE AT IDF FSPL HUKKEI REGION** Is submitted by **DEEPA S MAGADUM REG NO: MC171806** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in the Department of Commerce, KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani affiliated to Rani Channamma university, Belagavi, during the academic year 2018-2019.

S

**Prof. S.A. Deshpande**

**Prof. S.A. Deshpande**

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**A PROJECT REPORT ON  
“ A STUDY ON PERFORMANCE AND PROBLEMS OF SHRI  
GAYATRI URBEN CREDIT SOUHARD SAHAKARI NIYMIT.  
HATTRGI. ”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**Course code -D03**

**Academic Year-2018-19**

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**MISS. KAVERI D. BADA KAR**

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This is to certify that the project report entitled **“ A STUDY ON PERFORMANCE AND PROBLEMS OF SHRI GAYATRI URBEN CREDIT SOUWARD SAHAKARI NIYMIT. HATTRGI.”** Is submitted by **Miss. KAVERI D. BADA KAR REG.NO. MC171808** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
" A STUDY ON IMPACT OF SELF-HELP GROUPS ON WOMEN  
EMPOWERMENT IN CHIKODI TALUKA IN BELAGAVI DISTRICT"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF MASTER OF  
COMMERCE**

**Course code - D03  
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**CERTIFICATE**

This is to certify that the project report entitled **"A STUDY ON IMPACT OF SELF-HELP GROUPS ON WOMEN EMPOWERMENT IN CHIKODI TALUKA IN BELAGAVI DISTRICT"** Is submitted by **KRISHNABAI. M .PIRAJI ( REG.NO: MC171809)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post-graduation studies in commerce) Nipani.

  
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**A PROJECT REPORT ON  
“ A STUDY ON CASH FLOW STATEMENT AT SHRI  
DOODHAGANGA KRISHNA SAHAKARI SAKKARE KARKHANE  
NIYMIT, CHIKKODI”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
Course code - D03  
Academic Year-2018-19**

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**CERTIFICATE**

This is to certify that the project report entitled "**A STUDY ON CASH FLOW STATEMENT AT SHRI DOODHAGANGA KRISHNA SAHAKARI SAKKARE KARKHANE NIYMIT, CHIKKODI**" is submitted by **Miss. LAXMI K. WATHARE** (Reg No: MC171810) in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
“ A STUDY ON ANALYSIS OF FINANCIAL STATEMENTS AT  
POORVBHAG PRATHAMIK KRUSHI PATTIN SAHAKAR  
SANGH N., SADALAGA”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**Course Code - P03**

**Academic Year-2018-19**

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**CERTIFICATE**

This is to certify that the project report **"A STUDY ON ANALYSIS OF FINANCIAL STATEMENTS AT POORVBHAG PRATHAMIK KRUSHI PATTIN SAHAKAR SANGH N., SADALAGA"** is submitted by **Miss.Megha M Chandagade (REG.NO: MC171811)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON**  
**“ A STUDY ON COST VOLUME AND PROFIT ANALYSIS IN**  
**DECISION MAKING IN HALSIDHNATH SAHAKARI SAKHAR**  
**KHARAKHNA LTD NIPANI”**



**SUBMITTED TO**

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**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

*course code - 003*

*Academic Year-2018-19*

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This is to certify that the project report "**A STUDY ON COST VOLUME AND PROFIT ANALYSIS IN DECISION MAKING IN HALSIDHNATH SAHAKARI SAKHAR KHARAKHNA LTD NIPANI**" is submitted by **Mr. Mohan Biraje (REG.NO: MC171812)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON**  
**“ A STUDY ON ANALYSIS OF FINANCIAL STATEMENT OF THE**  
**NUCLEUS GRAPHICS AT ICHALAKARANJI”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*course code- P03*  
**Academic Year-2018-19**

**SUBMITTED BY**

**Miss. Nishiganda Ganapati Mali**  
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**CERTIFICATE**

This is to certify that the project report "**A STUDY ON ANALYSIS OF FINANCIAL STATEMENT OF THE NUCLEUS GRAPHICS AT ICHALAKARANJI**" is submitted by **Nishiganda Mali (REG.NO: MC171813)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
“ A STUDY ON LABOUR WELFARE MANAGEMENT AT  
VENKATESHWARA POWER PROJECT LTD.”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**Course code-PO3**

**Academic Year-2018-19**

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**(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)**



**CERTIFICATE**

This is to certify that the project report "**A STUDY ON LABOUR WELFARE MANAGEMENT AT VENKATESHWAR POWER PROJECT LTD.**" is submitted by **Miss. Padmashree K. Langote (REG.NO: MC171814)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**Dr.M.B.Kothale**

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**G.I. Bagawadi Arts, Science & Commerce College, NIPANI.**



**A PROJECT REPORT ON**  
**“ A STUDY ON CRITICAL ANALYSIS OF NON- PERFORMING**  
**ASSETS AT THE JANATA CO-OPERATIVE BANK LTD.**  
**SADALAGA”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

*Course Code - D03*

**Academic Year-2018-19**

**SUBMITTED BY**

**MISS. PALLAVI SIDDESHWAR ANURE**

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**UNDER THE GUIDANCE OF**

**Dr. C.V.KOPPAD**



**K.L.E. SOCIETY'S**  
**G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE, NIPANI.**



**KLE SOCIETY'S  
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*Department of Post graduate studies in Commerce.*

**(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)**



**CERTIFICATE**

This is to certify that the project report " **A STUDY ON CRITICAL ANALYSIS OF NON- PERFORMING ASSETS AT THE JANATA CO-OPERATIVE BANK LTD, SADALAGA**" is submitted by **Miss. Pallavi Anure (REG.NO: MC171815)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
**Dr.C.V.Koppad**

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**A PROJECT REPORT ON  
"A STUDY ON CONSUMER BUYING BEHAVIOUR AT UTTAM  
MOTORS IN SADALAGA CITY"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**Course code- P03**

**Academic Year-2018-19**

**SUBMITTED BY**

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**CERTIFICATE**

This is to certify that the project report **"A STUDY ON CONSUMER BUYING BEHAVIOUR AT UTTAM MOTORS IN SADALAGA CITY"** is submitted by **Miss.Pooja B Patil(REG.NO: MC171816)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
“ A STUDY ON CREDIT RISK ASSESSMENT AT SHRI  
BEERESHWAR CO-OP CREDIT SOCIETY LTD.,  
EXAMBA(MULTY-STATE)”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

*course code - D03*

**Academic Year-2018-19**

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**CERTIFICATE**

This is to certify that the project report entitled "**A STUDY ON CREDIT RISK ASSESSMENT AT SHRI BEERESHWAR CO-OP CREDIT SOCIETY LTD., EXAMBA(MULTY-STATE)**" is submitted by Miss. **POOJA S GAJARE (REG.NO: MC171817)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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Commerce College, NIPANI**

**A PROJECT REPORT ON  
“ A STUDY ON CUSTOMER RELATIONSHIP MANAGEMENT  
PRACTICES IN RETAIL INDUSTRY AT M. K. SUPER MARKET,  
HUKKERI ”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
Course Code - 003  
Academic Year - 2018-19**

**SUBMITTED BY**

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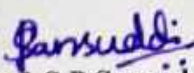
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**CERTIFICATE**

This is to certify that the project report entitled **“ A STUDY ON CUSTOMER RELATIONSHIP MANAGEMENT PRACTICES IN RETAIL INDUSTRY AT M. K. SUPER MARKET,HUKKERI ”** is submitted by **Miss. PREETIPARVATI C. KARDEGOUDA (REG. NO. MC171819)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, **KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE** (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON**  
**“ A STUDY ON EVALUATION OF FINANCIAL**  
**PERFORMANCE OF PADMAWATI FORGE PVT.LTD. KAGAL.”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*Course code - P03*  
**Academic Year-2018-19**

**SUBMITTED BY**

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**Prof. S.P. SANSUDDI**



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**CERTIFICATE**

This is to certify that the project report entitled **“ A STUDY ON EVALUATION OF FINANCIAL PERFORMANCE OF PADMAWATI FORGE PVT.LTD,KAGAL”** is submitted by **Miss. PRIYANKA R.KHOT (REG.NO: MC171820)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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Dr.M.B.Kothale

**Principal  
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Commerce College, NIPANI**

**A PROJECT REPORT ON**  
**“ A STUDY ON CAPITALIZATION AT SHREE HIRANYAKESHI**  
**SAHAKARI SAKKARE KARKHANE NIYAMIT SANKESHWAR”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
**Course code - P03**  
**Academic Year-2018-19**

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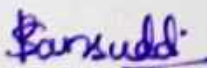
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**CERTIFICATE**

This is to certify that the project report entitled "**A STUDY ON CAPITALIZATION AT SHREE HIRANYAKESHI SAHAKARI SAKKARE KARKHANE NIYAMIT SANKESHWAR**" is submitted by **Miss. PUSHPALAXMI R.PUJARI(REG.NO: MC171821)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**Dr. M.B.Kothale**  
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**A PROJECT REPORT ON**  
**“IMPACT OF JOB SATISFACTION ON PERFORMANCE OF**  
**EMPLOYEES- A CASE STUDY OF JINABAKUL FORGE PVT**  
**LTD. BELAGAVI.”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*Course Code - D03*  
**Academic Year-2018-19**

**SUBMITTED BY**

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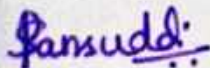
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**CERTIFICATE**

This is to certify that the project report entitled **"IMPACT OF JOB SATISFACTION ON PERFORMANCE OF EMPLOYEES- A CASE STUDY OF JINABAKUL FORGE PVT LTD. BELAGAVI."** is submitted by **MISS.RASHMI.M.NANDEPPANAVAR** (REG.NO: MC171822) in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .



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**A PROJECT REPORT ON  
" A STUDY ON INVENTORY MANAGEMENT AT SHREE  
D.K.SS.K.N.CHIKKODI"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF MASTER  
OF COMMERCE  
Course Code - D03  
Academic Year-2018-19**

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**COLLEGE**

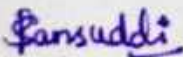
*Department of Post graduate studies in Commerce.*

(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)



**CERTIFICATE**

This is to certify that the project report entitled "**A STUDY ON INVENTORY MANAGEMENT AT SHREE D.K.S.S.K.N.CHIKKODI**" is submitted by **Mr.Ravindra.A.Honnamani (REG.NO: MC171823)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**A PROJECT REPORT ON  
" A STUDY ON FUND FLOW STATEMENT AT SHRI  
DOODHAGANGA KRISHNA SAHAKARI SAKKARE KARKHANE  
NIYMIT, CHIKKODI"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**course code-003**

**Academic Year-2018-19**

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**G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE**  
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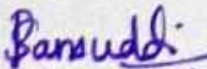
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**CERTIFICATE**

This is to certify that the project report entitled “ **A STUDY ON FUND FLOW STATEMENT AT SHRI DOODHAGANGA KRISHNA SAHAKARI SAKKARE KARKHANE NIYMIT, CHIKKODI**” Is submitted by Miss. Seema L Waddar (REG.NO: MC171824) in partial fulfillment of the requirements for the award of degree of Master Of Commerce in the Department of Commerce, KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani.

  
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**Dr. M.B. Kothale**

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**G.I. Bagewadi Arts, Science & Commerce College, NIPANI.**

**A PROJECT REPORT ON**  
**“A STUDY ON INVESTORS PERCEPTION TOWARDS**  
**INVESTMENT AVENUES IN HUKKERI AREA.”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*course code - 003*  
**Academic Year-2018-19**

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**CERTIFICATE**

This is to certify that the project report entitled **" A STUDY ON INVESTORS PERCEPTION TOWARDS INVESTMENT AVENUES IN HUKKERI AREA."** is submitted by **MISS. SHAKTI A. MARAGALI** (REG.NO: MC171825) in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

  
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**PRINCIPAL**  
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Commerce College, NIPANI



**A PROJECT REPORT ON**  
**“ A STUDY ON TO ANALYZE CHANGING CONSUMPTION PATTERN**  
**OF CONSUMERS AT JYOTI BAZAR, EXAMBA”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*course code - D03*  
**Academic Year-2018-19**

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This is to certify that the project report entitled **" A STUDY ON TO ANALYZE CHANGING CONSUMPTION PATTERN OF CONSUMERS AT JYOTI BAZAR, EXAMBA "** is submitted by **Mr. SHRISHAIL R. KHOT REG.NO: MC171826** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

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**Dr.M.B.Kothale**

**Principal**  
**PRINCIPAL**

**G.I. Bagewadi Arts, Science & Commerce College, NIPANI**

**A PROJECT REPORT ON**  
**“ A STUDY ON COMPARATIVE ANALYSIS OF FINANCIAL**  
**STATEMENT AT SHRI BEERESHWAR CO-OP.CREDIT**  
**SOCIETY LTD., EXAMBA (Multi-State)**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**

**MASTER OF COMMERCE**

**Course Code -D03**

**Academic Year-2018-19**

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This is to certify that the project report . "A STUDY ON COMPARATIVE ANALYSIS OF FINANCIAL STATEMENT AT SHRI BEERESHWAR CO-OP.CREDIT SOCIETY LTD., EXAMBA (Multi-State)" is submitted by Miss. Shruti .K. Desai (REG.NO: MC171827) in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

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**Principal**  
**PRINCIPAL**  
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**A PROJECT REPORT ON  
“A STUDY ON BRAND STRATEGIC PLAN FOR BHARATI  
AIRTEL LTD, CHIKODI.”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
Course Code- D03  
Academic Year-2018-19**

**SUBMITTED BY**

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This is to certify that the project report entitled **“ A STUDY ON BRAND STRATEGIC PLAN FOR BHARATI AIRTEL LTD, CHIKODI ”** is submitted by **Miss. SHUBHA M. MADANALLI (REG.NO: MC171828)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in, **KLE's G.I.B COLLEGE ARTS, SCIENCE AND COMMERCE COLLEGE** (Department of post graduation studies in commerce), Nipani .

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**Dr. M.B. Kothale**

**Principal  
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Commerce College, NIPANI.**



**A PROJECT REPORT ON  
"A STUDY ON EFFECT OF ADEVRTISEMENT MESSAGE  
TOWARDS CONSUMER"**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF  
MASTER OF COMMERCE  
Course Code - D03  
Academic Year-2018-19**

**SUBMITTED BY**

**Miss. Surekha Basappa Kumbar**

**REG.NO: MC171829**

**UNDER THE GUIDANCE OF**

**Prof. Priyanka. R. Kamate**



**K.L.E. SOCIETY'S  
G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE  
COLLEGE, NIPANI.**



**KLE SOCIETY'S**  
**G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE**

*Department of Post graduate studies in Commerce.*

**(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)**



**CERTIFICATE**

This is to certify that the project report **"A STUDY ON EFFECT OF ADEVRTISEMENT MESSAGE TOWARDS CONSUMER"** is submitted by **Miss Surekha Kumbar (REG.NO: MC171829)** in partial fulfillment of the requirements for the award of degree of Master Of Commerce in KLE's G.IB COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani .

**Prof. Priyanka.R.Kamate**

**Project Guide**

**Prof. S.A.Deshpande**

**Co-Ordinator**  
**Co-ordinator**  
**P. G. [M.Com.]**  
**K.L.E's G. I. B. College, Nipani.**

**Dr. M.B.Kothale**

**Principal**  
**PRINCIPAL**  
**G.I. Bagewadi Arts, Science & Commerce College, NIPANI.**



**A PROJECT REPORT ON**  
**“ A STUDY ON CUSTOMER ATTITUDE SURVEY TOWARD PATNJALI**  
**PRODUCT OF THE PATANJALI AROGYA KENDRA NIPANI”**



**SUBMITTED TO**

**RANI CHANNAMMA UNIVERSITY, BELAGAVI**

**IN PARTIAL FULFILLMENT OF THE AWARD OF DEGREE OF**  
**MASTER OF COMMERCE**  
*Course Code -D03*  
**Academic Year-2018-19**

**SUBMITTED BY**

**Miss. TASMIYA.M. BOJAGAR**

**REG.NO: MC171830**

**UNDER THE GUIDANCE OF**

**Prof. PRIYANKA R. KAMATE**



**K.L.E. SOCIETY'S**  
**G.L.BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE, NIPANI.**



**KLE SOCIETY'S  
G.I.BAGEWADI ARTS, SCIENCE AND COMMERCE  
COLLEGE**

*Department of Post graduate studies in Commerce.*

**(AFFILIATED TO RANI CHANNAMMA UNIVERSITY, BELAGAVI)**



**CERTIFICATE**

This is to certify that the project report entitled“ **A STUDY ON CUSTOMER ATTITUDE SURVEY TOWIRDS PATANJALI PRODUCT OF THE PATANJALI AROGYA KENDRA GOURI AGENCIES NIPANI**” Is submitted by Miss. **TASMIYA.M. BOJAGARIN (MC171830)** partial fulfillment of the requirements for the award of degree of Master Of Commerce in the Department of Commerce, KLE's G.I.B COLLEGE ARTS,SCIENCE AND COMMERCE COLLEGE (Department of post graduation studies in commerce), Nipani.

  
**Prof. Priyanka R. Kamate**

**Project Guide**



  
**Prof. S.A. Deshpande**

**Co-Ordinator  
Co-ordinator  
P. G. [M.Com.]  
K.L.E's G. I. B. College, Nipani.**

  
**Dr. M.B. Kothale**

**Principal  
PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.**

**RANI CHANNAMMA**  **UNIVERSITY, BELAGAVI**  
**Department of Mathematics**

**Syllabus**  
**for**  
**Master of Science in Mathematics**  
**I to II Semester**  
**(with effect from 2017 – 18)**





## Choice based credit system (CBCS)

## Course structure

Sl. No.	Paper & Title	Credit	No of Hrs/week Theory/ Practical	Duration of exam in Hrs Theory/ Practical	IA Marks Theory/ Practical	Marks at the Exams	Total Marks
<b>I Semester</b>							
1.1	Algebra -I	4	4	3 Hrs	20	80	100
1.2	Topology	4	4	3 Hrs	20	80	100
1.3	Real Analysis	4	4	3 Hrs	20	80	100
1.4	Linear Algebra	4	4	3 Hrs	20	80	100
1.5	Ordinary Differential Equations	4	4	3 Hrs	20	80	100
1.6	Discrete Mathematical Structures	4	4	3 Hrs	20	80	100
<b>II Semester</b>							
2.1	Algebra - II	4	4	3 Hrs	20	80	100
2.2	Complex Analysis	4	4	3 Hrs	20	80	100
2.3	Partial Differential Equations	4	4	3 Hrs	20	80	100
2.4	Functions of Several Variables	4	4	3 Hrs	20	80	100
2.5	Classical Mechanics	4	4	3 Hrs	20	80	100
2.6	<b>Open Elective Course</b> I. Set Theory (Arts & Commerce stream)	4	4	3 Hrs	20	80	100
	II. Integral Transforms (Science stream)						



Department of Mathematics

III Semester							
3.1	Measure Theory & Lebesgue Integration	4	4	3 Hrs	20	80	100
3.2	Differential Geometry	4	4	3 Hrs	20	80	100
3.3	Numerical Analysis	4	4	3 Hrs	20	80	100
3.4	Elective- I	4	4	3 Hrs	20	80	100
	I. Mathematical Finance						
	II. Fluid Mechanics						
	III. Commutative Algebra						
	IV. Coding Theory						
3.5	Elective- II	4	4	3 Hrs	20	80	100
	I. Algebraic Topology						
	II. Number Theory and Cryptology						
	III. Fourier Analysis						
	IV. Fuzzy Sets and Fuzzy Systems						
3.6	Open Elective Course	4	4	3 Hrs	20	80	100
	I. Statistics (Arts & Commerce stream)						
	II. Computational Methods (Science stream)						
IV Semester							
4.1	Functional Analysis	4	4	3 Hrs	20	80	100
4.2	Mathematical Methods	4	4	3 Hrs	20	80	100
4.3	Probability Theory	4	4	3 Hrs	20	80	100
4.4	Elective-I	4	4	3 Hrs	20	80	100
	I. Riemannian Geometry						
	II. Advance Graph Theory						
	III. Mathematical modeling						
	IV. Galois Theory						
4.5	Elective-II	4	4	3 Hrs	20	80	100
	I. Advanced Numerical Methods						
	II. Banach Algebra						
	III. Operations Research						
	IV. Computation Complexity						
4.6	Project	4	The candidate shall submit a dissertation carrying 80 marks and appear for viva-voce carrying 20 marks				100
Total		96					2400





Department of Mathematics

**4.6 PROJECT**

The candidate shall submit a dissertation carrying 80 marks and appear for viva-voce carrying 20 marks.



**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON**  
**"MATHEMATICAL METHODS AND ITS APPLICATIONS"**

**SUBMITTED BY**

**MISS TEJASHVINI D.ASODE**

**Reg. No: MT171214**

**course code - D120**

**IN PARTIAL FULFILMENT OF**  
**MASTERS OF SCIENCE (M.Sc. Mathematics)**  
**Academic Year 2018-19**

***Under Guidance of***

**DR.(SMT.). M. M. SHANKRIKOPP**

**M.Sc., PhD**

**PROF. MISS L.D.MATRANNAVAR**

**M.Sc.**

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**



K. L. E. Society's

G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE

COLLEGE NIPANI-591237.

(ACCREDITED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)



Certificate

This is to Certify that project carried out by MISS TEJASHVINI D.ASODE Reg No: MT171214 bonafide student of G. I. Bagewadi College, PG center Nipani, in partial fulfillment for the award of Master of Science in Mathematics of the Rani Channamma University, Belagavi during the year 2018-19. It is certified that all correction/suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

Miss L.D. Mantrannavar  
Guide

Dr. (Smt.) M.M. Shankrikopp  
Coordinator  
Head  
Department of Mathematics  
K.L.E's G. I. B. College, Nipani.

Dr. M. B. Kothale  
Principal  
PRINCIPAL  
K.L.E. Society's  
G. I. Bagewadi College, Nipani.

Examiner Name and Sign

1. 19-7-19

2. 19-7-19

**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON**  
**“CONFORMAL MAPPING AND ITS APPLICATIONS”**

**SUBMITTED BY**

**MISS NIKITA S. JADHAV**

Reg. No: MT171208

course code - D120

**IN PARTIAL FULFILMENT OF**  
**MASTERS OF SCIENCE (M.Sc. Mathematics)**  
**Academic Year 2018-19**

*Under Guidance of*

**DR.(SMT.). M. M. SHANKRIKOPP**

M.Sc., PhD

**PROF. MISS S. K. PATIL**

M.Sc., B. Ed.

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**



**K. L. E. Society's**  
**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE NIPANI-591237.**

(ACCRIGATED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)




*Certificate*

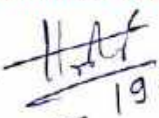

This is to Certify that project carried out by **MISS. NIKITA S. JADHAV**. Reg No: MT171208 bonafide student of G. I. Bagewadi College, PG center Nipani, in partial fulfillment for the award of **Master of Science in Mathematics** of the Rani Channamma University, Belagavi during the year 2018-19. It is certified that all correction/suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

  
**Miss S. K. Patil**  
**Guide**

  
**Dr. (Smt.) M.M. Shankrikopp**  
**Coordinator**  
**Head**  
**Department of Mathematics**  
**K.L.E's G. I. B. College, Nipani.**

  
**Dr. M. B. Kothale**  
**Principal**  
**PRINCIPAL**  
**K.L.E. Society's**  
**G. I. Bagewadi College, Nipani**

**Examiner Name and Sign**

1.   
19-7-19
2.   
19-7-19

**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON**  
**“RING THEORY AND ITS APPLICATIONS”**

**SUBMITTED BY**

**MISS. SUKANYA.M. MADANNAVAR**

Reg. No: MT171213

course code - D120

**IN PARTIAL FULFILMENT OF**  
**MASTERS OF SCIENCE (M.Sc. Mathematics)**

**Academic Year 2018-19**

*Under Guidance of*

**DR. (SMT). M. M. SHANKRIKOPP**

**M.Sc., PhD**

**PROF. J.N. MAGADUM**

**M.Sc. B.Ed**

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**



**K. L. E. Society's**  
**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE NIPANI-591237.**

(ACCRIGATED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)



*Certificate*


This is to Certify that project carried out by **MISS SUKANYA M. MADANNAVAR** Reg No: MT171213 bonafide student of G. I. Bagewadi College, PG center Nipani, in partial fulfillment for the award of **Master of Science in Mathematics** of the Rani Channamma University, Belagavi during the year 2018-19. It is certified that all correction/suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

  
**PROF. J. N. Magadum**  
**Guide**

  
**Dr. (Smt.) M.M. Shankrikopp**  
**Coordinator**  
**Head**  
**Department of Mathematics**  
**K.L.E's G. I. B. College, Nipani.**

  
**Dr. M. B. Kothale**  
**Principal**  
**PRINCIPAL**  
**K.L.E. Society's**  
**G. I. Bagewadi College, Nipani.**

**Examiner Name and Sign**

1.   
19-7-19
- 2.

**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON  
"APPLICATIONS OF NUMBER THEORY"**

**SUBMITTED BY**

**MISS. ARCHANA A. SHINTRE**

Reg. No: MT171202

Course code - D120

**IN PARTIAL FULFILMENT OF  
MASTERS OF SCIENCE (M.Sc. Mathematics)**

Academic Year 2018-19

*Under Guidance of*

**DR.(SMT.) M. M. SHANKRIKOPP**

M.Sc., PhD

**PROF. J. N. MAGADUM**

M.Sc. B.Ed

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**



**K. L. E. Society's  
G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE  
COLLEGE NIPANI-591237.**


(ACCREDITED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)



***Certificate***

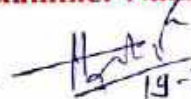

This is to Certify that project carried out by **MISS.ARCHANA A. SHINTRE**.  
Reg No: MT171202 bonafide student of G. I. Bagewadi College, PG center  
Nipani, in partial fulfillment for the award of **Master of Science in  
Mathematics** of the Rani Channamma University, Belagavi during the year  
2018-19. It is certified that all correction/suggestions indicated for internal  
assessment have been incorporated in the report. The project report has been  
approved as it satisfies the academic requirements in respect of project work  
prescribed for the said degree.

  
**PROF. J.N. Magadum**  
Guide

  
**Dr. (Smt.) M.M. Shankrikopp**  
Coordinator  
Department of Mathematics  
K.L.E's G. I. B. College, Nipani.

  
**Dr. M. B. Kothale**  
Principal  
**PRINCIPAL**  
K.L.E. Society's  
G. I. Bagewadi College, Nipani.

**Examiner Name and Sign**

-   
19-7-19
-   
19.7.19



**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON**  
**“APPLICATIONS OF GRAPHS IN NETWORKING”**

**SUBMITTED BY**

**MISS JYOTI M. PATIL**

Reg. No: MT171205

course code - D120

**IN PARTIAL FULFILMENT OF**

**MASTERS OF SCIENCE (M.Sc. Mathematics)**

**Academic Year 2018-19**

*Under Guidance of*

**DR.(SMT). M. M. SHANKRIKOPP**

**M.Sc., PhD**

**PROF. Mr. S. A. CHOUGALE**

**M.Sc., B. Ed.**

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**



K. L. E. Society's

G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE

COLLEGE NIPANI-591237.

(ACCREDITED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)



Certificate

This is to Certify that project carried out by MISS JYOTI M. PATIL Reg No: MT171205 bonafide student of G. I. Bagewadi College, PG center Nipani, in partial fulfillment for the award of **Master of Science in Mathematics** of the Rani Channamma University, Belagavi during the year 2018-19. It is certified that all correction/suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

*[Signature]* 31/05/2019

Mr. S. A. Chougale  
Guide

*[Signature]* 19/6/19

Dr. (Smt.) M.M. Shankrikopp  
Coordinator  
Head

Department of Mathematics  
KLE's G. I. B. College, Nipani

*[Signature]*

Dr. M. B. Kothale  
Principal

PRINCIPAL  
KLE. Society's  
G. I. Bagewadi College, Nipani.

**Examiner Name and Sign**

1. *[Signature]*  
19-7-19

2. *[Signature]*  
19-7-19

**RANI CHANNAMMA UNIVERSITY**  
**BELAGAVI-590 014**



**A PROJECT REPORT ON**  
**“APPLICATIONS OF GRAPHS IN NETWORKING”**

**SUBMITTED BY**

**MISS SHWETA V. CHOUGALE**

Reg. No: MT171212

course code - D120

**IN PARTIAL FULFILMENT OF**  
**MASTERS OF SCIENCE (M.Sc. Mathematics)**

Academic Year 2018-19

*Under Guidance of*

**DR.(SMT). M. M. SHANKRIKOPP**

M.Sc., PhD

**PROF. Mr. S. A. CHOUGALE**

M.Sc., B. Ed.

**SUBMITTED TO**



**DEPARTMENT OF MATHEMATICS**

**K. L. E. Society's**

**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**

**COLLEGE NIPANI-591237.**




**K. L. E. Society's**  
**G. I. BAGEWADI ARTS, SCIENCE AND COMMERCE**  
**COLLEGE NIPANI-591237.**

(ACCREDITED AT 'A' LEVEL BY NAAC IN III-CYCLE WITH CGPA 3.35)



*Certificate*

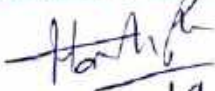

This is to Certify that project carried out by **MISS SHWETA V. CHOUGALE** Reg No: MT171212 bonafide student of G. I. Bagewadi College, PG center Nipani, in partial fulfillment for the award of **Master of Science in Mathematics** of the Rani Channamma University, Belagavi during the year 2018-19. It is certified that all correction/suggestions indicated for internal assessment have been incorporated in the report. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the said degree.

 13/05/19  
**Mr. S. A. Chougale**  
Guide

 19/6/19  
**Dr. (Smt.) M.M. Shankrikopp**  
Coordinator  
Head

  
**Dr. M. B. Kothale**  
Principal  
**PRINCIPAL**  
**K.L.E. Society's**  
**G. I. Bagewadi College, Nipani.**

**Examiner Name and Sign.** Department of Mathematics  
K.L.E's G. I. B. College, Nipani.

1.   
19-7-19
2.   
19-7-19

## Group – II

### OPTIONAL / COMPULSORY SUBJECT FOR THE DEGREE IN SCIENCE SUBJECTS

Science Subjects: (any three subject of equal importance to be chosen as per the grouping given by Rani Channamma University, Belagavi)  
DETAILED SYLLABUS OF FOLLOWING PAPERS WITH PRACTICALS

### 1. BOTANY (optional)

**B.Sc. III Semester** (w.e.f: 2018 – 19) and onwards.

**Subject: BOTANY (optional)**

**Paper: Diversity of Cryptogams (Algae, Fungi, Bryophytes, Pteridophytes, Gymnosperms).**

**52 Hrs**

**Unit I: Algae**

**10 hrs.**

General characters, Pigmentation, Classification by Fritsch (up to class level). Distribution, thallus structure, reproduction and life cycle of Nostoc, Volvox, Oedogonium, Sargassum and Batrachospermum. Economic Importance.

**Unit II: Fungi**

**08 hrs.**

General characters, Classification (Alexopoulos's system). Distribution, Structure, Reproduction and life cycle of Albugo, Rhizopus, Penicillium and Puccinia. Economic importance of fungi. General account of lichens.

**Unit III: Plant Pathology**

**06 hrs.**

General account of Bacteria and Viruses. Introduction and general symptoms of plant diseases. Symptoms, Pathogens and control measures of Late blight of potato, White rust of crucifers, Tikka disease of ground nut.

**Unit IV: Bryophytes**

**06 hrs.**

General characters, Classification (Smith). Structure, reproduction and schematic life cycle of Riccia, Anthoceros and Funaria. (Developmental details are not expected). Evolution of sporophytes.

**Unit V: Pteridophytes**

**10 hrs.**

General characters and classification. Distribution, Structure (External and Internal) and Reproduction of Psilotum, Selaginella, Equisetum and Nephrolepis (Developmental details are not expected). Steelar evolution. Heterospory and seed habit

**Unit VI: Gymnosperms**

**08 hrs.**

General characters and classification. Distribution, Structure (External and Internal) and Reproduction of Cycas, Pinus and Gnetum (Developmental details are not expected).

**Unit VII: Paleobotany**

**04 hrs.**

Geological time scale, fossilization-molds, Impression, Petrification and cast. Study of fossils - Calamitis, Lepidodendron, Lygenopteris.





## B.Sc. III Semester PRACTICALS

Total number of hours per week: 04, Internal Assessment=10 Marks, Max Marks: 40 Marks

1. Vegetative and reproductive structures of Nostoc, Volvox and Oedogonium.
  2. Vegetative and reproductive structures of Sargassum and Batrachospermum
  3. Vegetative, reproductive structures and disease symptoms of Albugo, Rhizopus and Penicillium.
  4. Vegetative, reproductive structures and disease symptoms of Puccinia. Lichens
  5. Study of Vegetative and Reproductive structures of Riccia, Anthoceros and Funeria.
  6. Study of Vegetative and Reproductive structures of Psilotum and Selaginella.
  7. Study of Vegetative and Reproductive structures of Equisetum and Nephrolepis.
  8. Study of Vegetative and Reproductive structures of Cycas, Pinus and Gnetum.
  9. Disease symptoms and control measures of Late blight of potato, Black rust of Wheat, Tikka disease of ground nut.
  10. Paleobotany- Study of fossils Lepidodendron, Calamitis, Lygenopteris.
11. Field visits.

### Suggested Readings:

Smith G.M.1971 vol 1 Algae and fungi. Tata McGraw Hill Publishing company New

Delhi Sharma O.P. 1992 Text book of thallophytes McGraw Hill Publication

Sharma P.D. 1991 The fungi Rastogi and Co Meerut

Dubey H.C.1990An Introduction to Fungi Vikas Publishing House Pvt Ltd

Dehli Clifton, A 1958 Introduction to Bacteria McGraw Hill and Co New York

Basu A.N.1993 Essentials of plant viruses, vectors plant diseases New Age International New

Dehli. Chopra G.L. A text book of algae Rastogi and co Meerut

Rangaswami G 1998 Diseases of crop plants in India. Prentice Hall of India New

Dehli. Sunderrajan S 1997 College Botany Vol 1. S. Chand and Co Ltd New Dehli

Alexopoulos, 1992 An Introduction to Mycology. New Age International. New Dehli

Vashista B.R. 1978 Fungi. S. Chand and co. Ltd. New Dehli

### B.Sc. III Semester Botany Practical Examination

Time: 4 Hours

Max Marks: 40

- Q1: Identify and classify specimens A, B, C giving reasons. 09marks
- Q2: Identify and explain the internal structures of specimen D and E with the neat labelled diagrams (Show the preparation to the examiner) 10 marks
- Q 3: Identify & describe the salient features in the slides/ specimens E, F, G, H, I and J 12 marks
- Q4: Identify & describe the salient features in the fossil specimen K. 03 marks
- Journal 04 marks
- Field visit report 03 marks



Ref.: E/E/Study tour

Date: 26.09.2018

## DEPARTMENT OF BOTANY

### Report on Study Tour/Field Visit for the year 2018-19

Name of the Department	Botany						
Name of the Event Organized	One day visit to Castle Rock						
Title of the Event	To study and collect cryptogamic plants						
Date of the Event Organized	22.09.2018						
Name of the faculty accompanied	Dr.S.D.Payamalle, Ms. P.B.Meghannavar						
Participants	III semester Botany students						
No. of Participants	Total	63	Teachers	4	Students	59	Others
Objectives of the Event	To Study nursery techniques To Study natural Vegetation						
Outcome of the Event	Students were able to see the organization of garden plants and learnt green house and shade house technology						

#### Photo Gallery



  
HOD  
**HEAD**  
Department of Botany  
G. L. Bagewadi College, Nipani.

  
IQAC Coordinator  
**Co-ordinator IQAC**  
K. L. E. Society's  
G. L. Bagewadi College, Nipani.

  
PRINCIPAL  
**PRINCIPAL**  
G.L. Bagewadi Arts, Science &  
Commerce College, NIPANI.





K. L. E. Society's  
G. I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237  
[Accredited at 'A' level by NAAC with CGPA 3.35 in 3<sup>rd</sup> Cycle]

Website: [www.klegibcollege.com](http://www.klegibcollege.com)

Ph: 08338-220116, 220416

E-mail: [klegibbotany@gmail.com](mailto:klegibbotany@gmail.com)

## DEPARTMENT OF BOTANY

Date: 15.09.2018

To,

The Principal,  
KLES G I Bagewadi College  
Nipani.

Sub: Seeking permission to conduct study tour Reg.

Respected Sir,

As per the RCU Belagavi BSc III Sem Syllabus there is study tour for BSc III Semester Students. Accordingly the department of botany has organised One day study tour to Castle rock and Anmode on 22.09.2018. Hence, I request you kindly permit us to conduct the study tour. Two Faculty members of Botany department will accompany the students.

Thanking You

Yours Sincerely

  
HOD  
HEAD

Department of Botany  
G. I. Bagewadi College, Nipani.



PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



Ref: Bot/E/E/CR I/ Study Tour

Date: 22.09.2018

## DEPARTMENT OF BOTANY

S.No	Year	Places visited	Class	Days	No. of students	Staff in charge
1.	2018-19	Castle Rock	III Sem	1 Day	59	Dr.S.D.Payamalle Ms. P.B.Meghannavar

Sl.No	IV sem students' List 2018-19	Sl.No	IV sem students' List 2018-19
1	Abhinandan Kolapure	31	Pratiksha Suryavamshi
2	Abhishek Magadum	32	Pravin Chougala
3	Aishwarya Killedar	33	Prithviraj Narayankar
4	Aishwarya Punde	34	Priyanka Palakar
5	Akshay Magadum	35	Pushpadant Upadhye
6	Anil Bhingare	36	Rachana Tandale
7	Chetana Belavi	37	Ramizraja Makandar
8	Chinmayi Indi	38	Rohini Tharapatti
9	Daksha Patel	39	Rutuja Patil
10	Gurunath Arekar	40	Sabil Makandar
11	Janhavi Bhatale	41	Sachin Badakar
12	Kajal Bhoite	42	Samiksha Gibise
13	Kamartaj Khanapure	43	Sana Soudagar
14	Kashinath Savantre	44	Saniya Awate
15	Kenchappa Nasalapure	45	Sanjeevini Hasure
16	Madhuri Bhivase	46	Sanket Jadhav
17	Masum Panawale	47	Santosh Adake
18	Meenakshi Gurav	48	Sayyam Havale
19	Megha Sumbad	49	Seema Datawade
20	Nandini Shiraganve	50	Shahida Desai
21	Neha Kadakane	51	Shubham Kodane
22	Neha Patil	52	Soujanya Kamate
23	Nikhita Havale	53	Sourabh Pujari
24	Nikita Magadum	54	Sumit Chougule
25	Parshwajeet Patil	55	Swati Tawadare
26	Pavan Payamalle	56	Umesh Pujari
27	Pooja Kesarkar	57	Yogesh Pujari
28	Prajakta Bachane	58	Zahabi Langoti
29	Prajakta Patil	59	Rohan Manjarekar
30	Pranjali Potadar		

HOD  
HEAD

Department of Botany  
G. I. Bagewadi College, Nipani.

IQAC Coordinator  
Co-ordinator IQAC

K. L. E. Society's  
G. I. Bagewadi College, Nipani.

Principal  
PRINCIPAL

G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



## Group – II

OPTIONAL / COMPULSORY SUBJECT FOR THE DEGREE IN SCIENCE SUBJECTS

RANI CHANNAMMA UNIVERSITY, BELAGAVI.

B.Sc. IV Semester (w.e.f. 2018 – 19) and onwards.

### Subject: BOTANY (optional)

<b>Paper: Diversity of Angiosperms and their systematics, Economic botany and Medicinal botany</b>	<b>52 hrs.</b>
<b>Unit I: Morphology of Angiosperms:</b> Study of stems and its modifications, Leaf- types, stipules, Phyllotaxy and their modifications. Study of Inflorescences, flowers (Floral formula and Floral diagram to be included) and fruits.	<b>07 hrs.</b>
<b>Unit II: Angiosperm systematics:</b> Botanical nomenclature- principles and rules, taxonomic ranks, type concept and principle of priority. Botanical survey of India. Classification of Angiosperms: Systems proposed by Bentham and Hooker, Engler Prantl. Their salient features, merits and demerits. Brief account of APG classification. Contributions of Cytology (Cytotaxonomy), Phytochemistry (Chemotaxonomy) and Taxometrics (Numerical taxonomy) to taxonomy.	<b>10 hrs.</b>
<b>Unit III: Diversity of flowering plants as illustrated by members of the following families:</b> Annonaceae, Brassicaceae, Malvaceae, Rutaceae, Rhamnaceae, Fabaceae, Myrtaceae, Combretaceae, Cucurbitaceae, Apiceae, Rubiaceae, Asteraceae, Apocyanaceae, Asclepiadaceae, Convolvulaceae, Solanaceae, Acanthaceae, Verbenaceae, Lamiaceae, Amaranthaceae, Euphorbiaceae, Orchidaceae, Liliaceae, Arecaceae and Poaceae.	<b>20hrs</b>
<b>Unit IV: Economic Botany:</b> Origin & Distribution, Family, Botanical name and utility of following plants- <b>Food plants:</b> Rice, Wheat, Maize, Pulses (Bengal gram, Pigeon pea) and Sugarcane <b>Fibres:</b> Cotton, Jute. <b>Oil yielding plants:</b> Ground nut, Sunflower, Palm oil, Sandalwood and Citronella oils <b>Paper &amp; pulp:</b> Bamboo & Eucalyptus <b>Spices:</b> Ginger, Clove, Cinnamom, Asafoetida and Cardamom <b>Beverages:</b> Tea & Coffee <b>Rubber:</b> Hevea sp.	<b>10 hrs</b>
<b>Unit V: Medicinal botany:</b> Common medicinal plants in primary health care: - Tippateega ( <i>Tinosporacordifolia</i> ), Tulsi ( <i>Oscimumsanctum</i> ) Kalabanda ( <i>Aloe-vera</i> ) Turmeric ( <i>Curcuma longa</i> ) Ashwagandha ( <i>Withaniasomnifera</i> ) and Sarpagandha ( <i>Rauwolfiaserpentina</i> )	<b>05hrs</b>



**Practicals:-**

1. Morphology of Root, Stem, Leaf and their modifications.
2. Study of Inflorescence and its types.
3. Study of Flower-I- Descriptive terms, Thalamus, Calyx, Corolla and Aestivation.
4. Study of Flower-II -Androecium and Gynoecium. Floral formula and Floral diagram.
5. Study of Fruit types.
6. Study of any 18 families representing from polypetalae, gamopetalae, apatalae and monocots available in the locality.
8. Economic botany and Study of Medicinal Plants (as per syllabus) available in the locality.
9. Study Tour for minimum Two days to study the Flora (Taxonomy).

**Suggested readings:**

1. Davis, P.H. and Heywood, V.H. 1963. Principles of angiosperm taxonomy. Oliver and boyd, London.
2. Heywood, V.H. and moore, D.M. (EDS) 1984. Current concepts in plant taxonomy academic press, London
3. Jeffery, C. 1982. An introduction to plant taxonomy. Cambridge university press, cambridge, London.
4. Jones, S.B. Jr and luchsinger, A.E. 1986. Plant systematics (2nd edition). McGraw Hill book co, newyork.
5. Radford, A.E. 1986. Fundamentals of plant systematics. Harper and Row, newyork.
6. Singh, G. 1999. Plant systematics; theory and practice. Oxford and IBH, newdelhi.
7. Atace, C.A. 1989. Plant taxonomy and bio systematics (2nd edition). Edward Arnold, London.
8. Dutta, S.C. 1988. systematic botany. walleyeastern, newdelhi.
9. Jaques, H.E. 1999, Plant families- how to know them. IBS, newdelhi.
10. Lawrence, G.H.M. 1951. Taxonomy of vascular plants. Macmillan, newdelhi.
11. Stewart, W.M. 1983. Paleobotony and the evolution of plants, cambridge university press, cambridge.
12. Joshi S.G. medicinal plants oxford and IBH newdelhi.
13. Kokate and Gokeale \_pharmacognacy. Neralipublication, newdelhi.
14. Lad v Ayurveda- the scince of self-healing- motilalbanarasidas, newdelhi.
15. Lewis W.H. and M.P, F Elwin Lewis 1976, medical Botony plants affecting maris health. A wileyinterscience publication, Jhonwiley and sons newyork.
16. College botany vol 1 by Gangulee, Das and Datta. New central book agency, Calcutta.
17. Systematic botany by R.N Sutaria.
18. Taxonomy of Angiosperms by B.P. Pandey.
19. Kocchar, S.L. 1998. Economic Botany in Tropics. 2nd edition, Macmillian Ltd, New Delhi .
20. Sambamurthy, A.V.S.S and subramanyam, N.S. 1989. A Text Book of Economic Botany, Wiley Eastern Ltd. New Delhi .
21. Shanna, O.P. 1996. Hill's Economic Botany. Tata McGraw Hill Co., Ltd., New Delhi.
22. Simpson, B.B. and Conner-Ogorzaly, M. 1986. Economic Botany-plants in our world. McGraw Hill, New York.
23. Hill. A.F. 1989. Economic Botany. Tata McGraw-Hill, New York.
24. Herbs Cultivation and Medicinal Uses- H. Panda - NIIR Publication, New Delhi.
25. Chopra R.N., Badhuvar R.L. & Ghosh G. (1965) - Poisons Plant of India.





Ref.: E/E/Study tour

Date: 26.02.2019

## DEPARTMENT OF BOTANY

### Report on Study Tour/Field Visit for the year 2018-19

Name of the Department	Botany								
Name of the Event Organized	One day visit to Nursery								
Title of the Event	Visit to Malakapur nursery, Panhal Ghad, Kolhapur.								
Date of the Event Organized	24.02.2019								
Name of the faculty accompanied	Smt. S.B.Patil, Smt. S.S.Sunnal, Dr.S.D.Payamalle Ms. P.B.Meghannavar								
Participants	IV semester Botany students								
No. of Participants	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>Total</td> <td>63</td> <td>Teachers</td> <td>4</td> <td>Students</td> <td>59</td> <td>Others</td> <td></td> </tr> </table>	Total	63	Teachers	4	Students	59	Others	
Total	63	Teachers	4	Students	59	Others			
Objectives of the Event	To Study nursery techniques To Study natural Vegetation								
Outcome of the Event	Students were able to see the organization of garden plants and learnt green house and shade house technology								

Photo Gallery



*[Signature]*  
**HOD**  
**HEAD**  
 Department of Botany  
 G. I. Bagewadi College, Nipani.

*[Signature]*  
 IQAC Coordinator  
**Co-ordinator IQAC**  
 K. L. E. Society's  
 G. I. Bagewadi College, Nipani.

*[Signature]*  
**PRINCIPAL**  
**PRINCIPAL**  
 G. I. Bagewadi Arts, Science &  
 Commerce College, NIPANI.



K. L. E. Society's  
G. I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237 (12)  
[Accredited at 'A' level by NAAC with CGPA 3.35 in 3<sup>rd</sup> Cycle]

Website: [www.kleibcollege.com](http://www.kleibcollege.com)

Ph: 08338-220116, 220416

E-mail: [klegibotany@gmail.com](mailto:klegibotany@gmail.com)

## DEPARTMENT OF BOTANY

Date: 22/02/2019

To,

The Principal,  
KLES G I Bagewadi College  
Nipani.

Sub: Seeking permission to conduct study tour for BSc IV Sem.

Respected Sir,

As per the RCU Belagavi BSc IV Sem Syllabus there is study tour for BSc IV Semester Students. Accordingly the department of botany has organised one day study tour on 24<sup>th</sup> February 2019. The places such as Shailesh Nursery Manakapur, Panhal Gad, and Kolhapur are to be visited. Hence, I request you kindly permit us to conduct the study tour. Faculty and gardeners of the Botany department will accompany the students.

Thanking You

Yours Sincerely

HOD Head

Department of Botany  
K.L.E's G. I. B. College, Nipani.



22/2/2019





## DEPARTMENT OF BOTANY

S.No	Year	Places visited	Class	Days	No. of students	Staff in charge
1.	2018-19	Malakapur nursery, Panhal Ghad, Kolhapur.	III Sem	1 Day	59	Dr.S.D.Payamalle Ms. P.B.Meghannavar

Sl.No	IV sem students' List 2018-19	Sl.No	IV sem students' List 2018-19
1	Abhinandan Kolapure	31	Pratiksha Suryavamshi
2	Abhishek Magadum	32	Pravin Chougala
3	Aishwarya Killedar	33	Prithviraj Narayankar
4	Aishwarya Punde	34	Priyanka Patkar
5	Akshay Magadum	35	Pushpadant Upadhye
6	Anil Bhingare	36	Rachana Tandale
7	Chetana Belavi	37	Ramizraja Makandar
8	Chinmayi Indi	38	Rohini Tharapatti
9	Daksha Patil	39	Rutuja Patil
10	Gurunath Arekar	40	Sabil Makandar
11	Janhavi Bhatale	41	Sachin Badakar
12	Kajal Bholte	42	Samiksha Gibise
13	Kamartaj Khanapure	43	Sana Soudagar
14	Kashinath Savantre	44	Saniya Awate
15	Kenchappa Nasalapure	45	Sanjeevni Hasure
16	Madhuri Bhivase	46	Sanket Jachav
17	Masum Panawale	47	Santosh Adake
18	Meenakshi Gurav	48	Sayyam Havale
19	Megha Sumbad	49	Seema Datawade
20	Nandini Shiraganve	50	Shahida Desai
21	Neha Kadakane	51	Shubham Kodane
22	Neha Patil	52	Soujanya Kamate
23	Nikhita Havale	53	Sourabh Pujari
24	Nikita Magadum	54	Sumit Chougule
25	Parshwajeet Patil	55	Swati Tawadare
26	Pavan Payamalle	56	Umesh Pujari
27	Pooja Kesarkar	57	Yogesh Pujari
28	Prajakta Bachane	58	Zainabi Langoti
29	Prajakta Patil	59	Rohan Manjarekar
30	Pranjali Potadar		

17/8

**B.Sc. V Semester  
(w.e.f : 2016 – 17)  
Botany Paper – I**

**Paper-I: Plant Breeding, Tissue Culture & Horticultural Practices. 50 Hrs**

**Objectives:** This paper includes some topics in horticulture like- Nursery, Green House Technology, Harvest and Weed Management. These will be of much help to the students residing in rural and urban areas to generate employment.

**Unit 1: Plant Breeding:** History and objectives. Introduction, Selection (Pure line, Mass election), Hybridization- inter specific and inter generic. Mutational & Polyploidy breeding. Germ plasm and its maintenance. Pollen Bank, Quarantine method. **10 Hrs.**

**Unit 2: Plant Tissue Culture:** Scope and Significance. Basic Aspects and Cellular totipotency (Shoot tip, Embryo and Haploid culture techniques). Differentiation and morphogenesis. **10 Hrs.**

**Unit 3: Introduction to Horticulture, Nursery management and importance.**  
**Methods of propagation** – vegetative – rhizome, bulb, corm and sucker (natural).  
**Artificial-** Cutting, layering, grafting and budding. Bonsai – methods and importance.  
**Nursery management:** Introduction, types of nurseries and cultural practices. Seed (propagule) collection, storage and treatment. Manures, fertilizers and pesticides. Methods of irrigation – drip, sprinkler and flood. **12 Hrs.**

**Unit 4: Green House Technology** – Introduction, advantages and limitations.  
Types of Green Houses- Green House structure, principle  
Green house technology as applied to ornamental, vegetable and fruit plants. **08 Hrs.**

**Unit 5: Harvest Technology and Weed Management:**  
**Harvest Technology:** Flower and fruit plants management. Artificial ripening, maturity indices, methods of picking. Post-harvest technology and management of fruits: grading, processing, storage and packing.  
**Weed Management:** Introduction and significance. Invasive weeds – concept and causes of their dominance. Weed control – physical, chemical and biological methods. **10 Hrs.**

**Practicals :**

1. Study of methods of propagation with help of tubers, bulbs rhizomes, corms, suckers, runner and offset.
2. Study of propagation by cutting, layering, grafting and budding.
3. Methods of emasculation and bagging for cross-pollination.
4. Morphology and anatomy of dry and wet stigma.
5. Morphology and anatomy of solid and hollow styles.
6. Study of pollination types.
7. Demonstration of tissue culture techniques.
8. Visit to nursery - poly house /Green house and tissue culture lab.
9. Preparation of MS media for culture.
10. Bonsai techniques.



## DEPARTMENT OF BOTANY

### Report on Study Tour/Field Visit for the year 2018-19

Name of the Department	Botany						
Name of the Event Organized	One day visit to Study Plant varieties and sps						
Title of the Event	Visit to Krushi mela And Agri University, Dharwad						
Date of the Event Organized	24.09.2018						
Name of the faculty accompanied	Smt. S.B.Patil, Dr.S.D.Payamalle and Ms. Afreen Maniyar						
Participants	V semester Botany Students						
No. of Participants	Total	40	Teachers	3	Students	37	Others
Objectives of the Event	To observe varieties of ornamental plants and improved varieties						
Outcome of the Event	Students observed varieties ornamental plants and improved varieties						

#### Photo Gallery



*[Signature]*  
**HOD**  
**HEAD**  
 Department of Botany  
 G. I. Bagewadi College, Nipani.

*[Signature]*  
 IQAC Coordinator  
**Co-ordinator IQAC**  
 K. L. E. Society's  
 G. I. Bagewadi College, Nipani.

*[Signature]*  
**PRINCIPAL**  
**PRINCIPAL**  
 G. I. Bagewadi Arts, Science &  
 Commerce College, NIPANI.



From,  
The HOD  
Department of Botany  
KLE's G. I. Bagewadi College Nipani

Date:22/9/2018

To,  
The Principal,  
KLE's G. I. Bagewadi College Nipani

**Sub- Permission for one day trip**

As per the RCUB BSc V sem syllabus, there is a compulsory study tour BSc V sem students. After discussing with staff and HOD of Botany, it is decided to visit Dharwad Agri University and Karnatak University Dharwad on 24<sup>th</sup> September 2018. So we request you to give us permission for the same.

For your kind information the list of the students and accompanying staff is attached.

Thanking you

Yours faithfully



**HEAD**  
*Department of Botany*  
G. I. Bagewadi College, Nipani.



**PRINCIPAL**  
G.I. Bagewadi Arts, Science  
& Commerce College, Nipani

## List of the Students

Sl. No.	Roll No.	Student Name	Contact Number
1.	91	Abhishek chougule	9152000166
2.	93	Arati Gore	7204959914
3.	94	Asharafali Barber	8073614968
4.	95	Chaitali Hegade	8880459545
5.	96	Chaitra Hasure	9880349447
6.	97	Devyani Khot	7338231273
7.	98	Dhanshri Hasure	8722423541
8.	99	Dhanshri Chalake	9242372287
9.	100	Dhanashri Patil	9686904809
10.	101	Digvijay Nigave	7353727570
11.	102	Divya Chandrakude	9535719260
12.	103	Gouravkumar Chougule	8150904084
13.	104	Jayashri Balekai	9902301211
14.	105	Komal Kadam	9880787462
15.	106	Madhuri Shelake	9611308727
16.	109	Narendra Patil	7026117108
17.	110	Nootan Kurane	9448967321
18.	111	Nootan Shettimani	9008013722
19.	112	Omkar Magdum	8150908473
20.	113	Pallavi Sangane	8867980637
21.	114	Pooja Ghorapade	
22.	115	Pranali Chovan	8310354310
23.	116	Pooja Karekar	9845848375
24.	117	Rachana Patil	8217432202
25.	119	Santosh Bilage	8867434820
26.	120	Seema Lagamannavar	8904777028
27.	121	Sharad Banne	9620712292
28.	122	Seetal Magdum	9845341243
29.	123	Shivatej Chougule	9148603614
30.	124	Shweta Sapagale	8751645365
31.	125	Sneha Kamble	8050390828
32.	126	Soumya Patil	8123003098
33.	128	Tejas Patil	7337854992
34.	129	Vaishanvi Ajarekar	
35.	130	Vaishanvi Ambale	9148848593
36.	131	Yogesh Varute	8310040006
37.	132	Pooja Reddy	



List of the Staff

1.	S. B. Patil	8762186999
2.	S. D. Pavamalle	9591703071
3.	P B Meghannavar	8123723166
4.	A Y Maniyar	7411237375
5.	Pragati Salunke	9130214352
6.	M M Patil	9481738368

  
**HEAD**  
Department of Botany  
G. I. Bagewadi College, Nipani.

  
**Co-ordinator IQAC**  
K. L. E. Society's  
G. I. Bagewadi College, Nipani.

  
**PRINCIPAL**  
G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



**Semester V**  
**(w.e.f 2016-17)**  
**Botany Paper – II**

**Paper-II: Ecology, Environmental Biology and Phytogeography**

**50 hrs**

**Objectives:-** This paper has topics on pollution, pollution control and forestry. Considering the present scenario with respect to environment these topics are most valuable.

**Unit 1: Plant and environment:** Atmosphere (gaseous composition), water (properties of water cycle), light (global radiation, photo synthetically active radiation), temperature, soil (development, soil profiles, physico-chemical properties), and biota.

Morphological, anatomical and physiological responses of plants to water (hydrophytes, xerophytes and epiphytes), temperature (thermoperiodicity and vernalization), light (photoperiodism, heliophytes and sciophytes) and salinity.

**12 Hrs.**

**Unit 2: Population ecology and Ecosystems:** Growth curves; ecotypes; ecads. Ecological succession-hydrach and xerarch. Structure of Ecosystems (Pond and Forest): abiotic and biotic components; food chain, food web, ecological pyramids, energy flow.

**10 Hrs.**

**Unit 3: Phytogeography:** Botanical regions of world. Vegetation types of Karnataka and India.

**06 Hrs.**

**Unit 4: Conservation of Natural resources:** Different types of natural resources and their conservation.

Forest and Forest Management: Forest and its ecological significance, deforestation, forest management and social forestry. Natural depletion of vegetation endangered and threatened economic plants of India and red data book. Wild life management in India. Indian board of wild life, national park and sanctuary.



Energy resources: conventional and non conventional sources of energy.

Biodiversity: significance, types, depletion, conservation of biodiversity.

12 Hrs.

**Unit 5: Pollution:** Introduction, causes, effects and control measures of Water pollution, Air pollution, Soil pollution, Acid rain, Global warming, and Ozone depletion.

Sewage water and waste water types. Methods of effluent treatment of industrial waste water, sludge disposal and its care related to environment.

10 Hrs.

### Practical

1. Study of frequency and density of herbaceous plants by quadrat method.
2. To determine moisture content and water holding capacity of different types of soils.
3. To estimate the alkalinity of water samples.
4. Ecological instruments.
5. Morphology and anatomical adaptations in three hydrophytes.
6. Morphology and anatomical adaptations in xerophytes: One succulent and one non-succulent, one epiphyte and one halophyte.
7. Waste water analysis, physical chemical parameter, pH, turbidity, TDS, BOD, COD, temperature and any other inorganic elements.
8. Visit to effluent treatment plant to study recycling of waste water near by industry and study the effect of industrial pollution nearby water bodies (Biomagnification & Eutrophication).
9. Assignment of Project related to practical number eight.



10. Study Tour of minimum two days to study forest types and ecological groups.

**Books for Reference:**

1. Sharma P.D. (1993)-Ecology and Environment – Rastogi Publication. New Delhi.
2. Mishra R. - - Ecology Work Book- Oxford and IBH, New Delhi.
3. Agarwal K.C. (1993)- Environmental Biology- Agro Botanical Publishers, Jodhapur.
4. Mishra K.C. (1992)- Manuel of Plant Ecology – Oxford & IBH Publication, New delhi.
5. Kochar P.L. (1980) – Plant Ecology – S. Nagin & Co., Jalandhar.
6. Kormandi E.J. (1984)- concept of Ecology- Printice Hall Ind., New Delhi.
7. Asthana R.K. (1998) – Environmental Problems and Solution- S.Chand & Co. Pvt. Ltd., New Delhi.
8. Verma P.S., V.K. Agarwal (1983) – Environmental Biology - S.Chand & Co. Pvt. Ltd., New Delhi.
9. Subramanyam N.S. A.V.S.S. Samburthy (2000)- Ecology- Narosa Publishing House, New Delhi.
10. Sharma D.P. (1993) – Ecology & Environmental Biology- Rastogi Publication, Meerut.
11. Nebel B.J. (1990) – Environmental Science – Printice Hall Indu. Pvt. Ltd. New Delhi.
12. Trivedi R.K. Etal (1987) – Practical Ecology – Anmol Publication, Jodhapur.
13. Rao K.S. (1971) - Fundamentals of Ecology – W.B. Saunders co. Philadelphia.
14. Shukla R.S. & Chandel P.S. (2000) – Plant Ecology – S.Chand & Co. Pvt. Ltd., New delhi.
15. Odum, E.P 1983. Basic Ecology, Saunders, Philadelphia.





## DEPARTMENT OF BOTANY

### Report on Study Tour/Field Visit for the year 2018-19

Name of the Department	Botany							
Name of the Event Organized	One day visit to study effluent water treatment							
Title of the Event	Visit to Om Sugar Factory, Jainapur, Chikodi							
Date of the Event Organized	28.09.2018							
Name of the faculty accompanied	Dr.S.D.Payamalle and Ms. Afreen Maniyar							
Participants	V semester Botany Students							
No. of Participants	Total	39	Teachers	2	Students	37	Others	-
Objectives of the Event	To become aware of effluent water treatment method							
Outcome of the Event	Students became aware of effluent water treatment method							

#### Photo Gallery



HOD  
HEAD

Department of Botany  
G. I. Bagewadi College, Nipani.

IQAC Coordinator

Co-ordinator IQAC  
K. L. E. Society's  
G. I. Bagewadi College, Nipani.

PRINCIPAL  
PRINCIPAL

G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



K. L. E. Society's  
G. I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237  
[Accredited at 'A' level by NAAC with CGPA 3.35 in 3<sup>rd</sup> Cycle]

Website: [www.klegibcollege.com](http://www.klegibcollege.com)

Ph: 08338-220116, 220416

E-mail: [klegibbotany@gmail.com](mailto:klegibbotany@gmail.com)

## DEPARTMENT OF BOTANY

Date: 27/09/2018

To,

The Principal,  
KLES G I Bagewadi College  
Nipani.

Sub: Seeking permission to visit the OmSugar Factory reg.

Respected Sir,

With respect to above mentioned subject, as per the RCU Belagavi Botany V semester Syllabus, there is compulsory visit to study water effluent treatment for V semester. In this respect the department of Botany has decided to conduct study visit on 28<sup>th</sup> September 2018 at Om Sugar Factory, Jainapur, Chikodi. Hence, we request your kind permission to conduct the Visit.

Thanking You,

Yours Sincerely

  
HOD  
HEAD

Department of Botany  
G. I. Bagewadi College, Nipani.

  
PRINCIPAL

G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.

Ref.: Bot/E/E/CR / Study Tour

Date: 28.09.2018

## DEPARTMENT OF BOTANY

S.No	Year	Places visited	Class	Days	No. of Students	Staff in charge
1.	2018-19	Visit to Om Sugar Factory, Jainapur, Chikodi	V sem	1 Day	37	Dr.S.D.Payamalle Ms. Afreen Maniyar

Sl.No	V sem students' List 2018-19	Sl.No	V sem students' List 2018-19
1	Abhishek Chougale	20	Pallavi Sangane
2	Arati Gore	21	Pooja Ghorpade
3	Ashrafali Bargir	22	Pranali Chavan
4	Chaitali Hegade	23	Puja Karekar
5	Chaitra Hasure	24	Rachana Patil
6	Devyani Khot	25	Santosh Bilagi
7	Dhanashree Hasure	26	Seema Lagamannavar
8	Dhanashree Chalake	27	Sharad Banne
9	Dhanashri Patil	28	Sheetal Magadum
10	Digvijay Nigave	29	Shivatej Chougale
11	Divya Chandrakude	30	Shweta Sapagale
12	Gauravkumar Chougale	31	Sneha Kamble
13	Jayashree Balikal	32	Soumya Patil
14	Komal Kadam	33	Tejas Patil
15	Madhuri Shelake	34	Vaishnavi Ajarekar
16	Narendra Patil	35	Vaishnavi Amble
17	Nutan Kurane	36	Yogesh Varute
18	Nutan Shettimani	37	Pooja Reddy
19	Omkar Magadum		

  
HOD  
HEAD

Department of Botany  
G. I. Bagewadi College, Nipani.

  
IQAC Coordinator  
Co-ordinator IQAC  
K. L. E. Society's  
G. I. Bagewadi College, Nipani.

  
Principal  
PRINCIPAL  
G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



## 12. ZOOLOGY (Optional)

**BSc II Semester Scheme (CBSC - Pattern)**  
**Zoology (Optional) Syllabus(Revised)**  
**2017 -18 Onwards**

Semesters	Syllabus	Total Hours	Theory & Practical/ Week
II	<b>BIOLOGY OF CHORDATES</b>	50hrs.	4 hrs.
	<b>PRACTICAL</b>	12	4 hrs.

**NOTE:**

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

**Question paper pattern for THEORY examination**

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
<b>TOTAL — 80 MARKS</b>			

**PRACTICAL pattern for examination**

Que.No.	Solve	Total Marks
I	Dissection (Explain any one system)	08
II	Mounting	04
III	Comparative Anatomy	06
IV	Identification / Spotting ( Six)	12
V	Project Report	05
VI	Journal	05
<b>TOTAL --- 40 MARKS</b>		



## B.Sc II Semester Syllabus

### ZOOLOGY (Optional) 2017-18 Onwards

Total Marks-80

Total Teaching-50hrs.

### Biology of Chordates

#### UNIT-I

**Chordates:** General characters and classification. 8 hrs

1. Sub-phylum: Hemichordata-External Characters & Digestive system of Balanoglossus.
2. Sub-phylum: Urochordata- External Characters & Retrogressive metamorphosis in Herdmania.
3. Subphylum: Cephalochordata-External Characters & feeding mechanism in Branchiostoma.
4. Cyclostomata: External Characters & general organisation of Petromyzon & Myxine (Hagfish/Slime).

#### UNIT-II

**Pisces:** General characters & Classification of Pisces up to orders 5hrs with examples. General characters of Chondrichthyes and Osteichthyes. Type study **Scoliodon**-Externals Characters, Digestive system, Reproductive system and Fish migration.

**Amphibia:** General characters & classification up to orders with 5hrs Examples. Type study **Frog**- Externals characters, Digestive system, Circulatory & Reproductive system. Axolotl larva & its significance.

#### UNIT-III

**Reptilia:** General characters & classification up to orders with 5hrs Examples. Type study **Calotes**-Externals characters, Digestive system, Circulatory & Reproductive system. Indian poisonous & non-poisonous snakes.

**Aves** - General characters & Classification up to orders with. 10hrs Examples Type study **Pigeon**-Externals characters, Digestive System, Respiratory & Reproductive system. Bird migration, Flight adaptations, Flightless birds, Beak & Feet modification.



## UNIT-IV

**Mammalia:** General characters & classification up to orders with 5hrs  
Examples Type study **Rat**-Externals characters, Digestive System, Circulatory, Nervous, Excretory & Reproductive Systems.

**Comparative Anatomy:**

Origin, development & structure of Heart, Brain 12 hrs  
and integument in Fishes, Amphibians, Reptiles, Aves  
and Mammals.

---

### PRACTICALS

	<b>Total Practicals -12</b>
1. Classification of Urochordata, Cephalochordata, Cyclostomes <u>Examples:</u> Balanoglossus, Herdmania, Branchiostoma, Peteromyzon.	01
2. Classification of Fishes - <u>Examples:</u> Scoliodon, Pristis, Sphyrna, Catla catla, Labeo rohita, Hippocampus, Eel, Exocoetus & Synaptura.	01
3. Classification of Amphibia - <u>Examples:</u> Frog, Toad, Ichthyophis, Ambystoma, Axolotl Larva & Rhacophorus.	01
4. Classification of Reptilia- <u>Examples:</u> Calotes, Hemidactylus, Chaemoleon, Mabuya Draco, Naja naja, Python, Viper, Turtle and Crocodile.	01
5. Classification of Aves - <u>Examples:</u> Psittacula, Owl, Woodpecker, Pigeon and Passer domesticus.	01
6. Classification of Mammalia - <u>Examples:</u> Sorex, Bat, Loris, Pangolin, Hystrix, Herpetes & Funambulus.	01
7. Study of Comparative Anatomy: Heart and Brain in Fishes, Amphibians, Reptiles, Aves and Mammals	02
8. Explanation & Demonstration in Bony fish/Shark. a). External characters b). Digestive system c). Reproductive system d). Mounting of Brain	04





### **NOTE:**

1. With the help of Charts/Models/Diagrams/Printouts & Xerox Sheets are used in practical's demonstration.
2. As per UGC guidelines **Only one species** to be demonstrated by Faculty & students should not do any dissection.
3. Students are supposed to draw neat labelled diagrams & write The explanation in their journal.
4. In practical examination question no I & II are put Charts/ Models/ Diagrams/ Printouts & Xerox Sheets of the system- Students has to identify& write the explanation in their Examination paper.
5. **Compulsory Study Tour/ Field visit to study Animal diversity.** (Submission of project report carries- 5 marks).

---

### **REFERENCE BOOKS**

1. Modern Text Book of Zoology Vertebrate-R.L.Kotpal.
2. Chordata – Dhama & Dhama.
3. Vertebrate- Majapuria.
4. Functional Organization of Vertebrate– H Nigam & R.Sobti-  
Shoban Lal Nagin Chand & Co.
5. A manual of Zoology Vertebrates- M.Ekambarnath Ayyar &  
Swaminathan Ayyar S. Vishwanath Publisher.
6. The Vertebrates Pisces to Mammalia, Hyman L.H. McGraw Hill Co
7. The Vertebrates – Hyman et al.
8. Text Book of Zoology – Parker T.J. & Haswell W.A. Macmillan  
Co. London.
9. Biology of Chordates by Dr Harish .C. Nigam.Vishal Publication  
Lucknow.





K.L.E. Society's  
G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237  
Re-accredited at 'A' level by NAAC with CGPA 3.35  
Affiliated to Rani Channamma University, Belagavi, Karnataka, India

Website: [WWW.Klegibnpn.edu.in](http://WWW.Klegibnpn.edu.in) E-mail: [klegibnpn@yahoo.co.in](mailto:klegibnpn@yahoo.co.in) Ph: 08338-220116

Ref. No.: GIB/

Date: 11/03/2019

DEPARTMENT OF ZOOLOGY

Field Visit – Bird Watching

To,  
The Principal  
K.L.E. Society's  
G.I. Bagewadi College, Nipani

Respected sir,

As a part of curriculum we have arranged one day field visit at Agriculture Research Station, Nipani on 12/03/2019 at early morning 6.30am for the study of different varieties of birds for B.Sc. II Sem students. 69 students have enrolled their names. Miss.S.M.Hegade and Smt.G.A Dhekate will be accompanying the students. This is for your kind information.

Thanking you Sir,

  
Head of Department

**HOD**  
Department of Zoology  
G.I. Bagewadi NIPANI

  
Principal

**PRINCIPAL**  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI



**(Bird Watching-Animal diversity)Field Visit  
2018-19  
II Sem**

Sr.No	Roll.No	Name of the student
1	1	Adesh Patil
2	2	Afreen Parakute
3	3	Aishwarya Kurundawade
4	4	Akshata Kulkarni
5	5	Akshata Vasawade
6	6	Akshay Shjiragave
7	7	Anand Patil
8	8	Aniket Sadalge
9	9	Anita Ingale
10	10	Anjali Patil
11	11	Arati Dhanappagol
12	12	Arpita Kulkarni
13	13	Bhagyashri Ghatage
14	14	Dhanashri Patil
15	15	Gouri Rajannavar
16	16	Rutuja Kogale
17	17	Kiran Irole
18	18	Kiran Karibalappagol
19	19	Komal Latakar
20	20	Mahesh Kadapure
21	21	Mahesh Gavade
22	22	Maheshchandr Dhange
23	23	Manjula Bhawe
24	24	Manjushree Sattigeri
25	25	Manasi Gurav
26	26	Megha Kambale
27	27	Nikita Patil
28	28	Nisha Chinchane
29	29	Omkar Kore
30	30	Pavan Bilage
31	31	Pranjali More
32	32	Poorva Jadhav
33	33	Rakesh Sutar
34	34	Rashmi Sidanale
35	35	Rishikesh Patil
36	36	Ritu Bilkar
37	37	Rudra Magadum
38	38	Rukmini Talawar
39	39	Rutuja Desai
40	40	Rutuja Pawar
41	41	Rutuja Shinde
42	42	Sagar Bagadi
43	43	Sahil Patil
44	44	Sakshata Jatrare
45	45	Sana Mulla
46	46	Sana Gadampalli
47	47	Seema Kunnure





48	48	Shashidhar Gurav
49	49	Shridhar Hawaldar
50	50	Shruti Kamate
51	51	Shrutika Kamate
52	52	Shubham Chougale
53	53	Shubhangi Bhojapatil
54	54	Sneha Ingale
55	55	Sneha Ambi
56	56	Sneha Murabatte
57	57	Sneha Patil
58	58	Soumya Magadam
59	59	Sourabh vaigude
60	60	Shruti Halagadagi
61	61	Suchita Sapagale
62	62	Sukanya Singannavar
63	63	Sushma Mathapati
64	64	Trupti Kamalkar
65	65	Vaishnavi More
66	66	Varsha Kore
67	67	Rutuja Chougale
68	68	Shefali Magadam
69	69	Shrutika Tele

NS

Department of Zoology  
A. I. Bagewadi College, Nipani,





K.L.E. Society's

G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237

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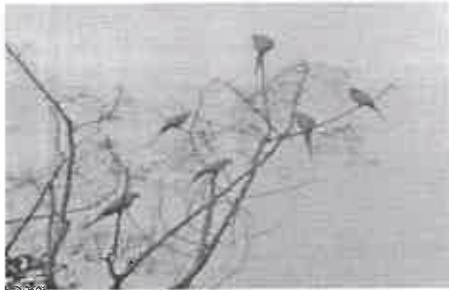

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Ref. No.: GIB/

Date: 12/03/2019

**REPORT ON - "BIRD WATCHING"**

Name of the Department	Zoology
Name of the Event Organized	Field visit
Title of the Event	"Bird watching"
Date of the Event Organized	12.03.2019
Class	B.Sc. II Sem
Field visit location	ARS Campus, Nipani
Name of the Convener	Dr. V.R.Naik
Participants	70
No. of Participants	Total 69 Teachers 01 Students 69
Name of the Expert with Designation	Miss. Geeta Dhekale
Contact Number & Address of the Expert	9036140785 A/P: Nipani Tq: Chikkodi Dist: Belagavi
Objectives of the Event	To study different varieties of birds in their natural habitat
Outcome of the Event	1. Students understood about diversity of birds and their behavior. 2. Students come to know about which types of birds are present in ARS Campus around GIB College Nipani.
<b>Photo Gallery</b>	
	
Behavior of Parrots	Bird watching Agriculture resource centre.

HOD

H O O

Department of Zoology  
G.I. Bagewadi NIPANI

IQAC Coordinator

Co-ordinator IQAC

K. L. E. Society's  
G. I. Bagewadi College, Nipani.

Principal

PRINCIPAL

G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.

# 11.ZOOLOGY (Optional)

**BSc IV Semester Scheme (CBSC - Pattern)  
Zoology (Optional) Syllabus(Revised)  
2018 -19 Onwards**

Semesters	Syllabus	Total Hours	Theory & Practical/ Week
IV	Cell Biology, Histology & Animal Behaviors	50hrs.	4 hrs.
	PRACTICAL	12	4 hrs.

NOTE:

THEORY MARKS			PRACTICAL MARKS		
Internal	Annual	Total Marks	Internal	Annual	Total Marks
20	80	100 marks	10	40	50 marks

**Question paper pattern for THEORY examination**

Que.No.	Marks	Solve	Total Marks
I	02	10	20
II	04	05	20
III	10	04	40
<b>TOTAL — 80 MARKS</b>			

**PRACTICAL pattern for examination**

Que.No.	Solve	Total Marks
I	Make a temporary preparation of Histology slide.	10
II	Make a temporary squash preparation of Onion root tip/ Grasshopper Testis/ Onion flower bud	08
III	Identification (6X2)	12
IV	Field study report & viva	05
V	Journal	05
<b>TOTAL — 40 MARKS</b>		

**B.Sc IV Semester Syllabus Revised (2018-19) Onwards  
ZOOLOGY (Optional)**

Total Marks--80

Total Teaching--50hrs.

**Cell Biology, Histology & Animal Behaviors**







Signals odours, sounds and light.	2hrs
Parental care: Concepts, Fishes, Amphibians and Birds.	3hrs

### PRACTICALS

	Total Practicals-12 hr
1) Study of permanent cytology slides of Mitosis & Meiosis.	2hrs
2) Study of temporary preparation of Mitotic stages from onion Root tip cells.	2hrs
3) Study of temporary preparation of Meiotic stages from onion Flower bud/Grass Hooper testis.	2hrs
4) Preparation and observation of permanent histological slides Stomach, Intestine, Liver, Pancreas, Kidney, Adrenal Thyroid, Testis & Ovary.	4hrs
5) Study of mimicry in leaf insect, Chameleon, Butterflies, Stick Insect, Ants, Wasps and Spiders.	1hr
6) Study of Nest and nesting material.	1hr
7) Internal Practical Test	1hr

#### NOTE:

1. With the help of Charts/Models/Diagrams/Printouts & Xerox Sheets are used in practical demonstration
2. Compulsory field visit to study Mimicry, Habitats and Community.
3. Submission of field visit report carries 5 marks.

#### REFERENCE BOOKS

1. Introduction to Histology. Gauba R.K. Tata Mc Graw Hill New Delhi.
2. Cells and Tissues: Introduction to Histology ND Cells :Rogers:A.W. Academic Press .
3. Basic medical Histology :Biology of cells & tissues & organs Kessel R.G. oupNew York.
4. Text Book of Histology :Bloom and Fawcett.Saunders Publ.Philadelphia.
5. Bailey's Text Book of Histology. Bailee Baltimore, Willims and Wilkins.
6. Text Book of Ecology : Odum.
7. Introduction to animal behavior:Aubrey Manning and Marian.S.DawkinsCambridge Uni Press.
8. Essentials of organizational behavior:Stephan Robbins,Prentice Hall of IndiaNew Delhi.
9. Animal Behaviour :McFarland D ELBS with Longman.
10. Ethology " Barnett.
11. An introduction to Behavioural Ecology J.R. Krebs & N.B. Davies Black wellScientific Publ.
12. Text Book of Animal Behaviour: Fatik Baran mandal, PHI Learning Pvt Ltd newDelhi.
13. Animal Behaviour :Reena Mathur,Rastogi and Coimpani.
14. Cell Biology -Chennarayappa - Unniversity Press





K.L.E. Society's

**G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237**

[Re-accredited at 'A' level by NAAC with CGPA 3.35]

Date: 17/03/2019

**DEPARTMENT OF ZOOLOGY**

To,  
Shri. A.S.Magar  
Chitri Adventures Eco and Agro tourism

Subject : Permission to visit Chitri Adventures Eco and Agro tourism for IV sem students..

Respected sir,

With reference to subject cited above I Dr. Vidya Naik head of department of Zoology G.I. Bagewadi college Nipani, bring to your kind perusal that as a part of curriculum for the B.Sc IV Sem students, would like to visit Chitri Adventures Eco and Agro tourism. Kindly permit us for the same.

Thanking you.

Received  
*[Signature]*



*[Signature]*  
Yours faithfully,





K.L.E. Society's

**G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237**

[Re-accredited at 'A' level by NAAC with CGPA 3.264]

Date: 15/03/2019

**DEPARTMENT OF ZOOLOGY**

To,

The Principal

G.I. Bagewadi College, Nipani

Sub: Permission to visit Chitri forest (Ajara).

Respected sir,

As a part of curriculum we are arranging one day study tour to chitri. As per RCU syllabus for IV SEM to study colouration and mimicry in animals. So we would like to visit on Sunday 17/03/2019. To accommodate the students we are hiring private vehicles. So kindly accord your permission.

Thanking you.



Yours faithfully  
HEAD

Department of Zoology  
G.I. Bagewadi College, Nipani

  
PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



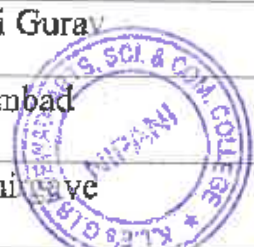
KLE Society's  
G.I.Bagewadi Arts, Science, Commerce Degree & P G College,  
Nipani-591237. District: Belagavi. KARNATAKA  
Re-Accredited at 'A' level by NAAC with CGPA 3.35

Phone Number: 08338 220116  
E-Mail ID: klegib\_npn@yahoo.co.in

Fax Number: 08338 220116  
Website URL: www.klegibcollege.org

List of Students

Sl No.	Roll.No.	Name of the Student	Amount	Signature
1	114.	Abhinandan Kolhapure	500/-	
2	115.	Abhishek Magdum	Ab -	
3	116.	Aishwarya Killedar	Ab -	
4	117.	Aishwarya Punde	500/-	
5	118.	Akshay Magdum	500	
6	119.	Anil Bhingare	500/-	
7	120.	Chetana Belavi	500/-	
8	121.	Chinmayi Indi	500/-	
9	122.	Daksha Patel	500/-	
10	123.	Gurunath Arekar	500/-	
11	124	Janhavi Bahtale	500/-	
12	125.	Kajal Bhoite	500/-	
13	126.	Kamartaj Khanapure	500/-	
14	127.	Kashinath Savantre	500/-	
15	128.	Kenchappa Nasalapure	500/-	
16	129.	Pranjali Potadar	Ab -	
17	130.	Madhuri Bhivashe	500/-	
18	131.	Masum Panwale	500/-	
19	132.	Meenakshi Gurav	500/-	
20	133.	Megha Sumbad	500/-	
21	134.	Nandini Shilave	Ab	



22	135	Neha Kadakare	500/-	<u>Kadakare</u>
23	136.	Neha Patil	500/-	<u>Patil</u>
24	137.	Nikita Havale	Ab	
25	138.	Nikita Magdum	500/-	<u>Magdum</u>
26	139.	Parshwajeet Patil	Ab	
27	140.	Pavan Paymale	500/-	<u>Paymale</u>
28	141.	Pooja Kesarkar	500/-	<u>Kesarkar</u>
29	142.	Prajakta Bachane	Ab	
30	143.	Prajakta Patil	Ab	
31	144	Prathmesh Mavinkatti	Ab	
32	145.	Pratiksha Suryavanshi	Ab	
33	146.	Praveen Chougule	500/-	<u>Chougule</u>
34	147.	Prithviraj Narayankar	Ab	
35	148.	Priyanka Palkar	500/-	<u>Palkar</u>
36	149	Pushpdant Upadhye	500/-	<u>Push.</u>
37	150.	Rachana Tandale	Ab	
38	151.	Ramizraja Makandar	Ab	
39	152.	Rohini Tharapatti	500/-	<u>Tharati</u>
40	153.	Rutuja Patil	Ab	
41	154.	Sabeel Makandar	200/-	<u>Makandar</u>
42	155.	Sachin Badkar	Ab	
43	156.	Samiksha Gibise	Ab	
44	157.	Sana Soudagar	Ab	
45	158.	Saniya Awate	500/-	<u>Awate</u>
46	159.	Sanjeevani Hasure	Ab	





47	160.	Sanket Jadhav	Ab	
48	161.	Santosh Adake	Ab	
49	162.	Sayyam Havale	500/-	Sayyam Havale
50	163.	Seema Datwade	500/-	Seema Datwade
51	164.	Shahida Desai	Ab	
52	165.	Shradha Kooge	Ab	
53	166.	Shubham Kodane	500/-	Shubham Kodane
54	167.	Soujanya Kamate	500/-	Soujanya Kamate
55	168.	Sourabh Pujari	500/-	Sourabh Pujari
56	169.	Sumeet Chougule	500/-	Sumeet Chougule
57	170.	Swati Tawadare	Ab	
58	171.	Umesh Pujari	Ab	
60	172.	Yogesh Pujari	500/-	Y. Pujari
61	173.	Zainbi Langoti	Ab	
62	174.	Rohan Manjrekar	Ab	





K.L.E. Society's  
G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237  
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Website: WWW.Klegibnnpn.edu.in E-mail: klegibnnpn@yahoo.co.in Ph: 08338-220116

Ref. No.: GIB/

Date: 17/03/2019

### REPORT ON : STUDY OF MIMICRY HABIT AND COMMUNITY

Name of the Department	Zoology
Name of the Event Organized	Field Visit
Title of the Event	Study of mimicry habit and community
Date of the Event Organized	17.03.2019
Class	B.Sc IV Sem
Field visit location	Chitri, Ajara (Maharashtra)
Name of the Convener	Smt.G.A.Dhekale
Participants	37
No. of Participants	Total 37 Teachers 02 Students 35
Name of the Expert with Designation	Smt.G.A.Dhekale, Assistant prof
Contact Number & Address of the Expert	9036140785
Objectives of the Event	Mimicry involves different species and functions to protect from predators.
Outcome of the Event	Makes as antipredator adaptation.
Photo Gallery	
	
Study of mimicry habitat and community. Chitri(Ajara )	Chitri Habitat

HOD

Department of Zoology  
G.I. Bagewadi College, Nipani

Co-ordinator IQAC

K. L. E. Society's  
G. I. Bagewadi College, Nipani.

PRINCIPAL

G. I. Bagewadi Arts, Science &  
Commerce College, NIPANI.

B.Sc V Semester (S.I.)  
Paper-I  
ZOOLOGY (optional)

(Ecology, Evolution, Paleontology, Zoogeography, Wild life Conservation)

Total hours, 50  
Marks, 80

Ecology.

Earth as Living Planet. Sub divisions of ecology. Scope of ecology, Biosphere	1 hr
Abiotic factors Light, Temperature (Effect on Animals and Plants)	2hr
Biotic Factor Mutualism, Commensalism, Amensalism, Parasitism, Predation	2hrs
Competition, Parasitism.	
Habitats	4hrs
Freshwater habitat — Lotic and Lentic systems Zonation of Sea, Marine Biota, Estuarine ecology, & Mangrooves Terrestrial habitat — A brief account of Biomes.	
Ecological Adaptations — Freshwater, Marine and Terrestrial.	
Biogeochemical Cycles - Principles and concepts of Water, Nitrogen, Carbon, Oxygen cycles	2hrs
Community Ecology-Community structure, Ecological niches, Edge effect, Stratification, Ecotone.	2hrs
Population Ecology: Density, natality, mortality, Age distribution	
Population growth, types and curves.	2hrs





## Evolution.

### The Solar System

Origin of Earth , Origin of Life and its theories

03hrs

### The geological time scale

03hrs

Fossils: Definition and Kinds of fossils, How fossils are formed, Methods of Preservation, Connecting links and Living fossils. The importance of fossils

02hrs

### Theories of Organic Evolution :

08hrs

Lamarckism, Darwinism, Mutation Theory  
And the Modern Synthesis Theory: ( population gene Pool, Gene  
Frequency, Variations — gene mutation, chromosomal mutation,  
isolation and recombination, Genetic drift,HardyWeinberg equilibrium )

Modes of Evolution : Microevolution, Macroevolution and  
Mega-evolution.

02 hrs

04 hrs

### Evolution of Man and Horse

#### Paleontology

Mesozoic reptiles with a note on Dinosaurs.

03 hrs

Zoogeography: Zoogeographical realms of world ,  
A brief account of Wallace's line

03 hrs

09hrs

### Wildlife Conservation :

Wildlife in India, Causes for the depletion of wildlife.  
Wild Life Conservation Techniques, methods and measures  
Brief account of : IUCN, WWF, Bombay Natural History Society,  
Indian Board for Wild Life, Red Data Book.  
Wild Life Act 1972 and its amendments in India, CITES.  
Project Tiger and Biosphere Reserve.



2019-18 V Semester

### Total -11 Practicals

- 1; Study of fossils (vertebrate(3) and invertebrate(3)).  
1hr
2. Mesozoic reptiles (Ichthyosaur, Tyrannosaur, Brontosaur, Triceratops, Archaeopteryx).  
1hr
3. Evolution of man (Homo-erectus, Homo-habits, Homo-neanderthalenceae)  
1hr
4. Evolution of Horse  
1hr
- 5; Connecting links and living fossils (Neopilina, Podipatus, Limulus, Latimeria; Archaeopteryx and Duckbill platypus)  
1hr
- 6 Study of threatened Animals of India (Tiger, Lion, single horned rhinoceros  
Musk deer, gaur, Golden langur, Lion tailed monkey, Python)  
1hr
7. Estimation of CO<sub>2</sub> from different water samples  
1hr
- 8; Estimation of dissolved oxygen  
1hr
- 9; Estimation of Total hardness  
1hr
- 10; Study of Ecological Adaptations and Morphological peculiarities, ex-Hammit crab, 1hr  
Draco, stick insect, puffer fish, Exocoetus, Phrynosoma, chameleon and Bat.
- 11; Visit to nearby water body to study Ecosystem  
1hr

### REFERENCE BOOKS:-

Evolution : Odum

Organic Evolution: N.Arumugam  
Evolution, Dobzhansky, Ayala Stebbins & Valentine  
Environmental Biology Rastogi and Company Meerut  
Evolution of the Vertebrates, Colbert E.H. John Wiley and Sons, New York  
Ecology, Principles and Application, Chapman, Cambridge university press  
Environmental Biology P.R.Trivedi and gurudeep Raj.  
Recent Advances in Environmental Biology -Diwan and D.K.Arora  
Environmental Science; Eldon D. Enger and Brady F. Smith





K.L.E. Society's

G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237

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Affiliated to Rani Channamma University, Belagavi, Karnataka, India

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Ref. No.: GIB/

Date: 04/09/2018

**DEPARTMENT OF ZOOLOGY**

**Field Visit – Study of Biodiversity**

To,  
The Principal  
K.L.E. Society's  
G.I. Bagewadi College, Nipani

Respected sir,

As a part of curriculum we have arranged one day field visit to Aadi(Nipani)s on 05/09/2018 at early morning 8.30am for the study of animal biodiversity for B.Sc. V Sem students. 40 students have enrolled their names. Miss. Pragati.Salunkhe will be accompanying the students. This is for your kind information.

Thanking you Sir,

*K. S. Patil*

Head of Department

HOD

Department of Zoology  
G.I. Bagewadi NIPANI



Principal

PRINCIPAL  
G.I. Bagewadi Arts, Science  
& Commerce College, NIPANI





K.L.E. Society's  
G.I. Bagewadi Arts, Science, Commerce and PG College, Nipani-591237  
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Website: WWW.Klegibnnpn.edu.in E-mail: klegib\_npn@yahoo.co.in Ph: 08338-220116

Ref. No.: GIB/

Date: 05/09/2018

### REPORT ON - "STUDY OF ECOSYSTEM"

Name of the Department	Zoology
Name of the Event Organized	Field visit
Title of the Event	"Study of Ecosystem"
Date of the Event Organized	05 Sept. 2018
Class	B.Sc. V Sem
Field visit location	Adi, Nipani
Name of the Convener	Dr. V. R. Naik, Associate Prof.
Participants	42
No. of Participants	Total 43 Teachers 01 Students 42
Name of the Expert with Designation	Miss. Pragati Salunke, Assistant Prof.
Contact Number & Address of the Expert	9130214352. A/P-Nipani. Tal-Chikodi, Dist-Belagavi
Objectives of the Event	Study of Biotic and Abiotic Factors and there inter relations.
Outcome of the Event	1. Students got knowledge about what are the necessities for good Ecosystem. 2. The students are got knowledge about Pond Ecosystem.
Photo Gallery	
	
Field Visit to Adi	Field Visit To Study Ecosystem

  
HOD  
HOD  
Department of Zoology  
G.I. Bagewadi NIPANI

  
IOAC Coordinator  
Co-ordinator IOAC  
K. L. E. Society's  
G. I. Bagewadi College, Nipani.

  
PRINCIPAL  
PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.

(Study of Ecosystem) Study Tour

2018-19

V Sem P-I

Sl.No	Roll.No	Name of the student
1	91	Abhishek Chougale
2	92	Amit Ammanagi
3	93	Arati Gore
4	94	Ashrafali Bargir
5	95	Chaitali Hegade
6	96	Chaitra Hosure
7	97	Devyani Khot
8	98	Dhanashree hasure
9	99	Dhanashree Shalake
10	100	Dhanashri Patil
11	101	Digvijay Nigave
12	102	Divya Chandrakude
13	103	Guravkumar Chougule
14	104	Jayashri Balikai
15	105	Komal Kadam
16	106	Madhuri Shelke
17	107	Malagoud Patil
18	108	Manoj Kumbar
19	109	Narendra Patil
20	110	Nootan Kurane
21	111	Nutan Shettimani
22	112	Omker Magadum
23	113	Pallavi Sangane
24	114	Pooja Ghorapade
25	115	Pranali Chavan
26	116	Pooja Karekar
27	117	Rachana Patil
28	118	Sangram Sanadi
29	119	Santosh Bilage
30	120	Seema Lagamannavar
31	121	Sharad Banne
32	122	Sheetal Magadum
33	123	Shivatehj Chougule
34	124	Shweta Sapagale
35	125	Sneha kambale
36	126	Soumya Patil
37	127	Sunita Patil
38	128	Tejas B Patil
39	129	Vaishnvi Ajarekar
40	130	Vaishnavi Ambale
41	131	Yogesh Varute
42	132	Pooja Reddy



MS

Department of Zoology  
G. L. Bagewadi College, Nipani.

17-18  
Zoology

Rani Channamma University, Belagavi  
B.Sc VI Semester - 01

Paper I

Total hours - 50  
Marks - 80  
Theory 4 hrs/week

APPLIED ZOOLOGY (optional)

- Sericulture: Mulberry Silkworm and Life History of Bombyx mori  
Rearing of Silkworm: Grainage management, Emergence of moth and fertilization, egg laying, hatching and moulting of silkworm, spinning of cocoons, Cocoon processing, stiffling and spinning silk. Filature. Non mulberry silkworm, types, in brief & Silkworm diseases- Muscardine, Grasserie, Flacherie & Pebrine. 07 hrs
- Apiculture: Species of Honey Bees, their Social organization, Life History  
Methods of Bee Keeping, products of Bees, & their Economic importance 05 hrs
- Insect Pest Management: Natural control and Applied control of pests  
Applied Control — Mechanical, Physical, Cultural, Legal, Chemical control 05 hrs
- Vermiculture: Earthworm species used in vermiculture, vermiculture technique, and importance of vermiculture. 04 hrs
- Aquaculture  
Prawn Fisheries, Species of Prawns, Culture of freshwater and marine  
Prawns, Preservation and processing of Prawns. 10 hrs
- Pearl Culture: Pearl producing molluscs, Pearl formation, Pearl producing Sites in India, Quality and composition of Pearl,  
Pearl industry Artificial Insertion of nucleus  
Brief technique of Fish culture, Preservation of fishes and their Byproducts
- Poultry: Breeds of fowl, Diseases of poultry, Poultry maintenance and By-products, and Composition and Nutritive value of Egg 06 hrs
- Animal Husbandary: Maintenance, Breeds Diseases, Products and By-Products of the following  
Sheep and Goats, Cow and Buffalos, Composition and Nutritive value of Milk 10 hrs
- Lac culture: Classification of Lac insect (Lachardia lacca), Life history of Lac Insect, Host plants, Cultivation of Lac, Composition and properties & Economic importance. 3 hrs





Practicals - 6.1

Total -11 Practicals

- |   |   |
|---|---|
| 1 Project on any of the applied branch studied in theory  | 1 |
| 2 Study of mulberry silkworm and Life cycle   | 1 |
| 3 Types of non mulberry silkworms in brief and Silkworm diseases (Pebrine, Muscardine and Grasserie & Flatulie) | 1 |
| 4 Species and castes of honeybees   | 1 |
| 5 Agricultural pests and domestic pests (total 8 varieties)   | 1 |
| 6 Study of fisheries ___ Mollusca (three), Crustaceans (three) And Pisces (six)                                 | 1 |
| 7 Study of Varieties of sheep and goat (from chart/photographs)   | 1 |
| 8 Study of varieties of Cow & Buffalos (from chart/photographs)   | 1 |
| 9 Vermiculture ___ Study of types of Earthworm species  | 1 |
| 10 Study of poultry breeds  | 1 |
| 11 Study of Lac insect (Life cycle)   | 1 |

Scheme for practicals 6.1 APPLIED ZOOLOGY

- |                                  |          |
|----------------------------------|----------|
| Q No. I Sericulture              | 03 marks |
| Q No. II Apiculture              | 03 marks |
| Q No. III Pest management        | 03 marks |
| Q No. IV Pisciculture            | 03 marks |
| Q No. V Vermiculture             | 03 marks |
| Q No. VI Animal Husbandry        | 06 marks |
| Q No. VII Prawn & Pearl culture  | 04 marks |
| Q No. VIII Project report & Viva | 10 marks |
| Q No. IX Journal                 | 05 marks |

Total 40 marks

Note 1 Examiners can alter the Scheme of marks for practical in consultation with the staff of the host college.





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Ref. No.: GIB/

Date: 19/03/2019

## DEPARTMENT OF ZOOLOGY

### Field Visit – Applied Zoology

To,  
The Principal  
K.L.E. Society's  
G.I. Bagewadi College, Nipani

Respected sir,

As a part of curriculum we have arranged Field Visit on 12/03/2019 to study about applied zoology about Dairy Farming, Sericulture, Vermiculture, Poultry Farming, and Insect Pest Management for B.Sc. VI Sem students. 42 students have enrolled their names. Smt. V. R. Naik and Smt. K. I. Pattan will be accompanying the students. This is for your kind information.

Thanking you Sir,

Head of Department

H O D  
Department of Zoology  
G.I. Bagewadi NIPANI

Principal

PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI



2018-19		Applied Zoology (Field Visit)	
SL.No	Roll.No	Name of the student	B.Sc VI Sem(P-I) Project names
1	91	Abhishek Chougale	Vermiculture
2	92	Amit Ammanagi	Vermiculture
3	93	Arati Gore	Vermiculture
4	94	Ashrafali Bargir	Vermiculture
5	95	Chaitali Hegade	Vermiculture
6	96	Cheitra Hosure	Vermiculture
7	97	Devyani Khot	Vermiculture
8	98	Dhanashree hasure	
9	99	Dhanashree Shalake	
10	100	Dhanashri Patil	
11	101	Digvijay Nigave	
12	102	Divya Chandrakude	
13	103	Guravkumar Chougule	Poultry farming
14	104	Jayashri Balikai	Poultry farming
15	105	Komal Kadam	Poultry farming
16	106	Machuri Shelke	Poultry farming
17	107	Malagoud Patil	Poultry farming
18	108	Manoj Kumbhar	Poultry farming
19	109	Narendra Patil	Poultry farming
20	110	Nootan Kurane	Insect Pest Management
21	111	Nutan Shettimani	
22	112	Omkar Magadum	
23	113	Pallavi Sangane	
24	114	Pooja Ghorapade	Insect Pest Management
25	115	Pranali Chavan	
26	116	Pooja Karekar	Dairy breeds
27	117	Raehana Patil	Dairy breeds
28	118	Sangram Sanadi	
29	119	Santosh Bilage	Dairy breeds
30	120	Seema Lagamannavar	Dairy breeds
31	121	Sharad Banne	Dairy breeds
32	122	Sheetal Magadum	Insect Pest Management
33	123	Shivatehj Chougule	Insect Pest Management
34	124	Shweta Sapagale	Insect Pest Management
35	125	Sneha kambale	Insect Pest Management
36	126	Soumya Patil	Insect Pest Management
37	127	Sunita Patil	Insect Pest Management
38	128	Tejas B Patil	Poultry farming
39	129	Vaishnvi Ajarekar	Poultry farming
40	130	Vaishnavi Ambale	Poultry farming
41	131	Yogesh Varute	Poultry farming
42	132	Pooja Reddy	Poultry farming







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Ref. No.: GIB/

Date: 20/03/2019

### PROJECT REPORT ON "APPLIED ZOOLOGY"

Name of the Department	Zoology
Name of the Event Organized	Applied Zoology
Title of the Event	Different Branches Of Applied Zoology
Date of the Event Organized	20/03/2019
Class	B.Sc VI Sem P-I
Name of the Convener	Smt.G.A.Dhekale
Participants	43
No. of Participants	Total 43 Teachers 01 Students 42
Name of the Expert with Designation	Miss. Sampada Hegade
Contact Number of the Expert	9008396800 A/P: Nipani Tq: Chikkodi Dist: Belagavi
Objectives of the Event	1.To know about Different breeds of Buffalos, Cows, sheep and goats 2.To Study the sericulture
Outcome of the Event	1. They got knowledge about poultry farming.. 2.They are the best acceptable disposal of waste, ways for quality, environment & organic farming from vermiculture
Photo Gallery	
	
Plants Of Silkworms in Sericulture Farm	Breeds Of Buffalos

*[Signature]*

HOD

NOD

Department of Zoology  
G.I. Bagewadi NIPANI

*[Signature]*

IQAC Coordinator

Co-ordinator IQAC

K. L. E. Society's

G. I. Bagewadi College, Nipani.

*[Signature]*

PRINCIPAL

G.I. Bagewadi Arts, Science & Commerce College, NIPANI.

17-18  
Rani Channamma University, Belagavi  
B.Sc VI Semester - 6.2

Paper II

(Microbiology, Nanotechnology, Bioinformatics and Methods In Biology)

Total hours -- 50  
Marks -- 80  
Theory 4 hrs/week

Microbiology

- |   |                 |
|---|-----------------|
| 1. Microscopy : Compound Microscope and its functions<br>Dark field microscope. Fluorescent Microscope<br>Phase Contrast Microscope and Electron Microscope and<br>their uses | 03 hrs          |
| 2. Sterilization and other Techniques _ Physical and Chemical methods<br>Bacteria: Classification based on shapes, structure (anatomy) Bacterial<br>reproduction and growth.  | 01 hr<br>02 hrs |
| 3. Virus _ Morphology, chemical properties, classification and nomenclature<br>DNA and RNA viruses.   | 02 hrs          |
| 4. Fungi: Structure, classification and reproduction, Yeasts  | 02hrs           |
| 5. Fermentation: Types of Fermentor and basic functions<br>Methods of preservations and criteria for the selection of microorganisms  | 03hrs           |
| 6. Production of antibodies Penicillin, Streptomycin, Enzyme- protease,<br>Riboflavin.  | 02hr            |
| 7. Ormal microbial flora of the human body  | 01hr            |
| 8. Role of microbes in environment  | 01hr            |

Nanotechnology

4hrs

Introduction: History, Name, Tools and Techniques in Nanotechnology.

Nanobiology, application of Nano in biology- Nano drug Administration Diagnostic & Therapeutic applications: Lotus effect, Gold & Silver Nanotechnology. Curcumin phytochemicals, Cinnamon in green nano technology.



## Bioinformatics

1. Introduction: Definition, Goal of Bioinformatics, Sequencing Sequences analysis and Structure analysis Applications of Bioinformatics. 02hrs
2. Classification of Biological Data Bases. Characteristics of FASTA (Fast Alignment) BLAST (Basic Local Alignment Search Tool). 02hrs
3. Aims and goals of Human Genome Project: Main findings of human genome Project, Prediction and tools for gene prediction. Comparative genomics. 02hrs
4. Proteomics: Two dimensional Gel Electrophoresis Mass spectrometry, SDS \_\_ PAGE Structure of protein \_\_ Primary, Secondary, Tertiary and Quaternary. 02hrs
- Protein structure prediction 01hr
- Application of Proteome analysis 01hr
- The future of Proteomics

## Methods in Biology

- Techniques of Cell fraction and Centrifugation. Homogenization and cell tissue disruption Centrifugation, Ultra centrifugation. 02hrs
- DNA Sequencing, \_ In situ Hybridization, DNA microchips 02hrs
- Genetic Engineering in animals- Transgenic Mouse, Transgenic sheep, Genetically Altered Fish, Mosquito and Drosophila. 02hrs
- Gene therapy in Humans 02hr
- Histochemical and Immunization Techniques \_ ELISA, RIA, Flow Cytometry 02hrs





Nucleic Acid Blotting and their applications _ Southern Blotting, Northern Blotting, Western Blotting	02hrs
Biophysical Methods _ Brief note of NMR, ESR, Spectroscopy and their uses	02hrs
Radioisotopes Techniques in Biochemistry - Types of radioactive decay- Alpha, Beta emission & Gamma rays	01 hr
Geiger-Muller counter, Liquid Scintillator	01hr
Biological applications of Radioisotopes	01hr
A brief note on the use of ECG, PET, MRI, CAT, Single Neuron recorder in Electro Physiological methods	02hrs



2019-18 VI Sem P-II

B.Sc VI SEMESTER 8.2

PRACTICAL DETAILS

ZOOLOGY Pract-II

**TOTAL 11 PRACTICALS**

Measurement of micro organisms (Micrometry)

Preparation of liquid medium (Broth)

Preparation of solid media (PDA medium and PDA plates)

Preparation of agar slants.

Bacterial cell counting using haemocytometer.

Simple and Gram's staining differentiation of bacteria.

Isolation, Identification and enumeration of Bacteria/Protozoa from moist soil or sewage water

Practical application of Bioinformatics: Tool BLAST And FASTA to find out sequence of nucleotides in Desired gene/Amino acid in desired protein

Study of Microbiological Lab Equipments—  
Microscope, Centrifuge, Autoclave, Pressure cooker, Laminar air flow, Streak Plate, Inoculation needle etc

Visit to Diagnostic center to study practical application of ECG, PET, MRI, CAT



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Date: 14/01/2019

DEPARTMENT OF ZOOLOGY

To,  
Dr. Sunil Jalalpure,  
KAHER'S Basic science and research centre,  
Belagavi.

Subject : Permission to visit KAHER'S BSRC for VI sem students., 16/01/19

Respected sir,

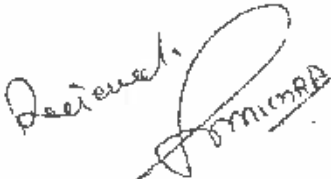
With reference to subject cited above I Dr. Vidya Naik head of department of Zoology G.I. Bagewadi college Nipani, bring to your kind perusal that as a part of curriculum for the B.Sc VI Sem students, would like to visit the centre and get acquainted with the recent developments in basic and applied research. Kindly permit us for the same.

Thanking you.

  
PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



  
Yours faithfully,  
Head  
Department of Zoology  
K.L.E.'s G. I. B. College, Nipani

  
Dr. Sunil Jalalpure

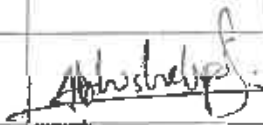






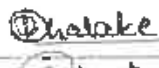
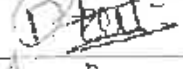




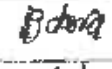


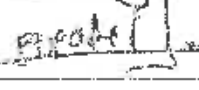
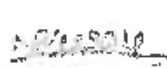


Date: 18/03/2022






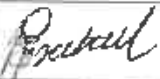
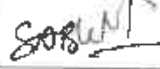



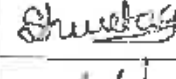
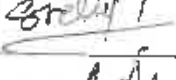
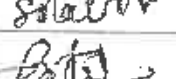

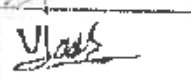

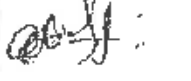
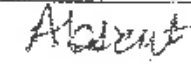
**K.L.E SOCIETY'S  
G.I.BAGEWADI ARTS, SCIENCE, COMMERCE & PG COLLEGE, NIPANI**

**Department of Zoology**

**B.Sc III<sup>rd</sup> Year ( Student attendance to visit KAHER'S BRSC Belgaavi)**

Sl No.	Roll No.	Register No	Name of the Student	Signature
1.	91.	S1617602	Abhishek Chogule	
2.	92.	S1617614	Amit Ammanagi	Absent
3.	93.	S1617620	Aarafi Gore	
4.	94.	S1617624	Ashrafali Bargir	
5.	95.	S1617630	Chaitali Hegade	
6.	96.	S1617631	Chaitra Hasure	
7.	97.	S1617633	Devyani Khot	
8.	98.	S1617634	Dhanashree Hasure	
9.	99.	S1617635	Dhanashree Chalake	
10.	100.	S1617636	Dhanashree Patil	
11.	101.	S1617637	Digvijay Nigave	
12.	102.	S1617639	Divya Chandrakude	
13.	103.	S1617640	Gauravkumar R. Chougule	
14.	104.	S1617641	Jayashree Balikai	
15.	105.	S1617643	Komal Kadam	
16.	106.	S1617646	Madhuri shelake	
17.	107.	S1617648	Malgoud S. Patil	Absent
18.	108	S1617650	Manoj R. Kumbhar	
19.	109.	S1617655	Narendra R. Patil	
20.	120.	S1617665	Nootan Kurane	



Sl No.	Roll No.	Register No	Name of the Student	Signature
21.	121.	S1617666	Nutan shettimani	
22.	122.	S1617668	Omkar Magdum	
23.	123.	S1617671	Pallavi Sangane	
24.	124.	S1617675	Pooja Ghorpade	Absent
25.	125.	S1617682	Chavan Pranali Prakash	
26.	126.	S1617689	Pooja Karekar	
27.	127.	S1617691	Rachana Patil	
28.	128.	S1617703	Sangram A. Sanadi	Absent
29.	129.	S1617706	Santosh Bilage	
30.	130.	S1617708	Seema Sanamannavar	Absent
31.	131.	S16176709	Sharad Banne	
32.	132.	S1617711	Sheetal Magdum	
33.	133.	S1617712	Shivtej Chougule	
34.	134.	S1617718	Shweta Sapakale	
35.	135.	S1617719	Sneha Karnble	
36.	136.	S1617722	Soumya Patil	
37.	137.	S1617729	Sunita P.Patil	
38.	138.	S1617736	Tejas patil	
39.	139.	S1617740	Vaishnavi Ajarekar	
40.	140.	S1617741	Vaishanvi Ambale	
41.	141.	S1617750	Yogesh Vanite	
42.	142.	S1617663	Pooja Reddy	Absent

total = 42 Present = 36 absent = 06



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Ref. No.: GIB/

Date: 19/01/2019

### REPORT ON -STUDY OG BIOTECH INSTRUMENTS

Name of the Department	Zoology
Name of the Event Organized	Study tour
Title of the Event	Study of Bioinstruments.
Date of the Event Organized	16.01.2019
Class	B.Sc VI Sem
Study tour location	JNMC, Belagavi
Name of the Convener	Smt.K.I.Pattan
Participants	32
No. of Participants	Total 32 Teachers 02 Students 30
Name of the Expert with Designation	Smt.G.A.Dhekale, Assistant prof
Contact Number & Address of the Expert	9036140785
Objectives of the Event	To acquaint the student with advance techniques in Biological sciences. Practical skills of using instruments in Biology.
Outcome of the Event	Student gets the knowledge of the devices used to measure evaluate and treat the human body students gets the knowledge of operating the instruments and evaluate various aspects.
Photo Gallery	
	
Visit to JNMC.	Scientist Shri. Doddamani explaining the instruments.

HOD

Department of Zoology,  
G.I. Bagewadi NIPANI

IOAC Co ordinator  
Co-ordinator IOAC  
K. L. E. Society's  
G. I. Bagewadi College, Nipani.

PRINCIPAL

PRINCIPAL  
G.I. Bagewadi Arts, Science &  
Commerce College, NIPANI.



(Study of Biotechnological instruments) Study Visit  
2018-19 VI Sem(P-II)

Sl.No	Roll.No	Name of the student
1	91	Abhishek Chougale
2	92	Amit Ammanagi
3	93	Arati Gore
4	94	Ashrafali Bargir
5	95	Chaitali Hegade
6	96	Chaitra Hosure
7	97	Devyani Khot
8	98	Dhanashree hasure
9	99	Dhanashree Shalake
10	100	Dhanashri Patil
11	101	Digvijay Nigave
12	102	Divya Chandrakude
13	103	Guravkumar Chougule
14	104	Jayashri Balikai
15	105	Komal Kadam
16	106	Madhuri Shelke
17	107	Malagoud Patil
18	108	Manoj Kumber
19	109	Narendra Patil
20	110	Nootan Kurane
21	111	Nutan Shettimani
22	112	Omkar Magadum
23	113	Pallavi Sangane
24	114	Pooja Ghorapade
25	115	Pranali Chavan
26	116	Pooja Karekar
27	117	Rachana Patil
28	118	Sangram Sanadi
29	119	Santosh Bilage
30	120	Seema Lagannpavar
31	121	Sharad Banne
32	122	Sheetal Magadum
33	123	Shivatehj Chougule
34	124	Shweta Sapagale
35	125	Sneha kambale
36	126	Soumya Patil
37	127	Sunita Patil
38	128	Tejas B Patil
39	129	Vaishnvi Ajarekar
40	130	Vaishnavi Ambale
41	131	Yogesh Varute
42	132	Pooja Reddy

LS

Department of Zoology  
G. L. Bagewadi College, Nipani.

