


**MAHASATEE ARTS COMMERCE & SCIENCE COLLEGE ULGA, KARWAR, (U.K.)**

**NOTICE**

It is to the notice of all the students of our college that, the 1<sup>st</sup> Unit Test for B.A./B.Com./B.Sc.I, III & V<sup>th</sup> semester is scheduled on 8<sup>th</sup> and 9<sup>th</sup> DECEMBER 2022. The Time-Table for 1<sup>st</sup> Unit Test is put on the notice board. All the students should take note of this.

Ulga

28-11-2022

  
Exam. In-charge  
Smt. Roopa R. Kudtarkar-

  
**PRINCIPAL**  
**MAHASATEE ARTS, COM & SCI, COLLEGE**  
**ULGA, KARWAR - JY 328**

MAHASATEEE ART. COMMERCE & SCIENCE COLLEGE ULGA, KARWAR(U.K.)

1st UNIT TEST TIME TABLE FOR THE YEAR 2022-23

CLASS		8 <sup>th</sup> December 2022				9 <sup>th</sup> December 2022			
		9.15 TO10.00	10.15TO 11.00	11.15 TO12.00	12.15 TO1.00	9.15 TO10.00	10.15TO 11.00	11.15 TO12.00	12.15 TO1.00
B.A.	ISEM NEP	Basic ENGLISH	Pol-Science NEP P-I	Sociology NEP P-I	ECONOMICS NEP P-I	Pol-Science NEP P-II	Sociology NEP P-II	ECONOMICS NEP P-II	AECC Kan/Hindi
	III SEM NEP	AECC Kan/Hindi	Pol-Science NEP P-I	Sociology NEP P-I	ECONOMICS NEP P-I	Pol-Science NEP P-II	ECONOMICS NEP P-II	ENGLISH	Artificial Intel.
	V SEM CBCS	Pol- Science-I	Sociology-I	Economics-I	Pol-science SEC	Sociology-SEC	---	---	--
B.Com	ISEM NEP	Financial Accounting	Prin.of Marketing	Stock Market Oper.	Contemp. Economics	English	AECC Kan/Hindi	Digital Fluency	--
	III SEM NEP	Company Account	International Business	Enter.Skill	Comp.Law &Sect.Pract.	AECC Kan/Hindi	ENGLISH	Artificial Intel.	--
	V SEM CBCS	Cost Accounting	Income Tax	Auditing	Comput.Appl. In Business	Ind.Economics Environment	Prin.of Mgt.Accounting	Financial Services	--
B.Sc	ISEM NEP	Zoology	Basic English	Botany	AECC Kan/Hindi	Chemistry	Digital Fluency	---	--
	III SEM NEP	Zoology	Basic English	Botany	AECC Kan/Hindi	Chemistry	Artificial Intel.	---	--
	V SEM CBCS	Botany-I	Zoology-I	Chemistry-I	--	--	---	---	--

Examination In- charge:

Smt.Roopa R.Kudtarkar  
28-11-2022

*Roopa*  
PRINCIPAL  
MAHASATEE ARTS, COM & SCI, COLLEGE  
ULGA, KARWAR - 38°328

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.  
1st UNIT TEST-2022-23

CLASS: B.com-III Sem (NEP)  
Marks: 10

SUB: Company Accounts-I  
TIME: 45 Minutes  
(1X5=5)

I. Answer the following.

1. P Ltd issued 50,000 equity shares of Rs 10 each to the public at par. Details of amount payable as follows. On application Rs 2. On allotment Rs 5, on 1st & final call Rs 3, Application money received on 55,000 shares. Excess application money were refunded immediately. All other amounts were duly received. Pass the journal entries.

(1X5=5)

2. Vijaya Co. Ltd declared a bonus of Rs 1,00,000. Out of its general reserve. This bonus is to be utilised as follows.

(a) To issue 4000 equity shares of Rs 10 each on fully paid bonus shares.

(b) To utilise the final call of Rs 2 per share on 20,000 equity shares of 10 each which are partly paid-up.

(c) To pay Rs 20,000 in cash. Pass the journal entries.

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.  
1st UNIT TEST-2022-23

CLASS: B.com-Ist Sem (NEP)  
Marks: 10

SUB: Principles of Marketing  
TIME: 45 Minutes

I. Answer the following.

(5X2=10)

1. What is Market.

2. What is holistic marketing ?

3. Write two differences between market and marketing.

4. What are the functions of marketing.

5. Mention recent modern marketing.

*Roopa*



SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.  
1st UNIT TEST-2022-23

CLASS: B.com-V Sem  
Marks: 10

SUB: Incom Tax  
TIME: 45 Minutes

(1X5=5)

I Answer The Following

1. Shri Vasu is a Citizen of India. He left for France for the first time on 1-6-2017 & come back to India on 15-12-2017. He again left for Japan on 1-10-2018 & returned to india on 15-1-2019. Determine his residential statuts for the previous year 2018-19

(1X5=5)

2. Mr. Franklin, working in " Leena Co. Ltd" retired from service on 31-12-2016 & got gratuity of Rs 8.00.000. At the time of retirement he was getting basic salary of Rs 20.000 p.m and dearness allowance of Rs 10.000 p.m (75% enters in to retirement benefit). He was served for 29 yrs and 8 months. The payment of gratuity covered under "payment of gratuity act, 1972".

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.  
1st UNIT TEST-2022-23

CLASS: B.com-V Sem (CBCS)  
Marks: 10

SUB: Auditing and Assurance  
TIME: 45 Minutes

(5X2=10)

- I. Answer the following.
  1. What is Auditing.
  2. Explain briefly objectives of auditing.
  3. What is audit report.
  4. Write type of audit report.
  5. Mention some qualities of auditor.

*RUK*  
*Roopa*

**SES'S MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE, ULGA, KARWAR**  
**1<sup>st</sup> Unit Test**

**Sub: Principles of Management Accounting**

**Class: B.Com 5<sup>th</sup> Sem**

(1\*5=5)

I. Answer any Five questions:

- 1) What is Management Accounting
- 2) Mention any two features of MA
- 3) Mention the techniques of MA
- 4) State any 2 objectives of MA
- 5) What is Fund flow statement
- 6) What is cash flow statement.

(5\*1=5)

II. Answer any one question:

1) Calculate fund from operation.

Sl.No	Particulars	Amount(Rs)
1.	P&L AIC balance on 1-4-2018	27,000
2.	P&L AIC balance on 31-3-2019	1,30,000
3.	Depreciation charged	30,000
4.	Refund of Tax	15,000
5.	Goodwill written off	20,000
6.	Dividend received	5,000
7.	Transfer to General Reserve	12,000
8.	Loss on sale of Machinery	4,000
9.	Profit on sale of Building	9,000

2) From the following information calculate cash from operation

Sl.No	Particulars	1-1-18 (Rs)	31-12-18 (Rs)
1.	Profit & Loss A/C	2,20,000	4,00,000
2.	Debtors	80,000	1,00,000
3.	B/R	20,000	16,000
4.	Creditors	60,000	80,000
5.	O/S Salary	12,000	8,000
6.	Goodwill	1,00,000	90,000
7.	Depreciation	1,40,000	1,60,000
8.	Prepaid Expenses	20,000	30,000

**Mahasatee Arts Commerce and Science College Ulga**

Unit Test-I Question paper 2022-23

Class:-B.Sc-Ist Sem

Sub:-Botany(OEC)

Answer the following questions

1) Describe the importance of Mushroom culture technique

Or

Describe the method of cultivation of Mushroom on paddy straw  
beds 10mks

**Mahasatee Arts Commerce and Science College Ulga**

Unit Test-I Question paper 2022-23

Class:-B.Sc-IIIrd Sem

Sub:-Botany(DSC)

Answer the following questions

1) Describe the t.s of monocot stem

Or

Write on

a) Parenchyma

b) Phloem

10 Mks

**Mahasatee Arts Commerce and Science College Ulga**

Unit Test-I Question paper 2022-23

Class:-B.Sc-Vth Sem(CBCS)

Sub:-Botany(DSC)

Answer the following questions

1) Describe the Watson Crick model of DNA

Or

Describe the mitotic cycle of cell division. 10Mks



MAHASATEE ARTS, COMMARCE AND SCIENCE COLLEGE ULGA

1<sup>st</sup> INTERNAL TEST 2021-2022

CLASS: V<sup>th</sup> SEM

SUB: ZOOLOGY


I. ANSWER ANY TWO OF THE FOLLOWING 2\*5=10

1. Explain in detail parental care behavior of amphibian

2. Explain the social organisation in termites

3. Explain with example

1. Batesian mimicry
2. Mullerian mimicry
3. Protective mimicry

  
Preeti K. Desai  
HOD of Zoology



MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA, KARWAR.

Unit –Test I

Class: B.A1 Sem.NEP

Subject: Political Science.-1

Date :08-12-2022

Marks: 20.

ರಾಜಕೀಯ ಶಾಸ್ತ್ರದ ಮೂಲಪರಿಕಲ್ಪನೆ

ಭಾಗ-1

ಬೇಕಾದ ಮೂರಕ್ಕೆ ಉತ್ತರಿಸಿರಿ

2 ಅಂಕಗಳು ★3=06

1. ರಾಜ್ಯ ಎಂದರೇನು?

2. ರಾಜ್ಯದ ಎರಡು ಮೂಲಾಂಶಗಳನ್ನು ಹೆಸರಿಸಿ?

3. ಸಾರ್ವಭೌಮಾಧಿಕಾರದ ಎರಡು ವಿಧಗಳನ್ನು ಹೆಸರಿಸಿ.

4. ಸ್ವಾತಂತ್ರದ ಅರ್ಥವನ್ನು ಬರೆಯಿರಿ.

ಭಾಗ-2

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

05 ಅಂಕಗಳು ★1=05

1.ರಾಜ್ಯ ಮತ್ತು ಸರ್ಕಾರದ ನಡುವಿನ ವ್ಯತ್ಯಾಸವನ್ನು ವಿವರಿಸಿರಿ.

2.ಸಕಾರಾತ್ಮಕ ಮತ್ತು ನಕಾರಾತ್ಮಕ ಸ್ವಾತಂತ್ರವನ್ನು ವಿವರಿಸಿರಿ

ಭಾಗ-3

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

10 ಅಂಕಗಳು ★1=10

1. ಸ್ವಾತಂತ್ರದ ಅರ್ಥ ಹಾಗೂ ವಿಧಗಳನ್ನು ವಿವರಿಸಿರಿ.

2.ರಾಜ್ಯದ ಮೂಲಾಂಶಗಳನ್ನು ವಿವರಿಸಿರಿ.

MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA, KARWAR.

Unit –Test I

Class: B.A1 Sem.NEP

Subject: Political Science.-1

Date :08-12-2022

Marks: 20.

BASIC CONCEPT OF POLITICAL SCIENCE

ಭಾಗ-1

Answer any THREE of the following

1. Define Political Science

2. Mention the elements of the state

3. Write the meaning of LIBERTY.

4. Name the two kinds of LIBERTY?

Section- II

Answer any one of the following; 10x1=10

1. Explain the nature of Political Science.

2. Explain the Economic Liberty.

Section-III

1. Explain the importance of Political Science

2. Explain the safeguards measures to protect Liberty.



MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA, KARWAR.

Unit –Test I

Class: B.A.V Sem.

Subject: Political Science.

Date :08-12-2022

Marks: 20.

ಭಾರತದ ಆಡಳಿತ ವ್ಯವಸ್ಥೆ

ಭಾಗ-1

ಬೇಕಾದ ಮೂರಕ್ಕೆ ಉತ್ತರಿಸಿರಿ

2 ಅಂಕಗಳು★3=06

1. ಸಾರ್ವಜನಿಕ ಆಡಳಿತ ಎಂದರೇನು?
2. ವ್ಯವಸ್ಥಾಪನೆಯ ಅರ್ಥ ಬರೆಯಿರಿ.
3. ಹೊಸ ಸಾರ್ವಜನಿಕ ವ್ಯವಸ್ಥೆ ಎಂದರೇನು?
4. ಅಭಿವೃದ್ಧಿ ಆಡಳಿತ ಎಂದರೇನು?

ಭಾಗ-2

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

05 ಅಂಕಗಳು★1=05

- 1.ಸಾರ್ವಜನಿಕ ಅಧ್ಯಯನದ ವಿಧಾನಗಳನ್ನು ವಿವರಿಸಿರಿ.
- 2.ಹೊಸ ಸಾರ್ವಜನಿಕ ವ್ಯವಸ್ಥಾಪನೆಯ ಅಂಶಗಳನ್ನು ಬರೆಯಿರಿ.

ಭಾಗ-3

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

10 ಅಂಕಗಳು★1=10

- 1.ಸಾರ್ವಜನಿಕ ಆಡಳಿತದ ಅರ್ಥ,ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿರಿ.
- 2.ಸಾರ್ವಜನಿಕ ಆಡಳಿತದ ಅರ್ಥ,ಸ್ವರೂಪ ವ್ಯಾಪ್ತಿ ಹಾಗೂ ಅಧ್ಯಯನದ ಮಹತ್ವವನ್ನು ವಿವರಿಸಿರಿ.

MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA, KARWAR.

Unit –Test I

Class: B.A.V Sem.

Subject: Political Science.sec

Date :08-12-2022

Marks: 20.

SEC:DEVELOPMENT OF ADMINISTRATIVE SKILLS

ಭಾಗ-1

ಬೇಕಾದ ಮೂರಕ್ಕೆ ಉತ್ತರಿಸಿರಿ

2 ಅಂಕಗಳು★3=06

1. ಆಡಳಿತ ಎಂದರೇನು ?
- 2.ಸಂವಹನದಲ್ಲಿ ಬರುವ ಎರಡು ಅಡೆತಡೆಗಳನ್ನು ಬರೆಯಿರಿ
3. ನಿರ್ಧಾರ ತೆಗೆದುಕೊಳ್ಳುವಿಕೆ ಎಂದರೇನು?
- 4.ನಾಯಕತ್ವ ಎಂದರೇನು?

ಭಾಗ-2

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

05 ಅಂಕಗಳು★1=05

- 1.ಸಂವಹನದ ಪ್ರಕಾರಗಳನ್ನು ವಿವರಿಸಿರಿ
- 2.ನಾಯಕತ್ವದ ಗುಣಗಳನ್ನು ವಿವರಿಸಿರಿ.

ಭಾಗ-3

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ

10 ಅಂಕಗಳು★1=10

- 1.ಆಡಳಿತದ ಪ್ರಮುಖ ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿರಿ
- 2.ಆಡಳಿತಾತ್ಮಕ ಕೌಶಲ್ಯಗಳ ವಿಧಗಳನ್ನು ವಿವರಿಸಿರಿ.

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.

Ist UNIT TEST-2022-23

DEPARTMENT OF ENGLISH

CLASS: B.A.I SEM-NEP

SUB: ENGLISH

Marks: 10

TIME: 45 Minutes

1. Discuss the Three purpose of studies as highlighted by the author.

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.

Ist UNIT TEST-2022-23

DEPARTMENT OF ENGLISH

CLASS: B.A.III SEM-NEP

SUB: ENGLISH

Marks: 10

TIME: 45 Minutes

1. Write an essay to validate this claim barring your illustration on Henric Ibsen's "A Doll's House"

SHREE SHIVAJI EDUCATION SOCIETY,S  
MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.

Ist UNIT TEST-2022-23

DEPARTMENT OF ENGLISH

CLASS: B.Sc.I SEM-NEP

SUB: ENGLISH

Marks: 10

TIME: 45 Minutes

1. How does Ramanujam compare and contrast the attitudes of the old poets and their of the new poets to human sufferings in his poem "River"

*Paulson*  
Raghavendra Naik

1<sup>st</sup> Unit Test

Date:-08-11-2022

Sub:-BA-1 sem sociology (N.E.P)

Marks :-10

I ಒಂದು ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿ :-

Answer the following in a sentence

1. ಸಮೂಹ ಮಾಧ್ಯಮ ಎಂದರೇನು?

What is mass media?

2. ಮುದ್ರಣ ಮಾಧ್ಯಮ ಎಂದರೇನು?

What is print media?

3. ಡಿಜಿಟಲ ಕ್ರಾಂತಿ ಪ್ರಾರಂಭವಾಗಿದ್ದು ಯಾವಾಗ?

In which year the digital revolution was established?

II ಕೆಳಗಿನ ಯಾವುದಾದರೂ ಒಂದು ಪ್ರಶ್ನೆಗಳಿಗೆ 2-3 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ:-

4. ಡಿಜಿಟಲ ಕ್ರಾಂತಿಯ ಪರಿಣಾಮಗಳು?

Explain the effects of digital revolution?

5. ಸಮೂಹ ಮಾಧ್ಯಮದ ಪ್ರಕಾರಗಳು?

What are the types of mass media?

6. ಮುದ್ರಣ ಮಾಧ್ಯಮದ ಅಪಗುಣಗಳನ್ನು ಬರೆಯಿರಿ?

demerits of print media?

III ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ 15-20 ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ:-

Answer the following in 15-20 sentence:-

7. ಸಮೂಹ ಮಾಧ್ಯಮದ ಸ್ವರೂಪ ಮತ್ತು ಲಕ್ಷಣಗಳನ್ನು ಬರೆಯಿರಿ?

Explain the nature and characteristics of mass media?

*Ans*  
*Rayle v. Adew*



S.E.SOCIETY'S

MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE,  
Ulga, Karwar (U.K.)



(Affiliated to Karnataka University, Dharwad)

2022-2023

Accredited at 'B' level

INTERNAL ASSESSMENT EXAMINATION BOOKLET

1. Name of the student OMKAR R PAHI
2. Roll No. 06
3. Subject Income Tax
4. B.A / B.Com / B.Sc \_\_\_\_\_ Semester

TEST NO.	SIGNATURE OF SUPERVISOR	MAXIMUM MARKS	MARKS OBTAINED	SIGNATURE OF VALUATOR
I		10	10	
II		10	10	
TOTAL I+II		20	20	

Total Marks obtained = 20 In words Twenty only

Signature of H.O.D.

calculation of residential status of shri vasu

(1)	1/4/17-30	1/1/18	1/10/18 left
	1/5/17-2	1/2/18	1/11/18
	1/6/17	1/3/18	1/12/18
	1/7/17	1/4/18	1/13/18
	1/8/17	1/5/18	1/14/18
	1/9/17	1/6/18	1/15/18
	1/10/17	1/7/18	1/16/18
	1/11/17	1/8/18	1/17/18
	1/12/17	1/9/18	1/18/18

213 days in India

came

⇒ He is a resident he stayed in India only for 422 days but is non-resident he left India for 367 days.

2) calculation of gratuity of Mr Franklin.

(2) Particular	Amt	Amt
gratuity received		8,00,000
less least of following exempt u/s 10(10)		
(1) Actual gratuity received	8,00,000	
(2) maximum gratuity. $\frac{15}{26} \times 3,60,000 \times 30$	20,00,000	
3) $\frac{1}{26} (20,000 \times 10000) \times 30$ years	<del>4,50,000</del>	<del>4,50,000</del>
	6,230,769	8,00,000
Total gratuity received		3,50,000
		2,80,770
		NIL

Note -

salary + Dearness allowance.

$$= 20000 + 10000 \quad 20,000 \times 12 = 2,40,000$$

$$= 30,000 \quad 10,000 \times 12 = 1,20,000$$

$$\underline{\hspace{10em}} 3,60,000$$





1) Calculation of House Rent Allowance of Mr David

Particular	₹	₹
Actual HRA received (1800 x 12)		21,600
less - Exception u/s 10(13A)		
HRA Received - 21,600	21,600	
① Rent paid over 10% of salary.		
② Sal = BS + Commission.		
$250,000 + \frac{800,000 \times 10}{100}$		
$25,00,00 + 80,000$		
$33,00,00 \times \frac{10}{100}$		
$(3000 \times 12) - 33,000$		
$36,000 - 33,000 = 3,000$	3,000	
③ 40% of Sal $3,30,000 \times \frac{40}{100}$	1,32,000	
WIS		3,000
Taxable HRA.		18,600

2) Calculation of Net annual value of Mr Naresh

Particular	₹
Municipal value	2,60,000
Fair rental value	3,00,000
Whichever is higher	3,00,000
Standard rent	2,80,000
Whichever is low	2,80,000
Actual rent (22,000 x 12)	2,64,000
Unrealised rent -	-14,000
Whichever is higher	2,50,000
less Vacancy period	2,80,000
Gross Annual value	44,000
less municipal tax paid at 10%	2,36,000
	$\frac{26,000}{100}$
Net annual value	2,10,000



**NOTICE**

It is to the notice of all the students of our college that, the IInd Unit Test for B.A./B.Com./B.Sc.I, III & V<sup>th</sup> semester is scheduled on 9<sup>th</sup> and 10<sup>th</sup> january 2023. The Time-Table for IInd Unit Test is put up on the notice board. All the students should take note of this.


Ulga

03-01-2023

Exam. In-charge

Smt.Roopa R. Kudtarkar-

RRK

  
**PRINCIPAL**  
MAHASATEE ARTS,  
COM. & SCI. COLLEGE  
ULGA, KARWAR - 581 329-

MAHASATEEE ARTS, COMMERCE & SCIENCE COLLEGE ULGA, KARWAR (U.K.)

II<sup>nd</sup> UNIT TEST TIME TABLE FOR THE YEAR 2022-23

CLASS		9 <sup>th</sup> January 2023				10 <sup>th</sup> January 2023			
		9.15 TO 10.00	10.15 TO 11.00	11.15 TO 12.00	12.15 TO 1.00	9.15 TO 10.00	10.15 TO 11.00	11.15 TO 12.00	12.15 TO 1.00
B.A.	ISEM NEP	Basic ENGLISH	Pol-Science NEP P-I	Sociology NEP P-I	ECONOMICS NEP P-I	Pol-Science NEP P-II	Sociology NEP P-II	ECONOMICS NEP P-II	AECC Kan/Hindi
	III SEM NEP	AECC Kan/Hindi	Pol-Science NEP P-I	Sociology NEP P-I	ECONOMICS NEP P-I	Pol-Science NEP P-II	ECONOMICS NEP P-II	ENGLISH	Artificial Intel.
	V SEM CBCS	Pol-Science-I	Sociology-I	Economics-I	Pol-science SEC	Sociology-SEC	---	---	--
B.Com	ISEM NEP	Financial Accounting	Prin.of Marketing	Stock Market Oper.	Contemp. Economics	English	AECC Kan/Hindi	Digital Fluency	--
	III SEM NEP	Company Account	International Business	Enter.Skill	Comp.Law & Sect.Pract.	AECC Kan/Hindi	ENGLISH	Artificial Intel.	--
	V SEM CBCS	Cost Accounting	Income Tax	Auditing	Comput.Appl. In Business	Ind.Economics Environment	Prin.of Mgt.Accounting	Financial Services	--
B.Sc	ISEM NEP	Zoology	Basic English	Botany	AECC Kan/Hindi	Chemistry	Digital Fluency	---	--
	III SEM NEP	Zoology	Basic English	Botany	AECC Kan/Hindi	Chemistry	Artificial Intel.	---	--
	V SEM CBCS	Botany-I	Zoology-I	Chemistry-I	--	--	---	---	--

Examination In-charge:

Smt. Roopa R. Kudtarkar  
03-01-2023



  
PRINCIPAL  
MAHASATEE ARTS,  
COM. & SCI. COLLEGE  
ULGA, KARWAR - 581 321



SES MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE, ULGA, KARWAR (U.K.)

II<sup>nd</sup> UNIT TEST TIME TABLE FOR THE YEAR 2022-23

CLASS		21 JUL 2023				22 JUL 2023				
TIME		9.15 TO 10.00	10.15 to 11.00	11.15 to 12.00	12.15 to 1.00	9.15 TO 10.00	10.15 to 11.00	11.15 to 12.00	12.15 to 1.00	1.15 to 2.00
B.A.	II <sup>nd</sup> sem NEP	English (AECC)	Pol.Sci P-1	Sociology (OEC)	Economics P-1	Pol.Sci P-2	EVS	AECC Hindi	Economics P-2	AECC KANNADA
	IV <sup>th</sup> sem NEP	AECC Kannada	Pol.Sci P-1	Sociology (OEC)	Economic P-1	Pol.Sci P-2	IC	Economic P-2	AECC English	F.E and I.Awarness
	VI <sup>th</sup> sem CBCS	Pol-Science	Sociology SEC	Economics	Basic KAN/Hindi					
B.COM	II <sup>nd</sup> Sem NEP	Fin.Acc-1 DSC-1	Enterpreuner ship	H.R.M	Bas.Eco	English	EVS	AECC Hindi/Kan		
	IV <sup>th</sup> sem NEP	English (AECC)	AECC Hindi	Comp.Acco unt	F.M	B.R.F	IC	AECC KANNADA	Ind.Eco	F.E and I.Awarness
	VI <sup>th</sup> sem CBCS	Cost.acc	I.T law and practice	GST	Princ of Foreign exchange	Service marketing	Ind. & finance	E.Commerc e		
B.Sc	II <sup>nd</sup> sem NEP	Zoolōgy	Botany	Chemistry	AECC HINDI	AECC English	EVS	AECC KANNADA		
	IV <sup>th</sup> sem NEP	Zoology (OEC)	Botany	Chemistry	AECC Hindi	AECC English	IC	AECC Kannada	AECC KANNADA	
	VI <sup>th</sup> sem CBCS	Botany	Chemistry	Zoology						

Exam In-Charge: 1. Smt.Roopa Kudtarkar

2. Smt.Divya M.Gunagi

PRINCIPAL  
 PRINCIPAL  
 MAHASATEE ARTS, COM & SCI, COLLEGE  
 ULGA, KARWAR - 583228



Shree Shivaji Education Society's  
MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA, KARWAR.

Unit –Test II

Class: B.A.I Sem. NEP

Subject: Political Science.P-I

Date :09-01-2023

Marks: 20.

TIME: 45 Minutes

Basic Concepts in Political Science

ರಾಜ್ಯಶಾಸ್ತ್ರದ ಮೂಲಭೂತ ಪರಿಕಲ್ಪನೆಗಳು

ಭಾಗ-1 Write any THREE of the following

ಬೇಕಾದ ಮೂರಕ್ಕೆ ಉತ್ತರಿಸಿರಿ 2 ಅಂಕಗಳು★3=06

1.Explain the meaning of Civil Society

ನಾಗರಿಕ ಸಮಾಜದ ಅರ್ಥ ವಿವರಿಸಿರಿ

2.Write the meaning of Sovereignty

ಸಾರ್ವಭೌಮಾಧಿಕಾರದ ಅರ್ಥ ಬರೆಯಿರಿ

3.Write TWO types of Sovereignty

ಸಾರ್ವಭೌಮಾಧಿಕಾರದ ಎರಡು ಬಗೆಗಳನ್ನು ಬರೆಯಿರಿ

4.What is Justice?

ನ್ಯಾಯ ಎಂದರೇನು?

5.Write the meaning of EQUALITY.

ಸಮಾನತೆಯ ಅರ್ಥ ಬರೆಯಿರಿ.

ಭಾಗ-2 / PART-II Write any one of the following

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ 05 ಅಂಕಗಳು★1=05

1.Explain the features of Civil Society

ನಾಗರಿಕ ಸಮಾಜದ ಲಕ್ಷಣಗಳನ್ನು ವಿವರಿಸಿರಿ

2.Explain the characteristics of Sovereignty.

ಸಾರ್ವಭೌಮಾಧಿಕಾರದ ಗುಣಲಕ್ಷಣಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿರಿ.

ಭಾಗ- 3 / PART\_III Write any one of the following

ಬೇಕಾದ ಒಂದು ಪ್ರಶ್ನೆಗೆ ಉತ್ತರಿಸಿರಿ 10 ಅಂಕಗಳು★1=10

1.Explain the meaning,importance and types of freedoms.

ಸ್ವಾತಂತ್ರದ ಅರ್ಥ,ಮಹತ್ವ ಹಾಗೂ ಬಗೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿರಿ

2. Explain the nature importance and types of EQUALITY

ಸಮಾನತೆಯ ಸ್ವರೂಪ, ಮಹತ್ವ ಹಾಗೂ ಬಗೆಗಳನ್ನು ಕುರಿತು ವಿವರಿಸಿರಿ.

==00==

MAHASATI ART'S COMMERCE AND SCIENCE COLLEGE ULGA KARWAR

IInd Internal test

B.com 1<sup>st</sup> year

Financial Accounting I

1. Answer the following question. 1×10=10

1. X Co., Ltd., took a mine on lease at a Royalty of 50 paise per tonne of coal raised with a minimum Rent of Rs. 40,000 p.a. Each year's excess of minimum rent over Royalties is recoverable out of the Royalties of the next 2 years. In the event of strike the lease provide for the proportionate reduction in the minimum rent. The output for the first 5 years is as given below:

Year Ending.	Output in tonnes
31-12-2016	40,000
31-12-2017.	64,000
31-12-2018.	1,00,000
31-12-2019.	1,20,000
31-12-2020 (Strike for 3 months).	48,000

You are required to prepare Minimum Rent Account Royalty Account, Short workings Account in the books of X Co., Ltd.

*Strike*

**SHREE SHIVAJI EDUCATION SOCIETY,S**  
**MAHASATEE ARTS,COMMERCE AND SCIENCE COLLEGE, ULGA,KARWAR-581328.**  
**II<sup>nd</sup> UNIT TEST-2023**

**Sub- Company Accounts - I**

**Marks- 10**

B.com- III sem

1. Shruthi Co . Ltd issued 50.000 equity shares of Rs10 each to the public. ( 5 X 1 = 5)

The whole issue was underwritten by PQRS are: P- 20.000,q-15,000,r- 10000,S-5000

The applications received for 45000 shares of which marked applications were as follows:

P- 22.000, Q-9000, R- 11000, S-1000. Find individual liability of underwriters.

2. The Vivek Co. Ltd issued 20.000 debentures of Rs100 each ( 5 X 1 = 5)

At a premium of Rs 10 per debenture.The amount was payable as follows: Rs 20 on application

Rs 50 on allotment (including premium)

Rs 30 on first call and Rs 10 on final call.

All the debentures Subscribed and the money was duly received. Pass the journal entries.

*APK*



**SHREE SHIVAJI EDUCATION SOCIETY,S**

MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA KARWAR- 581328.

2nd Unit Test – 2022-23

DEPARTMENT OF ENGLISH

Class : B.A 1<sup>st</sup>sem NEP. Sub : English

Marks : 10. Time: 45 Minutes

1. Write a note on the various ages in man's life.

**SHREE SHIVAJI EDUCATION SOCIETY,S**

MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA KARWAR- 581328.

2<sup>nd</sup>Unit Test – 2022-23

DEPARTMENT OF ENGLISH

Class : B.A 3rdsem NEP. Sub : English

Marks : 10. Time: 45 Minutes

1. Sketch the character of Nora
2. What is body language? Why is body language important? Write types of body language.

**SHREE SHIVAJI EDUCATION SOCIETY,S**

MAHASATEE ARTS, COMMERCE AND SCIENCE COLLEGE, ULGA KARWAR- 581328.

2<sup>nd</sup>Unit Test – 2022-23

DEPARTMENT OF ENGLISH

Class : B.Com.1stsem NEP. Sub : English

Marks : 10. Time: 45 Minutes

1. Why does Mini's father have to limit some of the wedding expenses?
2. Why do you think that Kabuliwalais fond of Mini?
3. What is the impression you get of Minis mother?
4. What do people think of the kabuliwala?
5. Why is the kabuliwalaso surprised to see Mini at the end of the story?

*Pradeep*  
5/10/2023  
Department of English.

**SES'S MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE, ULGA, KARWAR**

**2<sup>nd</sup> Unit Test**

**Sub: Stock Market Operations**

**Class: B. Com I<sup>st</sup> Sem**

**I. Answer any Five questions:**

**(1\*5=5)**

- 1) Write the meaning of Stock Market Indices.
- 2) State two types of settlement in the stock market.
- 3) What do you mean by internet trading?
- 4) State the methods of stock market indices.
- 5) Define Nifty.
- 6) What is a Risk ?

**II. Answer any One question:**

**(5\*1=5)**

- 1) Explain the participants involved in the settlement process.
- 2) Explain the Trading procedure of the stock exchange.

Nemandee

**SES'S MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE, ULGA, KARWAR**  
**2<sup>nd</sup> Unit Test**

**Sub:Management Accounting**

**Class:B.Com 5<sup>th</sup> Sem**

I. Answer any Five questions:

(1\*5=5)

- 1) Write the meaning of marginal Costing
- 2) Write the advantages of Marginal Cost.
- 3) What do you mean by financial Ratio Analysis.
- 4) Write the advantages of financial Ratio Analysis.
- 5) Write the formula for Gross Profit Ratio & Net Profit Ratio
- 6) What is Absorption costing

II. Answer any one of the following:

(5\*1=5)

- 1) XYZ Ltd sell goods on cash as well as on credit. The following Particulars are Extracted from their books of accounts for the Year Ending on 31-3-2017

Sl.No	Particulars	Amount (Rs)
1.	Total sales	2,00,000
2.	Cash sales	40,000
3.	Sales return	14,000
4.	Total debtors for sales as on 31-03-2016	18,000
5.	Bill receivable as on 31-03-2016	4,000
6.	Provision for doubtful debt as on 31-03-2016	1,000
7.	Total creditors as on 31-03-2016	6,000
8.	Bill payable as on 31-03-2016	2,000

Calculate the average collection period.

- 2) Following are the particulars of ABC Ltds

Sl.No	Particulars	Amount (Rs)
1.	Cash	30,000
2.	Debtors	65,000
3.	Bill receivable	35,000
4.	Stock	80,000
5.	Gross profit	1,60,000
6.	Bill payable	10,000
7.	Creditors	40,000
8.	Net sales	80,000
9.	Net profit	1,20,000

You are required to calculate

Working capital turnover ratio, Debtors Collection Period ratio, Debtors turnover ratio, Operating Cost ratio, Gross Profit Ratio & Net Profit Ratio.

Assume that all sales are credit sales.

*Njanandee*



MAHASATEE ARTS, COMMARCE AND SCIENCE COLLEGE ULGA

I<sup>st</sup> INTERNAL TEST 2023-2024

CLASS: B.sc IV<sup>th</sup> SEM SUB: OEC (ETHOLOGY)

I. ANSWER ANY TWO OF THE FOLLOWING

2\*5=10

1. Explain in detail social organisation in termites
2. Describe contribution of Nikotinbergn
3. Explain parental caring behaviour of fishes

Priya  
Head of the department of  
Zoology

S.E.SOCIETY'S  
MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE,  
Ulga, Karwar (U.K.)



(Affiliated to Karnataka University, Dharwad)

2022-2023

Accredited at 'B' level

INTERNAL ASSESSMENT EXAMINATION BOOKLET

1. Name of the student Arish P. Magekar.
2. Roll No. 20517706
3. Subject Zoology
4. B.A / B.Com / B.Sc V<sup>th</sup> Semester

TEST NO.	SIGNATURE OF SUPERVISOR	MAXIMUM MARKS	MARKS OBTAINED	SIGNATURE OF VALUATOR
I		10	09	
II		10	10	
TOTAL I+II		20	19	

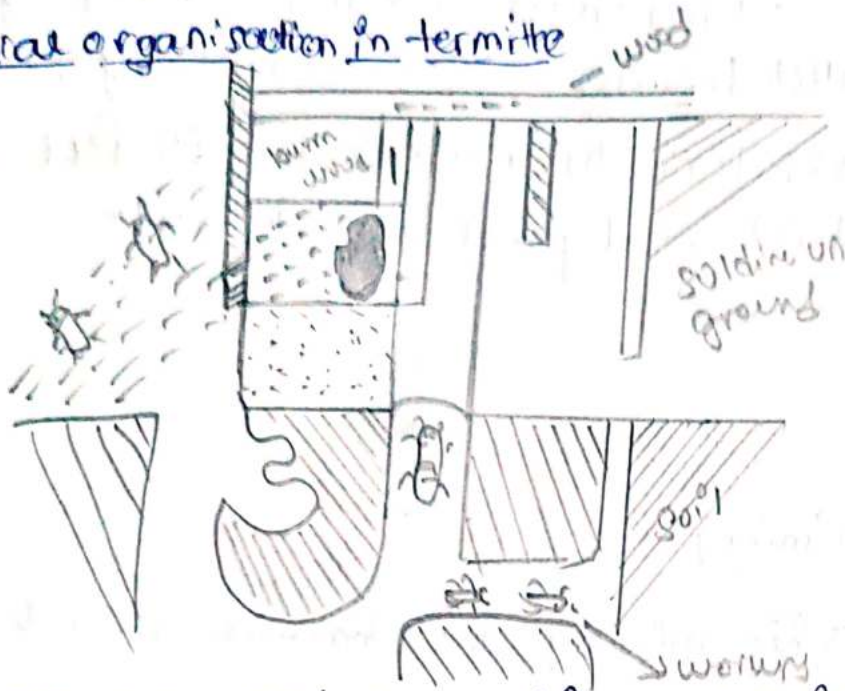
Total Marks obtained = 19 In words Nineteen only

Signature of H.O.D.



I.

## 2) Social organisation in termites - wood



Termites are social and polymorphic social insect are having large no. of caste of which are 3 are reproductive caste and 2 are sterile cast.

① 3 reproductive cast are

1) Winged form:- This are normal wing male and female having King and queen they characterise a dark pigment of course well developed eyes brain sex organ the wing King and queen leave the wings male lose the wing and rest and color.

2) Short wing form: This are short wing male and female of called supplementary King and queen. The primary King & queen die its place taken by Brachipodorus individual forming substitute King and queen.

3) Wing less form:- This are worker like individual oftenly called temporary King and queen they take wings and colical less developed eyes and reproductive organ then the other reproductive cast they are very rare.

② Sterile cast

1) Worker: This are small size wings less and include both male and female sterile individual they are for call the duties except reproductive & defense they care for eggs young ones search for food collect the food feed and the queen collective fungus in social also are constructed and perform other duties.



2) soldiers: they are like all workers but are  
while larger and have stronger mouth part  
mandibles soldiers have large band strong head,  
use mandibles driving away soldier's eyes.

This termite's nutrition they feed largely  
on wood which is digested by intestine.

3)

### 1) Batesian mimicry

This mimicry are ~~harmless~~ by which  
are harmless mimicry and poisonous species  
are called batesian mimicry.

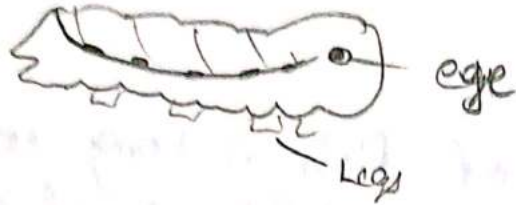
### 2) Mullerian mimicry

This mimicry is different  
butterflies but they all exhibit mullerian  
mimicry called mullerian mimicry.

### 3) Protective mimicry

This mimicry are over protect  
the mimicry is called protective mimicry.

d) caterpillar



e) Prawns

- \* It is rich source of vitamin A & D
- \* It is used for food purpose.

f) Oyster

- \* They found in ~~marine water~~ deep of sea water
- \* It is used for ornaments

g) Catfish

- \* It is found in fresh water
- \* It also used food purpose
- \* It is in bottom of water.

h) Macrel

- \* It is found in ~~marine~~ water.
- \* It also called King of sea water.
- \* It also used for food purpose

S.E.SOCIETY'S

MAHASATEE ARTS, COMMERCE & SCIENCE COLLEGE,  
Ulga, Karwar (U.K.)



(Affiliated to Karnataka University, Dharwad)

2021 - 2023

Accredited at 'B' level

INTERNAL ASSIGNMENT EXAMINATION BOOKLET

1. Name of the student Shweta. C. Lolekar
2. Roll No. 20917729
3. Subject Chemistry
4. B.A / B.Com / B.Sc VI<sup>th</sup> Semester

TEST NO.	SIGNATURE OF SUPERVISOR	MAXIMUM MARKS	MARKS OBTAINED	SIGNATURE OF VALUATOR
I		10	10	
II		10		
TOTAL I + II		20		

Total Marks obtained = \_\_\_\_\_ In words \_\_\_\_\_

Signature of H.O.D.



1) Rotational Energy

Rotational Energy of polyatomic molecules can be determined by

$$E_J = \frac{h^2}{8\pi^2 I} J(J+1) \quad \text{--- (1)}$$

where  $J$  = Rotational Quantum number

$I$  = Moment of Inertia

According to the mathematical expression of moment of Inertia is

$$I = Mr^2 \quad \text{--- (2)}$$

$$I = I_a + I_b + I_c \quad \text{--- (3)}$$

where  $I_a, I_b, I_c$  are the moment of Inertia along  $a, b$  and  $c$  axis respectively. The polyatomic molecule are similar to the diatomic molecule. except that the ~~total~~ moment of Inertia consider as

$$I = I_a + I_b + I_c \quad \text{--- (3)}$$

The classical Hamiltonian Energy expression is given by

$$H = E_J = \frac{P_a^2}{2I_a} + \frac{P_b^2}{2I_b} + \frac{P_c^2}{2I_c} \quad \text{--- (4)}$$

where  $P_a, P_b, P_c$  are the total energy of momentum along  $a, b,$  and  $c$  axis respectively.

$$P_a = I_a \cdot \omega_a, \quad P_b = I_b \cdot \omega_b, \quad P_c = I_c \cdot \omega_c$$

where  $\omega_a, \omega_b, \omega_c$  are the total energy of velocity

The total Energy of moment is given by

$$P^2 = P_a^2 + P_b^2 + P_c^2$$

## 2) Rotational Energy of linear polyatomic molecule.

For linear polyatomic molecule

$$I_a = 0 \quad I_b = I_c$$

i.e. the moment of inertia along a-axis = 0  
 the moment of inertia along b and c axis are equal  
 to one another ( $I_b = I_c$ )

The classical Hamiltonian energy expression is given by

$$H = E_J = \frac{p_a^2}{2I_a} + \frac{p_b^2}{2I_b} + \frac{p_c^2}{2I_c} \quad \text{--- (1)}$$

$$I_a = 0$$

Eq (1) becomes

$$H = E_J = 0 + \frac{p_b^2}{2I_b} + \frac{p_c^2}{2I_c}$$

$$H = E_J = \frac{p_b^2}{2I_b} + \frac{p_c^2}{2I_c} \quad \text{--- (2)}$$

$$\therefore p_a^2 + p_b^2 + p_c^2 = p^2 \quad \therefore I_a + I_b + I_c = I$$

$$H = E_J = \frac{p^2}{2I} \quad \text{--- (3)}$$

Applying the quantisation rule

$$H = E_J = J(J+1) \frac{h^2}{4\pi^2 I} \times \frac{1}{2I}$$

$$H = E_J = J(J+1) \frac{h^2}{8\pi^2 I} \quad \text{--- (4)}$$

$$\frac{E_J}{hc} = J(J+1) \frac{h}{8\pi^2 I c}$$

$$\frac{E_J}{hc} = B(J+1) \frac{h}{8\pi^2 I c}$$

$$B = \frac{h^2}{8\pi^2 I c}$$



3) Vibrational Raman Spectro

Let us consider as energy of vibrational

$$E_v = (v + \frac{1}{2}) w_e - (v + \frac{1}{2})^2 w_e x_e \quad (1)$$

10/10

According to the rule of vibrational Raman spectra

$$\Delta v = 0, \pm 1, \pm 2, \dots$$

The fundamental vibrational molecule

$$\Delta T = 0$$

$$\Delta E = E_1 - E_0$$

$$E_1 = (1 + \frac{1}{2}) w_e - (1 + \frac{1}{2})^2 w_e x_e$$

$$E_0 = (0 + \frac{1}{2}) w_e - (0 + \frac{1}{2})^2 w_e x_e$$

where  $\Delta E = E_1 - E_0$

$$\Delta E = [(1 + \frac{1}{2}) w_e - (1 + \frac{1}{2})^2 w_e x_e] - [(0 + \frac{1}{2}) w_e - (0 + \frac{1}{2})^2 w_e x_e]$$

~~v=1~~  $v=1$   $v=0$

$$\Delta E = (1 + \frac{1}{2}) w_e - (1 + \frac{1}{2})^2 w_e x_e - (0 + \frac{1}{2}) w_e - (0 + \frac{1}{2})^2 w_e x_e$$

$$\Delta E = (\frac{2+1}{2}) w_e - (\frac{2+1}{2})^2 w_e x_e - (\frac{1}{2}) w_e - (\frac{1}{2})^2 w_e x_e$$

$$\Delta E = (\frac{3}{2}) w_e - (\frac{3}{2})^2 w_e x_e - (\frac{1}{2}) w_e - (\frac{1}{2})^2 w_e x_e$$

$$\Delta E = (\frac{3}{2}) w_e - (\frac{9}{4}) w_e x_e - (\frac{1}{2}) w_e - (\frac{1}{4}) w_e x_e$$

$$\Delta E = (\frac{3}{2}) w_e - (\frac{1}{2}) w_e + (\frac{9}{4}) w_e x_e - (\frac{1}{4}) w_e x_e$$

$$\Delta E = (\frac{3-1}{2}) w_e + (\frac{9-1}{4}) w_e x_e$$

$$\Delta E = (\frac{2}{2}) w_e + (\frac{8}{4}) w_e x_e$$

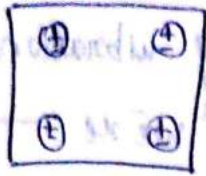
$$\Delta E = 1 w_e + 2 w_e x_e$$

$$= w_e (1 + 2 x_e)$$

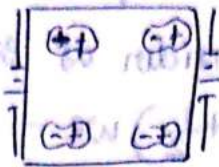
$$\Delta E = w_e (1 + 2 x_e)$$



# 1) Classical Theory of Raman effect



No electric field



Electric field

The magnitude of induced dipole moment is directly proportional to the electric field.

$$P \propto E$$

$$P = \alpha E \quad \text{--- (1)}$$

where  $\alpha$  is the polarisability of molecule. Now the strength of the electric field is given by

$$E = E_0 \sin 2\sqrt{\nu} t \quad \text{--- (2)}$$

using eq (2) in eq (1)

$$P = \alpha E$$

where  $P = E_0$

$$P = \alpha (E_0 \sin 2\sqrt{\nu} t) \quad \text{--- (3)}$$

If a molecule start executing vibrational motion in the presence of electric field then the net polarisability of vibrating molecule is given by expression

$$\alpha = \alpha_0 + \beta \sin 2\sqrt{\nu_{vb}} t \quad \text{--- (4)}$$

Using eq (4) in eq (3)

$$\text{where } P = \alpha (E_0 \sin 2\sqrt{\nu} t)$$

$$P = \alpha_0 + \beta \sin 2\sqrt{\nu_{vb}} t (E_0 \sin 2\sqrt{\nu} t)$$

$$P = \alpha_0 + \beta \sin 2\sqrt{\nu_{vb}} t (E_0 \sin 2\sqrt{\nu} t)$$

$$P = \alpha_0 + E_0 \sin 2\sqrt{\nu} t + \beta \sin 2\sqrt{\nu_{vb}} t \cdot E_0 \sin 2\sqrt{\nu} t$$

Multiply and divide by the equation.

$$\frac{P}{E_0} = \frac{\alpha_0 + \beta \sin 2\sqrt{\nu_{vb}} t \cdot E_0 \sin 2\sqrt{\nu} t}{E_0}$$

$$P = \alpha_0 + (E_0 \sin 2\gamma_0 t) + \frac{E_0 \beta}{2} (\sin 2\gamma_{wb} t) (\sin 2\gamma_0 t)$$

$$\sin A + \sin B = \cos(A-B) - \cos(A+B)$$

$$\text{where } A = \gamma_0 t \quad B = \gamma_{wb} t$$

$$P = \alpha_0 (E_0 \sin 2\gamma_0 t + \frac{E_0 \beta}{2} \cos(2\gamma_0 t - 2\gamma_{wb} t) - \cos(2\gamma_0 t + 2\gamma_{wb} t))$$

$$P = \alpha_0 (E_0 \sin 2\gamma_0 t + \frac{E_0 \beta}{2} \cos(2\gamma_0 t - 2\gamma_{wb} t) - \frac{E_0 \beta}{2} \cos(2\gamma_0 t + 2\gamma_{wb} t))$$

$$P = \alpha_0 (E_0 \sin 2\gamma_0 t + \frac{E_0 \beta}{2} (\cos \gamma_0 t - \gamma_{wb} t) 2t - \frac{E_0 \beta}{2} \cos(\gamma_0 t + \gamma_{wb} t) 2t)$$

$$P = \alpha_0 (E_0 \sin 2\gamma_0 t + \frac{E_0 \beta}{2} \cos \gamma_0 t - \gamma_{wb} t) - \frac{E_0 \beta}{2} \cos(\gamma_0 t + \gamma_{wb} t)$$



## Practical Internal Test

Aim: Determination of dissociation constant of acetic acid conductometrically

Chemicals: Exact 0.1M KCl solution 0.2M ~~CH<sub>3</sub>COOH~~ solution

Apparatus: Conductivity meter, conductivity cell, Burette etc.

Observation and calculation:

A. Determination of cell constant:

1. Observed conductance of 0.1M KCl solution = 12.64 S

2. Specific conductance of 0.1M KCl solution at 25°C temp  
=  $12.85 \times 10^{-3} \text{ S cm}^{-1}$

3. Cell constant =  $\frac{\text{sp. cond of 0.1M KCl soln}}{\text{obs cond of 0.1M KCl soln}}$

$$= \frac{0.01285}{12.64} = \frac{0.01285}{0.1264}$$

$$= \underline{0.10 \text{ cm}^{-1}} \text{ cell constant}$$

B) Determination of dissociation constant of acetic acid ( $K_a$ )

The equivalent conductance of acetic at infinite dilution

$$\lambda_{\infty} = 387.5 \text{ cm}^2 \text{ eq}^{-1}$$



Conc of the soln (C)	Observed conductance in S ( $\times 10^{-3}$ )	Sp. conductance $k = \text{cell constant} \times \text{obs cond} \cdot \text{cm}^{-1}$	Eq cond $\lambda_c = 1000 \times k/c$ $\text{scm}^2 \text{eq}^{-1}$	Degree of dissociation $\alpha = \lambda_c / \lambda_\infty$	Dissociation constant $K_a = C\alpha^2 / (1-\alpha)$
0.2 N	$0.997 \times 10^{-3}$	0.0997	498.5	1.288	1.14
0.1 N	$0.475 \times 10^{-3}$	0.0475	475	1.227	0.66
0.05 N	$0.954 \times 10^{-3}$	0.0354	708	1.829	0.19
0.025 N	$0.276 \times 10^{-3}$	0.0276	1104	2.352	0.10
0.0125 N	$0.227 \times 10^{-3}$	0.0227	1816	4.692	0.07
0.0625 N	$0.203 \times 10^{-3}$	0.0203	3248	0.839	0.24

### Calculation

1) For 0.2 N  $\text{CH}_3\text{COOH}$ :

$$C = 0.2 \text{ N Obs cond} = 0.997 \times 10^{-3} \text{ S}$$

$$\text{Sp cond } k = \text{cell const} \times \text{obs cond}$$

$$= 0.10 \times 0.0997$$

$$= 0.0997 \text{ g cm}^{-1}$$

$$\text{Eq cond } \lambda_c = 1000 \times k/c$$

$$= 1000 \times \frac{0.0997}{0.2} = \frac{99.7}{0.2} = 498.5 \text{ scm}^2 \text{eq}^{-1}$$

$$\text{Degree of dissociation } \alpha = \lambda_c / \lambda_\infty$$

$$= \frac{498.5}{387} = 1.288$$

$$\text{Dissociation constant } K_a = C\alpha^2 / (1-\alpha)$$

$$= \frac{0.2 \times 1.288 \times 1.288}{1.1288}$$

$$K_a = \frac{0.33}{1.1288} = 1.14$$



Similarly calculate for 0.1, 0.05, 0.025 and 0.0125 N  $\text{CH}_3\text{COOH}$  solution

Result:

Experimental value of  $K_a$  for acetic acid =  $0.4 \times 10^{-5}$  at  $25^\circ\text{C}$

Theoretical value of  $K_a$  for acetic acid =  $1.8 \times 10^{-5}$  at  $25^\circ\text{C}$

MAHASATEE ARTS, COMMERCE AND  
SCIENCE COLLEGE ULGA KARWAR

ASSIGNMENT

Name - Akshay banavalikar

Std - IV<sup>th</sup> Sem

Sub - Chemistry

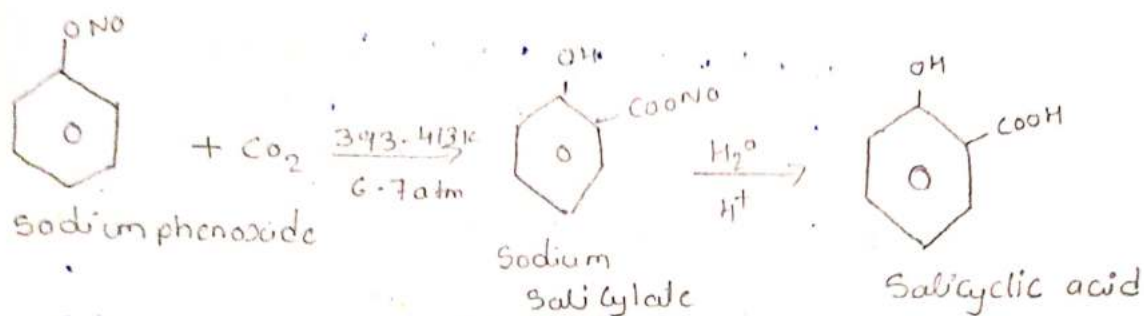
Roll no - 002JS2150013

10  
10  
Brestip  
27/07/2023



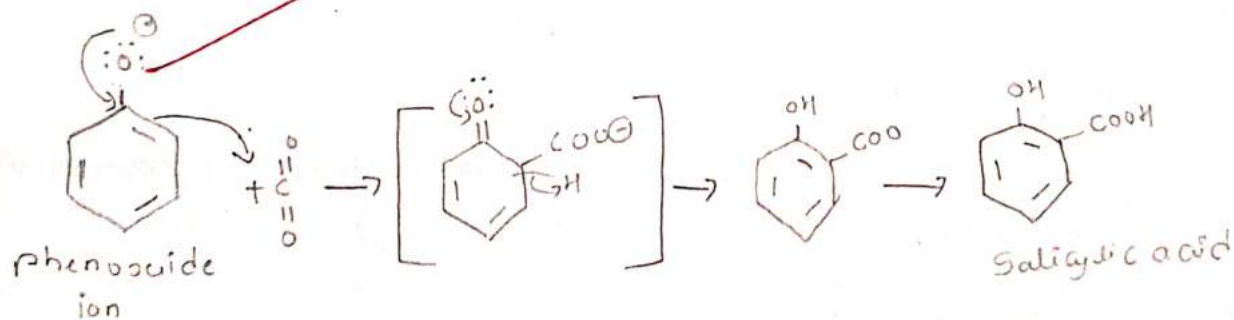
## KOLBE REACTION

When Sodium salt of phenol is react with Carbon dioxide at 393-413K, under pressure (6-7atm) Sodium Salicylate is produced. This on further treatment with HCl Salicylic acid



A small amount of p-isomer also obtained by it Potassium salt is used theo-isomer pure-dominant

### Mechanism:-



# FRIES REARRANGEMENT

## Reaction and Principle:-

Esters of phenols on heating with Lewis acid mainly anhydrous  $AlCl_3$  gives ortho and para isomers of phenol.

This reaction is known as Fries rearrangement.

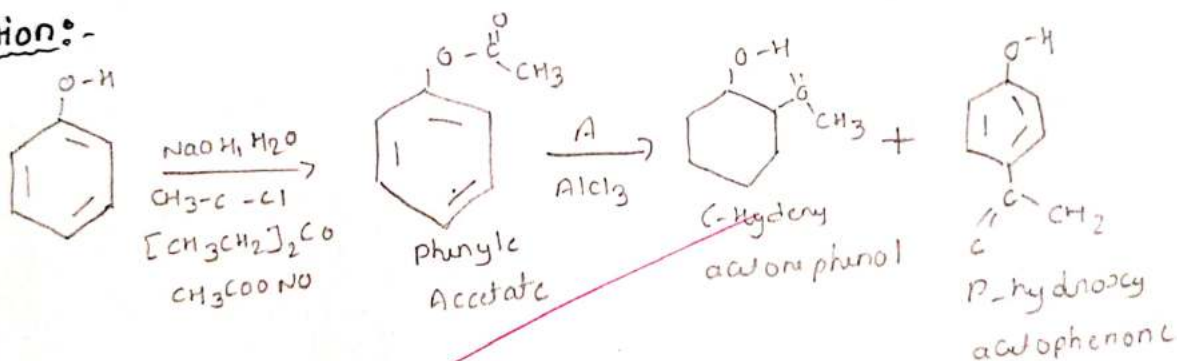
→ P- isomerism at product is depend on

P- Temperature

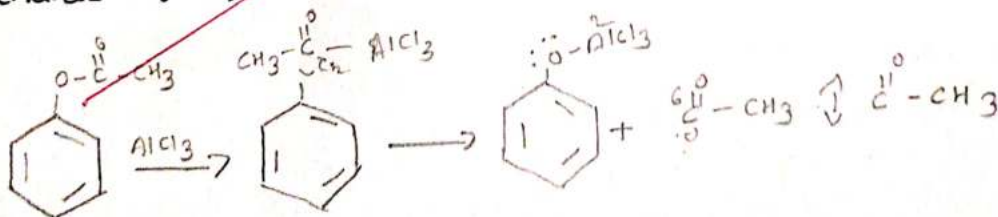
Temp  $\left\{ \begin{array}{l} < 60^\circ - \text{Para ortho Para product} \\ > 60^\circ - \text{ortho product.} \end{array} \right.$

Solvent used :- DMF, THF,  $CH_3CN$

## Reaction:-



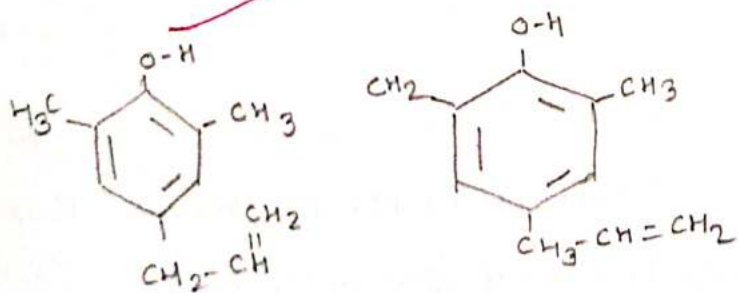
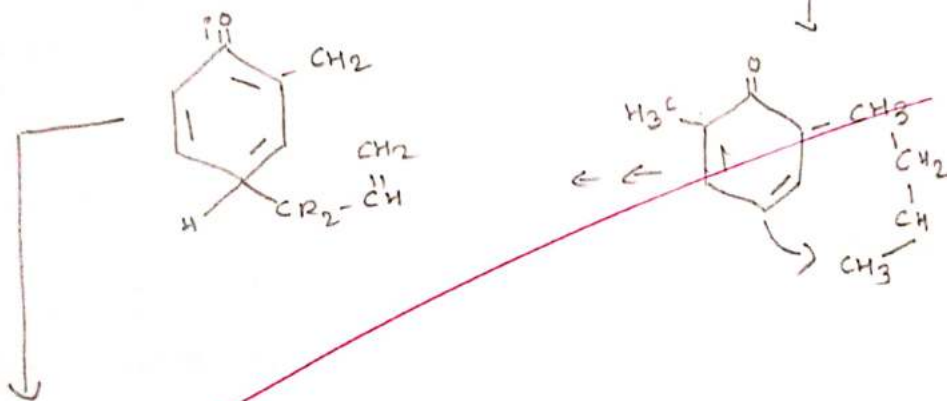
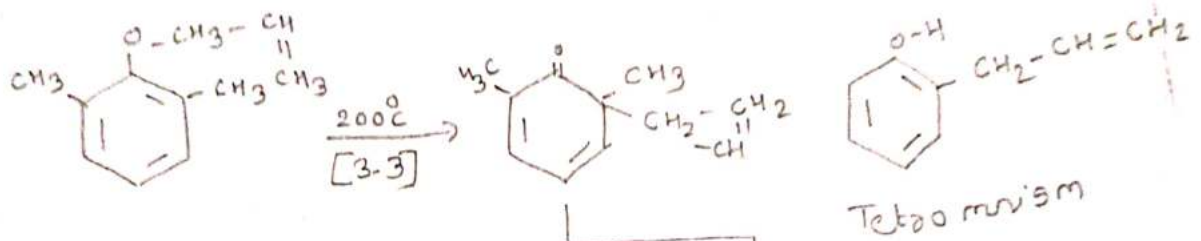
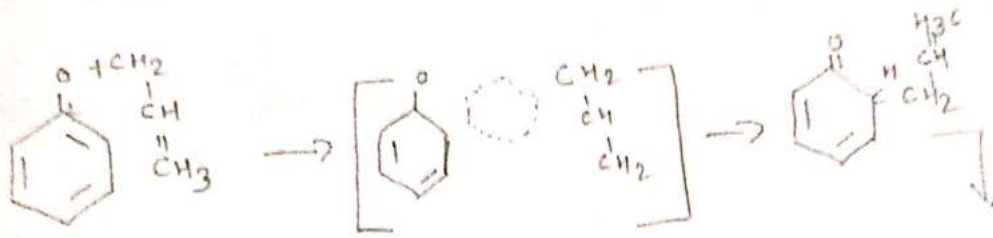
## Mechanism:- intramolecular





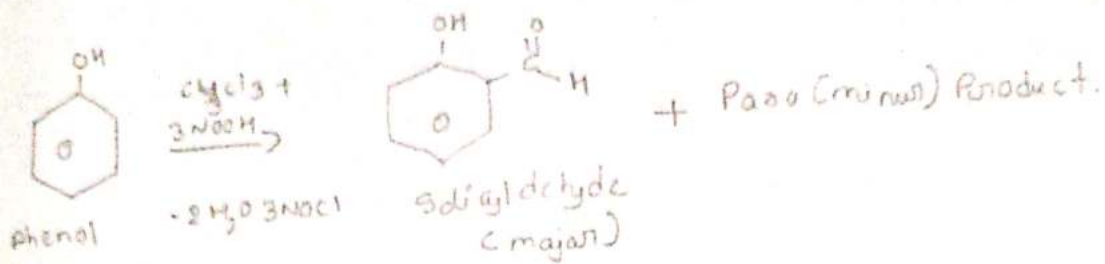


# Mechanism:-



## REIMER - TIEMANN REACTION

Reaction of Principle:-



1] It is ortho formylation of phenol

2] it is also electrophilic substitution reaction.

Principle:-

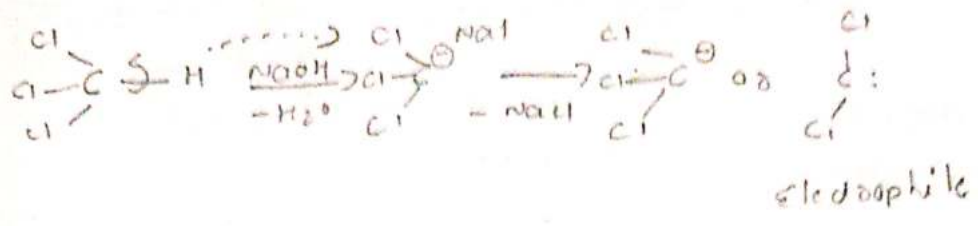
when phenol is heated with chloroform and alkali it gives ortho/para formyl phenol and this reaction is known as Reimer-Tiemann reaction.

1] if one both ortho position are occupied reaction will occur at para position.

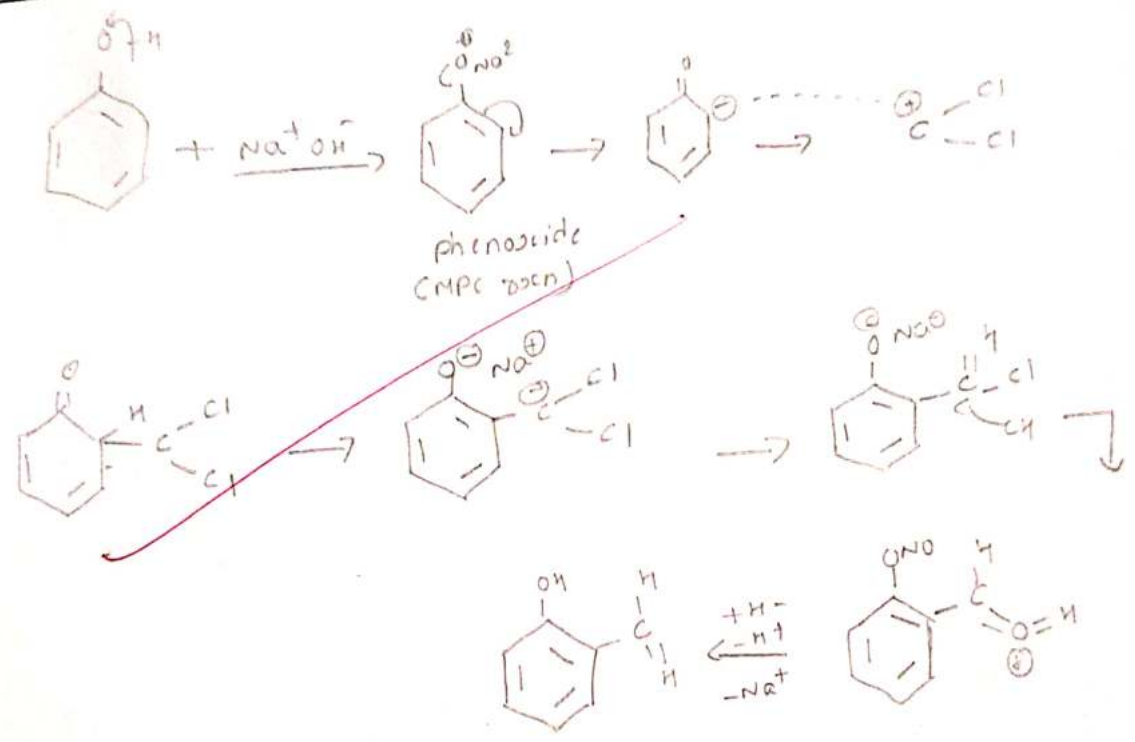
2 - elimination rxn (1) elimination.

Mechanism:-

Step 1):-



Step 2):-





ಮಹಾನವಿ.ಕಲಾ

ವಾಣಿಜ್ಯ ಹಾಗೂ ವಿಜ್ಞಾನ

ನವಮಹಾವಿಧ್ಯಾಲಯ

ಯೆ ಎಲ್ಲರೂ

ಭಾರತದ

ಅಡಿಪಾಯವು

ನಾಯಕ.ಜಿ. ಒಂಕಲೆ

ಎಸ್. ಸುಬ್ರಹ್ಮಣ್ಯಂ B.A

ಯೋಜನೆ ಮತ್ತು ಸಂಪಾದನೆ :-

ನಾಗರತ್ನ ನಂಜು















# MAHASATEE ART'S

## COMMERCE AND SCIENCE

### COLLEGE ULGA KARWAR

## SEMINAR TOPIC

2022-23

Name: . सख्शि. स. बोरुकर

Class: . B. Com II<sup>nd</sup> Year

Roll No: . 10

Sub: . English

Seminar topic: . Audio visual Aids

# Audio Visual Aids

## Definition

### 1. Bolton :

Aids are those sensory objects or images which initiate or stimulate & reinforce learning.

### 2. Good's Dictionary of education:

AV aids are anything by means of which learning process may be encouraged or conducted through the sense of hearing or sense of sight

## Popular sayings on AV AIDS

- \* I hear, I forget
- \* I see, I remember
- \* I do, I understand

## People generally remember

- \* 10 percent of what they read.
- \* 20 percent of what they hear.



- \* 30 percent of what they see
- \* 50 percent of what they hear & see.
- \* 70 percent of what they say.
- \* 90 percent of what they say as they do a thing

Sense are the gate ways of knowledge:

Research done by Robins (1968)

indicated that:

- \* 1 percent of what is learned is from the sense of TASTE.
- \* 1.5 percent of what is learned is from the sense of TOUCH.
- \* 3.5 percent of what is learned is from the sense of SMELL.
- \* 3.5 percent of what is learned is from the sense of HEARING.
- \* 83 percent of what is learned is from the sense of SIGHT.

Important values of AV aids :-

- \* Best motivation.
- \* Help to reduce verbalism
- \* Clear images.
- \* vicarious experiences.
- \* Novelty
- \* Freedom to use
- \* Opportunities to handle & manipulate
- \* Retentivity
- \* Based on maxims of teaching

\* helpful in attracting attention

\* saving of energy & time

\* Realism

\* Multitasking

\* Meeting individual differences

\* scope of education on a mass scale

\* promotion of scientific temper.

\* Reinforcement to learners.

\* positive transfer of learning & training

\* positive environment for creative discipline.

### Principles in the use of Teaching Aids

\* principle of Selection

\* principle of Preparation

\* principle of Physical Control

\* principle of Proper Placement

\* principle of Response.

\* principle of evaluation.

### Advantages of the Writing Board

\* Available in most training rooms.

\* Does not require electricity

\* Easy to use and inexpensive.

\* Suitable for use by both clinical teachers & participants.

\* Excellent for brainstorming, problem solving, making lists & other

\* Participatory

## Disadvantages of the Writing Boards

- \* The boards cannot hold a large amount of material
- \* Writing on the boards is time-consuming
- \* It is difficult to write on the boards and talk to the participants
- \* The boards can get messy.
- \* There is no permanent records of information presented.

  
10/12/2022

10

Sanshi