

**BIRLA VIDYAMANDIR, NAINITAL**  
**Syllabus for Unit Test - II (2017)**  
**Class – 12**

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**ENGLISH**

**Reading skills** (To test understanding and inferring)

1. Passage/poem for Comprehension 1 number
2. Passage for Note making 1 number

**Writing Skills**

1. Advertisement / Notice
2. Report Writing
3. Letter to the editor/ Formal letter

**Literary Text** (Consisting of questions based on prescribed text)

1. A stanza of prescribed poem followed by three questions.  
Keeping quite (before half yearly)  
A thing of beauty (after half yearly)
2. 5 number of short answer questions from-  
**(before half yearly)**  
Lost spring  
Deep waters  
The Enemy  
**(after half yearly)**  
Should wizard hit mommy  
On the face of it
3. One long answer question from the given two (Chapters as above)
4. One value based question (chapters as above)
5. Two questions from the long reading text.
  - i. first question from the first five chapters (before half yearly)
  - ii. Second question from chapter 6 to chapter 15 9after half yearly)

**MATHEMATICS**

1. Matrices and Determinants
2. Differentiation
3. Application of derivatives
4. Indefinite Integral
5. Definite Integral
6. Area under the curve

**PHYSICS**

1. Magnetism—magnetic effect of electric current, galvanometer and its conversion
2. Electromagnetic waves-properties and characteristics of em waves
3. Light- lens maker's formula and optical instruments
4. Semiconductors-application of p-n junction diodes, transistor working and input-output characteristics curves.

**CHEMISTRY**

1. Chemical kinetics
2. Chemistry in everyday life.
3. Bio- Molecules

**BIOLOGY**

**I. Genetics and Evolution**

**Heredity and variation:** Mendelian Inheritance; Deviations from Mendelism-Incomplete dominance, Co-dominance, Multiple alleles and Inheritance of blood groups, Pleiotropy; Elementary idea of polygenic inheritance; Chromosome theory of inheritance; Chromosomes and genes; Sex determination - in humans, birds, honey bee; Linkage and crossing over; Sex linked inheritance - Haemophilia, Colour blindness; Mendelian disorder in humans - Thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

**Molecular Basis of Inheritance:** Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; Transcription, genetic code, translation; Gene expression and regulation - Lac Operon; Genome and human genome project; DNA finger printing.

**Evolution:** Origin of life; Biological evolution and evidences for biological evolution (Paleontological, comparative anatomy, embryology and molecular evidence); Darwin's contribution, Modern Synthetic theory of Evolution; Mechanism of evolution - Variation (Mutation and Recombination) and Natural Selection with examples, types of natural selection; Gene flow and genetic drift; Hardy - Weinberg's principle; Adaptive Radiation; Human evolution.

## **II. Biology and Human Welfare**

**Human Health and Disease:** Pathogens; parasites causing human diseases (Malaria, Filariasis, Ascariasis, Typhoid, Pneumonia, common cold, amoebiasis, ring worm); Basic concepts of immunology - vaccines; Cancer, HIV and AIDS; Adolescence, drug and alcohol abuse.

**Strategies for Enhancement in food production:** Plant breeding, tissue culture, single cell protein, Biofortification, Apiculture and Animal husbandry.

**Microbes in human welfare:** In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilisers.

## **INFORMATICS PRACTICES**

### **Unit 1: Networking and Open Standards**

#### **Computer Networking**

Networking, Communication Media, Network Devices, Types of network, Network Topologies, Network Protocols, Remote access, Identifying computers and users over a network, Network Security, Internet Applications, Wireless/Mobile Communication.

#### **Open Source Concepts**

Open Source Software (OSS), Open standards, Indian Language Computing, Types of fonts

### **Unit 2: Programming**

#### **Review of Class XI; Programming Fundamentals**

Classes & Objects, Libraries - String class methods, Math class methods, JDBC

Web application development concepts, HTML tags, Introduction to XML

### **Unit 3: Relational Database Management System**

#### **Review of RDBMS from Class XI Database Fundamentals & MySQL commands**

Database transaction, GROUP BY clause and Group functions, Constraints, Joins

### **Unit 4: IT Applications**

#### **Review of Class XI; IT Applications**

Front-end Interface, Back-end Database, Front-end interface and Back-end Database connectivity for e-Governance, e-Business and e-Learning applications

**Based on Q. No. 1, 4, 5, 6 & 7 of the Model Question Paper**

## **PHYSICAL EDUCATION**

Unit III	Yoga and Lifestyle
Unit VII	Test and Measurements in Sports
Unit XI	Psychology and Sports
Unit I	Planning in Sports
Unit XII	Training in Sports

## **ACCOUNTANCY**

1. Company Accounts
  - Issue of Shares
  - Purchase Consideration
  - Balance Sheet as per Schedule VI revised
  - Forfeiture and Reissue of Shares
  - Pro-rata Allotment of Shares

2. Issue of Debentures
  - Purchase Consideration
  - Redemption of Debentures
  - Collateral Debentures
  - ESOP

### **BUSINESS STUDIES**

**Unit(s) Name of the Unit(s)**

5. Organising
6. Staffing
7. Directing
8. Controlling

### **ECONOMICS**

- Ch.1 Producer's Equilibrium.
- Ch.2 Main Forms of Market.
- Ch.3 National Income and Related Aggregates.
- Ch.4 Money and Banking.

### **ENTREPRENEURSHIP**

- | <b>Unit(s)</b> | <b>Name of the Unit(s)</b>   |
|----------------|--|
| 9 – 13,        | Entrepreneurs as problem solvers & Innovators  |
| 4&8            | Social Entrepreneurship<br>Business Risks & Role of Technology<br>In Today's Business<br>Barriers to Entrepreneurship & Support<br>System of Government<br>Market & Market Environment<br>Society's role in promoting entrepreneurship<br>& Women entrepreneurs<br>Types of entrepreneurs & Intrapreneurship |