

To,  
The Principal  
Sharanabasaveshwar College of Science  
Kalaburagi - 3

Sub: Submission of COC "Chemical Analysis" details for the  
academic year 2019-20

Ref: Your letter F. No: 4-347/2011 (COC), dated: 12.01.2012

Sir,

With reference to the above mentioned subject, I am here with  
submitting Career oriented course - "Chemical Analysis" detail  
information for the academic year 2019-20.

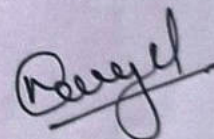
Kindly acknowledge the receipt of the same.

Thanking you



Coordinator  
Co-ordinator

GC, Carrier Oriented Course (Chemical Analysis)  
Sharnbasveshwar College of Science,  
Encl: - GULBARGA-3.



HOD Head  
Department of Chemistry  
Sharnbasveshwar College of Science  
KALABURAGI

1. UGC Course Sanction Letter
2. GUG Approval & syllabus copy
3. Poojya Appaji's permission letter to continue COC
4. Student enrollment list
5. Result
6. Remuneration paid to coordinator & staff





**SHARNBASVESHVAR COLLEGE OF SCIENCE,  
GULBARGA-585103, KARNATAKA**  
(Affiliated To Gulbarga University, Gulbarga)

**Progress Report**  
**On**  
**Career Oriented Course - "*Chemical Analysis*"**  
For the academic year 2019-20

Approved By Gulbarga University Gulbarga &  
Sanctioned By



ज्ञान-विज्ञान विमुक्तये

**University Grant Commission**  
**New Delhi-110002**





UNIVERSITY GRANTS COMMISSION  
35-FEROZSHAH ROAD  
NEW DELHI-110 001

F. No. 4- 347/2011(COC)

January, 2012  
12 JAN 2012

The Under Secretary (FD-III)  
University Grants Commission  
New Delhi-110002

Sub: - Release of Grant-in-aid to Shri. Sharanabasaveshwar Science College, Gulbarga, Dist. Gulbarga, Karnataka-585103 under the UGC scheme of Career Oriented Courses-reg.

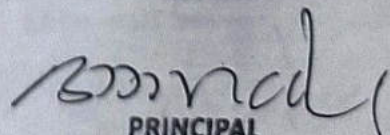
Sir,

With reference to the proposal submitted by Shri. Sharanabasaveshwar Science College, Gulbarga, Dist. Gulbarga, Karnataka-585103 under the UGC scheme of Career Oriented Courses, I am directed to convey the approval of the University Grants Commission for starting the following Career Oriented Courses in the above mentioned College from the academic year 2011-12.

Courses Approved	Seed Money approved (Rs. in lakh)	Grant released (90%)
<u>Science</u>		
1. Hardware and Networking	Rs. 10.00	Rs. 9,00,000/-
2. Chemical Analysis	Rs. 10.00	Rs. 9,00,000/-
<b>Total</b>	<b>Rs. 20.00</b>	<b>Rs. 18,00,000/-</b>

I am also directed to convey the sanction of the University Grants Commission for payment of Rs. 18,00,000/- (Rupees Eighteen Lakh only) to the Principal, Shri. Sharanabasaveshwar Science College, Gulbarga, Dist. Gulbarga, Karnataka-585103 as 90% grant (Seed Money) under the scheme of Career Oriented Courses.

PRINCIPAL  
SHARANBASAVESHWAR COLLEGE  
OF SCIENCE, GULBARGA

  
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SHARANBASAVESHWAR COLLEGE  
OF SCIENCE, GULBARGA



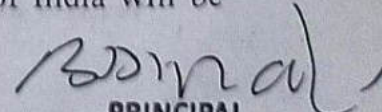
The assistance available in the programme is only in the form of a one - time as "Seed Money". The amount may be utilized for the purchase of books and journals augmentation of laboratory facilities, equipment and payment of remuneration to the Guest faculty only.

The terms and conditions of the approval and grant released are as per the guidelines of the scheme.

1. The sanctioned amount is dabitable to the following Heads and is valid for payment during the current financial year 2011-12.

S. No.	Component	Head of A/c	Amount
1.	General 77.5%	5.(i) Code No. 31	13,95,000/-
2.	SC 15%	1B h(i) (b) Code No. 31	2,70,000/-
3.	ST 7.5%	1B h(ii) (b) Code No. 31	1,35,000/-

2. The amount of grant shall be drawn by the Under Secretary (Drawing and Disbursing Officer), University Grants Commission on the Grants -in -aid bill and shall be disbursed to the credited to the Principal, **Shri. Sharanabasaveshwar Science College, Gulbarga, Dist. Gulbarga, Karnataka-585103** through Demand Draft/Mail Transfer.
3. The grant is subject to the adjustment on the basis of Utilization Certificate in the prescribed proforma submitted by the University/College/Institution.
4. The University/College shall maintain proper accounts only on approved items of expenditure.
5. The Utilization Certificate to the effect that the grant has been utilized for the purpose for which it was sanctioned shall be furnished to the University Grants Commission **On receipt of the same, 10% grant would be sanctioned to the grantee Institution.**
6. The assets acquired wholly or substantially out of the University Grants Commission grant shall not be disposed or encumbered or Utilized for the purposes other than those for which the grant was given, without proper sanction of the University Grants Commission and should, at any time the college ceases to function, such assets shall revert to the University Grants Commission.
7. A Register of Assets acquired wholly or substantially out of the grant shall be maintained by the University in the prescribed form.
8. The grantee institution shall ensure the Utilization of grants-in-aid for which it is being sanctioned/paid. In case non-utilization/part utilization, the simple interest @ 10% per annum as amended from time to time on unutilized amount from the date of drawl to the date of refund as per provisions contained in General Financial Rules of Govt. of India will be charged.

  
PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA



9. The University/ College shall implement the programme from the academic year 2011-12 positively and UGC to be informed in this regard.
10. The University/Institute/College is strictly following the UGC Regulations on curbing the menace of Ragging in Higher Education Institutions 2009.
11. The interest earned by the University/College/Institute on this grants in aid shall be treated as additional grant and may be shown in the U.C./Statement of expenditure to be furnished by grantee institutions.
12. The University/College shall follow strictly all the instructions issued by the Govt. of India from time to time with regard to reservation of posts for scheduled Caste and Scheduled Tribes.
13. The University/College shall fully implement the Official Language Policy of Union Govt. and comply with the Official Language Act, 1963 and Official Language (use for officially purpose of the Union) Rules, 1976 etc.
14. The Sanction issues in exercise of the delegation of powers vide Commission office order No. 25/92 dated May.01, 1992.
15. **The Universities/ Colleges shall submit Annual Progress Report to the UGC office.**
16. **The Universities/ Colleges already running the Career Oriented Courses and completed 5 years would submit the audited utilization certificate/ statement of expenditure immediately to the UGC for settlement the accounts.**
17. The funds to the extent are available under the scheme and have been noted in BCR for the year 2011-12 at S. No. \_\_\_\_\_ Page No. \_\_\_\_\_.

Yours faithfully,

(Sunita Chugh)  
Under Secretary

Copy forwarded for information and necessary action to:

1. The Principal, Shri. Sharanabasaveshwar Science College, Gulbarga, Dist. Gulbarga, Karnataka-585103 to intimate the receipt of the letter as well as the receipt of the sanction grant.
2. The Secretary to the Government of Karnataka, Deptt. of Education, Bangalore.
3. The Registrar, Gulbarga University, Jnana Ganga, Gulbarga-585106.
4. Office of Director, General, Audit General Revenues, AGCR Bldg., I.P. Estate, New Delhi.
5. Guard File, UGC, New Delhi.

*Usha*  
(Usha Naidu)  
Section Officer

*Roshni*  
PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA

*Bhadr*  
PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA





**GULBARGA UNIVERSITY**

"Jnana Ganga", GULBARGA - 585 106, Karnataka, India.



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Grams:

UNIGUL

ಕ್ರ. ಸಂ. ಗುವಿಗು/ವಿಮವಿ/ಬಿಟಿಎಸ್/2012-13/ 01

ದಿನಾಂಕ: 1-4-13

ಅಧಿಸೂಚನೆ

ವಿಷಯ: 2012-13 ನೇ ಸಾಲಿನಿಂದ "Chemical Analysis of Water" COP

ಕೋರ್ಸಿನ ಸ್ನಾತಕ ಕೋರ್ಸಿನ ಪಠ್ಯಕ್ರಮ ಜಾರಿಗೊಳಿಸುವ ಬಗ್ಗೆ.

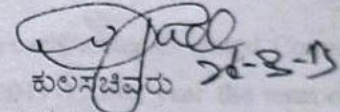
ಉಲ್ಲೇಖ: 1) ರಸಾಯನಶಾಸ್ತ್ರ ಸ್ನಾತಕ ಅಧ್ಯಯನ ಮಂಡಳಿ ನಿರ್ಣಯ (1) ದಿನಾಂಕ: 28.09.2012

2) ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ಸಭೆಯ ಗೊತ್ತುವಳಿ ಸಂಖ್ಯೆ 23 ದಿನಾಂಕ: 23.11.2012

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ಉಲ್ಲೇಖ (2) ರ ವಿದ್ಯಾವಿಷಯಕ ಪರಿಷತ್ ನಿರ್ಣಯದಂತೆ, "Chemical Analysis of Water" ಸ್ನಾತಕ "Career Orientation Programme" ನ ಕೋರ್ಸಿನ ಪಠ್ಯಕ್ರಮವನ್ನು 2012-13ನೇ ಸಾಲಿನಿಂದ ಜಾರಿಗೆ ಬರುವಂತೆ ಈ ಮೂಲಕ ಪ್ರಕಟಗೊಳಿಸಲಾಗಿದೆ.

ಸದರಿ ವಿಷಯವನ್ನು ವಿದ್ಯಾರ್ಥಿಗಳ ಹಾಗೂ ಸಂಬಂಧಪಟ್ಟ ಶಿಕ್ಷಕರ ಗಮನಕ್ಕೆ.

  
ಕುಲಸಚಿವರು

ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಗುಲಬರ್ಗಾ

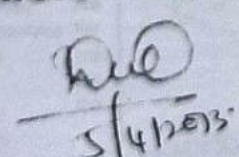
ಗೆ.

- 1) ಅಧ್ಯಕ್ಷರು, ರಸಾಯನಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮಂಡಳಿ, ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಗುಲಬರ್ಗಾ.
- 2) ಸಂಬಂಧಪಟ್ಟ ಕೋರ್ಸು ಹೊಂದಿರುವ ಮಹಾವಿದ್ಯಾಲಯದ ಪ್ರಾಂಶುಪಾಲರಿಗೆ.

ಪ್ರತಿ:

- 1) ಕುಲಸಚಿವರು (ಮೌಲ್ಯಮಾಪನ), ಗುಲಬರ್ಗಾ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಗುಲಬರ್ಗಾ.
- 2) ಕುಲಪತಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿ / ಕುಲಸಚಿವರ ಆಪ್ತ ಸಹಾಯಕರ ಮಾಹಿತಿಗಾಗಿ.

Dr. (Sd/-) K. S. Chavara  
Chemical Analysis Coordinator  
ಶಿಕ್ಷಕರ ಮಂಡಳಿ, ಗುಲಬರ್ಗಾ

  
5/4/2013





**Sharnbasveshwar**  
College of Science  
Kalaburagi - 585103  
(Karnataka)

Estd. 1956



**ಶರಣಬಸವೇಶ್ವರ**  
ವಿಜ್ಞಾನ ಕುಕಾಠಿದ್ಯಾಲಯ,  
ಕಲಬುರಗಿ-೫೮೫ ೧೦೩  
( ಕರ್ನಾಟಕ )



Institutions Run by Centenary Celebrated	
Sharnbasveshwar Vidya Vardhak Sangha, Gulbarga	2013
Sharnbasveshwar University, Gulbarga	2013
Sharnbasveshwar Vidya Vardhak Sangha, Gulbarga	1903
Engineering College for Women, Gulbarga	2011
Institute of Engineering & Technology, Gulbarga	2002
Institute of Engineering Science & Technology (Comp. & Digital Electronics)	2011
Nisty Engineering College, Shorapur	2010
Appa Engineering College, Bidar	2011
Doddappa Institute for MCA, Gulbarga	1999
Doddappa Institute of MBA, Gulbarga	1998
Institute of MBA (VTU) Gulbarga	2007
Institute of MBA (For Women) Gulbarga	2011
Doddappa Institute of MBA, Bidar	2011
Nisty Institute of MBA, Shorapur	2011
Research Institute, Gulbarga	2012
Institute of Mysore University, Mysore	1956
Sharnbasveshwar Science College, Gulbarga	1956
Institute studies in Computer Science	2012
Sharnbasveshwar College of Science, Gulbarga	2007
Institute studies in Master of Tourism	2007
5 year integrated Course (MTA)	2009
Institute Studies in Master of Arts in Mass & Mass Communication, Goddetai College, Gulbarga	1957
Institute Studies in Master of Fine Arts, Sharnbasveshwar Arts College, Gulbarga	1957
Sharnbasveshwar Residential Public School, Bidar	1957
CBSC Syllabus, Gulbarga	2011
Sharnbasveshwar Public School Residential Independent Science College, Shorapur	2011
Sharnbasveshwar Public School's Residential Independent Science College, Bidar	2011
Sharnbasveshwar Arthanvarani Community Radio, (FM) Gulbarga	2009
Sharnbasveshwar Girls Higher Primary School, Gulbarga	1934
Sharnbasveshwar Girls High School, Gulbarga	1960
Sharnbasveshwar Composite P.U. College, Gulbarga	1949
Sharnbasveshwar Ind. P.U. College of Science, Gulbarga	1956
Sharnbasveshwar College of Commerce, Gulbarga	1961
1-Graduate Diploma in Business Management	1967
Sharnbasveshwar College of Arts & Science, Basavakalyan	1967
Sharnbasveshwar Printing & Publication, Gulbarga	1969
Doddappa Appa P.U. College for Women, Gulbarga	1971
Doddappa Appa Arts & Commerce for Women, Gulbarga	1973
Sharnbasveshwar Granthavishwa Vidya Nilaya, Gulbarga	1978
Sharnbasveshwar College of BBM, Gulbarga	1996
Doddappa Appa Residential P.U. Science College, Gulbarga	1999
Doddappa Residential Ind. P.U. Science College, Gulbarga	1999
Doddappa Appa BCA College for Women, Gulbarga	2001
Doddappa Residential BCA College for Women, Gulbarga	2001
Doddappa Appa BCA College, Basavakalyan	2001
Sharnbasveshwar BCA College, Gulbarga	2001
Doddappa Residential BBM College, Gulbarga	2004
Sharnbasveshwar BBM College, Basavakalyan	2004
College of Education (B.Ed), Gulbarga	2004
Sharnbasveshwar B.Ed. (E.M.), Gulbarga	2004
D.Ed. College for Women, Gulbarga	2004
Doddappa Residential P.U. College for Girls, Basavakalyan	2006
Sharnbasveshwar Residential Public School, Basavakalyan	2006
Sharnbasveshwar D.Ed. College, Basavakalyan	2004
Doddappa Appa B.Ed. College, Basavakalyan	2004
Sharnbasveshwar Public Library, Gulbarga	1918

(Affiliated to Gulbarga University, Kalaburagi and Recognised by the Government of Karnataka)  
☎ : (08472) 221941, • Fax : 08472-241492,  
email: sbcscg@rediffmail.com, www.sharnscience.org

Ref.No .

Date :

To,  
**The Hon'ble President,**  
Sharanbasaveshwar Vidya Vardhak Sangha,  
Kalaburagi-3

**Sub:** Request regarding the permission for continuation of Carrier Oriented Course [i.e. Chemical Analysis & Computer Hardware & Networking].

**Letter Reference's:** UGC Letter No. F.No-4-347/2011[COC] **Dated:** 12.01.2012  
GUG Approval Letter No. GUG/VMV/BOS/2011-12/1364[HNW] **Dated:** 30.09.2011  
GUG Approval Letter No. GUG/VMV/BOS/2012-13/01[CA] **Dated:** 01.04.2013

His Holiness.

With the above cited subject, the five year Carrier Oriented Course sanctioned from UGC, New Delhi, in the Academic year 2011-12. this year the term of this course has been completed, but we are interested to continue the above said course's for the purpose of NAAC Accreditation to be held in our college next year. So I request you to kindly grant the permission for the continuation.

Thanking You.

"SANCTIONED"

Yours faithfully

HON'BLE PRESIDENT

PRINCIPAL

SHARNBASAVESHWAR COLLEGE  
OF SCIENCE, GULBARGA

10/10/2017  
PRINCIPAL  
SHARNBASAVESHWAR COLLEGE  
OF SCIENCE GULBARGA



**Certificate Course in Chemical Analysis Of Water**  
**One year course (Approved by GUG)**

**I Teaching**

Theory: 4 hours per week (Paper- I & Paper- II).

Practical: 3 hours per week (Practical- I) in first term.

Similarly 3 hours per week (Practical- II) in Second term.

*The above work has to be completed within the academic year.*

**II Examination**

Theory Paper- I and Paper- II of 3 hours duration each for 80 marks, internal assessment for 20 marks (conduct two tests and take average).

Practical- I and Practical- II of 3 hours for 50 marks each. (40 marks each for final examination and 10 marks each for internal assessment).

**Question paper pattern**

Theory: Question paper contains three sections.

Section A: There shall be Fifteen bits of one mark each; candidate has to answer all (1x15=15).

Section B: There shall be seven questions of 5 marks each; candidate has to answer any Five. Total marks will be 25 (5x5=25).

Section C: There shall be six questions of 10 marks each; candidate has to answer any Four. Total marks will be 40 (4x10=40).

Practical: Distribution of practical marks

Experiment	Journal	Viva-voce	Internal assessment	Total marks
Practical-I (30 marks)	05	05	10	50marks
Practical- II (30 marks)	05	05	10	50marks

**Paper-I**

**General Chemical Analysis (64 hours)**

**1 SI units:** Basic units, derived units, inter conversion of units 2 hours

**2 Stoichiometry:**

Mole concept, Avogadro number. Atomic weight, equivalent weight of elements, acids, bases, oxidizing agents and reducing agents. Molecular weight. Concept of Normality, molality and morality.

Volumetric techniques and Gravimetric techniques in brief. 10hours

**3 Analytical chemistry:**

Role of Analytical chemistry, types of analysis, classification of analytical methods, selecting an analytical method, factor affecting the analytical method, cleanliness and neatness in the analytical laboratory, laboratory note book and its importance, safety in the laboratory. 10hours

**4 Laboratory Operations And Practices-**

Filtration, drying, measuring volume, stoichiometry and graphs, concentration, percentage solute, activity, titration of a solution, parts per thousand (ppt) and parts per million (ppm), standards, chemical standards, sample preparation, drying samples, weighing, dissolving, decomposition of organic matter, ionization, precipitation.

Analytical balances (electronic, mechanical, semi micro, micro), errors in weighing, cleaning glass apparatus, preparations before calibration operation, calibration of glassware.

16 hours

**5 Sampling:**

Sampling techniques, sampling statistics, variability in the sample, sample stability, field sampling. Sample preparation, sample decomposition and dissolution-decomposing samples with inorganic acids, microwave decomposing, decomposing organic samples, decomposing inorganic materials with fluxes, selecting and handling reagents. 10hours

**6 Errors and evaluation:**

Central value, mean, arithmetic mean, median, precision, standard deviation, accuracy, types of errors, minimizing errors, significant figures and computations, reporting of analytical data, evaluation of data, uses of statistics. 08hours

**7 Computers in water analysis:** Use of computers in the water analysis, handling analytical results, instrument control and signal processing, computer data bases for analytical information, laboratory information management, laboratory computer systems. 08hours



### Books Recommended:

1. Analytical Chemistry –Dr Alka L Gupta, Pragathi Prakashan, Meerut.
2. The Chemical Analysis of Water: General Principles and Techniques– DTE Hunt, Anthony Leslie Wilson
3. Fundamentals of Analytical Chemistry–D A Skoog, DM West, Holler and Crouch, Saunders publishing, Newyork.
4. Qualitative Analysis– RA Day and AL Underwood,Prentice Hall, Inc, New Delhi.
5. Instrumental methods of Chemical Analysis–Chatwal and Anand, Himalaya Publications.
6. Modern Analytical Chemistry–Harvey, Harcourt Publishers.
7. Vogel's text book of Quantitative Chemical Analysis– J Mendham, RC Denney, Indian reprint Pearson Education Pvt, Ltd., New Delhi.
8. Instrumental methods and Chemical Analysis—H Kaur, Pragathi Prakashan, Meerut.
9. Text book of Quantitative Chemical Analysis—A I Vogel (ELBS)
10. Text book of Organic Chemistry—Bahl and Arun Bahl

### Paper-II

#### Water Analysis (64 hours)

1. **Water as a component of environment:**

Sources of water- atmospheric water, surface water, stored water, ground water, human use of water. 2hours

2. **Water pollution:**

Water pollutants, classification of water pollutants with explanation, origin of water pollutants, sources of water pollutants-Natural, domestic sewage, agricultural wastes, industrial wastes, radioactive wastes.

Effect of water pollutants-physicochemical effects, biological effects, toxic effects, pathogenic effects. Types of water pollution-physical pollution, inorganic pollution, organic pollution, biological pollution, oil pollution, pesticide pollution, radioactive pollution. 10hours

3. **Water quality standards:**

Water quality standards related to public health, environment and agriculture-Drinking water standards, bacteriological standards, irrigation standards- salinity, water infiltration rate, specific ion toxicity, miscellaneous, sodium concentration, stream standards, effluent standards. Chemical and biological parameters for evaluation of aquatic environment. 12hours

4. **Collection of Water samples:**

Ruttner water sampler, Von Dorn water sampler, Thermos-flask water sampler, pump samplers. Collection of water samples for irrigation, Handling and preservation of water samples, collection of biological matter of water. 06hours

5. **Physical analysis of water:**

colour-platinum-cobalt method, Forel-Ule colour method, Movement, Temperature- measurement of surface temperature, measurement of sub-surface temperature, Odour and taste, Transparency, Turbidity. 06hours

6. **Chemical analysis of water:**

$P^H$ , conductivity, measurement of Electrical conductivity(soluble salts concentration), acidity, alkalinity, total dissolved salts, total solids, dissolved oxygen(oxygen meter method, Winkler's method), calcium by Versenate method (temporary hardness), calcium plus magnesium (total hardness), sodium and potassium, chloride, fluorides, sulphate, boron, free carbon dioxide, total carbon dioxide, hydrogen sulphide, silica, phosphates, total carbohydrate, dissolved carbohydrate, oil and grease. Biochemical Oxygen demand (BOD), Chemical Oxygen demand (COD). 12 hours

7. **Analysis of Different Forms Of Nitrogen:**

Ammonia, nitrite, nitrate, total organic nitrogen (TON), dissolved organic nitrogen (DON), particulate organic nitrogen (PON) present in water samples. 06hours

8. **Instrumental Analysis of water:** Applications of the following instruments in the physico-chemical analysis of water-Uv solution spectro photometry and colorimetry, Flame emission spectrometry, Atomic-Absorption Spectrometry (AAS), Mass spectrometry, Infrared spectrometry, High performance liquid chromatography,  $P^H$ -meter and turbidometry. 10hours

### Books Recommended:



1. Methods in Environmental Analysis Water soil and air—PK Gupta
2. Water pollution—VP Kudesia, Pragathi Prakashan, Meerut.
3. Analytical Chemistry –Dr Alka L Guptha, Pragathi Prakashan, Meerut.
4. The Chemical Analysis of Water: General Principles and Techniques—DTE Hunt, Anthony Leslie Wilson.
5. Analytical Chemistry Vol I, II and III—Subhash and Sathish, Pragathi Prakashan, Meerut.
6. Instrumental methods of Chemical Analysis— Gurudeep R Chatwal and Anand, Himalaya Publications.
7. Chromatography –BK Sharma, GOEL Publications.
8. Basic concepts of Analytical Chemistry—SM Khopakr, New Age International Publications.
9. Standrd methods of Chemical analysis—FJ Welchar, Vol. I and II.
10. Electroanalytical Chemistry—BH Voigics, John Wiley Publications.

#### Practical-I

1. Introduction to the laboratory glass wares used in chemical analysis.
  2. Giving knowledge about laboratory note book and its importance, safety in the analytical laboratory, laboratory operations and practices.
  3. Calibration of Burette, pipette, volumetric flask and fractional weights.
  4. Use of balances: rough, chemical and electronic balances.
- Volumetric Analysis:
    1. Determination of total hardness (Ca & Mg) present in the water
    2. Estimation of alkalinity due to Sodium carbonate and bicarbonate in the given water sample.
    3. Determination of Acidity of a given water sample.
    4. Determination of dissolved oxygen in the given water sample.
    5. Estimation of Chemical Oxygen Demand
    6. Estimation of amount of chloride present in the given water sample by using Mohr's method.
- Gravimetric Analysis:
    1. Estimation of Mg as its axinate present in 250ml of given sample of water.
    2. Estimation of sulphate present in 250ml given solution using barium chloride.
    3. Estimation of Ca as calcium oxalate present in 250ml of given sample of water.

#### Practical-II

- Identification of following ions present in the water sample by chemical tests.  
Acid radicals— Carbonate, bicarbonate, chloride, fluoride, sulphate, nitrate  
Basic radicals—copper, lead, cadmium, iron, zinc, calcium, magnesium, sodium and potassium
- Instrumentation Exercises:
    1. Estimation of  $\text{Cu}^{+2}$  present in the given solution colorimetrically.
    2. Estimation of  $\text{CO}_3^{-2}$  and  $\text{HCO}_3^{-1}$  present in the given solution by  $\text{P}^{\text{H}}$  meter.
    3. Determination of  $\text{P}^{\text{H}}$  of acetate buffer by potentiometrically.
    4. Determination of Ferrous ammonium sulphate using standard  $\text{K}_2\text{Cr}_2\text{O}_7$ , potentiometrically

#### Books Recommended:

1. Advanced Practical Inorganic chemistry—Gurudeep Raj(goel publications)
2. Advanced practical Physical Chemistry—JB Yadav
3. Instrumental methods of Chemical Analysis—Gurudeep chatwal and Anand(Himalaya publications)
4. Industrial Chemistry—BK Sharma((goel publications)
5. Practical Chemistry—OP Pandey, DN Bajpai(S Chand publications)
6. A Text book of Quantitative chemical analysis—AI Vogel
7. A Text book of Qualitative chemical analysis—AI Vogel
8. Analytical Chemistry –Dr Alka L Guptha, Pragathi Prakashan, Meerut.
9. The Chemical Analysis of Water: General Principles and Techniques—DTE Hunt, Anthony Leslie Wilson
10. College practical chemistry—Patel, Jakali, Mohandas, Israney, Turakhia(Himalaya Publishing House)



Sharnbasveshwar College of Science, Gulbarga

UGC Sponsored and Gulbarga University Gulbarga Approved COC course  
In Chemical Analysis 2019-20

List of Teaching Faculty

Sl no	Name of the teacher and Institution
1	Mss Gouramma Patil Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi
2	Ms Chaitra Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi
2	Ms Geeta Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi
3	Ms Brickly Philomina Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi
4	Mr. Channabasava Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi



Coordinator



Principal

PRINCIPAL  
SHARNBASVESHWAR COLLEGE  
OF SCIENCE, GULBARGA

Co-ordinator

UGC, Carrier Oriented Course (Chemical Analysis),  
Sharnbasveshwar College of Science  
GULBARGA-3



**Sharanabasaveshwar College of Science, Kalaburagi****Department of Chemistry****COC: Selection List of Chemical Analysis 2019-20**

S.NO	Register No	Roll No	Name of the student	Combination
1.	91866082	272	Bhagyashree. S B	CBZ
2.	91866097	20	Avinash Dadge	PCM
3.	91866136	58	Megha M Allapur	PCM
4.	91866175	103	Sonali C Diwanji	PCM
5.	91866188	117	Vidya Ravindra	PCM
6.	91866291	255	Aishwarya B Dattankere	CBZ
7.	91866294	259	Amar N	CBZ
8.	91866297	262	Anusha B Deshpande	CBZ
9.	91866300	267	Basavaraj	CBZ
10.	91866301	268	Bhagyashree C	CBZ
11.	91866302	269	Bhagyashree S Patil	CBZ
12.	91866303	270	Bhagyashree S Soddy	CBZ
13.	91866306	274	Channaveer S Koralli	CBZ
14.	91866307	275	Chintan B	CBZ
15.	91866308	276	Gangadhar G	CBZ
16.	91866309	277	Gous Azim	CBZ
17.	91866310	278	Gurukiran malipatil	CBZ
18.	91866312	280	Kamalakshi S Patil	CBZ
19.	91866313	281	Laxmi C Savali	CBZ
20.	91866314	282	Madhusudhan reddy	CBZ
21.	91866315	286	Megha S Patil	CBZ
22.	91866317	284	Mangalambika B Patil	CBZ
23.	91866319	287	Nagveni S Hiremath	CBZ
24.	91866322	290	Nikhita S allapur	CBZ
25.	91866324	293	Pavan kumar	CBZ
26.	91866330	299	Priyanka C Hallad	CBZ
27.	91866331	300	Puttamma B Yaragal	CBZ
28.	91866333	302	Rahul H Kavali	CBZ
29.	91866335	304	Ratnamma R Reddy	CBZ
30.	91866337	306	Reshma S M	CBZ
31.	91866343	312	Sharda B Biradar	CBZ
32.	91866345	314	Shilpa V D	CBZ
33.	91866348	317	Shruti V Joshi	CBZ
34.	91866351	320	Soubhagyalaxmi S Sajjan	CBZ
35.	91866352	321	Supriya N Dhoni	CBZ
36.	91866355	324	Vijayalaxmi B Patil	CBZ
37.	91866412	311	Santosh B	CBZ
38.	91866413	257	Aishwarya H K	CBZ
39.	91869762	292	Nivedita S Taddkal	CBZ



Sharnbasveshwar College of Science, Gulbarga

UGC Sponsored and Gulbarga University Gulbarga Approved COC course  
In Chemical Analysis 2019-20

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4	Mr. Channabasava Lecturer in Chemistry Sharnbasveshwar College of Science, Kalaburagi

Coordinator

**Co-ordinator**  
UGC, Carrier Oriented Course (Chemical Analysis)  
Sharnbasveshwar College of Science,  
GULBARGA-3.

Principal

PRINCIPAL  
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Sharnbasveshwar College of Science, Gulbarga

Result of UGC Sponsored (Gulbarga University Gulbarga Approved) COC course In Chemical Analysis, April-2020 is here by declared.

**Due to COVID -19 pandemic issues, this year we could not conduct the Theory & Practical Examination and also Field Work for the candidates.**

On the basis of *their regularity, continuous evaluation, assignments, regular lab work and internal assessment work.* We declare them as pass & issuing only certificates for the following candidates.

The candidates with following Register Number are passed.

College: C312 Sharnbasveshwar College of Science, Gulbarga

91866082	91866097	91866136	91866175	91866188
91866291	91866294	91866297	91866300	91866301
91866302	91866303	91866306	91866307	91866308
91866309	91866310	91866312	91866313	91866314
91866315	91866317	91866319	91866322	91866324
91866330	91866331	91866333	91866335	91866337
91866343	91866345	91866348	91866351	91866352
91866355	91866412	91866413	91869762	

**Result Analysis**

College: C312 Sharnbasveshwar College of Science, Gulbarga  
Department: Chemistry  
Course: UGC Sponsored (Gulbarga University Gulbarga Approved)  
COC course in **Chemical Analysis.**

Number of candidates registered for the course: 39  
Number of candidates passed: 39  
Percentage of passing: 100%



Coordinator

Co-ordinator

UGC, Carrier Oriented Course (Chemical Analysis)  
Sharnbasveshwar College of Science,  
GULBARGA-3.



Principal

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