

BHARATHIAR UNIVERSITY : COIMBATORE 641046

M.PHIL. / Ph.D. – (FT/PT) - ENVIRONMENTAL SCIENCES

**PART – 1 SYLLABUS
(From October 2011 batch onwards)**

Note :

The existing paper (Environmental Biotechnology in the Management of Water) be replaced with Paper **III – (2) Environmental Health** from 2011-12 batch

The newly framed syllabi for the **Paper III- (2) Environmental Health** is furnished below

There is no change in the remaining papers.

Paper III - 2. ENVIRONMENTAL HEALTH
(From October 2011 batch onwards)

Unit –I

Environmental Microbiology: Normal flora in the human body, Normal flora in the skin, conjunctiva, respiratory alimentary and urinary tract, Bacteriology of water, milk- detection of coliform bacteria and *E. coli*, detection of fecal streptococci, bacteriological examination of milk-viable count, test for coliform bacteria, methylene blue reduction test, phosphatase and turbidity test, staining techniques-gram staining, acid fast staining, optical and electron microscope, sterilization techniques-Physical agents, sunlight, dry heat, incineration, moist heat, autoclaving.

Unit-II

Impact of Environment in Health care System: Sources of water supply, sanitary well, water pollution, water related diseases, purification of water-slow sand filter and rapid sand filter and their comparison, water quality criteria and standard, rain water harvesting, chlorination/disinfection of water, action of chlorine-principles of chlorination, method of chlorination, break point chlorination-orthotoludine test-disinfection of well, heat-effect of heat stress-preventive measures and global warming, disposal of wastes solid wastes, storage collection and methods of disposal- dumping, tipping or sanitary land, incineration-composting manual pits-burial method, excreta disposal, extent of problem in India-methods of excreta disposal, bore hole latrine, water seal latrine, RCA latrine.

Unit-III

Occupational Health: ergonomics, occupational diseases, pneumoconiosis-antracosis, silicosis, bagassosis, byssinosis, asbestosis, lead poisoning, occupational cancer-skin cancer, lung cancer, bladder cancer and leukaemia, occupational dermatitis, legislative act in occupational health factory act 1948, employees state insurance act 1948-scope, administration, finance benefits to employee-medical benefit, sickness benefit, maternity benefit, disablement benefit, dependants benefit, funeral expenses, rehabilitation, benefits to employer, Rajiv Gandhi shramik kalyan yojna.

Unit-IV

Biomedical Waste Management: definition, classification of health care waste, sources of health care waste, health care waste generation, hazards of health care waste, treatment and disposal, incineration-types, inertization, biomedical waste management-categories and colour coding.

Unit-V

Killer Communicable Diseases in India: Tuberculosis-problem statement-world and India, natural history of tuberculosis-agent, host and social Factors, tuberculin test, mantoux test, mode of transmission, incubation period, control of tuberculosis-case finding, collection of sputum samples, slide reporting, sputum culture, directly observed treatment short course(DOTS), chemotherapy, management of patients who interrupt treatment, childhood tuberculosis, BCG vaccination, chemoprophylaxis, rehabilitation, surveillance, role of hospitals, drug resistance-multidrug and extensively drug resistant tuberculosis, National tuberculosis programme, revised national tuberculosis programme, STOP TB strategy, tuberculosis and HIV- epidemiological impact, diagnosis of tuberculosis in people with HIV, the future, HIV-problem statement-world and India, epidemiological features-agent and host factors, mode of transmission-sexual transmission, blood contact, mother to child transmission, incubation period, clinical manifestations, diagnosis of AIDS-Clinical diagnosis, laboratory diagnosis-western blot, ELISA, control of AIDS-prevention, antiretroviral treatment, post exposure prophylaxis, specific prophylaxis, primary health care, National AIDS control programme.

REFERENCES

1. Principles and Practice of Medicine-(Davidson's), Colledge, N. R., Walker, B. R., and Ralston, S. H (Eds.), 21st Edition, Churchill Livingstone Elsevier, UK, 2010.
2. Parks Textbook of Preventive and Social Medicine, Park, K (Ed.), 19th Edition, M/S Banarasisdas Bhanot, Jabalpur, India, 2007.
3. Ananthanarayan and Paniker's Textbook of Microbiology, Panikar, C. K. J (Ed.), 7th Edition, Orient Longman Private Ltd, Chennai, India, 2005.
