

SARDAR PATEL UNIVERSITY
FIRST YEAR B.Sc. (Second Semester)
BIOLOGY (ZOOLOGY) FSBI-201
Chordate Biology and Physiology
(EFFECTIVE FROM JUNE 2010)
(2 CREDITS, TWO PERIODS PER WEEK)
(TotalMarks-100, Internal-30marks, External-70)

UNIT 1

Outline classification of Chordata with examples

Type study of Lamprey-Systematic position, External Structure, Digestive system, Respiratory system, Excretory system, Nervous system, Reproductive system, Fertilization and development, Significance of (Ammocoete larva)

Type of scales in fishes-Placoid, Cycloid, Ganoid and Cosmoid with examples

Migration of Fishes with examples- Types with examples

Parental care in fishes-Types and examples

UNIT 2

Parental care in amphibians-Types and examples

Migration of birds- Types, causes and significance

Flight adaptations

Type of feathers-Contour, Filoplume, Down, Semiplume, Bristle, Flight feather and Powder down feather

UNIT 3

Type study of Rabbit- External features, Digestive system-Buccal digestion, Type and function of salivary glands, Composition of salivary juice, Gastric digestion, Composition of gastric juice, Intestinal digestion, functions of liver, Respiratory system with mechanism of respiration, Structure and working of heart, Arterial and Venous system,

UNIT 4

Introduction of Blood Physiology- Composition and function of Blood, Type of blood cells(White blood cell-types(Agranular & Granular), Red blood cell, Platelet) and their function, structure and function of haemoglobin.

Excretion- Structure and function of kidney, Physiology of excretion

LIST OF REFERENCE BOOKS:

- 1) Modern Textbook of Zoology (Vertebrates)- R.L.Kotpal
- 2) Vertebrate Zoology- Jordan and Verma
- 3) Biology of Animals(Vertebrate)- Ganguly, Sinha and Adhikari
- 4) Textbook of Vertebrate Zoology –G.S. Sandhu, H. Bhaskar
- 5) Animal Physiology-K.A. Goyal and K.V. Shastri
- 6) Principles of Anatomy and Physiology-Tortora and Derrickson
- 7) A Textbook of Chordates-A. Thangamani, S. Prasannakumar, L.M. Narayanan and N. Arumugam
- 8) Textbook of Vertebrate Zoology-Prasad, S.N. Kashyap
- 9) Fish and fisheries of India- V.G. Jhingran

SARDAR PATEL UNIVERSITY
FIRST YEAR B. Sc. (Second Semester)
BIOLOGY (BOTANY) FEBI-202
Thallophyta, Bryophyta and Pteridophyta
(Effective From June 2010)
(2 CREDITS, TWO PERIODS PER WEEK)
(Total Marks-100, Internal-30 marks, External-70 marks)

Unit -1

Algae-General Characters

Life cycle of following examples with characters of each group in brief

Cyanophyta (Blue Green Algae) : Nostoc

Chlorophyta (Green Algae) : Volvox, Zygnema

Phaeophyta (Brown Algae) : Ectocarpus

Rhodophyta (Red Algae) : Batrachospermum

Economic Importance of Algae

Unit -2

Fungi- General Characters

Life cycle of Rhizopus, Yeast, Penicillium

Edible mushrooms- Button Mushroom (Agaricus bisporous), Paddy straw mushroom (Volvariella), Oyster/Dhingri mushroom (Pleurotus), Nutritive value, Medicinal value of mushrooms

Lichens : Types – Foliose, Fruticose and Crustose, Internal structure of thallus, Economic Importance of Lichens

Economic Importance of Fungi

Unit -3

Bryophyta - General Characters

Life cycle of

Riccia- Occurrence, thallus morphology, Internal structure of thallus, Vegetative and Sexual reproduction, sex organs-antheridium and archegonium, fertilization, Sporophyte, Spores (Morphology, dispersal, germination)

Anthoceros - Occurrence, morphology, Internal structure of thallus, Vegetative and Sexual reproduction, structure of mature antheridium and archegonium, Sporophyte structure, dehiscence, of capsule, Spore germination

Funaria - Occurrence, Plant morphology, Structure of antheridial branch, mature antheridium, archegonial branch, mature archegonium, fertilization, Sporophyte plant (foot, seta, capsule) detailed structure of capsule with diagram, Spore dispersal mechanism and germination

Unit -4

Pteridophyta - General Characters

Distribution, study of vegetative and reproductive parts of

Lycopodium (Sporophyte plant, stem internal structure, strobilus, gametophyte)

Equisetum (Sporophyte plant, stem internal structure, cone, gametophyte)

Nephrolepis (Sporophyte plant, stem internal structure of fern sorus, sporangium, prothallus)

Suggested Reference Books:

1. Gangulee S. C. Das K. S. Dutta C.D, and Kar A.K College Botany Vol. I
2. Smith. G. M – Cryptogamic Botany Vol.I
3. Vasistha.B. R – Botany for Degree students –Vol.I Algae
4. Alexopoulos. C.J – Introductory Mycology
5. Bessey. E.A – Morphology and Taxonomy of Fungi
6. Dubey H. C. –An Introduction to Fungi
7. Gangulee, S. C. Das, K. S. Dutta, C. D. and Kar, A. K. - college Botany Vol.1
8. Parihar N. S. -Bryophyta
9. Prem Puri –Bryophyta
10. Parihar N. S. –PteridoPhyta
11. Smith G.M. –Cryptogamic Botany Vol.I and II
12. Vasishtha, B. R. –Botany for Degree Students: Vol.II Fungi
13. Vasishtha, B. R. –Botany for Degree Students: Vol.III Bryophyta
14. Vasishtha, P. C. –Botany for Degree Students: Vol.VI Pteridophyta Fungi
15. Gangulee S. C. Das, K. S. Dutta C.D. and Kar A.K College Botany Vol. II and III

SARADAR PATEL UNIVERSITY
FIRST YEAR B. Sc. (SECOND SEMESTER)
BIOLOGY Practical (FSBI-203)
EFFECTIVE FROM JUNE 2010.
(2 Credits, Four hours per week)
(Total Marks-100, Internal – 30 Marks, External – 70 Marks)

Part I Zoology Practicals.

1. Preparation of Haemin crystals.
2. Detection of Blood group.
3. Study of Blood cells (Through charts/ Permanent slides)
4. Classification of Protochordata and Vertebrates (Pisces and Amphibia) – Amphioxus, Lamprey, Shark, Electric Ray, Sting Ray, Sea Horse, Ichthyophis and Toad.
5. Classification of Reptilia, Aves and Mammalia – Turtle, Calotes, Chamaeleon, Cobra, Alligator, Cuckoo, Wood Pecker, Shrew, Bat and Rabbit.
6. Study of General Viscera, Digestive system and Urinogenital system of Rat.
7. Study of Histological slides of mammalian Tissues/Organs – T.S of Stomach, Small Intestine, Liver, Pancreas, Testis, Ovary and Spinal Cord.
8. Collection and Types of Feathers.
9. Parental care in Fishes (Chart/Specimen).
10. Parental care in Amphibians (Chart/Specimen).
11. Field Study/Study tour.

Part II Botany Practicals.

1. Study of Algae – Nostoc, and Volvox, Zygnema. (Temporary mounting and P.S)
2. Study of Ectocarpus and Batrachospermum. (Temporary mounting and P.S)
3. Study of Yeast and Penicillium. (Temporary mounting and /P.S)
4. Study of Rhizopus. (Temporary mounting and P.S), Mushroom (Specimen)
5. Study of Lichens (Permanent Slides and Specimen)
6. Study of Riccia (Thallus Morphology, Internal structure and sex organs with P.S)
7. Study of Anthoceros (Thallus Morphology, Internal structure and sex organs with P.S)
8. Study of Funaria (Thallus Morphology, Internal structure and sex organs with P.S)
9. Study of Fern (Plant Morphology, Mounting of Sporangia)
10. Study of lycopodium (Stem T.S, Cone structure with help of specimen and P.S)
11. Study of Equisetum (Stem T.S, Cone structure with help of specimen and P.S)

SARDAR PATEL UNIVERSITY
FIRST YEAR B. Sc. (SECOND SEMESTER)
EFFECTIVE COURSE FSELE201-BIOLOGY
EFFECTIVE FROM JUNE-2010
(2 Credits, Two hours per week)
(Total Marks-100.Internal-30 Marks, External-70 Marks)

UNIT-1

Animal Biology Branches and Behaviour

- A) Introduction to various branches of zoology: Physiology, Cell Biology, Biochemistry, Biostatistics, Molecular Biology, Biotechnology, Biophysics, Entomology, Immunology.

Introduction to sub division of zoology based on animal studies

- B) Animal Behaviour – Classification of behavioural patterns and Analysis of behaviour with common Examples

UNIT-2 Animal Physiology

- (a) Nutrition in animals- Type of Nutrition (Autotrophic, Heterotrophic- Holozoic, Saprozoic, Osmotrophic, Parasitic, Nutrition), Type of Digestion (Intracellular.)
- (b) Circulation- Type of Hearts (Neurogenic and Myogenic Heart) open and close circulation
- Blood-Composition and Function

UNIT-3

Diversity of life forms in plant kingdom (Important Character of each group and brief Description of each example)

Virus	:Bacteriophage
Bacteria	:Morphological forms only
Algae	:Spirogyra
Fungi	:Mushroom, Mucor
Bryophyte	:Riccia
Pteridophyte	:Fern
Angiosperm	:Monocot-Maize, Dicot-Sunflower
Gymnosperm	:Cycas

UNIT-4

Biotic Interactions:

- Positive Interactions (Symbiosis) With suitable Examples.
 - Commensalism
 - Mutualism
- Negative Interactions with suitable example
 - Parasitism
 - Predation
 - Antibiosis
- Ecological Adaptations in Plants: Morphology of Hydrophytes and Xerophytes

Suggested Reference Books:

1. Modern Textbook of Zoology(Vertebrates)-R.L.Kotpal
2. Invertebrate Zoology- Jordan and Verma
3. Animal Physiology- K.A Goyal and K.V Shastri
4. Animal behaviour – Reena Mathur
5. Gangulee S. C. , Das , K.S. Dutta,C.D., and A.K. college Botany Vol-1
6. Smith, G. M.- Cryptogamic Botany Vol-1
7. Vaishtha B R- Botany for Degree students- vol-1algae
8. Alexopoulos C J- introduction Mycology
9. Bessy, E. A- Morphology and taxonomy of fungi
10. Dubey. H. C- An introduction to Fungi
11. Gangulee,S. C.- das, K.S. Dutta, C.D. and Kar College Botany Vol-1
12. Parihar N. S. - Bryophyta
13. Prem puri – Bryophyta
14. Parihar N. S.- pteridophyta
15. Smith,G. M.- Cryptogamic Botany Vol-1 and 2
16. Vasishtha B. R. – botany for degree students vol-2 fungi
17. Vasishtha B. R. – botany for degree students vol-3 bryophyta
18. Vasishtha B. R. – botany for degree students vol-4 Pteridophyta
19. Gangulee S. C., Das,K.S, Dutta, C.D. and kar, A. K. college botany vol 2&3

SARDAR PATEL UNIVERSITY
F.Y.B.Sc. [Semester-II]
Syllabus of FSCH-201 (ORGANIC CHEMISTRY)
(02 Credits)
(Effective from June-2010)
Total Marks: 100 [70+30]

UNIT 1 ALKANES AND CYCLOALKANES

[07 hrs]

Introduction, Preparation of Alkanes, The Grignard reagent: An organometallic compound, Coupling of alkyl halides with organometallic compounds, Mechanism of halogenations, Orientation of halogenations, Stability of free-radicals, Nomenclature of selected bicyclic and tricyclic systems, Reactions, reactions of small ring compounds, Baeyer strain theory, Heat of combustion & relative stabilities of cycloalkanes, Orbital picture of angle strain.

UNIT 2 ALKENE AND ALKYNE

[08 hrs]

Dehydrohalogenation of alkyl halide, The E2 mechanism, Evidence for the E2 mechanism. Evidence for the E2 mechanism. Absence of hydrogen exchange, Evidence for the E2 mechanism. The element effect, The E1 mechanism, Heat of hydrogenation & Stability of alkene, Electrophilic addition; Mechanism Electrophilic addition; Orientation & reactivity, Mechanism of addition of halogen Halohydrin formation, Addition of alkene; Dimerization, Addition of alkane; Alkylation Oxymercuration-demercuration, Hydroboration-oxidation, Free-radical addition. Mechanism of peroxide-initiated addition of HBr, Orientation of Free-radical addition, Hydroxylation Ozonolysis, Preparation of alkynes, Hydration of alkynes. Tautomerism Acidity of alkynes, Reaction of metal acetylides, Analysis of alkynes.

UNIT 3 ALKYL AND ARYL HALIDES

[07 hrs]

Homolytic and Heterolytic chemistry, Classification, Preparation, Reaction: Nucleophilic aliphatic substitution, S_N2 Reaction: Mechanism & kinetics, S_N2 Reaction: Reactivity & steric hindrance, S_N1 Reaction: Mechanism & kinetics, Carbocation, Structure of carbocation, Relative stability of carbocations, Stability of carbocations, Stability of carbocation: polar effect, Rearrangement of carbocation, S_N2 Vs S_N1 , Reaction, Low reactivity aryl and vinyl halides, Structure of aryl and vinyl halides, Nucleophilic aromatic substitution, Bimolecular displacement for nucleophilic aromatic substitution, Reactivity in nucleophilic aromatic substitution, Orientation in nucleophilic aromatic substitution, Electron withdrawal by resonance, Elimination-Addition mechanism, Benzynes, Problems.

UNIT 4 BENZENE AND THEIR DERIVATIVES

[08 hrs]

Aromatic character. The Huckel $[4n+2]$ rule, Effect of substituent group. Determination of relative reactivity, Classification of substituent group, Mechanism of nitration, Mechanism of sulphonation, Mechanism of Friedel-Craft alkylation, Preparation of ketones by Friedel-Craft acylation, Mechanism of halogenations, Reactivity and Orientation, Theory of reactivity, Theory of orientation, Electron release via resonance, Effect of halogen on electrophilic substitution Aromatic-Aliphatic hydrocarbon, Structure & Nomenclature of arenes & their derivatives, Preparation of alkyl benzenes, Limitation of Friedel-Craft alkylation, Reaction of alkylbenzene, Oxidation of alkylbenzenes, Halogenation of alkylbenzene: ring Vs side-chain, Side-chain halogenation of alkylbenzene, Preparation of alkenylbenzenes, Reactions of alkenylbenzenes.

Reference Book:

1. Organic Chemistry by Morrison & Boyd 6th Edition.
2. Organic Chemistry by Paula Yurkanis Bruice, Pearson Education Asia.

SARDAR PATEL UNIVERSITY
F.Y.B.Sc. [Semester-II]
Syllabus of FSCH-202 (PHYSICAL CHEMISTRY)
(02 Credits)
(Effective from June-2010)
Total Marks: 100 [70+30]

UNIT 1 Gaseous State [08 hrs]

Kinetic Molecular Theory of Gases, Deviation of Real Gases from Ideal Behaviour, Effect of Temperature and Explanation for the Deviations, Van der waal's Equation of State, Discussion of Van der Wall's Equation, Boyle Temperature, Critical Constant of Gas, Determination of Critical Temperature, Pressure and Volume, Van der waal's Equation and the Critical States, Numerical Problems.

UNIT 2 The Liquid State [07 hrs]

Vapour Pressure, Isoteniscopic method, Surface Tension and Surface Analysis, Effects of Temperature on Surface Tnesion, Capillary rise method an Double Capillary rise Method, Viscosity, The Ostwald's Viscometer Method, Effects of Temperature on Viscosity, Reynolds Number, Refractive Index and its Measurements

UNIT 3 Chemical Thermodynamics [08 hrs]

Terminology of Thermodynamics, Work and Heat, Internal Energy and First Law of Thermodynamics, Measurements of ΔE and ΔH , Hess's Law and its Applications, Heat Capacity and Temperature Dependence of ΔH , Numerical Problems.

UNIT 4 Chemical Kinetics [07 hrs]

Differential Rate Laws, Integrated Rate Laws, Experimental Determination of Rate Laws, Reaction Mechanism and Elementary Process, Mechanism and Rate Laws, Reaction Rates and Equilibria, Temperature Effects, Numerical Problems.

Reference Book:

1. University Chemistry By Bruce H Mahan 4th Edition, Narosa Publishing House.
2. Principles of Physical Chemistry, Puri, Sharma and Pathania, 29th Edition S. Chand and Company.
3. Physical Chemistry By G. M. Barrow
4. Essential of Physical Chemistry by Bahl, Bahl and Tuli, 25th Edition, S. Chand and Company.

SARDAR PATEL UNIVERSITY
F.Y.B.Sc. [Semester-II]
Syllabus of FSCH-203 (Chemistry Practicals)
(02 Credits)
(Effective from June-2010)
Total Marks: 100 [70+30]

[A] Volumetric Analysis:

1. To determine the amount of carbonates and bicarbonates in mixture.
2. To determine the molarity and gm/lit of NaOH and Na₂CO₃ in mixture.
3. To determine amount of Fe⁺² by K₂Cr₂O₇ using diphenyl amine as an internal indicator.

[B] Organic Spotting:

Benzoic acid, Salicylic acid, β-Naphthol, p-nitroaniline/m-nitroaniline, Acetanilide, Urea, Naphthalene, p-dichlorobenzene, m-dinitrobenzene, Acetone, Benzaldehyde, CHCl₃, CCl₄, Methanol, Toluene, Ethylacetate, Aniline, Benzamide, Nitrobenzene. The above compounds must be characterized by M.P. / B.P.

Reference Book:

1. Vogel's textbook of quantitative chemical analysis, 6th Edition, J Mendham, R C Denney, J D Barnes, M J K Thomas.
2. Practical Chemistry, OP Pandey, D N Bajpai, S Giri.
3. An Advanced Course in Practical Chemistry, Ghoshal, Mahapatra, Nad.

SARDAR PATEL UNIVERSITY
Subject
: Physics:
Second Semester
Course No. FSPH-201
(Effective from June – 2010)
Classical Mechanics & Relativity
(Two Credit Course – 2 Hours per week)

UNIT: 1 Vector algebra

Introduction to scalars and vectors, Surface area as a vector, Scalar triple product, Reciprocal vectors, Vector triple product, Gradient of a scalar point function, Divergence of a vector point function, Curl of a vector point function Irrotational and solenoidal vectors, Gauss Theorem, Greens Theorem, Stokes Theorem

UNIT: 2 Mechanics of a particle

Introduction to mechanics, Mechanics of a particle, Equation of motion of a particle, Motion under constant force (Atwood's machine), Motion under force which depends on time only, Motion of a charged particle in electromagnetic field, Motion in a constant electric field, Motion in a constant magnetic field (Derivation of cyclotron frequency), Motion in a crossed fields (Derivation of drift velocity)

UNIT: 3 Simple harmonic motion

Acceleration due to gravity, The simple pendulum, Drawbacks of a simple pendulum, Compound pendulum, Interchangeability of centers of suspension and oscillation, Centre of percussion, Other points, collinear with C.G. about which the time period is the same, Conditions for maximum and minimum time periods, Bar pendulum, Kater's reversible pendulum

UNIT: 4 Special theory of relativity

Frame of reference, Inertial frame of reference, Galilean transformation equation, Luminiferous Ether, Michelson Morley experiment, Einstein's special theory of relativity, Lorentz transformation, Lorentz-Fitzgerald contraction, Time dilation, Mass-Energy equivalence, Energy Momentum relation

Reference Books:

1. Introduction to Classical Mechanics
R. G. Takwale & P. S. Puranik
Tata McGraw-Hill Publishing Company Ltd., New Delhi
2. Elements of properties of matter
D. S. Matur, S. Chand & Co., New Delhi
3. Atomic and Nuclear Physics
N. Subrahmanyam and Brijlal
Revised by Jivan Seshan, S.Chand & Company Ltd, New Delhi

SARDAR PATEL UNIVERSITY
Subject
: Physics:
Second Semester
Course No. FSPH-202
(Effective from June – 2010)
Electronics, Nuclear and Modern Physics
(Two Credit Course – 2 Hours per week)

UNIT: 1 Electronics – 1

V-I characteristics of a PN junction diode

DC power supply: Use of diodes in rectifiers, Half wave rectifier, Full wave rectifier, Ripple factor and rectification efficiency, Performance of half wave rectifier, Performance of full wave rectifier

Filters: How to get better DC, Shunt capacitor filter, Series inductor filter, Choke - input LC filter, The CLC or PI filter

UNIT: 2 Electronics - 2

Diodes: Types of diodes, Signal diodes, Power diodes, Zener diode (Zener effect, Avalanche effect & Voltage regulation), Varactor diodes, Light emitting diodes

Transistor: Introduction to Transistor structure, The working of a transistor Relation between currents in a transistor, DC alpha, Transistor amplifying action, Transistor configurations, Transistor characteristics, Common-Emitter configuration, current relations, relation between alpha and beta, Input and output CE characteristics, Basic CE amplifier circuit, DC load line

UNIT: 3 Nuclear Structure and Nuclear Transformations

Nuclear Transformations: Radioactive decay, Half-life, Radiometric dating

Nuclear Structure: Nuclear composition Atomic masses, nuclear electrons,
Some nuclear properties : spin and magnetic moment, Nuclear magnetic resonance, applications of NMR, **Stable nuclei** : nuclear decay, **Binding energy** : binding energy per nucleon, The strong interaction, Liquid drop model

UNIT: 4 Modern Physics

Introduction to Black body radiation, Wien's Law, Rayleigh-Jeans Law, Planck's Law of Radiation & Special Cases of Planck's Law, Compton effect De Broglie's hypothesis, Davisson and Germer Experiment, Heisenberg's Uncertainty principle, Bohr atom model and its limitations, Wilson-Sommerfeld relativistic atom model, Vector Atom model and associated quantum numbers

Reference Books:

1. Basic Electronics and Linear Circuits
N. N. Bhargava, D.C. Kulshreshtha and S.C. Gupta
Tata McGraw-Hill Ltd., New Delhi
2. Concepts of Modern Physics,
Arthur Baiser, Tata McGraw Hill, New Delhi
3. Atomic Physics
J. B. Rajam, S. Chand & Company Ltd., (7th Edition)

SARDAR PATEL UNIVERSITY
Subject
: Physics (Practicals):
Second Semester
Course No. FSPH-203
(Effective from June – 2010)
(Two Credit Course – 4 Hours per week)

1. γ by bending of beam
2. Bar pendulum
3. Flywheel
4. Resolving power of grating
5. Newton's ring
6. λ by spectral line by diffraction photograph
7. Half wave rectifier with filters(L, C, LC, π)
8. Full wave rectifier with filters(L, C, LC, π)
9. Zener diode as voltage regulator
10. CE transistor characteristics(Input, Output & Transfer)
11. Measurement of self inductance
12. Measurement of capacitance
13. Study of probability distribution for two option system (coins)
14. Vibration magnetometer
15. Simulation of radioactive decay

Note: To provide flexibility, up to the maximum of 20% of total experiments can be replaced/ added to the list by the Board of Studies.

Communication Skills In English-II
(Semester 2)
FSEN-201 2 Credits: 4 hours a week

Internal – 30
External – 70
Total Marks : 100

I Reading: The objectives are to enable the learners

- a) Read to skim and scan through a passage.
- b) Read to get the over all idea, and comprehend the passage.
- c) Reading from a collection of units in a compiled text and the lessons selected from it below.

Book Prescribed:

'Corridors to Communication' by Ranu Vanikar (Orient Longman) (Units 6-10)

II Writing: The objectives are to enable the students to

- a) Write paragraphs on given topics.
- b) Develop points/ideas into longer composition.
- c) Write resume, job applications.

Books Recommended:

- 1) Champa Tickoo and Jaya Sasikumar (2000). 'Writing with a Purpose'. Chennai, OUP
- 2) David Jolly (1988). 'Writing Tasks: An authentic task approach to individual writing needs.' (Cambridge University Press)

III Listening: The objectives are to enable the students to listen and understand

- 1) Narrations, dialogues, talks
- 2) Identify language functions.
- 3) Note making

Books Recommended:

- 1) 'Spoken English' by D Sasikumar and PV Dhamija (with audio cassettes) (Tata McGraw Hill Publication Ltd, new Delhi) (Units 14-27)
- 2) 'On We Go' (A BBC Video Course)

IV Speaking: The objectives are to enable the students to

- a) Use various notions
- b) Give short formal and informal talks, speeches

Books Recommended:

- 1) Grant Taylor. English Conversation Practice. (Tata McGraw Hill, New Delhi)
- 2) R P Bhatnagar and R T Bell (1999) 'Communication in English' (Orient Longman, Hyderabad)

Evaluation:

Reading aloud + Viva (based on the Text)	10 Marks
Listening Comprehension (based on video) (Note making/Note taking)	10 Marks
Speaking: (1) Journal + Project (05 + 05)	10 Marks
Speaking: (2) Group Discussion	05 Marks
Writing: (1) Developing ideas	05 Marks
Writing: (2) Resume writing	10 Marks
Writing: (3) Connectives	05 Marks
Writing; (4) Registers	05 Marks
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	60 Marks

Information and Communication Technology
Semester-2
FSICT-201
(Effective from June – 2010)
Detailed Syllabus

Unit 1

Learning Essential Computer Softwares:

1. Microsoft Office Tools

Word: Creating, Formatting, Saving documents in different types and destinations, identifying and converting file types like .doc, .pdf, .rtf etc

Power Point: Preparation of power point slides, editing and formatting slides and making PPT presentation

Excel: Preparing Excel Workbooks and learning its various functions.

Unit 2

Communication Technologies

1. E-mail: Writing e-mails to single and multiple users, Attaching a file, Marking CC and BCC, Creating exclusive communication groups.
2. LCD Projectors: Using LCD projectors for making an audio-visual presentation
3. Tele/Video Conferencing
4. Blogging and chatting
5. Fax and Mobiles

Unit 3

Internet Usage for E-learning

1. Introduction to Internet and Web Browsers
2. Search engines to locate information, saving web pages, downloading files, (pdf, mp3 etc) and software
3. Open learning sites- Wikipedia, Wikispaces, Wikieducator etc.
4. Open Free wares- Hot Potatoes, Audacity, and Wida.co.uk
5. Advanced Social Networking
6. Web page building with tailor-made website builders provided free by websites like google.com & webs.com

Unit 4

Effects of Using IT

1. Software copyright: Issues and formalities
2. The problem of Hacking and preventive measures
3. Computer virus and Anti-virus
4. Effect of ICT on patterns of employment including areas of work where there is increased unemployment
5. Effect of microprocessor-controlled devices, in the home including their effects on leisure time, social interaction etc
6. Capability and limitation of IT
7. Issues related to information found on net i.e. unreliability, undesirability and the security of data transfer
8. Potential health problems related to constant use of ICT, for example, repetitive strain injury (RSI), neck and back problems, eye problems and some simple strategies for preventing these problems.

Unit 5

Group Project

Students may be divided in small groups to work on projects based on the following:

1. A Power Point presentation based on review of a Website of their choice
2. An exhaustive blog created on issues of current socio-political, cultural, economic relevance
3. Building a web page on given topics with hyperlinks, jpg, mp3 files etc.