SREE NARAYANA COLLEGE
KANNUR

ACCREDITED BY NAAC WITH 'A' GRADE (AFFILIATED TO KANNUR UNIVERSITY)
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www.sncollegekannur.ac.in

CRITERIA -1

1.1 CURRICULAM PLANNING AND IMPLIMENTATION FILES

BRIDGE COURSE

SREE NARAYANA COLLEGE-KANNUR

BRIDGE COURSE

DEPARTMENT OF ZOOLOGY

I BSC ZOOLOGY-2022-23 BATCH

With a view to enhance the comprehension in subjects we frame a bridge course to first semester B.Sc programme students. The essentials and fundamentals of Higher Secondary level subjects are necessary to understand the subject at an ease and this will lead to a better appreciation of the subject.

OBJECTIVE

The bridge course aims to act as a buffer for the new entrants with an objective to provide adequate time for the transition to hardcore of degree courses. This gives them a breather, to prepare themselves before the onset of courses for first year degree programme. During this interaction of five hours with the faculty and their classmates the students will be equipped with the knowledge and the confidence needed to take on bigger challenges in future.

DESIGN

The course consist of 10 Hrs of interactive sessions and an internal examination designed by the departments which is compulsory for all students. The result will be published in the department Notice Board.

SYLLABUS FOR BRIDGE COURSE

THE LIVING WORLD AND HUMAN REPRODUCTION

I.DIVERSITY IN THE LIVING WORLD

TAXONOMIC CATEGORIES (3hrs)

A. Species
B. Genus
C. Family
D. Order
E. Class
F. Phylum
G. Kingdom

II.TAXONOMICAL AIDS(3hrs)

A. Herbarium
B. Botanical Gardens
C. Museum
D. Zoological Parks
E. Key

ANIMAL KINGDOM(3hrs)

III.BASIS OF CLASSIFICATION

1. Levels of Organisation
2. Symmetry
3. Diploblastic and Triploblastic Organisation
4. Coelom
5. Segmentation
6. Notochord

IV.CLASSIFICATION OF ANIMALS(3hrs)

1. Phylum – Porifera
2. Phylum – Coelenterata (Cnidaria)
3. Phylum – Ctenophora
4. Phylum – Platyhelminthes
5. Phylum – Aschelminthes
6. Phylum – Annelida
7. Phylum – Arthropoda
8. Phylum – Mollusca
9. Phylum – Echinodermata
10. Phylum – Hemichordata
11. Phylum – Chordata
    I. Class – Cyclostomata
    II. Class – Chondrichthyes
    III. Class – Osteichthyes
    IV. Class – Amphibia
    V. Class – Reptilia
    VI. Class – Aves
    VII. Class – Mammalia

V.HUMAN REPRODUCTION(3hrs)

1. Male and female reproductive systems
2. Microscopic anatomy of testis and ovary
3. Gametogenesis
4. spermatogenesis & oogenesis
5. Menstrual cycle
6. Fertilisation
7. embryo development upto blastocyst formation
8. implantation
9. Pregnancy and placenta formation (Elementary idea)
10. Parturition (Elementary idea)
11. Lactation (Elementary idea)

Signature of the Tutor

SREE NARAYANA COLLEGE KANNUR

DEPARTMENT OF ZOOLOGY

BRIDGE COURSE QUESTION PAPER

Section I:

1. **(1 mark)** What is the basic unit of classification in the taxonomic hierarchy?
    - A) Genus
    - B) Species
    - C) Family
    - D) Order
2. **(1 mark)** Which taxonomic category is broader than 'Family'?
    - A) Class
    - B) Genus
    - C) Species
    - D) Order
3. **(1 mark)** A collection of preserved plant specimens is referred to as:
    - A) Botanical Garden
    - B) Herbarium
    - C) Museum
    - D) Zoological Park

Section II: Taxonomical Aids

4. **(1 mark)** What is the purpose of a key in taxonomy?
    - A) To classify animals
    - B) To identify species based on characteristics
    - C) To preserve specimens
    - D) To maintain gardens
5. **(1 mark)** Which of the following is NOT a taxonomical aid?
    - A) Herbarium
    - B) Botanical Garden
    - C) Laboratory
    - D) Zoological Park

Section III: Animal Kingdom

6. **(1 mark)** The presence of a notochord is a defining characteristic of:
    - A) Arthropoda
    - B) Mollusca
    - C) Chordata
    - D) Annelida
7. **(1 mark)** Which of the following phyla is characterized by a soft body and usually has a shell?

- A) Arthropoda
- B) Mollusca
- C) Echinodermata
- D) Cnidaria

Section IV: Classification of Animals

8. **(1 mark)** Which class of Chordata includes frogs and toads?
   - A) Reptilia
   - B) Mammalia
   - C) Amphibia
   - D) Aves
9. **(1 mark)** Organisms in the Phylum Porifera are commonly known as:
   - A) Jellyfish
   - B) Sponges
   - C) Earthworms
   - D) Starfish
10. **(1 mark)** The primary characteristic of the Phylum Arthropoda is:
    - A) Segmented body and jointed limbs
    - B) Radial symmetry
    - C) Soft-bodied
    - D) Presence of a notochord

Section V: Human Reproduction

11. **(1 mark)** The process of sperm formation is known as:
    - A) Oogenesis
    - B) Gametogenesis
    - C) Spermatogenesis
    - D) Fertilization
12. **(1 mark)** In human females, the menstrual cycle is regulated by:
    - A) Testes
    - B) Ovaries
    - C) Adrenal glands
    - D) Pancreas
13. **(1 mark)** What is the primary function of the placenta during pregnancy?
    - A) To produce eggs
    - B) To nourish the fetus
    - C) To store waste
    - D) To regulate hormones
14. **(1 mark)** The stage of embryo development that precedes implantation is:
    - A) Zygote
    - B) Morula
    - C) Blastocyst
    - D) Gastrula
15. **(1 mark)** Parturition refers to:

- A) Fertilization
- B) The birth process
- C) Lactation
- D) Embryo development

16. **(1 mark)** Which of the following marks the end of pregnancy?
    - A) Fertilization
    - B) Implantation
    - C) Parturition
    - D) Menstruation

SREE NARAYANA COLLEGE,KANNUR

DEPARTMENT OF ZOOLOGY

Bridge course marks

2022-23

SL.No	Roll No.	Register No.	Name	Marks out of 20
1	251	SN22CZOR01	Adidev S Lal	20
2	252	SN22CZOR02	Aardra	16
3	253	SN22CZOR03	Aleesha Sajeevan	12
4	254	SN22CZOR04	Anusree P C	15
5	255	SN22CZOR05	Arunima K	16
6	256	SN22CZOR06	Aswana K	09
7	257	SN22CZOR07	Aswini Praveen Kumar	12
8	258	SN22CZOR08	Aswitha V	14
9	259	SN22CZOR09	Diya Sanjeev	12
10	260	SN22CZOR10	Jyothika G	14
11	261	SN22CZOR11	Megha Suvarnan K	15
12	262	SN22CZOR12	Meghna N	17
13	263	SN22CZOR13	Nandana P P	17
14	264	SN22CZOR14	Saniya Manoj K	18
15	265	SN22CZOR15	Saniya N C	16
16	267	SN22CZOR17	Anurag M P	14
17	268	SN22CZOR18	Sidharth T	17
18	269	SN22CZOR19	Ajanya K P	20
19	271	SN22CZOR20	Avani K	20
20	272	SN22CZOR21	Mahika Raveendran	14
21	273	SN22CZOR22	Nandana P	16
22	275	SN22CZOR23	Nandana K	16
23	276	SN22CZOR24	Shalmiya T P	18
24	277	SN22CZOR25	Shivatheertha S	15
25	278	SN22CZOR26	Sneha M	16
26	280	SN22CZOR27	Souparnika Shyjan P	17
27	281	SN22CZOR28	Sredha P	13
28	282	SN22CZOR29	Vismaya M	15
29	283	SN22CZOR30	Vismaya Puthiayedath	16
30	284	SN22CZOR31	Sulthana	17

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF PHYSICS

Bridge Course in Physics for BSc Physics Students

Course Overview: This course aims to provide incoming BSc physics students with a strong foundation in fundamental concepts of physics that are necessary for success in the BSc program.

I) Mathematical Tools for Physics

Session1: Introduction to differential calculus (2 hours)

- Understanding the concept of a derivative
- Derivatives of trigonometric functions
- Derivatives of exponential and logarithmic functions
- Brief introduction to the natural logarithm and exponential base "e"

Session 2: Introduction to Integral Calculus (2 hours)

- Understanding the concept of integration
- Definite vs. indefinite integrals
- Basic trigonometric and algebraic integrals

Session 3: Introduction to Vectors (1 hour)

- Understanding the concept of vectors
- Notation: vector representation, magnitude, and direction
- Addition and subtraction of vectors
- Unit vectors and vector components

Session 4: Vector Operations (1 hour)

- Scalar multiplication of vectors
- Dot product (scalar product) of vectors: definition and properties
- Applications of the dot product: angle between vectors, projection
- Cross product (vector product) of vectors: definition and properties

Session 5: Vector Applications (2 hours)

- Displacement, velocity, and acceleration vectors
- Force vectors and equilibrium
- Geometric interpretations of vector operations

II) Classical Mechanics

Session 6: Introduction to Mechanics (1 hour)

- Definition of mechanics and its importance
- Distinction between kinematics and dynamics
- Scalars vs. vectors: understanding quantities and measurements
- Units and dimensions in mechanics

Session 7: Kinematics (2 hours)

- Definition of displacement, velocity, and acceleration
- One-dimensional motion: equations of motion
- Graphical representations of motion
- Two-dimensional motion: vectors and components

Session 8: Forces and Newton's Laws (2 hours)

- Understanding forces and their effects
- Newton's First Law: Law of Inertia
- Newton's Second Law: F = ma
- Newton's Third Law: Action and reaction

Session 9: Work, Energy, and Momentum (2 hours)

- Definition of work and energy
- Kinetic and potential energy
- Conservation laws

Assessment: Assessment methods include homework assignments, quizzes and tests.

SREE NARAYA COLLEGE, KANNUR

DEPARTMENT OF CHEMISTRY

BRIDGE COURSE IN CHEMISTRY

2023-24

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF CHEMISTRY

Knowledge Assessment Test for First Year BSc students

2023-24

Time: 30minutes Marks: 30

Instructions

This question paper contains 30 MCQ. Answer all questions.Each question carries one mark. No negative marks.

***Section A : Inorganic Chemistry (10 questions) ***

1. What is the oxidation state of Mn in KMnO4?

A) +2
B) +4
C) +6
D) +7

2. Which of the following compounds is an example of a complex?

A) K4[Fe(CN)6]
B) FeCl3
C) NaCl
D) CaCO3

3. What is the coordination number of the central metal atom in [Ni(CN)4]2-?

A) 2
B) 4
C) 6
D) 8

4. Which of the following statements about acid-base theory is false?

A) Arrhenius definition: acids produce H+ ions
B) Bronsted-Lowry definition: acids donate H+ ions
C) Lewis definition: acids accept electron pairs
D) All of the above are true

5. What is the hybridization of the central atom in SF6?

A) sp3d2
B) sp3d
C) sp2
D) sp

6. Which of the following elements is a noble gas?

A) Carbon
B) Oxygen
C) Neon
D) Nitrogen

7. What is the electrochemical process called when a metal is extracted from its ore?

A) Electrolysis
B) Electrorefining
C) Electrowinning
D) Electroplating

8. Which of the following compounds is an example of an ionic solid?

A) CO_2
B) H_2O
C) NaCl
D) CH_4

9. What is the term for the energy required to remove an electron from an atom?

A) Ionization energy
B) Electron affinity
C) Electronegativity
D) Atomic radius

10. Which of the following reactions is an example of a redox reaction?

A) $2Na + Cl_2 \rightarrow 2NaCl$
B) $HCl + NaOH \rightarrow NaCl + H_2O$
C) $2Fe + O_2 \rightarrow 2FeO$
D) All of the above

Section B: Organic Chemistry (10 questions)

11. What is the functional group in the compound CH_3COOH?

A) Aldehyde
B) Ketone
C) Carboxyl
D) Hydroxyl

12. Which of the following compounds is an example of an alkene?

A) CH_4
B) C_2H_4
C) C_2H_6
D) C_6H_{12}

13. What is the term for the process of adding hydrogen to an unsaturated compound?

A) Hydrogenation
B) Dehydrogenation
C) Halogenation
D) Alkylation

14. Which of the following reactions is an example of a substitution reaction?

A) $CH_4 + Cl_2 \rightarrow CH_3Cl + HCl$
B) $C_2H_4 + H_2 \rightarrow C_2H_6$
C) $CH_3OH + HCl \rightarrow CH_3Cl + H_2O$
D) All of the above

15. What is the name of the following compound: $CH_3CH_2CH_2CH_3$?

A) Butane
B) Propane
C) Pentane
D) Hexane

16. Which of the following compounds is an example of an aromatic compound?

A) Benzene
B) Toluene
C) Ethylbenzene
D) All of the above

17. What is the term for the process of forming a new bond between two molecules?

A) Condensation
B) Hydrolysis
C) Polymerization
D) Alkylation

18. Which of the following compounds is an example of an ether?

A) CH_3OCH_3
B) CH_3CH_2OH
C) CH_3COOH
D) CH_3CH_2Cl

19. What is the functional group in the compound C6H5OH?

A) Aldehyde
B) Ketone
C) Hydroxyl
D) Carboxyl

20. Which of the following reactions is an example of an elimination reaction?

A) $CH_4 + Cl_2 \rightarrow CH_3Cl + HCl$
B) $C_2H_4 + H_2 \rightarrow C_2H_6$
C) $CH_3CH_2Cl \rightarrow C_2H_4 + HCl$
D) All of the above

***Section C: Physical Chemistry (10 questions) ***

21. What is the term for the energy of a system?

A) Internal energy
B) Enthalpy
C) Entropy
D) Gibbs free energy

22. What is the change in entropy (ΔS) for a reversible isothermal expansion of an ideal gas?

A) $\Delta S = \Delta H / T$
B) $\Delta S = \Delta H \times T$
C) $\Delta S = n R \ln(V_2/V_1)$
D) $\Delta S = 0$

23. Which of the following statements about Gibbs free energy is true?

A) $\Delta G = \Delta H + T\Delta S$
B) $\Delta G = \Delta H - T\Delta S$
C) $\Delta G = \Delta H \times T\Delta S$
D) $\Delta G = \Delta H / T\Delta S$

24. What is the definition of the heat capacity (Cp) of a substance?

A) Energy required to raise temperature by 1 K
B) Energy required to raise temperature by 1°C
C) Energy required to change state
D) Energy required to change pressure

25. What is the principal quantum number (n) for the 3s orbital?

A) 1
B) 2

C) 3
D) 4

26. Which of the following statements about wave-particle duality is true?

A) Particles exhibit wave-like behaviour
B) Waves exhibit particle-like behaviour
C) Both A and B
D) Neither A nor B

27. What is the name of the equation that describes the energy levels of a hydrogen atom?

A) Schrödinger equation
B) Heisenberg uncertainty principle
C) Bohr equation
D) Dirac equation

28. What is the definition of the rate constant (k) in a chemical reaction?

A) Rate of reaction per unit concentration
B) Rate of reaction per unit time
C) Concentration of reactants
D) Concentration of products

29. Which of the following statements about catalysts is true?

A) Increase reaction rate
B) Decrease reaction rate
C) Change reaction mechanism
D) All of the above

30. What is the name of the equation that describes the temperature dependence of reaction rates?

A) Arrhenius equation
B) Eyring equation
C) Transition state theory
D) Collision theory

I BSc CHEMISTRY
Knowledge Assessment Test 2023
Mark list

	Name	Marks
151	ABIRANJ PRASAD	10
152	ADHEENA RAJENDRAN C	16
153	ADITHYA K	17
154	ADITHYA K V	15
155	ADITHYA.N.V	12
156	AISWARYA DAS KC	18
157	ANAMIKA M P	18
158	ANGHITHA N	15
159	ARSHA V V	20
160	ASWATHI K	23
161	ATHIRA P	21
162	AVANI V	12
163	BHAVYA M	23
164	DEVIKA SANOJ	22
165	DIYA P V	14
166	FATHIMATH SAFA AP	16
167	GOPIKA M P	13
168	HAREENA RATHEESH	21
169	HRISHIGA V P	20
170	KELVIN SUDHEER	ab
171	NANDANA K	15
172	NANDHANA K	12
173	NEMIKA RAMESH	20
174	NIRANJIKA PALLIPRATH	19
175	RHTHWIKA S	18
176	RISHYENDU S	10
177	SHIVAPRIYA.V	11
178	SREELAKSHMI R	14
179	THEERTHA RAJEEV	12
180	THEJASWINI K	8
181	VARSHA C	28
182	VARSHA P	22
183	VISHNU A SUJITH	6
184	VYSHNAV R K	11
185	YAMIKA K K	21
186	ADWAITH M	18
187	AMNA SAMAAHA E P	24

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188	ANAGHA V K	22
189	ANJANA.K	13
190	ANURAG A S	17
191	ARJUN A P	16
192	DHEERAJ K M	5
193	GOPIKA P	16
194	HRIDYA SURESHAN	12
195	KAVYA P	12
196	KRITHIKA R	20
197	NANDA KISHORE A	ab
198	NANDANA S	19
200	SARANG P	10
201	SARANJITH R	6
202	SNEHA S	18
203	VARSHA C	21
204	VISHNUPRIYA PV	20

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SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

BRIDGE COURSE IN B Sc CHEMISTRY- 2023

OBJECTIVES

1. To prepare newly admitted students for degree programme
2. To bridge the gap between knowledge levels apparent in higher secondary and the prescribed Kannur University curriculum
3. To explain basic concepts in Chemistry
4. To help students get equipped with knowledge and confidence in Chemistry

SYLLABUS (15 HOURS)

Physical Chemistry

Unit I- States of Matter

The three states of matter, properties, Inter and Intramolecular interaction, Hydrogen bonding , The gaseous state –gas laws- Boyle's law, Charles law , Avogadro law , Ideal gas equation, Kinetic molecular theory - molecular speeds, Liquid state- Vapour pressure, Surface tension , Viscosity.

Unit II- Chemical Kinetics

Rate of reaction, Effect of concentration of reactant on rate of reaction, Order and Molecularity of elementary reactions, Effect of Temperature on rate of reaction (Arrhenius equation), Effect of catalyst on rate of reaction.

Unit III- Thermodynamics

Types of system, Properties of system, state and path functions, Types of processes, Nature of heat and work, Internal Energy , 1st, 2nd, 3rd and Zeroth laws of thermodynamics, Enthalpy and Entropy , Thermochemistry , Spontaneous process.

Inorganic chemistry

Unit I - Structure of Atom

Atomic models, Quantum numbers , Shape of orbitals , Aufbau principle, Pauli's exclusion principle, Hund's rule.

Unit II -Periodic Table

Classification of Elements and Periodic trends in properties of Elements - a) Atomic radius b) Ionization enthalpy c) Electronegativity d) Elecron gain enthalpy

Unit III -Nature of chemical bonds

Covalent bond Co-ordinate bond and Ionic bond, Hybridization – sp,sp2 , sp3 , sp3 d , VSEPR Theory

Organic Chemistry

Unit I -Fundamentals of Organic Reaction Mechanism

Substrate, Reagents, Reactive intermediates –Formation and stability of Carbocation, Carbanion, and free radical, Electrophiles and Nucleophiles, Curved arrow notations, cleavage of bond-homolytic and heterolytic cleavage, , Types of reactions- Addition, Elimination, Substitution, and Rearrangement. Concept of Aromaticity- Huckell's rule, Heterocyclic compounds

Unit II -Hydrocarbons

Alkanes, Alkenes and Alkynes - Preparation methods and Chemical reactions, Preparation and Chemical properties of aldehydes, ketones, esters, ethers, halides, alcohols and phenols.

Unit III -Stereochemistry of Organic compounds & Biomolecules

Isomerism in organic compounds, R and S , E and Z nomenclature, Biomolecules -Amino acids, Proteins, and Carbohydrates – Classification, structure and Functions, Nucleic Acids- DNA, RNA

SREE NARAYANA COLLEGE, KANNUR

PG AND RESEARCH DEPARTMENT OF CHEMISTRY

BRIDGE COURSE IN B Sc CHEMISTRY- 2023

Timetable

Topic	Teacher	Day	**Time**
Stereochemistry of Organic Compounds	Ms. Sreya P	Monday	**8.30- 9.30**
Fundamentals of Organic reaction Mechanism	Dr.Sumitha Chandran U K	Monday	**3.30-4.30**
States of Matter	Dr. Jitha Kunhikrishnan M	Tuesday	**8.30- 9.30**
Thermodynamics	Aparna N	Tuesday	**3.30-4.30**
Hydrocarbons	Dr. Jithesh K	Wednesday	**8.30- 9.30**
Structure of Atom	Ms. Gethadevi K T	Wednesday	**3.30-4.30**
Periodic Table	Dr. Vinisha Valsaraj P	Thursday	**8.30- 9.30**
Chemical Kinetics	Mr. Mahesh S	Thursday	**3.30-4.30**
Nature of Chemical bonds	Dr. Charishma Ravindran	Friday	**8.30- 9.30**

I BSc CHEMISTRY
Bridge Course Evaluation 2023
Mark list

	Name	Marks(30)
151	ABIRANJ PRASAD	14
152	ADHEENA RAJENDRAN C	22
153	ADITHYA K	24
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191	ARJUN A P	120
192	DHEERAJ K M	9
193	GOPIKA P	20
194	HRIDYA SURESHAN	19
195	KAVYA P	17
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203	VARSHA C	26
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Report

The Bridge Course in Chemistry was designed to refresh and enhance the knowledge of students in chemistry, focusing on fundamental concepts in inorganic and organic chemistry. The course consisted of 15 hours of instruction, covering topics such as atomic structure, periodic table, chemical bonding, reaction mechanisms, hydrocarbons, functional groups, stereochemistry, and aromatic compounds.

Results and Analysis

The overall performance of the students was satisfactory, with an average score of 75%. The results indicated that:

- 80% of students demonstrated a clear understanding of atomic structure and periodic table.
- 70% of students accurately identified and analysed reaction mechanisms.
- 60% of students recognized and classified hydrocarbons, functional groups, and aromatic compounds.

Recommendations

Based on the course evaluation, the following recommendations are made:

1. Increase the duration of the course to allow for more in-depth coverage of topics.
2. Incorporate more practice problems and case studies to enhance student understanding.
3. Provide additional resources, such as online tutorials or textbooks, to support student learning.

Conclusion

The Bridge Course in Chemistry successfully refreshed and enhanced the knowledge of students in chemistry, meeting its intended objectives. The course provided a solid foundation for further studies in chemistry and related fields.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

BRIDGE COURSE IN BOTANY

About

The bridge course is a pragmatic, proactive and progressive step in view of helping students. This will upgrade the basic knowledge and understanding of the students in the subject. A Bridge course is a preparatory course designed to enable the students for preparing the intellectual challenges of university education before the commencement of the first semester classes. It aims to close the gap between two levels of competence and inculcates skills and knowledge to enhance quality of higher education. Course is aimed to act as a buffer for the new admitted students.

Objectives

1. To bridge the gap between the course contents of different syllabuses.
2. To strengthen the base of students in basic and fundamentals of Botany.
3. To adapt the university semester systems and the campus.
4. To bring back the slow learners who have fallen behind and failed to utilize the best of their ability.

Duration: - The course consists of 10 hrs in the beginning of academic year

Syllabus

Module 1: A general introduction about the Course Structure 1hrs

Credit and Mark distribution, and Scheme of theory and practical examinations. Career prospectus in the field of Botany. Classroom procedures. laboratory ethics and safety measures. Assignments, Seminars, Project, Viva, study tour, Visit to Botanical Garden.

Module 2: Fundamentals of Botany 4hrs

Botany – Basic Concepts, Biological classification: Difference between Prokaryotic and Eukaryotic cells. Plant Kingdom. Cell -The unit of Life. Anatomy of flowering plants: Plant body -Tissues, Morphology and Sexual reproduction in flowering plants: Flower - the reproductive organ, Basic Physiology: Photosynthesis and respiration in Higher Plants.

Module 3: Application: Biotechnology 2.5hrs

Definition, Principles, Recombinant DNA technology, DNA Cloning, Vectors, applications in Agriculture, Medicines.

Module 4: Environment and its conservation 2.5 hrs

Organisms, Biotic and Abiotic Factors, Concept of ecosystem, Types of Ecosystem, Biodiversity, Types of Biodiversity, Loss of Biodiversity and its significance.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2018-19

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. Describe the basic differences between Prokaryotic and Eukaryotic cells.
2. Explain the concept of plant tissue and its types.
3. Define biodiversity and explain its types.
4. Explain laboratory ethics and safety measures.
5. Discuss the importance of conservation of biodiversity.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2019-20

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. Describe the basic differences between Prokaryotic and Eukaryotic cells.
2. Describe the process of DNA cloning and its applications.
3. Describe the concept of ecosystem and its components
4. Explain the concept of ecosystem services.
5. Describe the structure and function of plant cells.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2020-21

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. What is the significance of photosynthesis in Higher Plants?
2. What are vectors in recombinant DNA technology?
3. Explain the principles of recombinant DNA technology.
4. What are the applications of biotechnology in medicine?
5. Describe the career prospects in the field of Botany.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2021-22

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. Describe the career prospects in the field of Botany.
2. Define sexual reproduction in flowering plants.
3. Discuss the loss of biodiversity and its significance.
4. Explain the morphology of flowering plants.
5. Define Botany and explain its importance.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2022-23

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. Describe the structure of a flower as the reproductive organ of flowering plants.
2. Discuss the importance of biotechnology in agriculture.
3. What are abiotic factors in an ecosystem?
4. Explain the concept of biological classification.
5. Explain the significance of study tours and botanical garden visits.

SREE NARAYANA COLLEGE, KANNUR

DEPARTMENT OF BOTANY

1 st Semester B.Sc. Botany test

BRIDGE COURSE: 2023-24

Time: 1 Hour **Total Marks: 10**

Short Answer Questions (2 marks each)

1. Describe the basic differences between Prokaryotic and Eukaryotic cells.
2. Discuss the importance of biotechnology in agriculture.
3. Discuss the loss of biodiversity and its significance.
4. What are the applications of biotechnology in medicine?
5. Discuss the importance of conservation of biodiversity.

. DEPARTMENT OF ECONOM

S.N. COLLEGE, KANNUR

BRIDGE COURSE IN ECONOMICS 2023

INTRODUCTION TO ECONOMICS

For 1st year BA students

POST GRADUATE DEPARTMENT OF ECONOMICS
SREE NARAYANA COLLEGE, KANNUR

BRIDGE COURSE IN ECONOMICS 2023

NAME OF BRIDGE COURSE: INTRODUCTION TO ECONOMICS

Max. Hours: 10

SYLLABUS

The Objective of this course is to introduce economics and acquaints them with the basic concepts of economics to enhance student's understanding towards the subject before the classes start in full swing.

Module -1: Introduction to Economics

Meaning of Economics- Definitions of Economics (Wealth, Welfare, Scarcity, and Growth definitions) - Basic Economic problems-Micro economics and Macroeconomics- Economic models-Positive Economics and Normative Economics- Inductive and Deductive methodology

Module – 2: Demand and Supply

Meaning of Demand, determinants, and law of demand – Supply: Meaning, determinants and law of supply. Elasticity of demand- Concept of utility-Marginal utility, Total Utility

Module-3: Production

Meaning of Production - Production function - Long run and short run- production possibility curve- **Cost:** Different types of cost-Fixed cost, Variable cost, Average cost, Marginal cost, Total cost.

Module-4: Market

Meaning of market- Various market forms-Perfect Competition-Features-Monopolistic Competition-Monopoly-Oligopoly

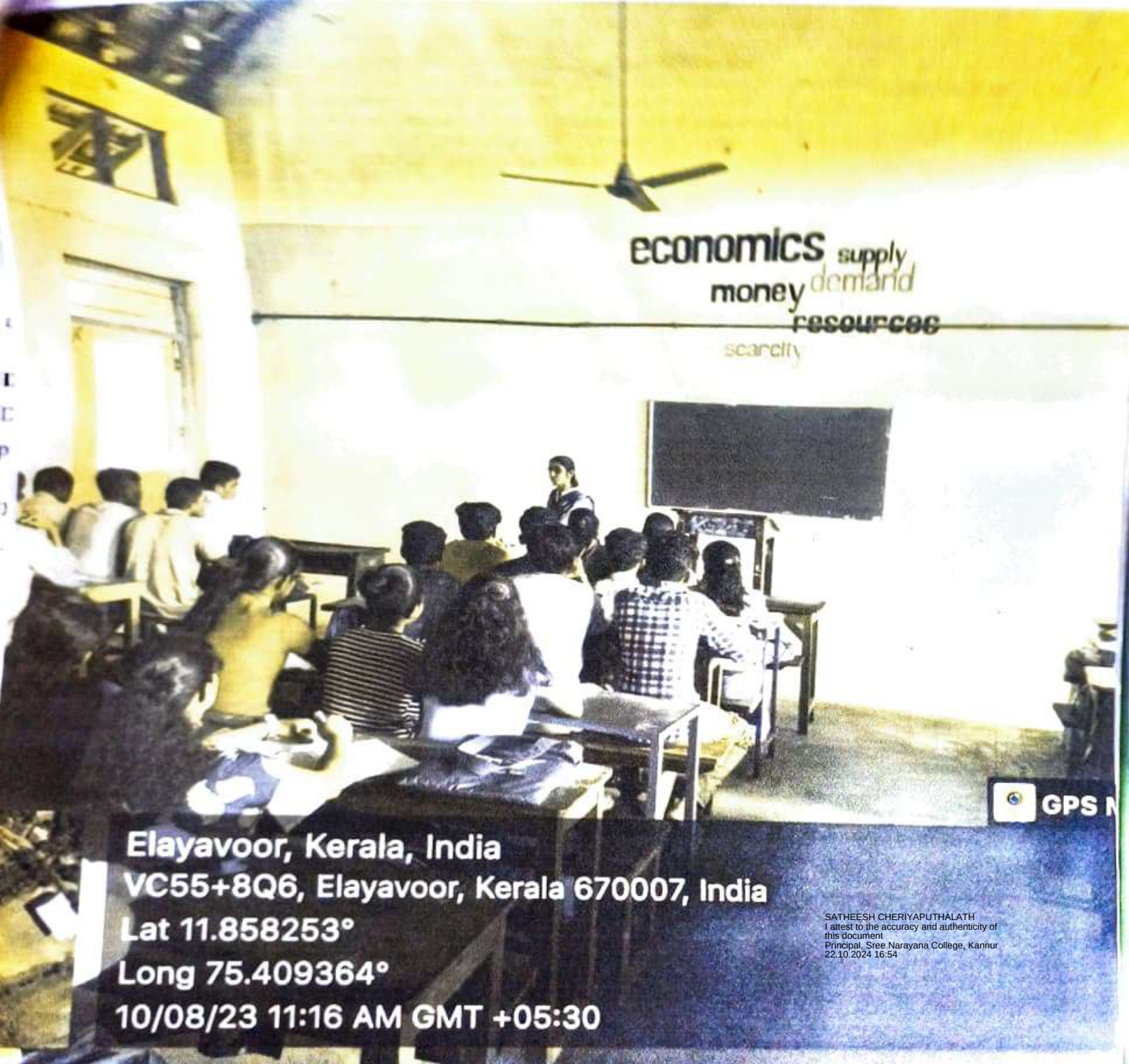
References

Koutsoyiannis, A. (1979). Modern Micro Economics, Bloomsbury Publishers, India Private Limited.

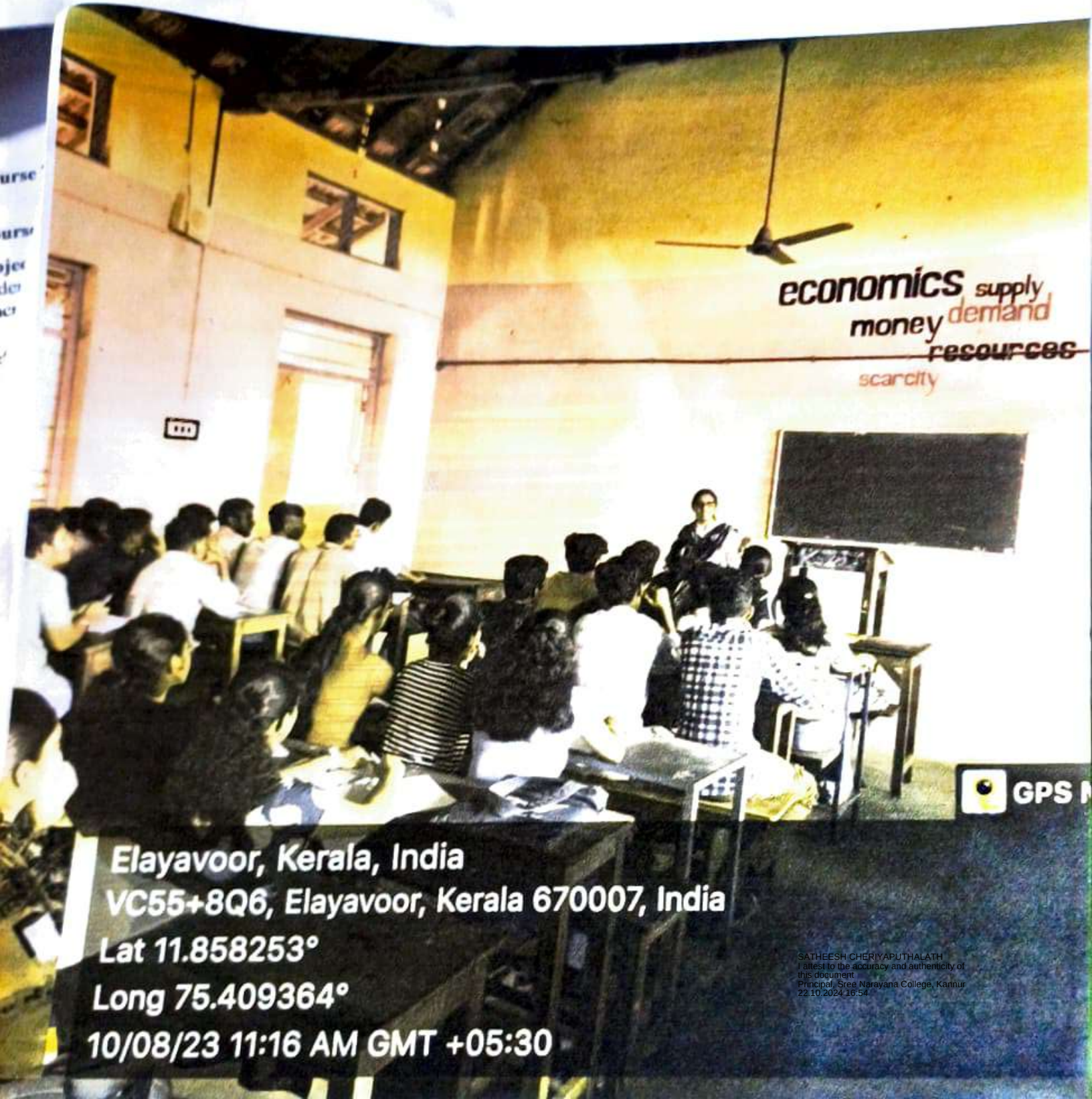
Ahuja, H. L. (2019). Advanced Economic Theory. S. Chand & Company Limited. New Delhi.

Dwivedi, D.N. (2016). Micro Economic Theory and Applications. Vikas Publishing House Pvt. Ltd.

Vijaya Kumar, V.K. (2019.) Introduction to Micro and Macro Economics, PlusXI, PlusXII



SATHEESH CHERIYAPUTHALATH
I attest to the accuracy and authenticity of this document
Principal, Sree Narayana College, Kannur
22.10.2024 16:54



Bridge Course Report

The objective of bridge course is to act as a cushion to improve and orient the subject knowledge keeping in mind the students coming from different streams. This gives them an overview and acquaints them with the basics of the subject before the classes start in full swing. With this objective in mind, the bridge course was organized by the Department of Economics, to help the students who are studying the paper for the first time. It was one week course which covered the basics and general concepts of Economics to enhance student's understanding towards the subject. Students participated enthusiastically and majority of the students felt that the course improved their basic understanding and will help in developing the interest in the subject during regular classes. Approximately 30 percent of the students who had taken this course had not studied economics before and all of them had given very positive feedback that they would like to attend such courses even in future. The main purpose of the course was to bridge the gap between the students who had studied economics in their higher secondary and those who had not and also to revise certain concepts which the students need to revise. The course fulfilled its purpose well.

POST GRADUATE DEPARTMENT OF ECONOMICS
SREE NARAYANA COLLEGE, KANNUR

BRIDGE COURSE-2022 Admission

Course Title: Introduction to Microeconomics

Course Duration: 1 week (10 Hours)

Course Description: This course serves as a foundation for undergraduate Economics students with varying levels of prior knowledge. It covers essential microeconomic principles, theories, and applications, providing a solid base for advanced studies in economics.

Day 1: Introduction to Microeconomics

Definition and scope of microeconomics-Basic economic concepts: scarcity, opportunity cost, production possibilities frontier

Day 2: Demand, Supply, and Market Equilibrium

Law of demand and law of supply-Determinants-Market equilibrium and price determination-Shifts in demand and supply curves

Day 3: **Elasticity and Consumer Behavior**

Price elasticity of demand and supply-Income elasticity and cross-price elasticity-Utility theory and consumer choice

Day 4: Production, Costs, and Perfect Competition

Production functions and isoquants-Cost functions: total, average, and marginal costs-Short-run and long-run production decisions in a perfectly competitive market

Day 5: Market Structures and Market Failures

Monopoly, monopolistic competition, and oligopoly-Externalities and public goods-Government intervention and regulation

References

Varian, H. A. (1993). *Intermediate microeconomics* (3rd ed.). New York, NY: W. W. Norton & Company.

Koutsoyiannis, A. (1979). *Modern Micro Economics*, Bloomsbury Publishers, India Private Limited.

Ahuja, H. L. (2019). *Advanced Economic Theory*. S. Chand & Company Limited. New Delhi.

Dwivedi, D.N. (2016). *Micro Economic Theory and Applications*. Vikas Publishing House Pvt. Ltd.

Vijaya Kumar, V.K. (2019). *Introduction to Micro and Macro Economics*. PlusXI, PlusXII

Assessment:

Daily Quizzes to assess understanding of concepts

Final exam assessing overall comprehension of the course material

Production functions and isoquants-Cost functions: total, average, and marginal costs-Short-run and long-run production decisions in a perfectly competitive market

Session 9-10: Market Structures and Market Failures (2 hours)

Monopoly, monopolistic competition, and oligopoly-Externalities and public goods-Government intervention and regulation

Methodology:

The course was conducted through a combination of lectures, interactive discussions, and practical exercises. Real-world examples and case studies were integrated to illustrate theoretical concepts and their applications. In addition, quizzes were administered to gauge the understanding of the material covered.

Achievements:

Participants displayed a notable improvement in their grasp of microeconomic principles, as evidenced by their performance in quizzes and interactive discussions.
The bridge course effectively addressed the diverse levels of prior knowledge among students, ensuring a uniform foundation for further studies in economics.

Feedback:

Student feedback was overwhelmingly positive, with participants expressing appreciation for the clarity of instruction and the practical relevance of the content covered. They particularly valued the real-world examples, which helped solidify their understanding of microeconomic concepts.

The Introduction to Microeconomics bridge course provided undergraduate students with a strong foundation in microeconomic principles within the condensed time frame of 10 hours. The course structure and methodology proved effective in accommodating varying levels of prior knowledge and ensuring a comprehensive understanding of the subject matter.

Objective Type Review Questions:

1. What is the primary concern of economics? a) Maximizing profits b) Allocating scarce resources c) Maximizing utility d) Minimizing costs
2. Which of the following is NOT a basic economic system? a) Capitalism b) Socialism c) Oligopoly d) Mixed economy
3. The law of demand states that: a) There is a direct relationship between price and quantity demanded. b) There is an inverse relationship between price and quantity demanded. c) Demand increases with price. d) Quantity demanded remains constant regardless of price changes.
4. What is the equilibrium price? a) The price at which quantity demanded equals quantity supplied. b) The maximum price set by the government. c) The price set by producers in a monopoly. d) The price at which demand exceeds supply.
5. What does GDP stand for? a) Gross Domestic Product b) General Domestic Product c) Gross Demand Price d) Global Domestic Production
6. What is inflation? a) A decrease in the general price level of goods and services b) An increase in the general price level of goods and services c) A measure of unemployment d) A measure of economic growth
7. What is fiscal policy? a) Government control over money supply b) Government spending and taxation policies c) Central bank's control over interest rates d) Regulation of international trade
8. Who controls monetary policy in most countries? a) The President b) The Prime Minister c) The Central Bank d) The Treasury Department
9. What is the main goal of international trade? a) Reducing unemployment b) Maximizing government revenue c) Achieving economic efficiency d) Promoting comparative advantage
10. Which economic indicator measures the overall level of prices in an economy? a) GDP b) CPI (Consumer Price Index) c) GNP (Gross National Product) d) PPF (Production Possibility Frontier)
11. What does a budget deficit signify? a) Government expenditure exceeding government revenue b) Government revenue exceeding government expenditure c) Balanced government budget d) Increase in national savings
12. What is the primary tool of monetary policy? a) Taxation b) Government spending c) Open market operations d) Fiscal deficit
13. What is the main determinant of elasticity of demand? a) Price b) Income c) Substitutability d) Government regulations
14. What does the law of supply state? a) There is an inverse relationship between price and quantity supplied. b) There is a direct relationship between price and quantity supplied. c) Supply increases with price. d) Quantity supplied remains constant regardless of price changes.
15. Which of the following is an example of a capital resource? a) Land b) Labor c) Money d) Machinery
16. What is the opportunity cost of a decision? a) The explicit cost of the decision b) The total cost of the decision c) The value of the next best alternative foregone d) The profit earned from the decision
17. What is the main function of the central bank? a) Regulate commercial banks b) Set fiscal policy c) Control government spending d) Distribute social welfare benefits
18. What is a mixed economy? a) An economy where the government owns all resources b) An economy where resources are owned and controlled by the private sector c) An economy where

resources are owned and controlled by both the government and the private sector d) An economy where resources are allocated through central planning

19. Which of the following is NOT a factor of production? a) Land b) Labor c) Capital d) Profit
20. What is the main goal of a firm in a market economy? a) Maximizing social welfare b) Maximizing profits c) Minimizing costs d) Maximizing government revenue
21. Which of the following is an example of a positive economic statement? a) The government should increase taxes on cigarettes to reduce smoking. b) Unemployment is at 5%. c) Everyone should have access to free healthcare. d) Pollution is harmful to the environment.
22. What is the primary function of the price mechanism in a market economy? a) Allocate resources efficiently b) Maximize government revenue c) Control inflation d) Minimize consumer surplus
23. What is the main purpose of international trade? a) Achieve self-sufficiency b) Promote economic growth c) Limit competition d) Reduce consumer choices
24. Which of the following is an example of a positive externality? a) Pollution from a factory b) Education benefits society as a whole c) Traffic congestion d) Healthcare costs
25. What is the main function of financial markets? a) Allocate resources efficiently b) Provide government subsidies c) Regulate commercial banks d) Control interest rates

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