

For all B.A./B.SC./(Home Science)B.Com./B.B.M/B.C.A  
Courses as core subject  
SCIENCE, TECHNOLOGY AND DEVELOPMENT  
(Foundation Course –II (Science ,Technology and Development)

(At the end of third Year Undergraduate Programme)  
With effect from 2011-2012.

**UNIT-1: SCIENCE :**

1. EARTH SYSTEM :Characteristic features – lithosphere, hydrosphere – Atmosphere, lithosphere-soil characteristic, texture, fertility and its control. Hydrosphere –hydrological cycle –water bodies –ponds, lakes, rivers and their Characteristic – water consumption at global level and regional level – Management of water bodies.  
  
Atmosphere – troposphere, stratosphere, ionosphere composition of air – Ozone - Ozone layer – its importance.
2. LIFE SCIENCE – Concept of origin life – evolution and diversity of life- cell Molecular basis of life and living forms – Mendel's concept on inheritance Impact on society – Blood groups – transfusion – wild life and its Conservation.
3. CHEMICAL SCIENCE – The definition, general awareness and importance of
  - (i) DRUGS- Antibiotic, penicillin, tetracycline, sulpha drugs, Anti malarial, anti Pyretics, analgesics.
  - (ii) SOAPS AND DETERGENTS – sources – mechanism of soap action – development of detergent -0 application – disadvantages of detergents
  - (iii) PLASTICS AND POLYMERS- polyethylene, polyvinylchloride(PVC),nylon 66-rubber and synthetic rubber
  - (iv) AGRO CHEMICAL AND FERTILIZERS- pesticides-Introduction-DDT,BHC, Marathon, parathion – Fungicides-Rodenticides, Weedicides. Nitrogen and phosphorus fertilizers-Micro fertilizers, Bio-pesticides, neem and bacillus thuringensis.
  - (v) BIO FERTILIZERS- Applications and their effects on nature
  - (vi) VITAMINS- Natural sources- importance- deficiencies

(Structures and preparation methods for the syllabus mentioned (1)to(iv) are excluded)

**UNIT-2: TECHNOLOGY AND DEVELOPMENT**

**COMMUNICATION** – Definition, nature and concept of communication- role of communication in society

**TYPES OF COMMUNICATION** –Intrapersonal, Intrapersonal, group and mass communication. Traditional and folk of communication in India New Media technologies- Satellite, Cable and Internet.

**PROCESS OF COMMUNICATION**- Functions of communication, elements and barriers of communication  
Mass Media- press , Radio , TV and Films , Functions of mass communication

**TRANSPORT** – Wheel , steam Engine, Automobile, ship, Airplane. Comparison of Road ,Rail, Water and Air transport in terms of infrastructure, speed, cost ect

**ENERGY** –sources –Renewable sources of energy – Non- renewable sources of energy -Conventional energy sources- Non Conventional energy sources- wind ,water, tidal ,solar, geothermal, atomic energy , bio-fuels – sources and their applications- Energy management – energy conservation – Future needs of energy

**HEALTH**- problems –Sex education –venereal Diseases, AIDS, General protozoan, Bacterial& viral diseases

**BIO-TECHNOLOGY** – Introduction – Applications –health and Human Welfare- Agriculture –Mushroom culture- Medical plants

**GREEN-REVOLUTION** – Introduction-Food processing – Methods of processing-Food preservation and methods of preservation

**NATIONAL INSTUTIONS (SCIENCE)**-Institutions Imparting Education- Institutions performing research and development – Role of Scientific Institutions in Research , Technology and development

**Science, Technology and Development**  
**Foundation course-ii**  
**For B.A/B.SC/B.COM/B.BM/BCA**

3hours  
75marks

**Section-A**

Answer all questions

4x10=40

1) a) what is ozone layer-what is its importance

ఓజోన్ పొర అంటే ఏమిటి దాని ప్రాముఖ్యత ఏమిటి

(Or)

b) write about vitamins and its deficiencies.

విటమిన్ల వ్రాస్తు వాటి లోపల వల్ల వచ్చే వ్యాదులను వ్రాయండి

2) Define Antibiotics Describe different types of Antibiotics

ఆంటిబయటిక్స్ను నిర్వచించండి. వివిధ రకాల ఆంటి బయటిక్స్ గురించి వ్రాయండి.

(Or)

Define pesticides-Describe about prio pesticides

కీటక సంహారిణులను నిర్వచించండి. జీవ కీటక సంహారిణులను గురించి వ్రాయండి.

3) write about Functions of communication

వార్త ప్రసారాల విధుల గురించి వ్రాయండి.

(Or)

Compare road transport with that of Air transport in term of speed and cost

వేగము, ధర ల వాషయంలో.

4) write an essay on Medicinal plants

జీషధ మెక్కల గురించి ఓక వ్యాసం వ్రాయండి.

(Or)

Write about "AIDS"

ఎయిడ్స్ వ్యాధి గురించి వ్రాయండి.

**Section-B**

Answer any FIVE questions

5x3=15

5) Hydrosphere- హైడ్రా స్ఫియర్

6) Blood Groups- రక్త సముహాలు

- 7) Soaps- సబ్బులు  
8) Polyethylene- పాలీ ఎథిలన్  
9) Radio- రేడియో  
10) Internet- అంతర్జాలం  
11) Green revolution- హరిత విప్లవము  
12) Scientific Institution- శాస్త్ర సాంకేతిక సంస్థలు

### Section-C

Answer all questions

10x2=20

- 13) Wild life- వన్య ప్రాణి జీవనము  
14) Transfusion- రక్త మార్పిడి  
15) Analgesics- నోప్పిపివిరణ మందులు  
16) Parathion- పారాథియన్  
17) Cable- కేబుల్  
18) Steam Engine- స్టీమ్ ఇంజన్  
19) Sex Education- లైంగిక విద్య  
20) Mushrooms- కుకు గోడుగులు  
21) Atomic energy- అణుశక్తి  
22) Ponds- చెరువులు