

**REVISED SYLLABI FOR
CSS COMPETITIVE EXAMINATION, CE-2016
FPSC, F-5/1, AGA KHAN ROAD, ISLAMABAD
Updated on: 7th July, 2015**

GENERAL SCIENCE & ABILITY (100 Marks)

Part-I (General Science) 60 Marks

I. Physical Sciences

Constituents and Structure:-

- Universe
- Galaxy
- Light Year
- Solar System
- Sun
- Earth
- Astronomical System of Units

Process of Nature: -

- Solar and Lunar Eclipses
- Rotation and Revolution
- Weather Variables (Global Temperature Pressure, Circulation, Precipitation, Humidity)
- Weather Variations

Natural Hazards and Disasters: -

- Earth Quake
- Volcanic Eruption
- Tsunami
- Floods
- Avalanche
- Traveling Cyclone (Tropical Cyclone, Middle Latitude Cyclone and Tornadoes)
- Drought, Wildfire

- Urban Fire
- Disaster Risk Management

Energy Resources: -

- Sources of Energy (Renewable i.e. LED Energy)
- Solar Energy
- Wind Energy and Non-Renewable Energy conservation and its sustainable use
- Atomic Structure
- Chemical Bonding
- Electromagnetic Radiations

Modern Materials/Chemicals: -

- Ceramics
- Plastics
- Semiconductors
- Antibiotics
- Vaccines
- Fertilizers
- Pesticides

II. Biological Sciences

The Basis of Life: -

- Cell Structures and Functions (Subcellular Organelles such as Nucleus, Mitochondria and Ribosomes).

Biomolecules: -

- Proteins
- Lipids
- Carbohydrates and Enzymes

Plant and Animal Kingdom: -

- A brief survey of plant and animal kingdom to pinpoint similarities and diversities in nature
- A Brief Account of Human Physiology

Common Diseases and Epidemics: -

- Polio
- Diarrhea

- Malaria
- Hepatitis
- Dengue their Causes and Prevention.

New Model Concept of Producing BIO Fuel Method

III. Environmental Science

Environment: -

- The Atmosphere (Layered Structure and Composition)
- Hydrosphere (Water Cycle, Major Water Compartments)
- Biosphere (Major Biomes)
- Lithosphere (Minerals and Rocks, Rock Types, Plate Tectonics)

Atmospheric Pollution: -

- Types
- Sources
- Causes and effects of major air pollutants (CO_x, Particulate Matter, NO_x, SO_x, Tropospheric Ozone, Volatile Organic Compounds, Dioxins)
- Regional and Global air pollution issues (Acid-rain, Ozone Depletion, Greenhouse Effect and Global Warming)
- International agreements on air pollution control (Montreal Protocol and Kyoto Protocol)

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Water Pollution:-

- Types
- Sources
- Causes and effects of major water pollutants (Synthetic Organic Chemicals
- Oxygen Demanding Wastes
- Plant Nutrients
- Thermal Pollution
- Infectious Agents
- Sediments, Radioactivity
- Heavy Metals and Acids)
- Drinking water quality and standards

Land Pollution: -

- Solid waste management and disposal.
- Role of Remote Sensing and GIS in Environmental Science
- Population Planning

IV. Food Science**Concept of Balance Diet: -**

- Vitamins
- Carbohydrates
- Protein
- Fats and oil
- Minerals
- Fiber

Quality of Food:-

- Bioavailability of Nutrients
- Appearance
- Texture
- Flavor
- Quality of Packed and Frozen Food
- Food Additives
- Preservatives and Antioxidants

Food Deterioration and its Control: -

- Causes of Food Deterioration
- Adulteration
- Food Preservation

V. Information Technology**Computer (Hardware & Software Fundamentals): -**

- I/O Processing and data storage
- Networking & Internet Standards
- Application and business Software
- Social Media Websites
- Information Systems
- Fundamentals of artificial intelligence

Telecommunications: -

- Basics of Wireless Communication (Mobile, Satellite, Surveillance GPS and Fiber Optics)

Part-II (General Ability) 40 Marks

VI. Quantitative Ability/Reasoning

- Basic Mathematical Skills
- Concepts and ability to reason quantitatively and solve problems in a quantitative setting
- Basic Arithmetic
- Algebra and Geometry (Average, Ratios, Rates, Percentage, Angles, Triangles, Sets, Remainders, Equations, Symbols, Rounding of Numbers)
- Random Sampling

VII. Logical Reasoning and Analytical Reasoning/Ability

- **Logical Reasoning** includes the process of using a rational systematic series of steps based on sound mathematical procedures and given statements to arrive at a conclusion
- **Analytical Reasoning/Ability** includes visualizing articulating and solving both complex and uncomplicated problems and concepts and making decisions that are sensible based on available information, including demonstration of the ability to apply logical thinking to gathering and analyzing information

VIII. Mental Abilities

- Mental Abilities Scales that measures specific constructs such as verbal, mechanical, numerical and social ability

SUGGESTED READINGS

1. Asimov's New Guide to Science 1993 Isaac Asimov
2. Science Restated: Physics and Chemistry for the Non-Scientist 1970 Harold Gomes Cassidy

3. Eminent Muslim Scientists 1991 S. Fakhre Alam Naqvi
4. Exploring Life Science 1975 Walter A. Thurber, Robert E. Kilburn, Peter S. Howell
5. Exploring Physical Science 1977 Walter A. Thurber, Robert E. Kilburn, Peter S. Howell
6. Principles of Animal Biology 2011 Lancelot Hogben
7. The Impact of Science on Society 2005 Isaac Asimov, A. S. a. N. A. S. a. 8. Fundamentals of Forensic Science 2010 Max M. Houck, Jay A. Siegal 9. Forensic Science Fundamentals & Investigation 2008 Anthony J. Bertino
10. Physical Geography 2013 **BY** Harm J. de Blij, Peter O. Muller, James E. Burt, Joseph A. Mason
11. Physical Geography-Science and Systems of the Human Environment 2009 **BY** Alan H. Strahler, Arthur N. Strallar.
12. Introduction to Information Technology 2005 **BY** I. T. L. Education Solutions Limited, Itl.
13. Management Information Systems 2014 **BY** Ken Sousa, Effy Oz
14. Fundamentals of Telecommunications 2005 **BY** Roger L. Freeman
15. Basics of Environmental Science 2002 **BY** Michael Allaby
16. Food Science 1998 **BY** Norman N. Potter, Joseph H. Hotchkiss
17. Environmental Science: Systems and Solutions. 5th ed. 2013 **BY** Michael L. McKinney, Robert Schoch and Logan Yonavjak
18. Environmental Science: A Global Concern 2012 **BY** William P. Cunningham, Barbara Woodworth Saigo

Books for Logical Reasoning

19. Logical Reasoning **BY** Rob P. Nederpelt, Farouz D. Kamareddine
20. Elements of Logical Reasoning **BY** Jan Von Plato
21. Reasoning Builder for Admission and Standardized Test **BY** Staff of Research Education
22. Test of Reasoning **BY** Thorpe
23. Mental Ability **BY** Dr. Lal & Jain
24. The Brain Book: Know Your Own Mind and How to Use it **BY** Edgar Thorpe

**Subject Wise Notes will be provided here
soon through CSS-Guide APP by ZH Softs**

