THE Pdhantu Classes

CGPSC ACF/RANGER

Online Test Series Time Table

SR. No.	Date	Subject	Syllabus
1.	15.07.2020	Environment	Complete Syllabus
2.	19.07.2020	Physics	Complete Syllabus
3.	22.07.2012	Chhattisgarh Part 1	Half syllabus
4.	26.07.2020	Language	Complete Syllabus
5.	29.07.2020	Agriculture Part 1	Half syllabus
6.	02.08.2020	CSAT	Complete Syllabus
7.	05.08.2020	Biology	Complete Syllabus
8.	09.08.2020	Chemistry	Complete Syllabus
9.	12.08.2020	Forestry	Complete Syllabus
10.	16.08.2020	Agriculture Part 2	Remaining half
11.	19.08.2020	Chhattisgarh part 2	Remaining half
12.	23.08.2020	Technology	Complete Syllabus
13.	26.08.2020	Current Affairs	Chhattisgarh +Science and technology
14.	30.08.2020	Science &Technology	Physics+Chemistry+Environment+Technology+Biology
15.	04.09.2020	Model Paper 1	Complete Syllabus
16.	04.09.2020	Model Paper 2	Complete Syllabus
17.	07.09.2020	Model Paper 3	Complete Syllabus
18.	07.09.2020	Model Paper 4	Complete Syllabus

Detailed Syllabus

Sr. No.	Date	Subject	Syllabus
1.	15.07.2020	Environment	Bio-diversity and its conservation-General introduction - definition, species and genetic diversity, Bio-geographic classification of India, Importance of Bio-Diversity-Constructive and Destructive application, Importance of social, moral and alternative vision. Global National and Local level Bio-diversity, India as a wide diversity nation, Hotspots of Biodiversity, threats to biodiversity, Residential damage, damage to wildlife, humans and wild animals struggle, India's threatened (endangered) and local species, Conservation of bio diversity, Topological and No topological conservation. Environmental pollution Reason effect and conservation Air pollution water pollution, see pollution, soil pollution, sound/noise pollution, thermal pollution, nuclear pollution, solid waste management - Urban and Industrial solid waste management reason effect and control, Human role in pollution control, Disaster Management, Floods, Earthquake. Cyclones and Landslide. Human Population and Environment, Population growth, Variation in the population in various countries. Population explosion and family welfare Programme Environment and Human health.
2.	19.07.2020	Physics	Source of Energy - Conventional and new sources of energy, sources of solar energy, causes of origin of energy in the sun, solar heating devices. Solar cooker solar cell, wind energy, biogas, fossil fuels, ideal fuel properties of ideal fuel. Nuclear energy, nuclear fission fusion, chain reaction, nuclear reactor uses and harms of nuclear energy. General information about CREDA Light - nature of light reflection of light, laws of reflection, reflection from plane and curved surface, image formation by plane convex and concave mirror, relation between focal length and radius of curvature determination of focal length of concave mirror by single pin method. [Relation between u-v-f] numerical examples. Refraction of light - laws of refraction, refraction by glass slab, critical angle, total internal reflection, use of total internal reflection in daily life. Lens converging and diverging lens. Definition focal length optical centre image formation by lens. Human eye, its defect and remedies. Comparison between photographic camera and human eye. Simple telescope and astronomical telescope. Construction working uses, ray diagram (no formula derivation). Electricity and its effects - electric intensity. potential , potential difference, electric current ohm's law. Resistance specific resistance influencing factors, combination of resistance and related numerical examples thermal effect of current it's use, calculation of power and electrical energy spent (numerical) precautions observed in electric experiments. Chemical effects of electric current. Primary and

			secondary cells their properties and drawback. Leclanche cell, dry cell, lead accumulator cell, construction. Magnetic effect of current - Magnetic effect of current. Oersted experiment, electromagnetic induction, electric motor, working principle and use of generator, general studies of alternating current and direct current, electric discharge in gases., discharge tube, cathode rays, X-rays and their properties, magnetism - Magnet and it's types artificial magnet, methods of preparing magnets, molecular theory of magnetism, demagnetization, magnetic keepers, magnetic lines of force and their properties. Plotting the lines of force Terrestrial magnetism magnetic storm, magnetic meridian geographical meridian, relation between VHI and θ.
3.	22.07.2020	Chhattisgarh Part 1	1. Geography, Environment, Physical Directions, Census, Archaeology and places of Tourist interest in Chhattisgarh 2. History, Music, Dance, Art and Culture, Riddles, Proverbs, local proverbs of Chhattisgarh. 3. Economy, forest and Agriculture of Chhattisgarh. 4. Industries, Energy, Water and Mineral Resources of Chhattisgarh.
4.	26.07.2020	Language	(1) **General Hindi Language** -Comprehension, Understanding, Précis Writing. Synonyms and Antonyms, Homonyms and their meaning, meaningful words for a phrase, Vocabulary and usage. Compound words and their separation, Words taken from Sanskrit language as it is and with some changes, word and sentence correction, Prefix and Suffixes, Proverbs (meaning and use), letter writing, Different phases and nomenclature of the History of Hindi literature Writers of Chhattisgarh and their works (2) **General English** - Comprehension. Précis Writing. Re arrangement and Correction of Sentences, Synonyms, Antonyms. Filling the Blanks. Correction of Spelling. Vocabulary and usage.Idioms and Phrases. Tenses. Prepositions. Active Voice and Passive voice Parts of Speech Translation-English to Hindi Letter Writing (3) **Chhattisgarhi Language** - Knowledge of Chhattisgarhi language, History and development of Chhattisgarhi language, literature of Chhattisgarhi language and laureates, Chhattisgarhi grammar, Hindi to Chhattisgarhi and Chhattisgarhi to Hindi Administrative Dictionary
5.	29.07.2020	Agriculture Part 1	• Ecology and its relevance to man, natural resources, their sustainable management and conservation. Physical and social environment as factors of crop distribution and production. Climatic elements as factors of crop growth, impact of changing environment on cropping pattern as indicators of environments. • Environmental pollution and associated hazards to crops, animals, and humans. Cropping pattern in different agro-climatic zones of the country. Impact of high-yielding and

			short-duration varieties on shifts in cropping pattern. Concepts of multiple cropping, multistorey, relay and intercropping, and their importance in relation to food production. Package of practices for production of important cereals, pulses, oil seeds, fibres, sugar, commercial and fodder crops grown during Kharif and Rabi seasons in different regions of the country. Important features, scope and propagation of various types of forestry plantations such as extension, social forestry, agro-forestry, and natural forests. • Weeds, their characteristics, dissemination and association with various crops; their multiplication; cultural, biological and chemical control of weeds. Soil-physical, chemical and biological properties. and factors of soil formation. Modern classification of Indian soils, Mineral and organic constituents of soils and their role in maintaining soil productivity. Essential plant nutrients and other beneficial elements in soils and plants. Principles of soil fertility and its evaluation for judicious fertilizer use, integrated nutrient management. Losses of nitrogen in soil, nitrogen-use efficiency in submerged rice soils, nitrogen fixation in soils. Fixation of phosphorus and potassium in soils and the scope for their efficient use. Problem soils and their reclamation methods. • Soil conservation planning on watershed basis. Erosion and run-off management in hilly, foot hills, and valley lands, processes and factors affecting them. Dry land agriculture and its problems. Technology of stabilising agriculture production in rain fed agriculture area. • Water-use efficiency in relation to crop production, criteria for scheduling irrigations, ways and means of reducing run-off losses of irrigation water. Drip and sprinkler irrigation. Drainage of water logged soils. quality of irrigation water, effect of industrial effluents on soil and water pollution. • Farm management, scope. important and characteristics, farm planning. Optimum resources use and budgeting. Economics of different types of farming systems. • Marketing and pricing of agricultural inputs and outputs, price fluctuations and their cost; role of cooperatives in agricultural economy: types and systems of farming and factors affecting them. • Agricultural extension, its importance and role, methods of evaluation of extension programmes. socioeconomic survey and status of big, small, and marginal farmers and landless agricultural labourers, farm mechanization and its role in agricultural production and rural employment. Training programmes for extension workers; lab-to land programmes. • Seed technology, its importance. Different kinds of seeds

			and their seed production and processing techniques. Role of public and private sectors in seed production, processing and marketing in India • Diseases and pests of field vegetables, orchard and plantation crops of India. Causes and classification of plant pests and diseases. Principles of control of plant pests and diseases Biological control of pests and diseases. Integrated pest and disease management. Epidemiology and forecasting, Pesticides, their formulations and modes of action Compatibility with rhizobial inoculants. Microbial toxins. Storage pests and diseases of cereals and pulses, and their control. • Food production and consumption trends in India. National and international food policies. Production, procurement, distribution and processing constraints. Relation of food production to national dietary pattern, major deficiencies of calorie and protein.
6.	02.08.2020	CSAT	Intelligence Test, Analytical and Logical Ability 1. Communication Skills and Mutual Skills 2. Logical reasoning and ability to analyze. 3. Decision making (Development and Problem Solving) 4. General Mental Ability 5. Basic Statistical Works (General Mathematics Ability) (level – Class X) 6. Analysis of numbers. (Chart, underlying, Tables)
7.	05.08.2020	Biology	Animal nutrition – Types of nutrition, heterotrophic nutrition, Holozoic, Parasitic, Saprophytic, Symbiotic, Insectivorous Important terms of nutrition process. Digestion in unicellular cell animal (amoeba) and multi cellular animal grass hopper. Human digestive system and digestive process. Photosynthesis, amino acid metabolism steps of the process light reaction and dark reaction. Factors influencing photosynthesis. Experiments related to photosynthesis. Respiration Definition respiratory organs of animals breathing and respiration. Types of respiration, Aerobic and anaerobic respiration, respiratory system of human being and mechanism of respiration (general information) respiratory quotient (RQ) of carbohydrate, fat and protein. Transport of mineral and water in plants and animals (in context of human being). Composition and function of blood, structure and working of heart, structure and function of blood vessels (preliminary knowledge) coagulation of blood, blood group. blood transfusion, blood bank, function of lymph system diseases related to heart. Excretion - excretion in plants and excretory product. Excretion in animal and excretory organs. Excretion system of man and excretion process (general information) artificial kidney dialysis. Osmoregulation Diseases related to kidney. Control and Coordination - Coordination

			in plants and animal phytohormones, Nervous system of human being. Structure and function of human Brain and Spinal cord, reflex action, endocrine glands hormones and their function. Reproduction and growth - type of reproduction Asexual reproduction fission, budding. regeneration. vegetative reproduction, layering cutting, grafting, parthenogenesis. Sexual reproduction in plants, structure of flower and reproduction process (general information) pollination fertilization. Human reproductive system and reproduction process. Heredity and evolution - heredity and variation basis of heredity chromosome DNA (Preliminary information)gene sex determination preliminary knowledge of organic evolution (Oparin's theory only).
8.	09.08.2020	Chemistry	Rate of chemical reaction and chemical equilibrium - Preliminary knowledge of rate of chemical reaction. Fast and slow chemical reactions. Reversible and irreversible chemical reactions. Reversible reaction and dynamic nature of equilibrium Acids and bases. pH scale {simple numerical questions. Exothermic and endothermic reactions. Some important chemical compounds - properties and uses. Method of production manufacture (water, washing soda, baking soda, bleaching powder and plaster of Paris) preparation of building material-lime cement glass and steel Metals Position of metals in the periodic table and general properties. Metal, mineral ore. Difference between mineral and ore. Metallurgy concentration, roasting, smelting refining of ores. - laboratory method of preparing alcohol and acetic acid, properties and uses some general artificial polymers. Polythene, polyvinyl chloride Teflon soap and detergents.
9.	12.08.2020	Forestry	Silviculture-General, Silviculture-System, Silviculture-Mangrove and cold desert, Silviculture of trees, Agroforestry, Social Forestry, Joint Forest Management and Tribology, Forest Soil, Soil Conservation and Watershed Management. Environment Conservation and Biodiversity (including pollution). Tree Improvement and few technology, Forest Management and Management Systems, Forest Working Plan, Forest Mensuration and Remote Sensing. Survey and Forest Engineering, Forest Ecology, Ethno Botany, Forest Resources Utilisation, Forest Protection and Wildlife Biology, Forest Economics and Legislation.
10.	16.08.2020	Agriculture Part 2	• Cell Theory, cell structure, cell organelles and their function, cell division. • Nucleic acids-structure and function, gene structure and function. • Laws of heredity, their significance in plant breeding. Chromosome structure, chromosomal aberrations, linkage and cross-over, and their significance in recombination breeding. Polyploidy, euploidy and aneuploidy. Mutation-micro and macro-and their role in crop improvement. Variation, components of variation. Heritability, sterility and

			incompatibility. • Classification and their application in crop improvement. Cytoplasmic inheritance, sex-linked, sex influenced and sex-limited characters. • History of plant breeding. Modes of reproduction, selfing and crossing techniques. Origin and evolution of crop plants, centre of origin, law of homologous series, crop genetic resources-conservation and utilization. Application of principles of plant breeding to the improvement of major field crops. Pure-line selection, pedigree, mass and recurrent selections, combining ability, its significance in plant breeding. Hybrid vigour and its exploitation, backcross method of breeding, breeding for disease and pest resistance, role of interspecific and intergeneric hybridization. Role of biotechnology in plant breeding. Improved varieties, hybrids, composites of various crop plants. • Physiology and its significance in agriculture. Imbibitions, surface tension, diffusion and osmosis. Absorption and translocation of water, transpiration and water economy. Enzymes and plant pigments: photosynthesis-modern concepts and factors affecting the process, aerobic and non-aerobic respiration; C, C and CAM mechanisms. Carbohydrate, protein and fat metabolism. • Growth and development; photo-periodism and vernalization. Auxins, hormones, and other plant regulators and their mechanism of action and importance in agriculture. Physiology of seed development and germination; dormancy. Climatic requirements and cultivation of major fruits, plants, vegetable crops and flower plants; the package of practices and their scientific basis. Handling and marketing problems of fruit and vegetables. Principal methods of preservation of important fruits and vegetable products, processing techniques and equipment. Role of fruits and vegetables in human nutrition. Raising of ornamental plants, and design and layout of lawns and gardens.
11.	19.08.2020	Chhattisgarh part 2	1. History of Chhattisgarh and Role of Chhattisgarh in the Independence Movement. 2. Tribal, Special, Traditions, Festivals of Chhattisgarh.. 3. Administrative Setup, local administration and Panchayati Raj in Chhattisgarh.
12.	23.08.2020	Technology	National policy of science and technology and changes in the policy from time to time, purpose of technology. Space programme in India and its applications with special reference to industrial, agricultural and other rural development activities, INSAT and IRS systems. Role of information Technology in Rural India, basis

			knowledge of computers. Computers in communication and broadcasting, software development for economic growth. Broad applications of IT. Energy Resources : Energy demand, renewable and nonrenewable energy resources nuclear energy. the development and its utilization in the Country. Current Science & Technology Developments in India origin of agriculture. Progress of Agricultural Science and its impact. Crop science in India, Fertilizers, control of pests and disease scenario in India.
13.	26.08.2020	Current Affairs	Chhattisgarh + Science and technology
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