AMLT21 SAFETY AND OCCUPATIONAL HEALTH HAZARD OF LEATHER INDUSTRY

UNIT-1 INTRODUCTION TO OCCUPATIONAL HEALTH & SAFETY

1.1 Basic principals in Epidemiological Practice:
1.2 How to perform an investigation, Basic measures & terms,
1.3 Epidemiological researchs, retrospective cohort shidies,
1.4 Concept of 'relative risk', preventive role of epidemiology.

UNIT-2 ERGONOMICS & OCCUPATIONAL INGURIES

2.1 Approach to prevention of occupation.
2.2 Inguris, improvement of work & work place design,
2.3 Use of anthropometic data. Biomechanics of lifting, pushing, pulling.
2.4 Role of environmental factors in occupational injuris.
2.5 Setting up an 'ideal' computer work station.
2.6 Musculoskeletal injuries (mention only with causes), cumulative traume dis orders occupations associated with.
2.7 Noise & Occupational hearing loss-prevention of hearing loss.
2.8 (1)Noise &its measurements, Impact & impulse noise, sound level meters, noise exposure evaluation, machines of hearing- brief overview, hearing tests ,TTS, Assessment of hearing loss- brief overview, hearing conservation- reduction of noise exposure.
2.9 Working in heat- effects on human system. thermal environment , heat exchange man-environment, respouse and adaptation to work in heat , occupations with ' heat' risk ,
2.10 Heat cramps, heat exhantion, Heat shoke stress criteria WBGT index,
2.11 Effective temperature, effect of heat an productively, control of heat stress.
2.12 Working with non- ionising rediation.

UNIT-3 SOLAR RADIATION

3.1 Infrared, visible radition, ultraviolet,
3.2 Extreme low frequency radiations, lasers, electric fields, magnatic fields,
3.3 Known effects, unconfirmed effects.
3.4 Ioniziting Radiation radition physics-basics, radition measurements, biological effects of radition in man. Sources of radition in the workplace.
3.5 Exerternal radition exposure prevention, shielding, radition exposure guidelines for works.
3.6 Occupational Toxicology basic principles, toxicokinetics, inhalation toxicology, toxicity testing, carcinogenesis, application of toxicology.

UNIT-4 BIOLOGICAL MONITORING ENVIRONMENTAL & BIOLOGICAL MONITORING

4.1 Exposure monitoring,
4.2 Effect monitoring sources of error &quality assurance,
4.3 Monitoring exposure to carcinogens, In vivo measurement of body burden of chemicals,

4.4 Interpretation of chemicals, Interpretation of result,
4.5 Analysis of specific chemicals-Al, As, Cd, Cr, Pd, Mn, Hg, CS2, CO& Benzene, Toluene, Xylem, Dychloro methane, etc.
4.6 Occupational exposure and effects of some specific agents- (incidence, industrial occurrence, jobs involved and at hight risk, systemic effects,
4.7 Acute effects, chromic effects, preventive measure, bio-monitoring, symptoms & signs of ailments, treatments as available)
4.8 Occupational health laws in India Factories act, workmen's computation act, ESI act-schedule of compensable occupational diseases,
4.9 Legal requirements as per factories act-physical amenities to be provided by employer, obligation of employer, obligation of practitioner in the field.

Reference Books:

1. Occupational Medicine, 3rd Ed, Mosby, - Carl Zenz, and Ed: O.Bruce Dickerson, Edward P.Horvath Jr.
2. Occupational &Environmental Medicine, 2nd Ed, Prentice-Hall Int.Ine. Ed Joseph Ladon.