KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

Programme of F.Y.B.A. (2019 PATTERN) Mid-Term Exam TIME TABLE

MARCH 2023

SEMISTER - II

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
MARATHI	11022A	MARATHI SAHITYA:AKANKIKA & BHASHIK KOUSHALYAVIKAS	25.04.2023	8.30a.m. TO 10.00a.m.
HINDI	11092B	VAIKALPIK HINDI PRASHNPATR-IIA	26.04.2023	8.30a.m. TO 10.00a.m.
OPT. ENGLISH	11332	OPTIONAL ENGLISH - II	27.04.2023	8.30a.m. TO 10.00a.m.
POLITICS	11162A	INTRODUCTION TO INDIAN CONSTITUTION-II	28.04.2023	8.30a.m. TO 10.00a.m.
HISTORY	11172	EARLY INDIA: POST MOURYAN AGE TO THE RASHTRAKUTAS	29.04.2023	8.30a.m. TO 10.00a.m.
GEOGRAPHY	110B	HUMAN GEOGRAPHY	02.05.2023	8.30a.m. TO 10.00a.m.
ECONOMICS	11152	INDIAN ECONOMIC ENVIRONMENT - II	03.05.2023	8.30a.m. TO 10.00a.m.
DEMOCRACY	22999	DEMOCRACY,ELECTION AND GOVERANCE	04.05.2023	11.00a.m. TO 12.30p.m.
COMP. ENGLISH	11012	COMPULSORY ENGLISH	06.05.2023	8.30a.m. TO 10.00a.m.

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

Programme of F.Y.B.Sc. (2019 PATTERN) Mid-Term Exam TIME TABLE MARCH 2023

SEMISTER - II

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
BOTANY - I	BO-121	PLANT LIFE AND UTILIZATION II	24.04.2023	8.30a.m. TO 10.00a.m.
BOTANY - II	BO-122	PRINCIPLES OF PLANT SCIENCE		
PHYSICS - I	PHY-121	HEAT AND THERMODYNAMICS	25.04.2023	8.30a.m. TO 10.00a.m.
PHYSICS - II	PHY-122	ELECTRICITY AND MAGNETISM		
GEOGRAPHY - I	GG-121	INTRODUCTION TO HUMAN GEOGRAPHY	26.04.2023	8.30a.m. TO 10.00a.m.
GEOGRAPHY - II	GG-122	POPULATION & SETTLEMENT GEOGRAPHY		
ZOOLOGY - I	ZO-121	ANIMAL DIVERSITY - II	27.04.2023	8.30a.m. TO 10.00a.m.
ZOOLOGY - II	ZO-122	CELL BIOLOGY		

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
CHEMISTRY - I	CH-201	INORGANIC CHEMISTRY	28.04.2023	8.30a.m. TO 10.00a.m.
CHEMISTRY - II	CH-202	ANALYTICAL CHEMISTRY		
MATHEMATICS - I	MT-121	ANALYTICAL GEOMETRY	29.04.2023	8.30a.m. TO 10.00a.m.
MATHEMATICS - II	MT-122	CALCULUS - II		
DEMOCRACY	22999	DEMOCRACY,ELECTION AND GOVERANCE	04.05.2023	11.00a.m. to 12.30a.m.

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

Programme of F.Y.B.Com. (2019 PATTERN) Mid-Term Exam TIME TABLE MARCH 2023

SEMISTER - II

SUBJCET	SUBJECT CODE	DATE	TIME
COMPULSORY ENGLISH - II	121	24.04.2023	11.00 a.m. TO 12.30 p.m.
FINANCIAL ACCOUNTING - II	122	25.04.2023	11.00 a.m. TO 12.30 p.m.
BUSINESS ECONOMICS - II	123	26.04.2023	11.00 a.m. TO 12.30 p.m.
BUSINESS MATHEMATICS AND STATISTICS - II	124A	27.04.2023	11.00 a.m. TO 12.30 p.m.
COMMERCIAL GEOGRAPHY - II	125C	28.04.2023	11.00 a.m. TO 12.30 p.m.
ORGNIZATION & SKILL DEVELOPMENT - II	125A	28.04.2023	11.00 a.m. TO 12.30 p.m.
BANKING AND FINANCE - II	125B	28.04.2023	11.00 a.m. TO 12.30 p.m.
MARKETING AND SALESMANSHIP - II	126C	29.04.2023	11.00 a.m. TO 12.30 p.m.
CONSUMER PROTECTION & BUS. ETHICS - II	126D	29.04.2023	11.00 a.m. TO 12.30 p.m.
ADDITIONAL ENGLISH - II	127A	02.05.2023	11.00 a.m. TO 12.30 p.m.
MARATHI - II	127B	02.05.2023	11.00 a.m. TO 12.30 p.m.
DEMOCRACY,ELECTION AND GOVERANCE	22999	04.05.2023	11.00 a.m. TO 12.30 p.m.

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

F.Y.B.A. (2019 PATTERN) TIME TABLE OCTOBER 2022

SEMISTER - I EXAM

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
COMP. ENGLISH	11011	COMPULSORY ENGLISH - I	23.11.2022	9.00A.M. TO 10.30A.M.
MARATHI	11021A	MARATHI SAHITYA: KATHA & BHASHIK KOUSHALYAVIKAS	24.11.2022	9.00A.M. TO 10.30A.M.
HINDI	11091B	VAIKALPIK HINDI PRASHNPATRA - IA	25.11.2022	9.00A.M. TO 10.30A.M.
ECONOMICS	11151	INDIAN ECONOMIC ENVIRONMENT - I	26.11.2022	9.00A.M. TO 10.30A.M.
POLITICS	11161A	INTRODUCTION TO INDIAN CONSTITUTION	28.11.2022	9.00A.M. TO 10.30A.M.
HISTORY	11171	EARLY INDIA: FROM PREHISTORY TO THE AGE OF MAURYAS	29.11.2022	9.00A.M. TO 10.30A.M.
GEOGRAPHY	110A	PHYSICAL GEOGRAPHY	30.11.2022	9.00A.M. TO 10.30A.M.
OPT. ENGLISH	11331	OPTIONAL ENGLISH - I	01.012.2022	9.00A.M. TO 10.30A.M.

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

F.Y.B.Sc. (2019 PATTERN) TIME TABLE OCTOBER 2022

SEMISTER - I ***INTERNAL EXAM***

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
BOTANY - I	BO-111	PLANT LIFE AND UTILIZATION I	23.11.2022	11.30 A.M. TO 1.00P.M.
BOTANY - II	BO-112	PLANT MORPHOLOGY AND ANATOMY	23.11.2022	
PHYSICS - I	PHY-111	MECHANICS AND PROPERTIES OF MATTER	24.11.2022	11.30 A.M. TO 1.00P.M.
PHYSICS - II	PHY-112	PHYSICS PRINCIPLES AND APPLICATIONS	24.11.2022	
GEOGRAPHY - I	GG-111	INTRODUCTION TO PHYSICAL GEOGRAPHY I (Geomorphology)	25.11.2022	11.30 A.M. TO 1.00P.M.
GEOGRAPHY - II	GG-112	INTRODUCTION TO PHYSICAL GEOGRAPHY II (Geomorphology of Atmosphere and Hydrosphere)	25.11.2022	
ZOOLOGY - I	ZO-111	ANIMAL DIVERSITY - I	26.11.2022	11.30 A.M. TO 1.00P.M.
ZOOLOGY - II	ZO-112	ANIMAL ECOLOGY	26.11.2022	

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

F.Y.B.Sc. (2019 PATTERN) TIME TABLE OCTOBER 2022

SEMISTER - I ***INTERNAL EXAM***

SUBJCET	SUBJECT CODE	SUBJECT TITLE	DATE	TIME
CHEMISTRY - I	CH-101	PHYSICAL CHEMISTRY	28.11.2022	11.30 A.M. TO 1.00P.M.
CHEMISTRY - II	CH-102	ORGANIC CHEMISTRY	28.11.2022	
MATHEMATICS - I	MT-111	ALGEBRA	29.11.2022	11.30 A.M. TO 1.00P.M.
MATHEMATICS - I	MT-112	CALCULUS-I	29.11.2022	

KARMAVEER RAMRAOJI AHER ARTS, SCIENCE & COMMERCE COLLEGE DEOLA

F.Y.B.Com. (2019 PATTERN) TIME TABLE OCTOBER 2022

SEMISTER - I EXAM

SUBJCET	SUBJECT CODE	DATE	TIME
COMPULSORY ENGLISH - I	111	23.11.2022	11.30A.M. TO 1.00P.M.
FINANCIAL ACCOUNTING - I	112	24.11.2022	11.30A.M. TO 1.00P.M.
BUSINESS ECONOMICS - I	113	25.11.2022	11.30A.M. TO 1.00P.M.
BUSINESS MATHEMATICS AND STATISTICS - I	114-A	26.11.2022	11.30A.M. TO 1.00P.M.
COMMERCIAL GEOGRAPHY - I	115-C	28.11.2022	11.30A.M. TO 1.00P.M.
ORGNIZATION & SKILL DEVELOPMENT	115-A	28.11.2022	11.30A.M. TO 1.00P.M.
BANKING AND FINANCE - I	115-B	28.11.2022	11.30A.M. TO 1.00P.M.
MARKETING AND SALESMANSHIP - I	116-C	29.11.2022	11.30A.M. TO 1.00P.M.

Kar. Ramraoji Aher Arts, Science & Commerce College Deola (Nashik)

(SavitribaiPhule Pune University)

Mid-Term (Internal) Exam. March/April 2023

Jr.Sup.Sign.↓		Seat No.↓
		24

Class: FYBsc	Semester: II	Time: 1.00 Hrs.	Total Marks: 10

Subject: Introduction to Human Geography **Sub.Code:** **Gg:- 121**

Seat No.(InWords): Twenty four

Q. No.	1	2	3	4	Total	Sign. of the Examiner
Marks	1	1	6			08

Instructions: *1. All Questions are compulsory. 2. Figures to the right indicate full Marks.*

Q.1 Select the appropriate answer. 02

A) Human Geography is the branch of -Social Sciences.

a) Social Sciences b) Physical Geography c) Economic Geography d) None

B) Economic Geography is a branch of ---Human----- Geography.

a) Human b) Physical c) Transport d) Political.

C) Evolution means slow process of change from simple to more complex structure.

a) Race b) Evolution c) Nature d) All Above

D) Human Evolution is known as -Human change

a) Human Change b) Dryopithecus c) Hominization d) None of these

Q.2 Identify True or False. 02

A) Human Geography refers to civilization and Society. [True]

B) Stop and Go determinism introduced by Griffith Taylor. [false]

C) Race is a Classification system used to categorize humans. [false]

D) Skin Colour and Hair are not the bases of Human Race. [True]

Q3. Answer the following questions in 20 words. (Any two) 06

1) Define Human Geography

2) Write in detail about the branches of Human Geography

3) What are the various stages of Human Evolution?

Q.3

1) **Human Geography :**

Human Geography is the branch of social sciences that studies the world, its people, communities and cultures with an emphasis on relation of and across space and place.

2) Branches of Human Geography :

3

i) **Economic Geography -**

economic geography examines the distribution of production and distribution of goods, the distribution of wealth and the spatial structure of economic conditions.

ii) **Historical Geography -**

Historical Geography is study of the human, physical, fictional, theoretical and real geographies of past.

iii) **political Geography -**

3

political Geography is concerned with study of both the spatially uneven outcomes of political processes.

iv) **Medical Geography -**

In this branch, geographers normally study the patterns in which particular diseases spread.

3/6/22

Kar. Ramraoji Aher Arts, Science & Commerce College Deola (Nashik)

Jr Sup.Sign.↓ RPawal

(Savitribai Phule Pune University)

10

2021-22 Internal Examination January 2022

10

Semester: II	Class: F.Y.B.Sc.	Time: 1 Hr.	Total Marks: 10

Seat No. 02 **Seat No. (In Words):** TWO Name:- Aher Ashwini Dilip

Subject: CH-202 Analytical Chemistry

Instructions: *1. All Questions are compulsory.* *2. Figures to the right indicate full Marks.*

Q.1. Write correct option in the box in front of question: (5)

1) SI unit of temperature is......
(A) °K (B) K (C) °C (D) Cal — B]

2) The component not associated with pH meter is ......
(A) Set buffer (B) Photovoltaic cell
(C) Temperature Probe (D) Slope Control Knob — B]

3) Which colour is observed for test of Nitrogen in sodium fusion test?
(A) Purple (B) White (C) Colourless (D) Green — D]

4) The term pH is defined as.....
(A) $-\log_{10}[C_H^+]$ (B) $\log[H^+]$ (C) $-\log_{10}[H^+]$ (D) $\log_{10}[a_H^+]$ — C]

5) Which one is the strongest electrolyte in the following?
(A) NaCl (B) CH_3COOH (C) NH_4OH (D) AgCl — A]

Q.2. Answer the following: (5)

1) What is the test for sulphur in qualitative analysis?

2) Define : Molarity

3) Define : Empirical Formula

4) Give any two advantages of glass electrode.

5) Calculate pH of solution, if H+ ion concentration is 1×10^{-4}M.

1)

Test	Observation	Inference
Test for Sulfure i) 1ml Sodium fusion extract + 1 drop of NaOH + 4 drops of Sodium nitroprusside	purple colour	Sulphur is present

2) Molarity :- It is defined as the no. of moles of solute per unit volume is called as the molarity.

$$\therefore \text{Molarity} = \frac{\text{No of moles of solute}}{\text{unit volume of solution}}$$

3) Empirical formula :- It is defined as the ratio of atom of molecules, is called as Empirical formula.

4) Advantages of glass electrode :-

i) It is easy to operate.

ii) It is used in oxidizing & reducing solution.

iii) It is used for pH value ranging from 1 to 12.

iv) It is used in colour, turbid and colloidal.

5) $[H^+] = 1 \times 10^{-4}$ M ---- given

$$pH = -\log_{10}[H^+]$$

$$pH = -\log_{10}[1 \times 10^{-4}]$$

$$= -\log_{10}[\bar{4}.0000]$$

$$= -[-4]$$

$$pH = 4$$

$\therefore$ pH of the Sol^n is 4.

Kar. Ramraoji Aher Arts, Science & Commerce College Deola (Nashik)

(Savitribai Phule Pune University)

2021-22 Internal Examination January 2022

Jr Sup Sign.	9
Rohini	10 Eight

Semester: II	Class: F.Y.B.Sc.	Time: 1 Hr.	Total Marks 10

Seat No. 02 Seat No. (In Words) Eight Name:-Aher Sarnirsha Jay

Subject: CH-202 Analytical Chemistry

Instructions: *1. All Questions are compulsory* *2. Figures to the right indicate full Marks*

Date:- 03/06/2022.

Q.1. Write correct option in the box in front of question: (5)

1) SI unit of temperature is.....
(A) K (B) K (C) C (D) Cal — B

2) The component not associated with pH meter is.....
(A) Set buffer (B) Photovoltaic cell
(C) Temperature Probe (D) Slope Control Knob — B

3) Which colour is observed for test of Nitrogen in sodium fusion test?
(A) Purple (B) White (C) Colourless (D) Green — D

4) The term pH is defined as.....
(A) $-\log_{10}[Cu^+]$ (B) $\log[H^+]$ (C) $-\log_{10}[H^+]$ (D) $\log_{10}[au^+]$ — C

5) Which one is the strongest electrolyte in the following?
(A) NaCl (B) CH_3COOH (C) NH_4OH (D) AgCl — D

Q.2. Answer the following: (5)

1) What is the test for sulphur in qualitative analysis?

2) Define : Molarity

3) Define : Empirical Formula

4) Give any two advantages of glass electrode.

5) Calculate pH of solution,if H+ ion concentration is $1x10^{-4}M$.

Q.2 1) Test for sulphur

Test	observation	Interence
1) 2-3 drops of sodium fusion extract + NaOH + sodium nitroprousside solution + boil, cool + add conc. HNO_3.	No purple colour	sulphur is absent
2) 2-3 drops of sodium fusion extract + lead acetate + dil. H_2SO_4 (CH_3COOH)	No black ppt	sulphus is absent

2) Molarity:

The number of moles of solute per litre of solution is called molarity. Denoted by M. Its unit is moles per litre M^1.

4) Advantages of glass electrode:

i. It is easy to operate.

ii. It can be used in both oxidising and reducing agents.

5) pH of a solution is given as

$$pH = -\log_{10}[H^+]$$

$$= -\log_{10}[10^{-4}]$$

$$= -[-4]$$

$$\boxed{pH = 4}$$

3) Empirical formula:

It is the ratio of atoms of molecule.

Kar. Ramraoji Aher Arts, Science & Commerce College Deola (Nashik)

(Savitribai Phule Pune University)

2021-22 Internal Examination January 2022

Jr.Sup.Sign.	10
Rpawar	10

Semester: II	Class: F.Y.B.Sc.	Time: 1 Hr.	Total Marks: 10

Seat No. 1 Seat No. (In Words): one Name: Aher Anushka Prakash

Subject: CH-202 Analytical Chemistry Date- 3-6-22

Instructions: *1. All Questions are compulsory.* *2. Figures to the right indicate full Marks.*

Q.1. Write correct option in the box in front of question: **(5)**

1) SI unit of temperature is.....
(A) K (B) K (C) C (D) Cal — B

2) The component not associated with pH meter is.....
(A) Set buffer (B) Photovoltaic cell
(C) Temperature Probe (D) Slope Control Knob — B

3) Which colour is observed for test of Nitrogen in sodium fusion test?
(A) Purple (B) White (C) Colourless (D) Green — A D

4) The term pH is defined as.....
(A) $-\log_{10}[Cu^+]$ (B) $\log[H^+]$ (C) $-\log_{10}[H^+]$ (D) $\log_{10}[au^+]$ — C

5) Which one is the strongest electrolyte in the following?
(A) NaCl (B) CH_3COOH (C) NH_4OH (D) AgCl — A

Q.2. Answer the following: **(5)**

1) What is the test for sulphur in qualitative analysis?

2) Define : Molarity

3) Define : Empirical Formula

4) Give any two advantages of glass electrode.

5) Calculate pH of solution,if H+ ion concentration is 1×10^{-4}M.

1)→

Test	observation	Inference
1 ml of sodium fusion extract + 1 drop of NaOH + 4 drops of sodium nitrate	Purple colour is observed.	Sodium is present

2)→ - The number of moles of solute in compound to dissolve in 1 litre of solution is known as molarity.
- It is also called as molar concentration of substance.

Molarity = $\frac{\text{moles of solute}}{\text{volume of soln in litres}}$

3)→ Empirical formula is defined as the simplest ratio of the elements present in compound rather the number of atoms of element present in compound.
eg - CH_2O is the empirical formula of glucose.

4)→ 1) Glass electrode is easier to operate / handle. It is used to measure the pH of any compound in acid & alkali form. upto 1 to 12, some electrodes like lithium glass electrode measures upto 1 to 14.
2) It can be used in colour, turbid & colloidal substances too.

5)→ Given -

H^+ ion conc. = 1×10^{-4} M.

To calculate - pH of solution.

$$pH = -\log_{10}[H^+]$$
$$= -\log - 10^{-4}$$
$$= -(-4)\log_{10}$$
$$pH = 4$$

Jr.Sup.Sign.↓

(Savitribai Phule Pune University)

Seat No.↓ 93

Mid-Term (Internal) Exam. March/April 2023

Kar. Ramraoji Aher Arts, Science & Commerce College Deola (Nashik)

Class: T.Y.B.A	Semester: VI	Time: 1.30 Hrs.	Total Marks: 20

36171

Subject:History Spl. III Applied HistorySub.Code:

Seat No.(InWords): Ninety three

Q. No.	1	2	3	4	Total	Sign. of the Examiner
Marks	10	8			18	

Instructions: *1. All Questions are compulsory. 2. Figures to the right indicate full Marks.*

Q.1: Write correct option in the box in front of question: प्रश्नासमोरील चौकोनात योग्य पर्याय लिहा.(10)

1.Application या शब्दाचा अर्थ काय होतो? A

Aलागू करणेB.काढून टाकणेC.न घेणेD. पर्यायी

2.इतिहासाचे विविध विषयातील उपयोजन का करावे लागते कारण..... A

A.तो लोकांचाही विषयB.राजाचा विषयC.धर्माचा विषयD.राज्याचा विषय

3.समकालीन इतिहास संकल्पनेचे जनक कोणास म्हंटले जाते? A

A. बेनेटो क्रोसे B.जॉन डुईC.नेपोलियनD.सिकंदर

4.नाणकशास्त्रावरून आपणास काय समजते? D

A. राज्याचा विस्तारB.आर्थिक परिस्थितीC. व्यापारD.पुढील सर्व

10

5.वस्तुसंग्रहालयाची भूमिका काय असते? A

A. राष्ट्राची संस्कृती जपून ठेवणेB.वारसाC.शैक्षणिक मूल्यD.पुढील सर्व

6.ऐतिहासिक दस्तऐवजांचे संकेलन व संवर्धन कोण करते? C

A. नाणकशास्त्रB. मुद्राशास्त्रC.अभिलेखागार शास्त्रD.आलेखशास्त्र

7.What is History हा ग्रंथ कोणाचा? A

A. इ.एच.कारB. मन्त्रोC.आर.सी.मुजुमदारD.रोमिला थापर

8.Contemporary म्हणजे काय? B

A. भूतकालीन B.समकालीनC.भविष्यकालीनD.वर्तमानकालीन

9.गतकालीन मानवी संस्कृतीचा अभ्यास करणे हे कशाचे उद्दिष्टे आहे? A

A. पुरातत्व विद्याB.नाणकशास्त्रचेC.आलेख शास्त्राचेD.भाषाचे

10.भारतात रेडीओचा प्रारंभ केव्हा झाला? A

A.१९२३B.१९२८C.१९२०D.१९५०

Q.2: Write Short Note (*Any Two*) (कोणत्याहीदोनटीप लिहा) **(10)**

A)टेलिव्हिजन(दूरचित्रवाणी) B)पुरातत्वशास्त्र C) इतिहासाचे विविध विषयातील उपयोजन

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B] → पुरातत्वशास्त्र हे इतिहासाला संलग्न असणारे महत्वाचे शास्त्र आहे. इतिहास व पुरातत्व परस्परावलंबी अभ्यास विषय आहेत. त्यामुळे इतिहासाचे पुरातत्वशास्त्राशी असलेले उपयोजन उल्लेखनीय आहे. इतिहासकालीन अवशेषांचा अभ्यास करणारे शास्त्र म्हणजे पुरातत्वशास्त्र होय. पुरातत्वशास्त्रालाच पुरातत्वविद्या असेही म्हणतात. पुरातत्वशास्त्र हे इतिहासाचे एक प्रमुख सहाय्यकारी शास्त्र आहे. पुरातत्वशास्त्रालाच आर्किओलाजी (Archaeology) हा इंग्रजी शब्द आहे. पुरातत्व विभागातील अभ्यासकांना विविध क्षेत्रात महत्वाचे स्थान आहे. पुरातत्व अवशेष जमीनीखालील उत्खननातुन काढले जातात. जमिनीवर अस्तित्वात असता या निर्जीव अवशेषांच्य संदर्भातील माहिती इतिहासाद्वारे मिळते. त्यामुळेच पुरातत्वशास्त्र कार्यपद्धती व परिणाम कारक बनवण्यासाठी त्याला इतिहासाची जोड असणे आवश्यक आहे. पुरातत्वशास्त्र म्हणजे गतकालीन मानव समाजाचे अध्ययन होय. उदा. सिंधु संस्कृती व त्या संदर्भातील पुरातत्वीय अवशेषाचा शोध पुरातत्वशास्त्रज्ञाने लावला पण त्या अवशेषांच्या आधारे तत्कालीन इतिहास ह्या करण्यात इतिहास विद्येची भूमिका महत्वाची आहे. त्यामुळे पुरातत्वशास्त्राला इतिहासाची जोड असणे आवश्यक आहे.

A] → दृक-श्राव्य स्वरूपाचे प्रभावी प्रसार माध्यम म्हणुन इराचिप्रातील अनन्यसाधारण महत्व आहे. इराचिप्रवाहिनीच्या शोधानंतर आहे माहितीचा उपयोग केला जातो. दूरचित्र वाहिनीद्वारे आवश्यक अनेक प्रकारची माहिती मिळत असते. इराचिप्रवाणीचा उपयोग भारतात अनेक प्रकारे केला जात आहे. या इराचिप्रवाणी वरुन जे काही मिळत असते ते म्हणजे माहिती व चित्रे दिसत असत. इराचिप्रवाणीत दृक-श्राव्य माध्यम हे इराचिप्रवाणीत या माध्यम ला महत्व असत. इराचिप्रवाणी हे एक माहिती देणारे माध्यम आहे. इराचिप्रवाणी या उपयोग प्रत्येक जण करत असे. इराचिप्रवाणी त जी काही माहिती असते दृकश्राव्य माध्यमाचा इराचिप्रवाणीत उपयोग केला जातो. भारतात इराचिप्रवाणी वापरली जाते. इराचिप्रवाणी यातुन जे काही माहिती मिळते ती म्हणजे इराचिप्रवाणी अत्यंत आवश्यक असते.

DEOLA EDUCATION SOCIETY'S

K.R.A.ARTS SCIENCE AND COMMERCE COLLEGE DEOLA

TAL:-DEOLA DIST:-NASHIK

TERM END EXAMINATION JAN.2022 (CBCS Pattern 2019)

08/10

11/1/2022

Name of the Student :- Shekhawat khushi Ranveersingh Roll No /Seat No:- 67

CLASS:-T.Y.B.Sc. SUB:- PHYSICS (Classical Mechanics) PAPER:- III

Sem :- V Max Marks :- 10 .

N.B. 1. All questions are compulsory.

2. All questions carry equal marks.

Que:-1.Fill in the blanks.

1.When a particle of mass m and having charge q and velocity v enters in the electric field perpendicular to the field direction, then the path of particle will be ---Parabola---.

2.A system in which all the forces acting on it are derivable from the potential energy functions is called as ---Centre of Mass system.---.

3.The property of an object at rest to remain at rest is known as ---inertia---.

Que:-2.State wheather the following statements are true or false.

1.When net external force acting on the particle is zero, then its linear momentum is conserved. ---True---.

2.Three objects of different masses placed along x-axis, then centre of mass also lies on y-axis .---False---.

3.The drift velocity of particle in the crossed electric and magnetic field is perpendicular to both fields .--True

Que:-3. Solve the following examples.

1.What force is required to produce an acceleration of 2 m/s^2 on a mass of 2 Kg.

2.A charged particle having charge $2X10^{-9}$ C enters in the magnetic field of induction $4X10^{-4}$ T with velocity $3X10^4$ m/s with an angle 30^0 with the field. Find the force acting on the particle .

3.A system of two particles have masses 10 Kg and 15 Kg . What is the reduced mass of the system .

4.The satellite revolves in circular orbit around the earth at a height 10000 Km. above the surface of the earth. Find its orbital velocity.

Q.3. 1) $a = 2\ m/s^2$, $m = 2\ kg$.

$F = ma$

$F = 2 \times 2$

$\therefore F = 4\ N/m^2$

3) $m_1 = 10\ kg, \quad m_2 = 15\ kg$.

∴ Reduce mass of the system is.

$$R = \frac{m_1 m_2}{m_1 + m_2}$$

$$\therefore R = \frac{10 \times 15}{10 + 15} = \frac{150}{25} = 6$$

$$\therefore R = 6 \ kg$$

2) given :- $q = 2 \times 10^{-9} C$

$B = 4 \times 10^{-4} T$

$v = 3 \times 10^{+4} \ m/s$

$\theta = 30°$

we know that,

The Magnetic force is

$$F = q(v \times B)$$

$$\therefore F = qvB \sin\theta$$

$$\therefore F = (2 \times 10^{-9})(3 \times 10^{4})(4 \times 10^{-4}) \sin 30$$

$$= 2 \times 3 \times 4 \times 10^{-9} \times \frac{1}{2}$$

$$\therefore F = 12 \times 10^{-9} \ N/m^2$$

4)

given:- $r_e = 6370\ km$

$Re = 10000\ km$

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TERM END EXAMINATION JAN.2022 (CBCS Pattern 2019)

Name of the Student :- Shekhawat Khushi Ranveersingh Roll No /Seat No:- 67

CLASS:-T.Y.B.Sc. SUB:-PHYSICS (Atomic And Molecular Physics) PAPER:- IV

Sem :- V Max Marks :- 10 .

N.B. 1. All questions are compulsory.

2. All questions carry equal marks.

Que:-1.Fill in the blanks.

1. Vector atom model is based on the concept of orbital angular momentum
2. Pauli's exclusion principle states that two electrons in the same orbit have opposite spin
3. The quantity (2S+1) is called Spin Multiplicity.

Que:-2.State wheather the following statements are true or false.

1 . Thomson's atomic model failed to explain the stability of an atom . True .

2 . Total energy of an electrons decreases as it goes away from the nucleus . False .

3 . According to Sommerfeld , electron revolves in an elliptical orbit with the nucleus at one of the Focus . True .

Que:-3. Answer the following questions .

1 . What is the meaning of space quantization ?

2 . State four quantum numbers .

3 . Write the electronic configuration of fluorine and neon .

4 . If L=2 ,S=1/2 , then write atomic states .

Q.3) 1) Space quantization:-

The orbit spin in quantized space is called space quantization

2) Four Quantum Numbers

(i) spin quantum number

$s^* = \sqrt{s(s+1)}$, $(2s+1) = \pm\frac{1}{2}$ $\therefore s = 1, 0$, $\therefore s = \frac{1}{2}$

(ii) orbital quantum number

$l^* = \sqrt{l(l+1)}$, $m_l(2l+1) = \pm 1$ $l = 0, 1, 2, 3 \ldots$

(iii) spin orbital quantum number

$s^* = \sqrt{s(s+1)}$, $l^* = \sqrt{l(l+1)}$

$\therefore J^* = L^* + S^*$, $j = \pm l$ or 0

(iv)

3)

i) Fluorine = 9

$\Rightarrow$ Electronic configuration = $1s^2, 2s^2, 2p^5$

ii) Neon = 10

$\Rightarrow$ Electronic configuration = $1s^2, 2s^2, 2p^6$

4) $L = 2$, $S = \frac{1}{2}$

$\therefore J_1 = L + S$ & $J_2 = L - S$

$J_1 = 2 + \frac{1}{2}$ & $J = 2 - \frac{1}{2}$

$\therefore J = \frac{4+1}{2}$ & $J = \frac{4-1}{2}$

$\therefore J_1 = \frac{5}{2}$ & $J = \frac{3}{2}$

$\therefore J = \left[\frac{5}{2}, \frac{3}{2}\right]$