

**B.Tech. (Cosmetics)
Semester-V & VI
Examination**

Prospectus No.20151912

**संत गाडगे बाबा अमरावती विद्यापीठ
SANT GADGE BABA AMRAVATI UNIVERSITY**

**गृहविज्ञान विद्याशाखा
(FACULTY OF HOME SCIENCE)**

**PROSPECTUS
OF
B.Tech (Cosmetics)
Semester-V, Winter-2014
Semester-VI, Summer-2015
Examinations
(Eight Semester Degree Course)**



2014

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Price Rs./-

Published by
Dineshkumar Joshi
Registrar,
Sant Gadge Baba
Amravati University
Amravati - 444 602

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Semester-V & VI
Prospectus No. 20151912

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SANT GADGE BABA AMRAVATI UNIVERSITY

SPECIAL NOTE FOR INFORMATION OF THE STUDENTS

- (1) Notwithstanding anything to the contrary, it is notified for general information and guidance of all concerned that a person, who has passed the qualifying examination and is eligible for admission only to the corresponding next higher examination as an ex-student or an external candidate, shall be examined in accordance with the syllabus of such next higher examination in force at the time of such examination in such subjects papers or combination of papers in which students from University Departments or Colleges are to be examined by the University.
- (2) Be it known to all the students desirous to take examination/s for which this prospectus has been prescribed should, if found necessary for any other information regarding examinations etc., refer the University Ordinance Booklet the various conditions/provisions pertaining to examination as prescribed in the following Ordinances.

- Ordinance No. 1 : Enrolment of Students.
- Ordinance No. 2 : Admission of Students
- Ordinance No. 4 : National cadet corps
- Ordinance No. 6 : Examinations in General (relevent extracts)
- Ordinance No. 18/2001 : An Ordinance to provide grace marks for passing in a Head of passing and Improvement of Division (Higher Class) and getting Distinction in the subject and condonation of defficiency of marks in a subject in all the faculties prescribed by the Statute No.18, Ordinance 2001.
- Ordinance No. 9 : Conduct of Examinations (relevent extracts)
- Ordinance No. 10 : Providing for Exemptions and Compartments
- Ordinance No. 19 : Admission of Candidates to Degrees.

- Ordinance No. 109 : Recording of a change of name of a University student in the records of the University.
- Ordinance No. 6 of 2008 : For improvement of Division/Grade.
- Ordinance No.19/2001 : An Ordinance for Central Assessment Programme, Scheme of Evaluation and Moderation of answerbooks and preparation of results of the examinations, conducted by the University, Ordinance 2001.

Dineshkumar Joshi
Registrar
Sant Gadge Baba Amravati University

DIRECTION

No. : 27 / 2012

Dated :- 29.6.2012

Subject : Examinations Leading to the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science (Eight Semester – Credit Grade Based System Course) Direction, 2012

Whereas, the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science is in existence in the University under Ordinance No.15 of 1998 and Regulation No.43 of 1998 respectively as per annual pattern.

AND

Whereas, the Academic Council in its meeting held on 5.5.2012 while considering item No.53 (3) A) R-1 has resolved to accept the Draft Schemes of Teaching and Examinations, Draft Syllabus and Draft Ordinances for B.Tech. (Cosmetics) alongwith other details as per semester system and credit grade based system, and further resolved to refer the Draft Scheme of Teaching and Examination and Draft Ordinances to the Ordinance Committee for making Ordinances and Regulations.

AND

Whereas, the Honorable Vice-Chancellor has accepted the corrections recommended by Chairman, Ad-hoc Committee in Cos.Tech. & Dean, faculty of Home Science u/s 14(7) of the Maharashtra Universities Act, 1994 on 25.6.2012 on behalf of the authorities of the University.

AND

Whereas, it is necessary to frame an Ordinance/Regulation for B.Tech. (Cosmetics) as per semester pattern and credit grade system.

AND

Whereas, the making of Ordinance/Regulation for B.Tech.(Cosmetics) Semester-I to VIII as per semester pattern and credit grade system, is a time consuming process.

AND

Whereas, the Academic Session is commencing from June 2012 and it is necessary to provide the Schemes of examinations, eligibility criteria along with other details for admission of students in the above pattern.

Now, therefore, I, Dr. Mohan K.Khedkar, Vice Chancellor of Sant Gadge Baba Amravati University, in exercise of powers conferred upon me under sub-section (8) of section 14 of the Maharashtra Universities Act., 1994, do hereby direct as under:

- 1) This Direction may be called "Examinations Leading to the Degree of Bachelor of Technology (Cosmetics) in the Faculty of Home Science (Eight Semester Credit Grade Based System Course) Direction, 2012".
- 2) This direction shall come into force from the date of its issuance.
- 3) (a) The following shall be the examinations leading to the Degree of Bachelor of Technology (Cosmetics) in the faculty of Home science.

| | | |
|----|------------------------|----------------|
| 1. | Bachelor of Technology | Semester-I |
| 2. | Bachelor of Technology | Semester-II |
| 3. | Bachelor of Technology | Semester-III |
| 4. | Bachelor of Technology | Semester-IV |
| 5. | Bachelor of Technology | Semester-V |
| 6. | Bachelor of Technology | Semester-VI |
| 7. | Bachelor of Technology | Semester - VII |
| 8. | Bachelor of Technology | Semester-VIII |
- (b) The duration of the Degree Course under this Direction shall be of Eight Semester in four academic years (i.e. two semester per year)
 - 1) B.Tech I & II Semester in First Academic Year
 - 2) B.Tech III & IV Semester in Second Academic Year
 - 3) B.Tech V & VI Semester in Third Academic Year
 - 4) B.Tech VII & VIII Semester in Fourth Academic Year
- (c) The examination specified in the preceding paragraph shall be held twice a year at such places and on such dates as may be appointed by the Board of Examinations.
- 4) Supplementary examinations shall be held for all semesters of B.Tech.(Cosmetics)
- 5) Subject to her/his compliance with the provisions of this Direction and other ordinance in force from time to time, a candidate for admission :-
 - a) To the Bachelor of Technology, Ist Semester Examination, shall have passed twelfth standard examinations of Maharashtra State Board of Secondary & Higher Secondary Education or examination recognised as equivalent thereto with the subjects English, Physics, Chemistry, Biology or Maths or Diploma in Pharmacy.

- 6) Subject to his/her compliance with the provisions of this Direction & other Ordinances pertaining to Examination in force from time to time, the applicant for admission, at the end of the course of study of a particular semester/session, to an Examination specified in column (1) of the table below, shall be eligible to appear if-
- he/she satisfies with the conditions in the table and the provisions thereunder.
 - he/she complies with the provisions of the ordinance pertaining to the Examination in general from time to time.
 - he/she has prosecuted a regular course of study in a college affiliated to the University.
 - he/she has in the opinion of the Principal shown satisfactory progress in his/her studies.

TABLE

| Name of the Exam. | The student should have passed the exam. of | The student should have satisfactorily completed the following session/ semester | The student should have passed the following examination |
|------------------------|---|--|--|
| B.Tech. Semester-I | As mentioned in Para 5(a) | ô | ô |
| B. Tech. Semester-II | ô | B.Tech. Semester-I | ô |
| B. Tech. Semester-III | ô | B.Tech. Semester-II | 2/3 rd Heads of I & II Semester combined together |
| B. Tech. Semester-IV | ô | B.Tech. Semester-III | -do- |
| B. Tech. Semester-V | B.Tech.I & II Semester | B.Tech. Semester-IV | 2/3 rd Heads of III & IV Semester combined together |
| B. Tech. Semester-VI | ô | B. Tech. Semester-V | -do- |
| B. Tech. Semester-VII | B.Tech. III & IV Semester | B. Tech. Semester-VI | 2/3 rd Heads of V & VI Semester combined together |
| B. Tech. Semester-VIII | ô | B. Tech. Semester-VII | -do- |

Explanation :

- While calculating 2/3rd heads of passing, fraction if any shall be ignored
 - For considering the heads of passing, every theory and every practical shall be considered as separate head of passing.
 - An examinee who has passed 2/3rd heads of passing shall be allowed to keep term in the next higher class.ô
- Without prejudice to the other provision of the Ordinance No. 6 relating to the Examination in General, the provisions of paragraph 5,7,8,10 and 31 of the said ordinance shall apply to every college candidate.
 - The fees for the examinations shall be as prescribed by the Management Council from time to time whenever any change is made in the fees prescribed for any particular examination that shall be notified through a notification for information of the examinees concerned.
 - The scope of the subjects shall be as indicated in the respective syllabus in force from time to time.
 - Medium of instruction and examination shall be English.
 - The schemes of teaching & credit system, scheme of examination along with other details & features of credit system shall be as given in **Appendices-I to V**.
 - There shall be no classification of examinees successful at the I to VII semester examination.
 - Incentive marks for each semester of B.Tech. examinations shall be as per Ordinance no.1 of 1985 in respect of Ordinance to provide for incentive marks for NSS, NCC, games & sports & other extra-curricular activities.
 - Every student has to undergo Industrial Training for one month after Sixth Semester in any Cosmetic Industry which shall be essential for fulfilment of Degree course.
 - Provision of Ordinance No.18 of 2001 relating to the condonation of Deficiency of marks for passing an Examination and of Ordinance No. 10 relating to Exemptions and Compartments as amended up to date shall apply to the Examinations under this Direction.
 - Cummulative Grade Point Average shall be calculated on the basis of performance of a candidate from Semester-V to VIII.
 - As soon as possible after the examinations, the Board of Examinations shall publish a list of successful examinees and the Merit list shall be prepared as per provision of Ordinance No.6.

- 17) Notwithstanding anything to the contrary in this Direction no person shall be admitted to this examination, if he/she has already passed the same examination or an equivalent examination of other statutory University.
- 18) Successful examinees at the I,II,III,IV, V,VI,VII & VIII semester examination shall be entitled to receive a certificate signed by the Registrar and successful Examinees at the VIII semester examination shall on payment of the prescribed fees receive a Degree in the prescribed form signed by the Honøble Vice-Chancellor.

Amravati
Dated : 28/06/2012

Sd/-
(Dr. M.K. Khedkar)
Vice-Chancellor

Appendix-I
Draft Scheme of teaching & Credit System for B.Tech (Semester wise)
First to Eight Semester

| Sub. Code | Subject | Scheme of teaching & Credit System | |
|---------------------|---------------------------------------|------------------------------------|---------------------|
| | | Theory (Credits) | Practical (Credits) |
| Semester-I | | | |
| 1.1 | Cosmetic Technology I | 03 (03) | 03 (1.5) |
| 1.2 | Cosmetic Chemistry I | 03 (03) | 03 (1.5) |
| 1.3 | Herbal Cosmetics I | 03 (03) | 03 (1.5) |
| 1.4 | Dermatology I | 03 (03) | 03 (1.5) |
| 1.5 | Computer Application | 03 (03) | 1 hr. demo |
| 1.6 | Mathematics & Statistics-I | 03 (03) | δ |
| | Total | 18 (18) | 12 (06) |
| Semester-II | | | |
| 2.1 | Cosmetic Technology II | 03 (03) | 03 (1.5) |
| 2.2 | Cosmetic Chemistry II | 03 (03) | 03 (1.5) |
| 2.3 | Herbal Cosmetics II | 03 (03) | 03 (1.5) |
| 2.4 | Dermatology II | 03 (03) | 03 (1.5) |
| 2.5 | Perfume & Colours I | 03 (03) | 03 (1.5) |
| 2.6 | Mathematics & Statistics-II | 03 (03) | δ |
| | Total | 18 (18) | 15 (7.5) |
| Semester-III | | | |
| 3.1 | Cosmetic Technology III | 03 (03) | 03 (1.5) |
| 3.2 | Cosmetic Chemistry III | 03 (03) | 03 (1.5) |
| 3.3 | Beauty Culture & Clinical Cosmetic-I | 03 (03) | 03 (1.5) |
| 3.4 | Perfume & Colours II | 03 (03) | 03 (1.5) |
| 3.5 | Cosmetic Engineering-I | 03 (03) | 03 (1.5) |
| 3.6 | Dermatology III | 03 (03) | δ |
| | Total | 18 (18) | 15 (7.5) |
| Semester-IV | | | |
| 4.1 | Cosmetic Technology IV | 03 (03) | 03 (1.5) |
| 4.2 | Cosmetic Chemistry IV | 03 (03) | 03 (1.5) |
| 4.3 | Beauty Culture & Clinical Cosmetic-II | 03 (03) | 03 (1.5) |
| 4.4 | Cosmetic Analysis I | 03 (03) | 03 (1.5) |
| 4.5 | Cosmetic Engineering II | 03 (03) | 03 (1.5) |
| 4.6 | Dermatology IV | 03 (03) | δ |
| | Total | 18 (18) | 15 (7.5) |

| Semester-V | | | |
|----------------------|--------------------------|----------------|-----------------|
| 5.1 | Cosmetic Technology V | 03 (03) | 03 (1.5) |
| 5.2 | Perfume & Colour III | 03 (03) | 03 (1.5) |
| 5.3 | Herbal Cosmetics III | 03 (03) | 03 (1.5) |
| 5.4 | Physical Cosmetics I | 03 (03) | 03 (1.5) |
| 5.5 | Cosmetic Analysis-II | 03 (03) | 03 (1.5) |
| 5.6 | Cosmetic Management -I | 03 (03) | ô |
| | Total | 18 (18) | 15 (7.5) |
| Semester-VI | | | |
| 6.1 | Cosmetic Technology VI | 03 (03) | 03 (1.5) |
| 6.2 | Perfume & Colour IV | 03 (03) | 03 (1.5) |
| 6.3 | Herbal Cosmetics IV | 03 (03) | 03 (1.5) |
| 6.4 | Physical Cosmetics II | 03 (03) | 03 (1.5) |
| 6.5 | Cosmetic Analysis III | 03 (03) | 03 (1.5) |
| 6.6 | Cosmetic Management II | 03 (03) | ô |
| | Total | 18 (18) | 15 (7.5) |
| Semester-VII | | | |
| 7.1 | Cosmetic Technology VII | 03 (03) | 03 (1.5) |
| 7.2 | Perfume & Colour V | 03 (03) | 03 (1.5) |
| 7.3 | Herbal Cosmetics V | 03 (03) | 03 (1.5) |
| 7.4 | Cosmetic Analysis IV | 03 (03) | 03 (1.5) |
| 7.5 | Cosmetic Engineering-III | 03 (03) | 03 (1.5) |
| 7.6 | Seminar | ô | 03 (1.5) |
| | Total | 15 (15) | 18 (9) |
| Semester-VIII | | | |
| 8.1 | Cosmetic Technology VIII | 03 (03) | 03 (1.5) |
| 8.2 | Perfume & Colour VI | 03 (03) | 03 (1.5) |
| 8.3 | Herbal Cosmetics VI | 03 (03) | 03 (1.5) |
| 8.4 | Cosmetic Jurisprudence | 03 (03) | ô |
| 8.5 | Cosmetic Engineering-IV | 03 (03) | 03 (1.5) |
| 8.6 | Project | ô | 03 (1.5) |
| | Total | 15 (15) | 15 (7.5) |

Appendix-II
Scheme of Examination for B. Tech. (Semester wise)
First to Eight semester

| Sub. Code | Subject | Scheme of Examination | | | | | | Minimum Marks for passing | | Total Marks in theory/practical |
|------------------------------|--------------------------------------|-----------------------|-------|-----------|----|-------------------|-------------------|---------------------------|--------|---------------------------------|
| | | Theory | | Practical | | Theory Int. Marks | Pract. Int. Marks | Theory | Pract. | |
| Hrs | Marks | Hrs | Marks | | | | | | | |
| Semester-I | | | | | | | | | | |
| 1.1 | Cosmetic I Technology | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 1.2 | Cosmetic Chemistry I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 1.3 | Herbal Cosmetics I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 1.4 | Dermatology I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 1.5 | Computer Application | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| 1.6 | Mathematics & Statistics-I | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | 800 | |
| Semester-II | | | | | | | | | | |
| 2.1 | Cosmetic Technology II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 2.2 | Cosmetic Chemistry II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 2.3 | Herbal Cosmetics II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 2.4 | Dermatology II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 2.5 | Perfume & Colours I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 2.6 | Mathematics & Statistics-II | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | 880 | |
| Semester-III | | | | | | | | | | |
| 3.1 | Cosmetic Technology III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 3.2 | Cosmetic Chemistry III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 3.3 | Beauty Culture & Clinical Cosmetic-I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 3.4 | Perfume & Colours II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 3.5 | Cosmetic Engineering-I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 3.6 | Dermatology-III | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | 880 | |

| Semester-IV | | | | | | | | | | |
|------------------------------|---------------------------------------|----|----|----|----|----|----|----|----|-------|
| 4.1 | Cosmetic Technology IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 4.2 | Cosmetic Chemistry IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 4.3 | Beauty Culture & Clinical Cosmetic-II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 4.4 | Cosmetic Analysis I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 4.5 | Cosmetic Engineering-II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 4.6 | Dermatology-IV | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | | 880 |
| Semester-V | | | | | | | | | | |
| 5.1 | Cosmetic Technology V | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 5.2 | Perfume & Colour III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 5.3 | Herbal Cosmetics III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 5.4 | Physical Cosmetics I | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 5.5 | Cosmetic Analysis II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 5.6 | Cosmetic Management I | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | | 880 |
| Semester-VI | | | | | | | | | | |
| 6.1 | Cosmetic Technology VI | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 6.2 | Perfume & Colour IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 6.3 | Herbal Cosmetics IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 6.4 | Physical Cosmetics II | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 6.5 | Cosmetic Analysis III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 6.6 | Cosmetic Management II | 03 | 60 | - | - | 20 | - | 36 | - | 80 |
| Total Marks for the semester | | | | | | | | | | 880 |
| Semester-VII | | | | | | | | | | |
| 7.1 | Cosmetic Technology-VII | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 7.2 | Perfume & Colour V | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 7.3 | Herbal Cosmetics V | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 7.4 | Cosmetic Analysis IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 7.5 | Cosmetic Engineering-III | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 7.6 | Seminar | - | - | - | - | - | 80 | - | 40 | 80 |
| Total Marks for the semester | | | | | | | | | | 880 |

| Semester-VIII | | | | | | | | | | |
|------------------------------|--------------------------|----|----|----|----|----|----|----|----|-------|
| 8.1 | Cosmetic Technology VIII | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 8.2 | Perfume & Colour VI | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 8.3 | Herbal Cosmetics VI | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 8.4 | Cosmetic Jurisprudence | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 8.5 | Cosmetic Engineering-IV | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| 8.6 | Project | 03 | 60 | 04 | 50 | 20 | 30 | 36 | 40 | 80+80 |
| Total Marks for the semester | | | | | | | | | | 800 |

Seminar :-

The topic for the seminar shall be assigned to him/her by the faculty members of Seventh semester & topic should be decided from the syllabus of same semester, with immediate from the date of the commencement of the seventh semester. Evaluation of seminar shall be based on the communication, representation and skill in oral presentation.

Project Report :-

The topic for the project shall be based on the practical work / theoretical/review oriented any topic from current Pharmaceutical development and shall be assigned to him/her by the respective guide from faculty members immediate from the date of the commencement of the sixth semester. Report to be submitted in the institute and examination (seminars on the project report) shall be conducted at the college level. Examination/ Evaluation of the project shall be based on Introduction and information retrieval systems, Organization of material and references in the project report, Representation, Skill in oral presentation, Questioning and defending, and finally on the report.

Appendix-III

Scheme of Marks and Credits subject wise for B. Tech. (Semester wise) First to Eight Semester

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|----------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 1.1 | Cosmetic Technology I | 80 (03) | 80(1.5) | 160 (4.5) |
| 1.2 | Cosmetic Chemistry I | 80 (03) | 80(1.5) | 160 (4.5) |
| 1.3 | Herbal Cosmetics I | 80 (03) | 80(1.5) | 160 (4.5) |
| 1.4 | Dermatology I | 80 (03) | 80(1.5) | 160 (4.5) |
| 1.5 | Computer Application | 80 (03) | - | 80 (03) |
| 1.6 | Mathematics & Statistics-I | 80 (03) | - | 80 (03) |
| Total | | | | 800 (24) |

Semester-II

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|-----------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 2.1 | Cosmetic Technology II | 80 (03) | 80(1.5) | 160 (4.5) |
| 2.2 | Cosmetic Chemistry II | 80 (03) | 80(1.5) | 160 (4.5) |
| 2.3 | Herbal Cosmetics II | 80 (03) | 80(1.5) | 160 (4.5) |
| 2.4 | Dermatology II | 80 (03) | 80(1.5) | 160 (4.5) |
| 2.5 | Perfume & Colours I | 80 (03) | 80(1.5) | 160 (4.5) |
| 2.6 | Mathematics & Statistics-II | 80 (03) | - | 80 (03) |
| Total | | | | 880 (25.5) |

Semester-III

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|--------------------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 3.1 | Cosmetic Technology III | 80 (03) | 80(1.5) | 160 (4.5) |
| 3.2 | Cosmetic Chemistry III | 80 (03) | 80(1.5) | 160 (4.5) |
| 3.3 | Beauty Culture & Clinical Cosmetic-I | 80 (03) | 80(1.5) | 160 (4.5) |
| 3.4 | Perfume & Colours II | 80 (03) | 80(1.5) | 160 (4.5) |
| 3.5 | Cosmetic Engineering-I | 80 (03) | 80(1.5) | 160 (4.5) |
| 3.6 | Dermatology III | 80 (03) | - | 80 (03) |
| Total | | | | 880 (25.5) |

Semester-IV

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|---------------------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 4.1 | Cosmetic Technology IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 4.2 | Cosmetic Chemistry IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 4.3 | Beauty Culture & Clinical Cosmetic-II | 80 (03) | 80(1.5) | 160 (4.5) |
| 4.4 | Cosmetic Analysis I | 80 (03) | 80(1.5) | 160 (4.5) |
| 4.5 | Cosmetic Engineering-II | 80 (03) | 80(1.5) | 160 (4.5) |
| 4.6 | Dermatology IV | 80 (03) | - | 80 (03) |
| Total | | | | 880 (25.5) |

Semester-V

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 5.1 | Cosmetic Technology V | 80 (03) | 80(1.5) | 160 (4.5) |
| 5.2 | Perfume & Colour III | 80 (03) | 80(1.5) | 160 (4.5) |
| 5.3 | Herbal Cosmetics III | 80 (03) | 80(1.5) | 160 (4.5) |
| 5.4 | Physical Cosmetics I | 80 (03) | 80(1.5) | 160 (4.5) |
| 5.5 | Cosmetic Analysis II | 80 (03) | 80(1.5) | 160 (4.5) |
| 5.6 | Cosmetic Management -I | 80 (03) | - | 80 (03) |
| Total | | | | 880 (25.5) |

Semester-VI

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 6.1 | Cosmetic Technology VI | 80 (03) | 80(1.5) | 160 (4.5) |
| 6.2 | Perfume & Colour IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 6.3 | Herbal Cosmetics IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 6.4 | Physical Cosmetics II | 80 (03) | 80(1.5) | 160 (4.5) |
| 6.5 | Cosmetic Analysis III | 80 (03) | 80(1.5) | 160 (4.5) |
| 6.6 | Cosmetic Management II | 80 (03) | - | 80 (03) |
| Total | | | | 880 (25.5) |

Semester-VII

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|--------------------------|-------------------------|-----------------------|-----------------------|
| | | Theory | Practical | |
| 7.1 | Cosmetic Technology VII | 80 (03) | 80(1.5) | 160 (4.5) |
| 7.2 | Perfume & Colour V | 80 (03) | 80(1.5) | 160 (4.5) |
| 7.3 | Herbal Cosmetics V | 80 (03) | 80(1.5) | 160 (4.5) |
| 7.4 | Cosmetic Analysis IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 7.5 | Cosmetic Engineering-III | 80 (03) | 80(1.5) | 160 (4.5) |
| 7.6 | Seminar | 0 | 80(1.5) (Internal) | 80 (1.5) |
| Total | | | | 880 (24) |

Semester-VIII

| Subject Code | Subject | Maximum Marks (Credits) | | Total Marks (Credits) |
|--------------|--------------------------|-------------------------|-----------|-----------------------|
| | | Theory | Practical | |
| 8.1 | Cosmetic Technology VIII | 80 (03) | 80(1.5) | 160 (4.5) |
| 8.2 | Perfume & Colour VI | 80 (03) | 80(1.5) | 160 (4.5) |
| 8.3 | Herbal Cosmetics VI | 80 (03) | 80(1.5) | 160 (4.5) |
| 8.4 | Cosmetic Jurisprudence | 80 (03) | - | 80 (3) |
| 8.5 | Cosmetic Engineering-IV | 80 (03) | 80(1.5) | 160 (4.5) |
| 8.6 | Project | - | 80(1.5) | 80 (1.5) |
| Total | | | | 800(22.5) |

he is mutually permitted on terms mutually agreed to complete the same and be eligible to appear for term end examination.

- 5) Seminar and the project shall be compulsory to each student at the end semester of VIIth and VIIIth Semester.
- 6) Paper setting and assessment for a particular course would be the responsibility of the course In-charge.
- 7) A student who passes the internal tests but fails in Term End Examination of a course shall be given FF grade.
- 8) Student with FF grade in a course would be granted credit for that course but not the grade for that course and shall have to clear the concerned course.
- 9) The evaluation is based on average weightage system. Every subject has credit point based system. Every student is awarded grade point out of maximum 10 points in each subject (based on 10 point scale).
- 10) Grades-Marks for each course would be converted to grades as shown in following Table 1 for theory and table 2 for practical.

Table 1: Final Grade point for Theory

| Final grade | Range of Marks obtained out of 100 or equivalent fraction | Grade point |
|-------------|---|-------------|
| AA | 90-100 | 10 |
| AB | 80-89 | 9 |
| BB | 70-79 | 8 |
| BC | 60-69 | 7 |
| CC | 55-59 | 6 |
| CD | 45-54 | 5 |
| FF | Below 45 | 0 |
| ZZ | Absent in Examination | |

Table 2: Final Grade point for Practical

| Final grade | Range of Marks obtained out of 100 or equivalent fraction | Grade point |
|-------------|---|-------------|
| AA | 90-100 | 10 |
| AB | 80-89 | 9 |
| BB | 70-79 | 8 |
| BC | 60-69 | 7 |
| CC | 55-59 | 6 |
| CD | 50-54 | 5 |
| FF | Below 50 | 0 |
| ZZ | Absent in Examination | |

- 11) Equivalence of the conventional division/class with the CGPA in final semester is in accordance with the following table 3 and Grade Points for SGPA and CGPA of B.Tech. Table-4.

Table-3: Equivalence of Class/Division to CGPA

| Sr.No. | CGPA | Class/Division |
|--------|---|------------------------------|
| 1. | 7.5 or more than 7.5 | First Class with Distinction |
| 2. | 6.00 or more but less than or equal to 7.49 | First Class |
| 3. | 5.50 or more but less than or equal to 5.99 | Higher Second Class |
| 4. | 5.00 or more but less than or equal to 5.49 | Second Class |

Table-4 : Grade Points for SGPA and CGPA of B.Tech.

| Grade Point | Final Grade |
|-----------------------|-------------|
| 9 - 10 | AA |
| 8 - 8.99 | AB |
| 7 - 7.99 | BB |
| 6 - 6.99 | BC |
| 5.5 - 5.99 | CC |
| 4.5 - 5.49 | CD |
| 0 - 4.49 | FF |
| Absent in Examination | ZZ |

- 12) Based on the grade point obtained in each subject, Semester Grade Point Average (SGPA) and then Cumulative Grade Point Average (CGPA) are computed as follows.

13) Computation of SGPA and CGPA

Every student is awarded point out of maximum out of 10 point in each subject (Based on 10 point scale). Based on the Grade point obtained in subject the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA) are computed. The computation of SGPA and CGPA is as under.

Semester Grade Point Average (SGPA) is the weightage average of point obtained by a student in a semester and computed as follows.

$$SGPA = \frac{U_1 \times M_1 + U_2 \times M_2 + \dots + U_n \times M_n}{U_1 + U_2 + \dots + U_n}$$

Where U_1, U_2, \dots, U_n are subject credit of the respective course and M_1, M_2, \dots, M_n are the Grade point obtained in the respective subject (out of 10).

The Semester Grade Point Average (SGPA) for all the four semester is also mentioned at the end of every semester.

The Cumulative Point Average (CGPA) is used to describe the overall performance of a student in the course and is computed as under. CGPA shall be calculated on semester V, VI, VII & VIII.

$$CGPA = \frac{\sum_{n=5}^{n=8} SGPA(n)C(n)}{\sum_{n=5}^{n=8} C(n)}$$

Where SGPA (n) is the nth semester SGPA of the student and C_n is the nth semester total credit. The SGPA and CGPA are rounded off to the second place of decimal.

- 14) Degree will be awarded on the basis of the performance of credits from the Semester-V to VIII.

ACADEMIC CALENDAR AND TERMS

The terms and academic activities of the Sant Gadge Baba Amravati University under CGPA shall be as per the dates given below, only the years shall be changed i.e. the dates shall remain same as given below irrespective of the year.

| | | |
|---|---|-------------------------------------|
| Beginning of First Term (Semester I, III, V and VII) | : | As per University academic calendar |
| Beginning of Second Term (Semester II, IV, VI and VIII) | : | As per University academic calendar |
| Vacation | : | As per University academic calendar |

Syllabus Prescribed for B.Tech (Cosmetics) Vth Semester Examination (Implemented from the Academic Session 2014-15) 5.1 Cosmetic Technology- V

Theory

- Skin Care cosmetics :-** 1) Skin creams ó Introduction, Classification, of skin creams, Cleansing creams, Night & Massage creams, moisturizing creams, vanishing cream. Hand creams all purpose creams.
- Face packs & Masks –** Introduction, water based systems, Rubber based system, vinyl based system, hydrocolloid based system Earth based system, its formulations and evaluation.
- Gels :** Purposes & Function of Gels, Main ingredients, of Gel, Emulgels
- Ointment and paste ó** Selection of ideal bases, preparation, stability & packing.
- Body Cosmetics :-** Sunscreens, Suntan & Antisunburn, Tannings. Beneficial & Adverse effect of sunlight. Solar radiation & its effects on skin. Protective mechanism of the skin. Sunscreen and suntan Preparations. Introduction Sunscreens and sustain preparations, antiperspirants & anti-oxidant preparations.
- Foot Preparations :** Introduction : Influence of foot wear foot Ailments, Foot Care & Hygiene, Bathing , The feet, Foot Powders, Foot Sprays, Foot Creams, Corn & Cullus preparations, Chillblain preparation, Athlete's Foot preparations.

Practicals :-

- Preparation of Antiperspirant & Antioxidant.
 - Cream
 - Sticks
 - Lotions
- Foot Preparations like foot cream, foot scrub, foot powder.
- Face preparations ó Face masks, face powders.

5.2 Perfume & Colours-III

Theory

- Oderous materials manufactured synthetically by following processes with reaction flow diagrams :-
 - Condensation ó Coumarin, Di-phenyl oxide & cinnamic aldehyde

- b. Esterification of Benzyl Acetate, Benzyl Benzoate.
 - c. Grignard process of Phenyl ethyl alcohol
 - d. Hydrogenation of citronellal from citronellol
 - e. Nitration of Musk of Ambrette, musk of xylene & Musk of ketone.
 - f. Oxidation- Vanillin, heptotropins, anisaldehyde, benzaldehyde
- 2) Flavours :- sources & properties of following ; Vanilla, Rose, pineapple, peppermint, mango, raspberry, orange, lemon, eugenol, citral, nerol.
 - 3) Packaging of perfumes with special emphasis on aerosol products.
 - a. Aerosol :- Principle of mechanism
 - b. Method of preparation , Cold fill method & press fill method
 - c. Packaging components.
 - 4) General formulations :-
 - a. Fixative :- Selection & uses of fixatives.
 - b. Building of perfume & body of the perfumes.
 - c. Synthetic substances, used for formulate different perfumes, their sources, properties & composition of lavenders, Rose, Jasmine, Violet, Orres, Cypre, Amber , Carnation, Magnet , Liliac, Acacid, Classic, Narcissus, Kewra, Mineral water Essences.
 - d. Revision, adaptation of incorporation of perfumes in cosmetic products, like creams , lotions, powders , eye preparations Hair Preparations nail preparations, lip & other preparations, tooth-paste & body preparation, Toilet Soaps.

Practical

- 1) Estimation of fundamental groups like hydroxy, amino carbonyl, vitro, halogens etc
- 2) Kjeldhal's estimation for nitrogen determination.
- 3) Extraction of volatile oils & its identification.

Books recommended

- 1) Perfume flowers & essential oil industries by S.B. Srivastva
- 2) Manufacture of perfumes, cosmetics, & Detergents by Giriraj Prasad
- 3) Cosmetics of Science & Technology By Sagarin.
- 4) Industrial pharmacy- By Leon Lachman

5.3 Herbal Cosmetics- III

Theory

- 1) **Volatile Oils** : Classification of Terpenes, sources, chemical constituents, properties and uses of following; lemongrass oil, lemon oil, clove oil, cinnamon oil, eucalyptus oil, menthol, camphor , Turpentine oil, Cardamom, Orange oil, rose oil , Sandal wood oil.

- 2) Study of Cosmeceuticals of allergenic extracts.
- 3) **Antioxidants**- Natural Rejuvenators that heal detoxify & provide nourishment. Free radicals, sources of free radicals, major antioxidants, antioxidant properties, herbal antioxidants.
- 4) Various methods of extraction and Isolation of herbal constituents.

Practicals :-

- 1) Organoleptics studies & Identification test of following herbals drugs.
 - a. Aloe b. Brahmi c. Bawachi d. Chandan e. Jatamansi
 - f. Lodhara g. Nagarmotha h. Ritha i. Raktachandan
 - j. Shikakai
- 2) Extraction of Volatile oil from various herbal drugs.
 - a. Lemon grass Oil b. Lemon Oil
 - c. Eucalyptus Oil d. Orange oil
 - e. Clove oil f. Rose Oil
- 3) Practical based on preparations of various cosmetic product using herbal drugs.

Reference

- 1) Trease of Evans : Text Book of Pharmacognosy
- 2) Claus and Tyler : Pharmacognosy
- 3) Nadkarni : Materia Medica
- 4) C.S.I.R. : Wealth of India
- 5) H. Panda : Hand Book of Herbal Cosmetics
- 6) Rakesh K. Sharma & Rajesh Arora Herbal drugs.
- 7) Medicinal Plants : Alice Kurian & N. Asha Sankar
- 8) Herbal Drug Technology ; By S.J. Agrawal , M. Paridhavi
- 9) Pharmacognosy & Phytochemistry Vol 1 & II, Mohammed Ali.

5.4 Physical Cosmetics- I

Theory

- 1) **Interfacial Phenomena** : Spreading coefficient, work of cohesion, work of adhesion. Adsorption at liquid interfaces, Adsorption at solid Interface, adsorption at solid / Gas Interface. Adsorption Isotherms & its types, adsorption at solid - liquid interface, electrical properties at interface.
- 2) **Complexation** :- Metal complexes, organic complexes, molecular complexes, inclusion complexes, methods of analysis of complexes. Applications in cosmetics.

- 3) **Rheology** : Types of Flow behaviour. Thixotropy, Negative Thixotropy. Measurement of Thixotropy. Determination of flow properties, capillary Viscometer. Falling sphere viscometer, cup & Bob viscometer. Cone & plate viscometer.
- 4) **Micromeritics** : Definition, Particle size determination methods, surface area methods , Derived properties of powders, porosity in Powder, Flow Properties of Powders . Applications in cosmetics technology.

Practicals :-

- 1) To determine surface tension of given sample by stalagnometer for atleast 4 samples.
- 2) To determine viscosity by using Ostwald viscometers at room temperature atleast 4 samples.
- 3) To determine interfacial tension of given sample.
- 4) To determine hardness of given sample by complexometric analysis method.
- 5) To study effect of lubricating agent on the flow properties of powder atleast 3 samples.

Reference

- 1) Physical pharmacy by Alfred Martin, James Swarbrick.
- 2) Burger & Lee ó Physical & Technical pharmacy
- 3) Rawlins Bentleyø Text Book of Pharmaceutics
- 4) Shotton & Ridgway : Physical pharmaceutics.

5.5 Cosmetic Analysis-II

Theory

- 1) Miscellaneous methods of analysis ó Diazotization titration, Kjeldhals method for nitrogen determination.
- 2) Theoretical aspects, Basic instrumentation and applications of following methods in cosmetics. Polarimetry, refractometry, potentiometry, pH measurement, conductometry.
- 3) Quality Assurance ISO, ICH Regulatory control, Validation of equipments and analytical instruments.
- 4) Testing of containers and closures.
- 5) Stability aspect of cosmetic preparations

Practical :-

- 1) Analysis of oils and fats used in cosmetics
 - a. Determination of acids values.
 - b. Determination of saponification value
 - c. Determination of iodine value

- 2) Quantitative tests for detection of proteins and amino acids and quantitative estimation of proteins, separation of amino acids by TLC
- 3) Estimation of ascorbic acids
- 4) Identification tests and analysis of lanolin, kaolin and Bentonite.
- 5) Preparation of standard buffers (Citrate, phosphate and carbonates) and measurements of pH.
- 6) Isolation of casein from milk and identification test for protein.

Reference Book

- 1) Practical pharmaceutical chemistry part I & Part II
- 2) Vogel Text Book of practical organic chemistry.
- 3) Instrumental methods of Analysis by Willard Dean, Merit and settle words worth publication co.
- 4) Instrumental methods of analysis of cring.
- 5) Higuchi and Brochmann- Pharmaceutical Analysis
- 6) Indian Pharmacopocia
- 7) British Pharmacopoeia
- 8) USP

References Book (Practicals)

- 1) Practical Pharmaceutical chemistry Part I Beckett & Stanlak.
- 2) Indian Pharmacopoeia
- 3) Practical Inorganic chemistry by Vogel.

5.6 Cosmetic Management-I

Theory

- 1) Management process and Organisational behaviour concepts. Various approaches to management philosophy. Organisational structures, Individual Behaviour and personality, group dynamics, group behaviour.
- 2) Human Resources Management :- Concept & perspective Human resource planning. Career and Succession planning. Training and Development programmes, orientation programmes, performance appraisal & potential evaluation. Employee empowerment.
- 3) Managerial skill development :- Importance & Nature of Communication, principles and process of communications. Barriers and Gateways to communications, types of communications. Commercial letter types, writing business reports. Oral communication, presentation of Reports. Public speaking. Body language and Kinetics/ movements.
- 4) Marketing Management : Nature and Scope of Marketing marketing management. Nature & structure of Indian market, marketing information system. Marketing research, understanding market

segmentation. Product Mix, Product life cycle. New Product development- Modern marketing concepts. Promotion Mix ó advertising, sales promotion sales forecasting.

Reference :-

- 1) Financial Management By S.N. Maheshwari
- 2) Marketing Management By . Sheriekar
- 3) Human Resource Management By K. Ashwathappa.

Syllabus Prescribed for B.Tech (Cosmetic)

Vith Semester Examination

6.1 Cosmetic Technology- VI

Theory

- 1) **Antioxidants** – Introduction, General Oxidative theory, classification of Antioxidants, Choice of Antioxidant.
- 2) **Skin products for Babies** :- Introduction, skin problems in babies, Function, Requirements of baby product safety of baby products example formulation. Fillers used in cosmetics & their definition, classification properties & significance in formulation, like surfactants. Hydrocolloid preservatives, Diluents. paste, bases, preparation.
- 3) **Coloured Cosmetics** :- Manicure preparations, Cuticle Remover, Nail Bleach, Nail Cream, Nail Strengthner, Nail Lacquer- Introduction, ingredients of Nail Lacquer, Formulation, Manufacture of Nail lacquer, Base coats & Top coats, Enamel remover, Nail driver, Plastic fingernails & Elongators, Nail mending coponsitons.
- 4) **Stability of Cosmetics** : Stability of Base Formulation & its Testing , General Preservation Test, General Performance & Effectiveness Test ó Aerosol stability test, Accelerated stability test, stability of Mass produced cosmetics, Stability Based on Usage Environment.
- 5) **Depilatories** : Epilation & Depilation, formulation of depilatories using chemicals like thioglycolates, sulphide, enzymes. Evaluation of depilatories. Formulation of powder, cream, gel type depilatories & their stability aspect.

Practicals :

- 1) Eye Care Preparations : Eye Shadow stick, Eye Liner Evaluation of above products.
- 2) Preparations based on gels
- 3) Preparations of body cosmetics atleast two examples from each category.

- 4) Preparation of sulphide & thioglycolate depilatories.
- 5) Nail preparations ó Nail lackers, nail bleach, cutical remover, enamel remover.

References

- 1) Cosmetic Science and Technology by Sagarin.
- 2) Modern Cosmetics by E.J.Thomson.
- 3) Harryø Cosmetology.

6.2 Perfume & Colour-IV

Theory

- 1) Specially perfumed products :- formulation & proposing of
 - a. Alcoholic fragrance solution
 - b. Emulsified & Solid fragrances
 - c. Solubilised perfumes.
- 2) Colour, Pigment & Dyes :-
 - a. Classification uses & preparation of colours, solution/ dispersions, incorporation
 - b. Detection of colour
- 3) Heterocyclic compounds, chemistry, preparation and properties of some importance systems isoquinoline, acridine, phenothiazines.
- 4) Classification, chemistry and cosmetic properties of cosmeceutically important monoterpenes ó sesquiterpenes, diterpenes and triterpenoids.
- 5) Alkaloide ó General introduction, classifications and importance in cosmetics.

Practicals

- 1) Study of soxlet apparatus and its use for extraction.
- 2) Distillation of alcohol
- 3) Identifications of perfume and flavours.
- 4) Synthesis of odourous materials.

Books recommended

- 1) Perfume flowers & essential oil industries by S.B. Srivastva
- 2) Manufacture of perfumes, cosmetics, & Detergents by Giriraj Prasad
- 3) Cosmetics ó Science & Technology By Sagarin.
- 4) Industrial pharmacy- By Leon Lachman

6.3 Herbal Cosmetics- IV

Theory

- 1) Application of herbs and their constituents in cosmetic formulation; 1) In skin care products. 2) In Hair care products
- 2) Plants for Aromatherapy & Cosmetics:- Introduction plants & Aromatherapy sources & functioning of essential oils, application, elements & therapy, Herbal cosmetics, skin care Tonners, Hands and feet, Hair dyes, Bathing preparations.
- 3) Development and Quality control of Herbal Cosmetics development safety & efficacy evaluation clinical studies of herbals medicines nonclinical studies standardisation and quality control of Ayurvedic & Herbal preparations.

Practicals

- 1) Incorporation of herbal extracts in various herbal cosmetic products
- 2) Herbs used for skin care :-
1) Vasaka 2) Bael 3) Aloe 4) Neem 5) Mustard
6) Papaya 7) Lemon 8) Haldi 9) Tulsi 10) Chiretta 11) Ashwagandha
- 3) Herbs used for Hair care :-
1) Shikakai 2) Mandukaporni 3) Datura 4) Mehandi 5) Jatamansi
6) Amla 7) Ritha 8) Behera 9) Til 10) Fenugreek
- 4) Herbs used for Nail care :- 1) Garlic 2) Sadabahar 3) Haldi 4) Henna
5) Pann. 6) Hop 7) Birch.
- 5) Cosmaceuticals aids & Technical products :- Introduction, various herbal material used in cosmetics formulation :- Spermacity, Kaolin, Colchinal, Shellac, lard, musk, Diatomite, Bentonite, Talc.
- 6) Herbal Colours :- Annatto, Marigold, Ret beat Root, Monascus, Red Poppy Petals, Red Rose petals.

Reference

- 1) Trease of Evans : Text Book of Pharmacognosy
- 2) Claus and Tyler : Pharmacognosy
- 3) Nadkarni : Materia Medica
- 4) C.S.I.R. : Wealth of India
- 5) H. Panda : Hand Book of Herbal Cosmetics
- 6) Rakesh K. Sharma & Rajesh Arora Herbal drugs.
- 7) Medicinal Plants : Alice Kurian & N.Asha Sankar
- 8) Herbal Drug Technology ; By S.J. Agrawal , M. Paridhavi
- 9) Pharmacognosy & Phytochemistry Vol 1 & II, Mohmmmed Ali.

6.4 Physical Cosmetics- II

Theory

- 1) **Colloidal Dispersion** : Classification of colloidal Dispersion, Purification of colloidal dispersion. Stability of collids, sensitization and protective colloidal action. Optical properties, Kinetic properties & Electrical properties of colloids. Applications of colloids.
- 2) **Surface active agents** : Classification Based on chemical nature & HLB scale, Determination of HLB, chemical nature & HLB Scale, determination of HLB, Surface activity, Bulk properties of surfactant solutions, factors affecting micelle formation. Solubilisation, factors affecting solubilisation, application of solubilisation.
- 3) **Emulsion**:- Definition, classification of Emulsions Appearance & Identification. Thermodynamic causes for instability. physical Instability Markers, factors which improve physical stability, phase Inversion, Evaluation of physical stability of emulsions.
- 4) **Suspension** :- Ideal characteristic of suspension, classification of suspension, particle particle, Interaction & Behaviour factors influencing setting physical stability controlled flocculation flocculated suspension flocculation in structured vehicles.
- 5) **Diffusion** : Definition, steady state diffusion Ficks first law, Fick's second Law. Methods and procedures to study diffusion.

Practicals

- 1) To determine critical miceller concentration of given surfactant.
- 2) To determine bulk density, true density & percentage porosity of given powder.
- 3) To determine the HLB value of glyceryl monosterate, Tween 80.
- 4) To determine sedimentation volume of given suspension.
- 5) To determine particle size of given suspension using microscopic method.
- 6) To determine globule size of emulsion by optical microscopy.
- 7) To prepare and carry out, diffusion study of antiageing cream.
- 8) Determination of Zeta potential of using given suspension & emulsion a demonstration.
- 9) Accelerated stability studies on emulsion & suspension.

Reference

- 1) Physical pharmacy by Alfred Martin, James Swarbrick.
- 2) Burger & Lee's Physical & Technical pharmacy
- 3) Rawlins Bentley's Text Book of Pharmaceutics

6.5 Cosmetic Analysis-III

Theory

- 1) Study of UV, Visible spectrophotometry and I.R. Spectrophotometry , UV filter in sunscreens and other cosmetics.
- 2) Chromatography- Principles and techniques involving separation of actives from excipients and its application in cosmetics. TLC, HPLC, GLC, HPTLC, ion exchange chromatography, paper and column chromatography
- 3) Study of Flame photometry and fluorimetry and its application in cosmetics.
- 4) General concept , current legislation of cosmetic in different countries
- 5) ISO its significances, role and importance in cosmetic industry.

Practicals

- 1) Study of Lambert Beer's law and Quantitative estimation of cosmetic formulations by spectrophotometer.
- 2) Quantitative estimation of at least 5 cosmetics formulation by using instrumental techniques.
- 3) Study of rheological properties of semisolids.
- 4) Microbial analysis.

Reference Book

- 1) Chattan, Text Book of Pharmaceutical Chemistry.
- 2) Connors K.A.A. Text Book of Pharmaceutical Analysis
- 3) Vogel
- 4) Bentley and Drivers Text Book of Pharmaceutical Chemistry

6.6 Cosmetic Management II

Theory

- 1) Production Management :- Scope of production facility, location types of manufacturing system and layout. layout planning and analysis. Export promotion. production planning and control, material and handling, principles, stores management. Work environment, industrial safety management.
- 2) Entrepreneurial Development : Process of generating business ideas, Technical and economic feasibility ódeveloping detailed project report for implantation, legal provision, knowledge of laws & bye laws. Legal formalities of import & export license. International Business and entrepreneurship, entrepreneurship development. Role of management education, Total Quality management (TQM) cost benefit analysis. PERT & CPM.

- 3) Financial Management : Financial Management objectives , Management of working capital, management of earning, profit planning, corporate planning and Break Even analysis . Taxation and financial planning and policies Expansion and Diversification strategies, investment portfolio, decisions with reference to financial organizations like Banks., Trusts and insurance companies etc.
- 4) Small scale industries and cottage industries with emphasis on soaps, Detergents and other cosmetics industries . Role of Small scale industries in developing economy of India. Problems of small scale industries. Financial institutions providing assistance to India.

Reference :-

- 1) Financial Management By S.N. Maheshwari
- 2) Marketing Management By . Sheriekar
- 3) Human Resource Management By K. Ashwathappa
