

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD



CIRCULAR NO.SU/B.Sc.Practical Pattern of Ques. /58/2023

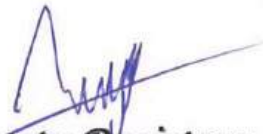
It is hereby inform to all concerned that, Recommendation of the Dean, Faculty of Science & Technology, the Hon'ble Vice-Chancellor has accepted **the Pattern of Question Paper (Practical) of All curriculum of B.Sc. under the scheme of Choice Based Credit & Grading System** in his emergency powers under section 12(7) of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith.

This is effective from the Academic Year 2022-23 and onwards.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF.NO.SU/2023/23612-20
Date:- 17.03.2023.

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Deputy Registrar,
Academic Section

Copy forwarded with compliments to :-

- 1] **The Principal of all concerned Colleges,**
Dr. Babasaheb Ambedkar Marathwada University,
- 2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular on University Website.**

Copy to :-

- 1] **The Director, Board of Examinations & Evaluation,**
Dr.BAMU,A'bad.
- 2] The Section Officer, [B.Sc.Unit] Examination Branch, Dr.BAMU,A'bad.
- 3] The Programmer [Computer Unit-1] Examinations, Dr.BAMU,A'bad.
- 4] The Programmer [Computer Unit-2] Examinations, Dr.BAMU,A'bad.
- 5] The In-charge, [E-Suvidha Kendra], Rajarshi Shahu Maharaj Pariksha Bhavan, Dr.BAMU,A'bad.
- 6] The Public Relation Officer, Dr.BAMU,A'bad.
- 7] The Record Keeper, Dr.BAMU,A'bad.

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

Faculty of Science & Technology

Home Science Practical Question Paper (CBGC) 2023

B. Sc First Year Practical Examination (Semester I & II)

Course code-121 and 212

**Course Title- Food Science and Nutrition practical +Principles of Food
Processing practical**

Time: 4 Hour

Mark : 80

Date: _____

Batch No. _____

Centre: _____

- | | |
|---|----|
| Q.1 Write down the use & care of kitchen equipment's. | 10 |
| Q.2 Write down the One serving concept | 10 |
| Q.3 Prepare the nutrients rich recipe of the given nutrient. _____ | 10 |
| Q.4 Prepare the recipes for below poverty line income group. | 10 |
| Q.5 How will you prepare the food by using various machineries. | 10 |
| Q.6 Write down the types of identification method for spoiled food | 10 |
| Q.7 Write down the process of canning & bottling of fruits & vegetables | 10 |
| Q.8 Viva – Voce | 10 |



Anvita Agrawal
Prof. Dr A.S. Agrawal
Bos Member

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

**Faculty of Science & Technology
Home Science Practical Question Paper (CBGC) 2023
B. Sc First Year Practical Examination (Semester I & II)
Course code-BHS-122 and BHS-222**

**Course Title-Basics of Textiles and clothing practical + Textiles Science and
Basics of Embroidery practical**

Time: 4 Hour

Marks: 80

Date _____

Batch No. _____

Center _____

- Q.1 Write down the equipment used in clothing construction & draw the diagram and draw any two 10
- Q.2 Prepare the sample of seams & pockets. (Any Two) 10
- Q.3 Garment Construction Bib/Diaper/Panty/Baby frock/Self-help garment 10
- Q.4 Write down the primary / secondary color theory. 10
- Q.5 Draw the diagram of colour combination. 10
- Q.6 Prepare the sample using different embroidery stitches 10
- Q.7 Identify the given sample and write its chemical property. 10
- Q.8 Viva – voce 10



Amita Agrawal
Prof. Dr A.S. Agrawal
BAS member.

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

**Faculty of Science & Technology
Home Science Practical Question Paper (CBGC) 2023
B. Sc First Year Practical Examination (Semester I & II)
Course code-BHS-123 and BHS-223**

**Course Title-Family Resource Management-I Practical + Family Resource
Management-II Practical**

Time: 4 Hour

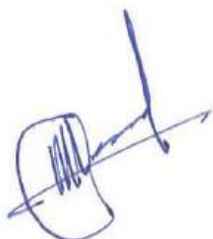
Mark : 80

Date: _____

Batch No. _____

Centre: _____

-
- | | |
|--|----|
| Q1. Write the work simplification Techniques. | 10 |
| Q.2 Write the energy demanding tasks. | 10 |
| Q.3 Write down the steps in management process? | 10 |
| Q.4 Prepare the budget & actual spending. | 10 |
| Q.5 Write down the report of attending seminar. | 10 |
| Q.6 Prepare the budget of high income group. | 10 |
| Q.7 Write down the report of visit to Exhibition / Trade fair. | 10 |
| Q.8 Viva -Voce. | 10 |



Anita Aggarwal
Prof. Dr A.S. Aggarwal
Bos Member.

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y Scheme of Practical examination: Annual examination

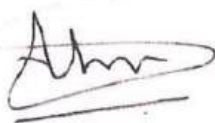
Semester I PHY 121 and Semester II PHY 221

Time: 3:00 hrs

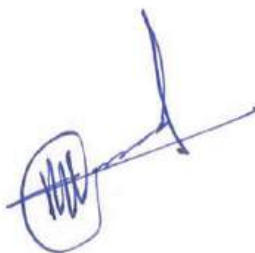
Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
2	Table , Observations, Observation Table, Graph (if applicable), Calculations, Result with Proper Unit	50
3	Oral	10
Total		80



Dr. S.T. Alone.



**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Instrumentation practice

B. Sc. F. Y Scheme of Practical examination: Annual examination

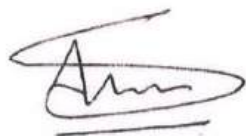
Semester I IP 121 and Semester II IP 221

Time: 3:00 hrs

Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
	Text , Observations, Observation Table	30
2	Graph (if applicable), Calculations, Result with Proper Unit	20
3	Oral	10
Total		80



Dr. S.T. Alone.



**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for non conventional and conventional energy

B. Sc. F. Y Scheme of Practical examination: Annual examination

Semester I NCCE- 110 and Semester II NCCE- 210

Time: 3:00 hrs

Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
2	Observations, Observation Table	30
3	Graph (if applicable), Calculations, Result with Proper Unit	20
4	Oral	10
Total		80


Dr. S.T. Alone



DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD

Faculty of Science and Technology

B. Sc. Computer Science(Optional) I & II Semester

Computer Science Practical Question Paper Pattern(CBCS)

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical based on paper No. CMP-121 of semester-I (40 Marks)

- a) Practical based on CMP-111 - 17.5 Marks
- b) Practical based on CMP-112 -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CMP-221 of Semester-II (40 Marks)

- a) Practical based on CMP-111 - 17.5 Marks
- b) Practical based on CMP-112 -17.5 Marks
- c) Viva / Oral – 05 Marks



DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD
Faculty of Science and Technology
B. Sc. Information Technology (Optional) I & II Semester
Information Technology Practical Question Paper Pattern(CBCS)

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical based on paper No. IT-121 of semester-I (40 Marks)

- d) Practical based on IT-111 - 17.5 Marks
- e) Practical based on IT-112 -17.5 Marks
- f) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. IT-221 of Semester-II (40 Marks)

- d) Practical based on IT-111 - 17.5 Marks
- e) Practical based on IT-112 -17.5 Marks
- f) Viva / Oral – 05 Marks



DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD

Faculty of Science and Technology

**B. Sc. Computer Application(Optional) I & II Semester
Computer Application Practical Question Paper Pattern(CBCS)**

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical based on paper No. CA-121 of semester-I (40 Marks)

- g) Practical based on CA-111 - 17.5 Marks
- h) Practical based on CA-112 -17.5 Marks
- i) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CA-221 of Semester-II (40 Marks)

- g) Practical based on CA-111 - 17.5 Marks
- h) Practical based on CA-112 -17.5 Marks
- i) Viva / Oral – 05 Marks



DR.BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

AURANGABAD

**Faculty of Science and Technology
Practical Question Paper Examination
B.Sc.F.Y. Fishery Science
Sem-I(Fish-121) & Sem-II(Fish-221)**

Time: 04.00 hours

Max. Marks: 80

Date:

Batch No:

Center:

Sem-I Lab Course I (based on Fish-111 and Fish-112).

Q.1 a Identify and Classify the given spots (any four). 20 Marks

or

b Identify and Describe adaptive features of fishes (any four).

Q.2 a Dissect the given fish.....so as to expose..... System. 20 Marks

Or

b Prepare a permanent/Temporary mounts of materials provided. Identify and describe.

Sem-II Lab course II (based on Fish-211 and Fish-212).

Q.3 a Identify and describes the given spots (three). 15 Marks

Or

b Preparation of pituitary gland extract and Injection techniques doses of synthetic hormones to fishes for induced breeding.

Q.4 a Estimate the amount of O_2/CO_2 /Alkalinity. 15 Marks

Or

b Estimation of Oxygen consumption of Fish.

Q.5 Record Book and Viva –Voce. 10 Marks



DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

Faculty of Science and Technology

Botany Practical Question Paper (C. B. C. & G. S.) 2023

B. Sc. First Year Practical Examination (Semester I and II)

Course Code: BOT- 121 and BOT- 221

Course Title: Lab Course- 1 and Lab Course- 2

(Based on BOT- 111 + BOT- 112 and BOT- 211 + BOT- 212)

Diversity of Cryptogams- I + Morphology of Angiosperms and

Diversity of Cryptogams- II + Histology, Anatomy and Embryology

Time: 4 Hours

Marks: 80

Date: _____

Batch No. _____

Center: _____

- Q. 1 Identify, classify and describe any two Algae from the given mixture 'A' 10
- Q. 2 Identify, classify and describe the given specimen 'B' (Fungi) 10
- Q. 3 Identify, classify and describe the given specimen 'C' (Bryophyta) on the basis of external and internal features. 10
- Q. 4 Prepare a temporary slide of the given specimen 'D' (Pteridophyta). Identify and describe with a well labeled diagram. 10
- Q. 5 Identify and describe the structure, modification and pollination mechanism in the given specimen 'E' (Flower). 10
- Q. 6 Prepare a double stained permanent preparation of the given specimen 'F' (Monocot/Dicot – Root/Stem/Leaf). Identify and describe with a labeled diagram. 10
- Q. 7 Identify and describe the specimen 1, 2, 3, 4 and 5 as per the instructions. (1- Bacteria/Lichen, 2- Morphology, 3- Morphology, 4- Histology 5- Embryology) 10
- Q. 8 Viva-Voce 10

Prof. M. S. Wadikar, 14/03/23

Prof. J. S. Ambhore, 14/3/2023

Prof. Abhay Salve and 14/3/2023

BOS Member (Botany)

Dr. Shaikh R. I. 14/03/2023

Dr. Babasaheb Ambedkar Marathwada University, Auangabad.

Faculty of Science and Technology

Pattern of Practical Question Paper Examination

B.Sc. F.Y. Analytical Chemistry (Practical)

Sem -I (ACH-121) & Sem -II (ACH-221)

Time: 4:00 Hrs

Maximum Marks: 80

Q1.

a. Calibration of weight on Single pan balance

(15 Marks)

OR

b. Calibration of volumetric apparatus like burette/ pipette / standard flask.

OR

c. To prepare standard solution of sodium carbonate and standardize the given solution of $\text{HCl} / \text{H}_2\text{SO}_4$

OR

d. To prepare standard solution of sodium oxalate and standardize the given solution of KMnO_4

OR

e. To prepare standard solution of $\text{K}_2\text{Cr}_2\text{O}_7$ and standardize the given solution of $\text{Na}_2\text{S}_2\text{O}_3$

OR

f. To prepare standard solution of sodium chloride and standardize the given solution of AgNO_3

Q2.

(15 Marks)

a. Assay of commercial NaOH

OR

b. Assay of Ferrous Sulphate

OR

c. Assay of Boric acid using Manitol

OR

d. Assay of Copper Sulphate

OR

e. To estimate the amount of barium in the given solution of barium chloride.

OR

f. To estimate the amount of iron in the given solution of ferrous salt.

Q3.

(20 Marks)

- Preparation of 0.1 N solution of HCl , HNO_3 using density and percentage by weight and standardize it by Na_2CO_3
- Preparation of 0.05 N solutions of H_2SO_4 using density and percentage by weight and its standardization.
- Measure the optical density of series of solution of $\text{K}_2\text{Cr}_2\text{O}_7$ and find the equations of line using least square method.
- Prepare a working calibration curve using CuSO_4 Solution and determine concentration of CuSO_4 in the given unknown sample.
- To determine the stability constant of Fe-5-Sulpho salicylic acid by Jobs method.

Q4.

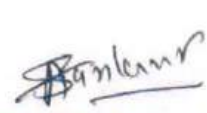
(20 Marks)

- Provided 0.1 N FAS solution, prepare 50 ml 0.05 N FAS and standardize it by K_2MnO_4
- Prepare a working calibration curve using KMnO_4 Solution and determine concentration in the given unknown sample
- Measure the optical density of series of solution of KMnO_4 and find the equations of line using least square method.
- Estimation of Na / K by using flame photometer.
- Estimate the water soluble poly-phenols / Catechin content in various samples of tea leaves.
- Estimate the amount of Tannic acid present in various samples of tea leaves

Q.5 Record book and viva-voce

(10 Marks)




(Dr. Anil G. Shankarwar)

Chairman BOS Chemistry
Dr. Babasaheb Ambedkar Marathwada University
Aurangabad.

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
Faculty of Science & Technology
Pattern of Practical Question Paper Examination
B.Sc. F.Y. ZOOLOGY (Practical) Sem-I (ZOL- 103) & Sem-II (ZOL-106)
(Based on ZOL- 101 & 102, 104 & 105)

Time: 4 Hour

Max Marks: 80

Date-

Centre—

Q.1. Identify the given spots and comments on it (Any Six) 30

(Protozoa to Echinodermata, Cell organelles and Cancer cell)

OR

Identify & classify the given spots and comments on it (Any Six)

(Protochordata to Mammalia)

Q.2. Dissect the -----So as to expose its-----System (Invertebrate/Vertebrate) 10

Q.3. Mounting of squash preparation of Onion root tip, identify the stage 10

OR

Identification of Protozoan/ Coelenterates in pond/lake water sample.

Q.4 Find out the blood groups and Rh factor of given blood sample 10

OR

Genetics- Major/ Minor Problem

Q.5. Identify the given spot and comments on it. (Any Two) 10

(Mosquito, Housefly, Honey bee, Cockroach and Butterfly)

OR

Study of gene frequency and mutants of man (Any Two)

(Attached ear lobe, Colour of eyes, rolling of tongue and blood group frequency)

OR

Prepare temporary slide of the following: (Any Two)

(Gemule, Spicule, Obelia Colony, Parapodium of Neries)

Q.6. Viva-Voce 10

Deshmukh
Prof. D. R. Deshmukh
(Bos member)

9/23/23

Shm
Prof. J. D. Shaikh
(B.O.S. members)

Padwal
(Dr. Nitin Padwal)
(B.O.S. member)

Dr. Babasaheb Ambedkar Marathwada University

Faculty of Science & Technology

B.Sc. First Year Practical Examination

Dairy Science and Technology

DST 121 & 221:- Lab Course (CBCS Pattern)

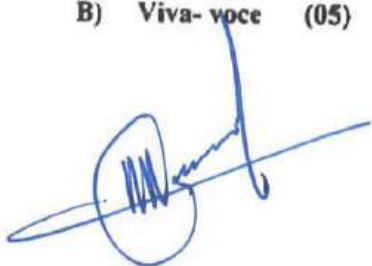
Marks: 80

Time: 4 Hrs

Batch No:

Date:

- Q1. Spotting 10 (5 spots related to DST 121 & 5 spots related to DST 221) 20**
- Q2. Recording Temperature, Pulse, Respiration of farm animal / Identification of Healthy animal / Sick animal 15**
- Q3. Determination of Fat / TS / Sp. gravity / Acidity of milk 10**
- OR**
- Detection of Adulterants added in milk**
- Q4. Determination of Moisture / Ash / Crude Fiber 15**
- OR**
- Preparation of Concentrate Mixture / Mineral mixture / Milk replacer / Calf starter / Silage / Hay**
- Q5. Separation of Cream / Preparation of Flavored Milk 10**
- Q6. A) Record book (05) 10**
- B) Viva-voce (05)**



Prof. Vasant V. Niras
Head & Professor
Dept. of Dairy Sci. & Technology
Vivekanand Arts, S.D. Comm. & College, Aurangabad. (M.S.)

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
Faculty of Science & Technology
B.S.F.Y. Industrial Chemistry Practical Examination Sem. I & II M/A 2023
Semester I (IC- 121)-Lab Course-1 based on IC-111 & IC-112) &
Semester II (IC-221) - Lab Course-2 based on IC-211 & IC-212)

Time : 3 Hours

Marks : 80

Perform any ONE Experiment from the following questions.

- Q. 1 To determine the coefficient of Venturimeter.
- Q. 2 To determine the coefficient of Orificemeter
- Q. 3 To study the characteristics of Centrifugal pump.
- Q. 4 To verify Hagen-Poisellues equation.
- Q. 5 To study the pipe fittings test rig.
- Q. 6 To study the thermal conductivity of bad conductor.
- Q. 7 Determination of acid value of lubricating oil.
- Q. 8 Determination of Saponification value of lubricating oil.
- Q. 9 Determination of viscosity of lubricant by Red wood viscometer.
- Q. 10 Determination of Flash & Fire point of lubricating oil by
a) Cleavelands apparatus(open cup) b) Abel's apparatus (closed cup)
- Q. 11 Determination of strength of NaOH & Na₂CO₃ in the given alkali mixture solution.
- Q. 12 Determination of alkalinity of water sample.
- Q. 13 Determination of hardness of water.
- Q. 14 Determination of percentage of iron in cement volumetrically.
- Q. 15 Determination of amount of available chlorine in Bleaching powder.
- Q. 16 Estimation of calcium in limestone.
- Q. 17 Determination of dissolved oxygen(DO).
- Q. 18 Determination of Chemical oxygen demand(COD) in given waste water sample.
- Q. 19 To measure the density of various liquids by pyknometer.
- Q. 20 To determine the chloride of water by Mohr's method.

Note: The Experimental Performance includes--

1. Writing of required Chemicals & Glass apparatus/Test rigs required	10 marks
2. Writing of experimental theoritical aspects / Chemical reaction	10 marks
3. Writing of experimental procedure details.....	10 marks
4. Writing of experimental observations / practical test readings/ and actual performance of the student.....	20 marks
5. Experimental Calculations / Percentage Yields.....	10 marks
6. Presentation of Experiment / Test rig in the form of result.....	10 marks
Experimental Performance	(Total : 70 Marks)
Viva-voce	10 Marks



Imal
Dr. S. M. Mane
Chairman
Advisors in Industrial Chemistry

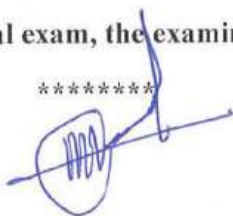
Dr. Babasaheb Ambedkar Marathwada University Aurangabad
Faculty of Science and Technology
Pattern of Practical Question Paper for Practical Examination
B.Sc I Year (Environmental Science) (Practical)
Sem.- I (EVS-121) & Sem-II (EVS-221)

Time: (Hrs) 4.00 hrs

Max Marks : 80

- Q.1:** Explain the Phytoplankton's from provided water Sample. (Any 5 specimen). 20
OR
Q.: Explain the zooplankton's from provided water Sample. (Any 5 specimen)
OR
Q.: To study the Xeric adaptation in plants with suitable examples.
OR
Q.: To study the Xeric adaptation in animals with suitable examples.
OR
Q.: Explain the effect of SO₂ gas on plants.
- Q.2:** Explain working principle and application of the Laboratory equipment (Any 5) 15
OR
Q.: To study the effect of NH₃ gas on plants.
OR
Q.: Explain the laboratory safety rules and First- Aid and emergency treatment in laboratory.
OR
Q.: Explain the mesophytic specimen with unique features (Any 5)
OR
Q.: Describe the equipment's used in air pollution control.
- Q.3:** Determination of total hardness from provided water sample. 20
OR
Q.: Determination of Alkalinity from provided water sample.
OR
Q.: Determination of Turbidity from provided water sample.
OR
Q.: Determination of Dissolved oxygen from provided water sample.
OR
Q.: Determine the free CO₂ and Electrical conductivity of given water sample.
- Q. 4:** Determine the percent composition of solid waste. 15
OR
Q.: Determination of Organic matter from provided soil sample.
OR
Q.: Determine the potassium content from municipal solid waste
OR
Q.: Determine the pH and Electrical conductivity of municipal solid waste.
OR
Q.: Determine the wind speed and wind direction.
- Q.5:** Viva -Voce and Submission . 10

Note: At the time practical exam, the examiner can set question on syllabus in this pattern.



Guile
Ad-hoc Board Chairperson

Dr. Babasaheb Ambedkar Marathwada University

Faculty of Science
B.Sc. First and Second Semester Practical Examination
Microbiology
(Based on Lab Course 121 & 221)

Time: 09:00am to 01:00pm (on both days)

Max. Marks:80

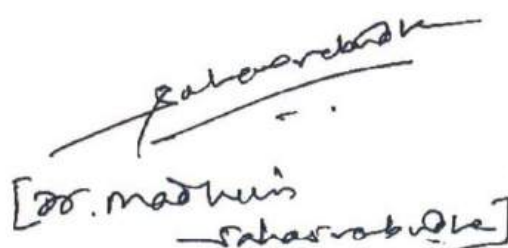
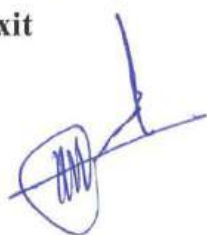
Note:

1. Students absent on the first day will not be permitted for practical exam on second day.
2. Wearing an apron is mandatory.

- | | |
|---|----|
| Q1. Monochrome/Gram/Negative/ Cell wall/Capsule/Spore staining | 15 |
| Q2. Hanging drop Technique/ Micrometry/Bacterial growth curve | 15 |
| Q3. Isolation of bacteria from soil/mixed culture and Study of morphological and cultural characters. | 15 |
| Q4. Effect of pH/temperature/ UV on bacterial growth/ Qualitative tests | 15 |
| Q5. Spotting: | 10 |
| a. Laboratory equipment/Parts of Microscope | |
| b. Buffers/Reagents/Cleaning & Sterilization of glassware | |
| Q6. Viva-voce/study tour report | 10 |



Dr. Prashant P. Dixit



[Dr. Madhu Sahasrabudhe]

First Year chairman

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
AURANGABAD**

Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for non conventional and conventional energy

B. Sc. F. Y Scheme of Practical examination: Annual examination

Semester I NCCE- 110 and Semester II NCCE- 210

Time: 3:00 hrs

Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
2	Observations, Observation Table	30
3	Graph (if applicable), Calculations, Result with Proper Unit	20
4	Oral	10
Total		80



**DR. BABASAHEB AMBEDKAR MARATHWADA
UNIVERSITY, AURANGABAD**
Faculty of Science and Technology



Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. First Year
Semester-I (PHY-121) and Semester- II (PHY-221)

Scheme of Marking
for
Practical Examination (80 Marks)
and Internal Assessment (20 Marks)

Subject: Physics

Effective From
Academic Year: 2022-2023

Important Notes:

- i) **Nomenclature:** DSC- Discipline Specific Core course, SEC – Skill Enhancement Course, AECC- Ability Enhancement compulsory course, DSE- Discipline Specific Elective, UA- University Assessment (Semester End), CIA-Continuous Internal Assessment.
- ii) **There shall be one skill enhancement course (SEC) IIIrd to VIth Semester (any one SEC course to be chosen (any one from three optional subjects) from the basket of SEC courses for the respective semester.**
- iii) **Code description:** XXX code has to be decided by BoS of the respective subject while designing their respective curriculum (e.g., for Physics it will be PHY; for Electronics it will be ELE)
 - The codes for first semester courses will start from XXX-111, Second-semester courses will start from XXX-211 and so on
 - XXX-111: The first digit indicates the Semester Number; the second two digits indicate paper numbers for the first-semester courses and the same analogy is for the remaining semesters
 - The codes for theory courses will start from XXX-111 (for the first semester and the same analogy is for the remaining semesters)
 - The codes for practical courses will start from XXX-121 (for the first semester and the same analogy is for the remaining semesters)
 - The codes for Ability Enhancement compulsory courses will start from XXX-131 (for the first semester and the same analogy is for the remaining semesters)
- iv) **Assessment:** 80% for University Assessment (Semester End Examination) and 20 % for Continuous Internal Assessment (CIA)
- v) **Continuous Internal Assessment (CIA):Theory** (10 Marks): Internal Test 05 Marks (Two Internal Tests of 05 marks each and average of the two tests will be considered) and 05 Marks for Assignment/tutorials.
- vi) ***Continuous Internal Assessment (CIA):Practical** (10 Marks): 07 Marks for Internal Practical Examination and 03 Marks for record book/submission of collection and field survey report and excursion report
- vii) Practical examination: Annual examination

***Continuous Internal Assessment (CIA) For 10+10=20 Marks distribution**

Course title	Internal Practical Examination	Record book	Total
PHY-121	07 Marks	03 Marks	10 Marks
PHY-221	07 Marks	03 Marks	10 Marks
Total	14 Marks	06 Marks	20 Marks

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Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 01

Aim: Determination of acceleration due to gravity by using Kater's pendulum

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup	20	
2	Observations (C.G. of rod), Table, Calculations, Result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:.....

Experiment No.: 02

Aim: Youngs modulus 'Y' by bending of a beam loaded at the center

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of thickness and breath	20	
2	Observations, Observations Table, Calculations, graph, Result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 03

Aim: Youngs modulus 'Y' by cantilever (Oscillation method)

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of thickness and breath.	20	
2	Observations, Observations Table, Calculations, graph, Result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:.....

Experiment No.: 04

Aim: Moment of inertia (M.I.) by using fly wheel

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius	20	
2	Observations, Observations Table, Calculations, graph, Result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 05

Aim: ‘ η ’ by Maxwell needle

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius of wire	20	
2	Observations (Mass of hollow & solid cylinders, length of wire and needle), Observation Table, Calculations, result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 06

Aim: Determine modulus of rigidity ' η ' and Young's modulus ' Y ' of the material of flat spiral spring.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius of spring and wire	20	
2	Observations, Observations Table, Calculations, graph, Result with proper Unit.	50	
3	Viva-voce	05	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 07

Aim: Determine the Surface Tension of a given liquid by using Jaeger's Method.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius of bore of Capillary tube.	20	
2	Observations for three different depths, Observation Table, Calculations, result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 08

Aim: Determine the coefficient of viscosity ' η ' of a liquid by Poiseuille's method

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius of bore and length of Capillary tube.	20	
2	Observations for three different h, Observation table, Calculations, result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 09

Aim: Determine the thermal conductivity of copper by Searle's apparatus.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of radius of wire.	20	
2	Observations, Observation Table, Calculations, result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 10

Aim: Determine the thermal conductivity 'K' of a bad conductor by using Lees disk method.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Proper adjustment of experimental setup, measurement of thickness and radius of bad conductor.	20	
2	Observations, Observations table , Calculations, graph, result with proper Unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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B. Sc. F.Y. IInd Semester
Physics Paper VI (PHY-221)
List of experiment

1. Use of multimeter for measuring voltage, current and resistance.
2. Determination of dielectric constant of liquid / solid.
3. I-H curve.
4. Field along the axis of circular coil.
5. Determination of wavelength of light by Newton's rings.
6. Resolving power of telescope.
7. Specific rotation by Laurent's half shade polarimeter.
8. λ by grating (normal incidence)
9. Determination of frequency of AC mains by sonometer
10. Comparison of capacitor using De'Sauty's method
11. Measurement of constants of B. G.

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 01

Aim: Use of Multimeter for measuring voltage, current and resistance

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Draw circuit diagram and do connections for voltage, Current measurement. Measure values of Standard resistances and compare it with color code values	20	
2	Observation in proper tabular form for voltage, Current and resistance measurement	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:.....

Experiment No.: 02

Aim: Determination of dielectric constant of liquid / solid

1. Connect variable capacitor and test capacitor to RF oscillator and get it checked by the examiner
2. Measure C_1 for air and C_2 for given liquid / solid for different lengths of sample
3. Calculate dielectric constant from C_0 (given), C_1 and C_2 for different lengths of sample
4. Calculate dielectric constant using the following formula

$$K = 1 + \frac{C_1 - C_2}{C_0}$$

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Do proper connections and setting up of apparatus for initial adjustment and then measure C_1 and C_2	20	
2	Proper tabular form, required observations. Calculation and answer with proper unit.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 03

Aim: I-H Curve

Draw a circuit diagram and determine the hysteresis loss for a given specimen in the form of rod.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Circuit diagram, connections and setting up of apparatus of I-H curve.	20	
2	Observation in proper tabular form, graph of I- $\tan\theta$, calculations of area of loop as hysteresis loss.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:.....

Experiment No.: 04

Aim: Field along the axis of a circular coil

1. Draw the circuit diagram and get it checked by the examiner
2. Verify that the magnetic field changes with distance along the axis of a coil
3. Plot a graph between $\tan\theta$ (y-axis) and distance (x- axis)
4. Formula:

$$1. F = \frac{2 \pi n i r^2}{10 (r^2 + x^2)^{3/2}}$$

$$2. F = H \tan\theta$$

Where, n -Total number of turns in the coil

i- Current in the coil

r - Radius of the circular coil

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Circuit diagram, connections and setting up of apparatus	20	
2	Proper tabular form, required observations and graph. Calculation and answer with proper unit.	50	
3	Viva-voce	10	
Total		80	

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 05

Aim: Determination of wavelength of light by Newton's rings

1. Setup Newton's ring apparatus and source to get Newton's ring
2. Take left and right measurement for different rings using microscope and calculate diameter of each ring
3. Calculate wavelength using formula

$$\lambda = \frac{D_n^2 - D_m^2}{4R(n - m)} \quad \text{and} \quad \lambda = \frac{\text{Slope}}{4R}$$

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Setup Newton's ring apparatus and Sodium source to get proper Newton's rings	20	
2	Take left and right measurement for different rings using microscope and calculate diameter of each ring, Take observations for at least five rings. Draw the graph and also calculate λ from slope of graph	50	
3	Viva-voce	10	
Total		80	

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Faculty of Science and Technology

Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 06

Aim: Determine resolving power (R.P.) of a Telescope

1. Draw diagram and determine the distance between two successive wires using traveling microscope.
2. Calculate the critical width of a slit to resolve for just appear and disappear

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Ray Diagram and proper experimental setup	20	
2	Calculate the critical width of a slit to resolve for just appear and disappear. Take observations for at least two distances between gauge and telescope, Calculations of R.P. and verify the results.	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 07

Aim: Specific rotation by Laurent's half shade polarimeter.

1. Prepare Sugar solutions of different Concentrations
2. Measure angle of rotation for distilled water
3. Measure angle of rotation for sugar solutions of different concentrations
4. Calculate Specific rotation value using formula

$$S = \left(\frac{10}{C.L} \right) \theta$$

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Prepare Sugar solutions of different Concentrations. Measure angle of rotation for distilled water. Measure angle of rotation for sugar solutions of different concentrations	20	
2	Observations, Proper observation table, Calculations and Result/answer with unit	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 08

Aim: λ by grating (normal incidence).

1. Setup Spectrometer for proper alignment
2. Adjust spectrometer for parallel beam of light by Schuster's method
3. Setup plane diffraction grating perpendicular to incident beam
4. Measure diffraction maxima angle on left and right side for first and second order
5. Calculate $(a + b)$ for plane diffraction grating
6. Calculate wavelength of source using formula

$$(a + b) \sin \theta = n \lambda$$

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Setup Spectrometer for proper alignment. Adjust spectrometer for parallel beam of light by Schuster's method. Setup plane diffraction grating perpendicular to incident beam. Take direct reading.	20	
2	Required number of observations, Observation table, Calculations and Result with Proper Unit	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics

B. Sc. F. Y. Scheme of Practical examination Mar-Apr/Oct-Nov-202... /202...

Semester-I (PHY 121) and Semester- II (PHY 221)

Time: 3:00 hr

Batch No.

Maximum Marks: 80

Date:

Experiment No.: 09

Aim: Determination of Frequency of A.C. mains by using Sonometer.

1. Make experimental arrangement with proper connections
2. Find out radius of the given wire.
3. Determine the freq. of AC mains by using the formula.

$$n = \frac{1}{2l} \sqrt{\frac{T}{m}}$$

Where, l - Vibrating length of the wire

T - Tension in the wire

m - mass per unit length of sonometer wire.

given, $m = \dots\dots\dots$ gm./cm.

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks	Obtained Marks
1	Experimental arrangement with proper connections	20	
2	Observations, Proper observation table, Calculations and Result/answer with unit	50	
3	Viva-voce	10	
Total		80	

Signature of Examiner(s)

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Choice Based Credit System (CBCS) Curriculum for Physics
B. Sc. F. Y Scheme of Practical examination: Annual examination
Semester I PHY 121 and Semester II PHY 221

Time: 3:00 hrs

Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
2	Observations, Observation Table, Graph (if applicable), Calculations, Result with Proper Unit	50
3	Oral	10
Total		80



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Faculty of Science and Technology

Pattern of Practical Question Paper Examination

**B.Sc. First Year Automobile Technology / Workshop Technology / Refrigeration and Air
Conditioning (P-2022)**

Sem I (Paper Code _____) & Sem II (Paper Code _____)

Time: 3.00 Hrs

Maximum Marks: 80

Q. 1 Conduct and Write down Experiment _____ based on _____ 30 Marks

OR

Conduct and Write down Experiment _____ based on _____

Q. 1 Conduct and Write down Experiment _____ based on _____ 30 Marks

OR

Conduct and Write down Experiment _____ based on _____

Q. 4 Answer the Question. 10 Marks

OR

Answer the Question.

Q. 5 Record Book and Viva Voce 10 Marks



Dr. P.M. Ambedkar

**DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY,
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Choice Based Credit System (CBCS) Curriculum for Electronics

B. Sc. F. Y Scheme of Practical examination: Annual examination

Semester I ELE 121 and Semester II ELE 221

Time: 3:00 hrs

Maximum Marks: 80

Scheme of Marking

Sr. No	Head of Distribution of Marks	Maximum Marks
1	Proper adjustment of experimental setup (including Figure/ Circuit diagram)	20
2	Observations, Observation Table, Graph (if applicable), Calculations, Result with Proper Unit	50
3	Oral	10
	Total	80



Sawant
Sawant S.S.
Professor
Dept of Electronics
Shri Chhatrapati Shivaji college
Aurangabad

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
Faculty of Science and Technology
Pattern of Practical Question Paper Examination
B.Sc. F.Y. Biochemistry (Practical)
Sem-I (BCH-121) & Sem-II (BCH-221)

Time-4hrs

Max Marks-80

Section-A

- Q.1.** Carbohydrates Qualitative Tests (Any Two) 20 Marks
(Fehling's test/ Benedict's test/Barfoed's test /Molisch test/ Iodine test)
or
Protein Quantitative Test (Any One.)
(Albumin/Casein)
or
Estimation of carbohydrates- Hanes method.
or
Determination of Saponification value.

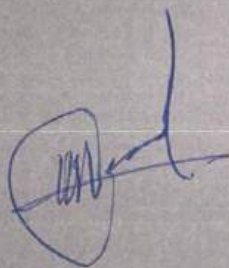
- Q.2.** Spotting -5 marks/ Principle -5 marks/ MCQ- 5 marks. 15 Marks

Section-B

- Q.3.** Determination of pH of given solutions. 20 Marks
or
Titration curve for amino acids and determination of pK value
or
Verification of Lambert Beer's law and its limitations
or
Estimation of Ascorbic acid.

- Q.4.** Spotting -5 marks/ Principle -5 marks/ MCQ- 5 marks 15 Marks

- Q.5** Record-book and viva-voce 10 Marks




17/03/2023
Dr. Vikas R. Shende
Assistant Professor
Department of Biochemistry
Dr. Babasaheb Ambedkar
Marathwada University,
Aurangabad.

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Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Faculty of Science & Technology
B.Sc. (Integrated) Biotechnology Practical Examination CBC& GS

Paper - PC006203
(Based on Paper Course TC006105, TC006106, TC006205, TC006206)

UNIVERSITY ASSESSMENT
(80Marks)

Time – 6 Hrs.	Max Marks – 80
Q.1 Based on Practical prescribed in TC006105	15 Marks
Q.2 Based on Practical prescribed in TC006106	15 Marks
Q.3 Based on Practical prescribed in TC006205	15 Marks
Q.4 Based on Practical prescribed in TC006206	15 Marks
Q. 5 Spotting (one spot each of 2.5 marks based on each of 4 Courses)	10 Marks
Q. 6 Viva-Voce (Based on All 4 Courses)	10 Marks

INTERNAL ASSESSMENT
(20 Marks)

Record Book/Journal/Submission/Reports etc. Internal Work (10 per semester x 2)

(7marks for internal practice examination and 3marks for record book /submitted of collection and filed survey report and excursion tour for each semester.) to be evaluated by the Department and finally recorded at the time of annual practical examination.

20Marks



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Faculty of Science & Technology
B.Sc. (Integrated) Biotechnology Practical Examination CBC& GS

Paper - PC006202
(Based on Paper Course TC006103, TC006104, TC006203, TC006204)

UNIVERSITY ASSESSMENT
(80Marks)

Time – 6 Hrs.

Max Marks – 80

Q.1	Based on Practical prescribed in TC006103	15 Marks
Q.2	Based on Practical prescribed in TC006104	15 Marks
Q.3	Based on Practical prescribed in TC006203	15 Marks
Q.4	Based on Practical prescribed in TC006204	15 Marks
Q. 5	Spotting (one spot each of 2.5 marks based on each of 4 Courses)	10 Marks
Q. 6	Viva-Voce (Based on All 4 Courses)	10 Marks

INTERNAL ASSESSMENT
(20 Marks)

Record Book/Journal/Submission/Reports etc. Internal Work (10 per semester x 2)

(7marks for internal practice examination and 3marks for record book /submitted of collection and filed survey report and excursion tour for each semester.) to be evaluated by the Department and finally recorded at the time of annual practical examination.



20Marks

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Faculty of Science & Technology
B.Sc. (Integrated) Biotechnology Practical Examination CBC& GS

Paper - PC006201
(Based on Paper Course TC006101, TC006102, TC006201, TC006202)

UNIVERSITY ASSESSMENT
(80Marks)

Time – 6 Hrs.	Max Marks – 80
Q.1 Based on Practical prescribed in TC006101	15 Marks
Q.2 Based on Practical prescribed in TC006102	15 Marks
Q.3 Based on Practical prescribed in TC006201	15 Marks
Q.4 Based on Practical prescribed in TC006202	15 Marks
Q. 5 Spotting (one spot each of 2.5 marks based on each of 4 Courses)	10 Marks
Q. 6 Viva-Voce (Based on All 4 Courses)	10 Marks

INTERNAL ASSESSMENT
(20 Marks)

Record Book/Journal/Submission/Reports etc. Internal Work (10 per semester x 2)

(7marks for internal practice examination and 3marks for record book /submitted of collection and filed survey report and excursion tour for each semester,) to be evaluated by the Department and finally recorded at the time of annual practical examination.

20Marks



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Faculty of Science & Technology
B.S.(Optional) Biotechnology Practical Examination CBC& GS

Paper – BTOP – 211 C
(Based on Paper Course BTO- 211, BTO- 112, BTO - 211, BTO- 212)

UNIVERSITY ASSESSMENT
(80Marks)

Time – 6 Hrs.	Max Marks – 80
Q. 1 Based on Practical prescribed in BTO- 111	15 Marks
Q. 2 Based on Practical prescribed in BTO-112	15 Marks
Q. 3 Based on Practical prescribed in BTO-211	15 Marks
Q. 4 Based on Practical prescribed in BTO-212	15 Marks
Q. 5 Spotting (one spot each of 2.5 marks based on each of 4 Courses)	10 Marks
Q. 5 Viva-Voce (Based on All 4 Courses)	10 Marks

INTERNAL ASSESSMENT
(20 Marks)

Record Book/Journal/Submission/Reports etc. Internal Work (10 per semester x 2)

(7marks for internal practice examination and 3marks for record book /submitted of collection and filed survey report and excursion tour for each semester.) to be evaluated by the Department and finally recorded at the time of annual practical examination.

20Marks

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Faculty of Science - Practical Examination

B. Sc. I year 2022-23

Subject – Geology

Paper No- (121 & 221)

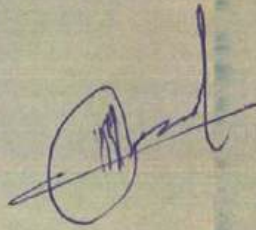
Paper Based on

(Petrology, Mineralogy, Paleontology and Structural Geology)

Time: 4 Hours

Marks: 80

- | | | |
|-----|---|----|
| Q.1 | Identify the given minerals after describing their physical properties from Spot no. 1 to 6. | 12 |
| Q.2 | Identify the given rock samples & describe their composition, texture & Classification from Spot no. 7 to 11. | 10 |
| Q.3 | Describe with neat sketches morphological features of given fossil/shell & their Classification from Spot no. 12 to 16. | 15 |
| Q.4 | Depict the Physiographic division of India in the given map of India | 05 |
| Q.5 | Describe the elements of symmetry & form of the crystal system from Spot No.17 to 20 | 12 |
| Q.6 | Describing their Geomorphological Features of given models from Spot no. 21 to 22. | 06 |
| Q.7 | Describe Geology & Geography of the given topographical map and Draw section along x-y. | 10 |
| Q.8 | viva voce / Record book. | 10 |



Chairman

Prof. Ashok Tejankar

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Faculty of Science & Technology

Pattern of Practical Examination Question Paper

B.Sc. Bioinformatics F.Y. (CBCS)

(BBI-121 & BBI-221)

(Practical based on Basic Chemistry, Mathematics & Statistics & Basic Chemistry-II and Introduction to Genetics)

Time: 4 Hrs

Max. Marks: 80

-
- | | |
|--|----|
| Q.1. To prepare standard solution of NaOH/KMnO ₄ & standardize it with given oxalic acid solution | 15 |
| Q.2. Problems based on measures of central tendency or measures of dispersion or ANOVA or matrix or vector | 10 |
| Q.3. Systematic qualitative analysis of given organic compounds | 10 |
| Q.4. Purification of given organic compound by crystallization/sublimation /distillation method | 15 |
| Q.5. Problems based on mono hybrid & di hybrid ratio/sex inheritance | 10 |
| Q.6. Bacterial conjugation/transformation/transduction | 10 |
| Q.7. Viva Voce | 10 |

Legatkar
Dr. J. S. Kulkarni

Willy

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad

Faculty of Science & Technology

Pattern of Practical Examination Question Paper

B.Sc. Bioinformatics F.Y. (CBCS)

(BBI-122 & BBI-222)

(Practical based on Fundamentals of Biology & Cell biology and Introduction to Bioinformatics)

Time: 4 Hrs

Max. Marks: 80

-
- | | |
|--|----|
| Q.1. To study the different parts of a microscope/ preparation and study of mitosis in onion root tips | 15 |
| Q.2. Isolation and confirmation of mitochondria from plant / animal cells. | 10 |
| Q.3. Isolation of Chloroplasts from Spinach leaves/ Study of osmosis in blood cells | 10 |
| Q.4. Exploring and accessing of resources-NCBI/EBI/SIB/ENTREZ | 15 |
| Q.5. Exploring and accessing of biological information from Genbank/EMBL/DDBJ/Uniprot/PIR | 10 |
| Q.6. Exploring and querying PROSITE, PFAM and PRODOM database | 10 |
| Q.7. Viva Voce | 10 |

Lopad Sen
Pr. Jeevan

W
W

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad
Faculty of Science & Technology
Pattern of Practical Examination Question Paper
B.Sc. Bioinformatics F.Y. (CBCS)
(BBI-123 & BBI-223)
(Practicals based on Fundamentals of Computers & Programming in C)

Time: 4 Hrs

Max. Marks: 80

-
- Q.1. Make a new folder / Make a document / Make a presentation / Create a database using Microsoft Office. 15
- Q.2. Connect the Internet; open any website of your choice and save the Webpages. 10
- Q.3. To compute mean/median/mode. 10
- Q.4. Find out the given number is perfect number or not using C program/ Write a C program to print the Fibonacci series 15
- Q.5. Write a C program that uses functions to perform the following:
a. Addition of Two Matrices b. Multiplication of Two Matrices 10
- Q.6. Write a C program to sort a given list of integers in ascending order. 10
- Q.7. Viva Voce 10

Accepted
Dr. D. D. Adhikari

Wf

DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD

Faculty of Science and Technology

B. C. A. (Science) I & II Semester [Degree]

Practical Question Paper Pattern(CBCS)

Practical Paper – 1

Time: 3:00 Hrs.

Max Marks: 80

Section A

Q:1 Practical on paper No. CA-121P of semester-I (40 Marks)

- a) Practical based on CA-111T - 17.5 Marks
- b) Practical based on CA-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CA-221P of Semester-II (40 Marks)

- a) Practical based on CA-111T - 17.5 Marks
- b) Practical based on CA-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Practical Paper – 2

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical on paper No. CA-122P of semester-I (40 Marks)

- a) Practical based on CA-113T - 17.5 Marks
- b) Practical based on CA-114T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CA-222P of Semester-II (40 Marks)

- a) Practical based on CA-213T - 17.5 Marks
- b) Practical based on CA-214T -17.5 Marks
- c) Viva / Oral – 05 Marks



Practical Paper – 3

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical on paper No. CA-123P of semester-I (40 Marks)

- a) Practical based on CA-115T - 17.5 Marks
- b) Practical based on CA-116T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CA-223P of Semester-II (40 Marks)

- a) Practical based on CA-215T - 17.5 Marks
- b) Practical based on CA-216T -17.5 Marks
- c) Viva / Oral – 05 Marks



DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD

Faculty of Science and Technology

B. Sc. (Information Technology) I & II Semester [Degree]

Practical Question Paper Pattern(CBCS)

Practical Paper – 1

Time: 3:00 Hrs.

Max Marks: 80

Section A

Q:1 Practical on paper No. IT-121P of semester-I (40 Marks)

- a) Practical based on IT-111T - 17.5 Marks
- b) Practical based on IT-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. IT-221P of Semester-II (40 Marks)

- a) Practical based on IT-111T - 17.5 Marks
- b) Practical based on IT-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Practical Paper – 2

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical on paper No. IT-122P of semester-I (40 Marks)

- a) Practical based on IT-113T - 17.5 Marks
- b) Practical based on IT-114T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. IT-222P of Semester-II (40 Marks)

- a) Practical based on IT-213T - 17.5 Marks
- b) Practical based on IT-214T -17.5 Marks
- c) Viva / Oral – 05 Marks

Practical Paper – 3

Time : 3:00 Hrs.

Max Marks : 80

Section A

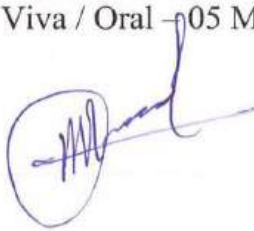
Q:1 Practical on paper No. IT-123P of semester-I (40 Marks)

- a) Practical based on IT-115T - 17.5 Marks
- b) Practical based on IT-116T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. IT-223P of Semester-II (40 Marks)

- a) Practical based on IT-215T - 17.5 Marks
- b) Practical based on IT-216T -17.5 Marks
- c) Viva / Oral – 05 Marks



DR. BABASAHEB AMBEDKAR MARATHAWADA UNIVERSITY, AURNGABAD

Faculty of Science and Technology

B. Sc. (Computer Science) I & II Semester ^[Degree]

Practical Question Paper Pattern(CBCS)

Practical Paper – 1

Time: 3:00 Hrs.

Max Marks: 80

Section A

Q:1 Practical on paper No. CS-121P of semester-I (40 Marks)

- a) Practical based on CS-111T - 17.5 Marks
- b) Practical based on CS-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CS-221P of Semester-II (40 Marks)

- a) Practical based on CS-111T - 17.5 Marks
- b) Practical based on CS-112T -17.5 Marks
- c) Viva / Oral – 05 Marks

Practical Paper – 2

Time : 3:00 Hrs.

Max Marks : 80

Section A

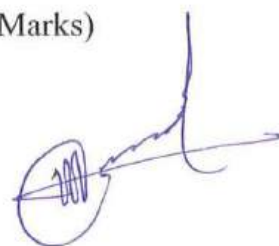
Q:1 Practical on paper No. CS-122P of semester-I (40 Marks)

- a) Practical based on CS-113T - 17.5 Marks
- b) Practical based on CS-114T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CS-222P of Semester-II (40 Marks)

- a) Practical based on CS-213T - 17.5 Marks
- b) Practical based on CS-214T -17.5 Marks
- c) Viva / Oral – 05 Marks



Practical Paper – 3

Time : 3:00 Hrs.

Max Marks : 80

Section A

Q:1 Practical on paper No. CS-123P of semester-I (40 Marks)

- a) Practical based on CS-115T - 17.5 Marks
- b) Practical based on CS-116T -17.5 Marks
- c) Viva / Oral – 05 Marks

Section B

Q:2 Practical based on Paper No. CS-223P of Semester-II (40 Marks)

- a) Practical based on CS-215T - 17.5 Marks
- b) Practical based on CS-216T -17.5 Marks
- c) Viva / Oral – 05 Marks



Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

B.Sc (First Year) (CBSC PATTERN) 2022-23

FACULTY OF SCENCE & TECHNOLOGY

B.Sc (First Year) EXAMINATION

STATISTICS

Model Question Paper

Time: 03 Hours

Max.Marks: 80

Please check whether you have got the right question paper.

N.B. 1) Attempt all questions

2) Figures to the right indicate full marks

Q.1 Problem based on STA-111 & STA-112

OR

20 Marks

Q.1 Problem based on STA-111 & STA-112

Q.2 Problem based on STA-111 & STA-112

OR

15 Marks

Q.2 Problem based on STA-111 & STA-112

Q.3 Problem based on STA-211 & STA-212

OR

20 Marks

Q.3 Problem based on STA-211 & STA-212

Q.4 Problem based on STA-211 & STA-212

OR

15 Marks

Q.4 Problem based on STA-211 & STA-212

Viva – Voice

10 Marks

Total: 80 Marks


PROFESSOR AND HEAD
DEPARTMENT OF STATISTICS
Dr. Babasaheb Ambedkar
Marathwada University



DR. BABASHEB AMBEDKAR MARATHWADA UNIVERSITY FACULTY OF SCIENCE

B.Sc. Ist year / I & II Semester Practical Examination / New CBCS pattern

Subject: Horticulture

Course Code: HORTI-121 & HORT-221

Paper No: III & VI

Elements of horticulture, Ornamental horticulture, vegetable growing I & II

Batch No:

Date

Time 3 hrs

Center

Mark 80

Note: Draw neat and well labeled diagrams wherever necessary

Q1) Describe and classify the given ornamental / vegetable material of given sample

15

Sample –

A) _____ B) _____ C) _____ D) _____ E) _____

Q2) A) Preparation of garland/bouquet from the given materials.

10

B) Layout a plan of home/ public garden

10

Q3) A) Preparation of graft/ layer by using given material. (Sample – F)

15

B) Preparation of flat/ raised beds for sowing of seeds for given ornamental crop. (Sample- G)

15

Q4) Spotting (Identify and comment)

15

Sample

H) _____ I) _____ J) _____ K) _____ L) _____

DR. BABASHEB AMBEDKAR MARATHWADA UNIVERSITY FACULTY OF SCIENCE

B.Sc. IInd year / III & IV Semester Practical Examination / New CBCS pattern

Subject: Horticulture

Course Code: HORTI-321 & HORT-421

Paper No: IX & XIII

Principles and Technology of Fruit gardening & Cultivation Technology of Fruit Crops.

Batch No:	Date	Time 3 hrs
Center		Mark 80

Note: Draw neat and well labeled diagrams wherever necessary

Q1)	Layout a plan of system of planting of given specimen- A	20
Q2)	A) Papain extraction from papaya/ Mango malformation management	10
	B) Paclobutrazol Treatment / Bahar Treatment of Given Specimen- B	10
Q3)	Draw the -----types of irrigation layout of given specimen- C	20
Q4)	Spotting- 5 spots (Identify and comment)	20
	D _____, E _____ F _____, G _____, & H _____,	

DR. BABASHEB AMBEDKAR MARATHWADA UNIVERSITY FACULTY OF SCIENCE

B.Sc. IInd year / III & IV Semester Practical Examination / New CBCS pattern

Subject: Horticulture

Course Code: HORTI-322 & HORT-422

Paper No: X & XIV

Orchard management of Fruit Crops & Production Technology of Plantation, Spices, condiments, Medicinal and aromatic plants

Batch No:	Date	Time 3 hrs
Center		Mark 80

Note: Draw neat and well labeled diagrams wherever necessary

Q1)	Processing of Given Specimen A	20
Q2)	A) Prepare the given specimen-A for girdling/ ringing/ Bending/Notching	10
	B) Demonstrate the method of central leader/open center system for given specimen-B	10
Q3)	Layout a plan of Bio-gas/Compost by given method	20
Q4)	Drying / Distillation of Given Specimen -D	20

DR. BABASHEB AMBEDKAR MARATHWADA UNIVERSITY FACULTY OF SCIENCE

B.Sc. IIIrd year / V & VI Semester Practical Examination/ New CBCS pattern

Subject: Horticulture

Course Code: HORTI-521 & HORT-621

Paper No: XVIII & XXII

Post-Harvest Management of Fruits and vegetables & Preservation of Fruits & Vegetables

Batch No:

Date

Time 3 hrs

Center

Mark 80

Note: Draw neat and well labeled diagrams wherever necessary

-
- | | |
|---|----|
| Q1) A) Spotting- 5 spots (Identify and comment on maturity indices) | 20 |
| A _____, B _____, C _____, D _____, & E _____ | |
| B) Determination of Total Soluble Solids/ Starch from given sample..... | 10 |
| Q2) A) Preparation of Jam/Jelly/Juice From Given Specimen----- | 15 |
| B) Prepare valuable products of Ketchup/Sauce/Wafers from Tomato/Potato | 15 |
| Q3) Prepare dehydrated product/canned product from given Specimen..... | 20 |

DR. BABASHEB AMBEDKAR MARATHWADA UNIVERSITY FACULTY OF SCIENCE

B.Sc. IIIrd year / V & VI Semester Practical Examination/ New CBCS pattern

Subject: Horticulture

Course Code: HORTI-522 & HORT-622

Paper No: XVIII & XXII

Mushroom Culture and Apiculture & Horticulture Business Management

Batch No:

Date

Time 3 hrs

Center

Mark 80

Note: Draw neat and well labeled diagrams wherever necessary

-
- | | |
|---|----|
| Q1) A) Preparation of project report for..... | 20 |
| B) Write in detail case study report/Field visit report of----- | 10 |
| Q2) A) Draw the Ideal Morphological Part of Mushroom/ Apiculture Unit | 15 |
| B) Preparation of Culture media -----for mushroom spawns | 15 |
| or Properties and purity test of given honey sample----- | |
| Q3) prepare the recipe of ----- | 20 |

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY



CIRCULAR NO.SU/B.Sc.Pattern of Question Paper /29/2022

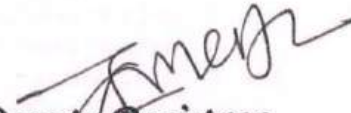
It is hereby inform to all concerned that, Recommendation of the Dean, Faculty of Science & Technology, the Hon'ble Vice-Chancellor has accepted **the Pattern of Question Paper(Theory) of All curriculum of B.Sc. First Year, B.Sc. Mathematics and Practical Question Paper for the Curriculum of B.Sc. Zoology, Chemistry under the scheme of Choice Based Credit & Grading System** in his emergency powers under section 12(7) of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith.

This is effective from the Academic Year 2022-23 and onwards.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF.No.SU/2022/ 12810-19
Date:- 18.10.2022.

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**Deputy Registrar,
Academic Section**

Copy forwarded with compliments to :-

- 1] **The Principal of all concerned Colleges,**
Dr. Babasaheb Ambedkar Marathwada University,
- 2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular on University Website.**

Copy to :-

- 1] **The Director, Board of Examinations & Evaluation,**
Dr.BAMU,A'bad.
- 2] The Section Officer, [B.Sc.Unit] Examination Branch,Dr.BAMU,A'bad.
- 3] The Programmer [Computer Unit-1] Examinations, Dr.BAMU,A'bad.
- 4] The Programmer [Computer Unit-2] Examinations, Dr.BAMU,A'bad.
- 5] The In-charge,[E-Suvidha Kendra], Rajarshi Shahu Maharaj Pariksha Bhavan, Dr.BAMU,A'bad.
- 6] The Public Relation Officer, Dr.BAMU,A'bad.
- 7] The Record Keeper, Dr.BAMU,A'bad.

Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

Nature of Question paper for CBCS semester pattern -2022

F.Y. B.Sc. for all subjects

Time -2 hours

Max. Marks -40

Instruction

1. All question are compulsory
2. All question carry equal marks
3. Draw neat diagrams and give labels wherever necessary
4. Fingers to the right indicate full marks
5. -----

Q.1. Long answer questions ----- (Based on unit-1) -----10 marks

Or

Explain in brief

- a. Short Answer questions (unit-2)
- b. Short Answer question (unit- 2)

Q.2. Long answer questions ----- (Based on unit-3) -----10 marks

Or

Explain in brief

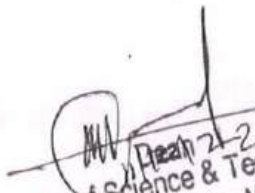
- a. Short Answer questions (unit-4)
- b. Short Answer question (unit -4)

Q.3. Write short notes on (any -2) -----10 marks

1. Short note based on (unit-1)
2. Short note based on (unit-2)
3. Short note based on (unit-3)
4. Short note based on (unit-4/5)

Q.4. Multiple choice questions (1-10) -----10 Marks

Note- 1. Ten MCQs having four alternatives based on theory (maximum 2/3 MCQ, 5 from each chapter),
2. Give equal weightage to each chapter


Faculty of Science & Technology
Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad

Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

Faculty of Science and Technology

Pattern of Practical Question Paper Examination

B.Sc. F.Y. Chemistry (Practical)

Sem -I (CHE-121) & Sem -II (CHE-221)

Time: 4:00 Hrs

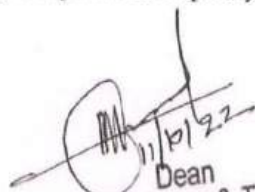
Maximum Marks: 80

Q1. Inorganic chemistry Section (20 Marks)

- a) Semi micro qualitative analysis of inorganic salt mixture containing two acidic radicals and two basic radicals of same or different groups.
OR
- b). Estimation of sodium carbonate and sodium hydrogen carbonate present in a mixture.
OR
- c. Estimation of oxalic acid by titrating it with KMnO_4 .
OR
- d. Estimation of water of crystallization in Mohr's salt by titrating with KMnO_4 .
OR
- e. Estimation of Fe (II) ions by titrating it with $\text{K}_2\text{Cr}_2\text{O}_7$ using internal indicator.
OR
- f. Estimation of Cu (II) ions iodometrically using $\text{Na}_2\text{S}_2\text{O}_3$.

Q2. Organic Chemistry Section (20 Marks)

- a). Organic Qualitative Analysis: Detection of physical constant, type, functional group, elements, and Confirmatory test of Acid/Phenol/Base/Neutral.(Any one compound)
OR
- b. Preparation of acetanilide (Acetylation).
OR
- c. Preparation of Benzanilide (Benzoylation).
OR
- d. Preparation of m-di-Nitrobenzene (Nitration).
OR
- e. Preparation of tri-Bromoaniline from Aniline (Bromination).
OR
- f. Preparation of Benzoic acid from Benzamide (Hydrolysis).
OR
- g. Preparation of phenylazo- β -naphthol dye (Diazotisation)


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Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad

Q3.

Physical Chemistry Section

(15 Marks)

a. Determination of heat capacity of calorimeter for different volumes.

OR

b. Determination of enthalpy of neutralization of hydrochloric acid with sodium hydroxide.

OR

c. Determination of enthalpy of ionization of acetic acid.

OR

d. Determination of integral enthalpy of solution of salts (KNO_3 , NH_4Cl).

OR

e. Determination of enthalpy of hydration of copper sulphate.

OR

f. Study of the solubility of benzoic acid in water and determination of ΔH .

OR

g. Determination of Equivalent weight of mg by Eudiometer

Q4. Physical Chemistry and Applied Chemistry Section

(15 Marks)

a. To Determine Viscosity of given liquid (Water / Ethanol) by viscometer.

OR

b. To determine surface tension of given liquid by Staganometer.

OR

c. Chemical Kinetics: To study the effect of acid strength on the hydrolysis of an ester.

OR

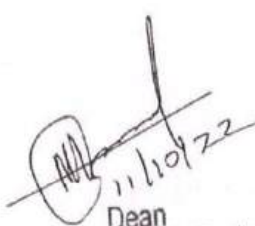
d. Identify and separate the components of a given mixture of two amino acids by paper chromatography.

OR

e. Identify and separate the cations by Paper Chromatographic technique from the given mixtures.

Q.5 Record book and viva-voce

(10 Marks)


11/10/22
Dean
Faculty of Science & Technology
Dr. Babasaheb Ambedkar Marathwada
University, Aurangabad

DR. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY

B.Sc. (First Year) (CBCS PATTERN) 2022-2023

FACULTY OF SCIENCE & TECHNOLOGY

B.Sc. (First Year) EXAMINATION

MATHEMATICS

Model Question Paper

Time: 1:30 hours

Max.Marks:40

Please check whether you have got the right question paper

- N.B. 1) Attempt all questions
2) Figures to the right indicate full marks
- Q.1. A) Attempt any one: (05)
a) Theory
b) Theory
B) Attempt any one: (05)
c) Problem
d) Problem
- Q.2. A) Attempt any one: (05)
a) Theory
b) Theory
B) Attempt any one: (05)
c) Problem
d) Problem
- Q.3. A) Attempt any one: (05)
a) Theory
b) Theory
B) Attempt any one: (05)
c) Problem
d) Problem
- Q.4. Choose the correct alternative (Attempt All) (M.C.Q from each Unit) (10)
i)
ii)
iii)
iv)
v)