

SYLLABUS FOR POST OF ASSISTANT MANAGER – SALES

IN MYSORE SALES INTERNATIONAL LTD.

- 1) Managerial Communication
- 2) Accounting for Managers
- 3) Organisation Behaviour
- 4) Managerial Economics
- 5) Business Statistics
- 6) Information Technology for Business
- 7) Business Perspectives
- 8) Research Methodology & Technical Writing
- 9) Financial Management
- 10) Production and Operations Management
- 11) Human Resource Management
- 12) Marketing Management
- 13) Quantitative Methods & Operations Research
- 14) Legal Aspects of Business
- 15) Entrepreneurship Development
- 16) Business Ethics & Corporate Governance
- 17) Strategic management
- 18) International Business

SYLLABUS FOR POST OF ASSISTANT MANAGER – EDP

IN MYSORE SALES INTERNATIONAL LTD.

- 1) Data Structures and algorithms
- 2) Logic Design and Computer Organization
- 3) Formal Languages and Automata Theory
- 4) System Software
- 5) Operating Systems
- 6) Databases
- 7) Computer Networks
- 8) Web technologies
- 9) Digital Electronics
- 10) Software Engineering

SYLLABUS FOR POST OF ASSISTANT MANAGER (PHARMA)

IN MYSORE SALES INTERNATIONAL LTD.

Part I

a. UV-Visible spectroscopy: Introduction, Theory, Laws,

Instrumentation associated with UV-Visible spectroscopy, Choice of solvents and solvent effect and Applications of UV- Visible spectroscopy.

b. IR spectroscopy: Theory, Modes of Molecular vibrations, Sample handling, Instrumentation of Dispersive and Fourier - Transform IR Spectrometer, Factors affecting vibrational frequencies and Applications of IR spectroscopy

c. Spectrofluorimetry: Theory of Fluorescence, Factors affecting fluorescence, Quenchers, Instrumentation and Applications of fluorescence spectrophotometer.

d. Flame emission spectroscopy and Atomic absorption spectroscopy: Principle, Instrumentation, Interferences and Applications.

2. NMR spectroscopy: Quantum numbers and their role in NMR, Principle, Instrumentation, Solvent requirement in NMR, Relaxation process, NMR signals in various compounds, Chemical shift, Factors influencing chemical shift, Spin-Spin coupling, Coupling constant, Nuclear magnetic double resonance, Brief outline of principles of FT-NMR and ¹³C NMR. Applications of NMR spectroscopy.

3. Mass Spectroscopy: Principle, Theory, Instrumentation of Mass

Spectroscopy, Different types of ionization like electron impact, chemical, field, FAB and MALDI, APCI, ESI, APPI Analyzers of Quadrupole and Time of Flight, Mass fragmentation and its rules, Meta stable ions, Isotopic peaks and Applications of Mass spectroscopy

4. Chromatography: Principle, apparatus, instrumentation, chromatographic parameters, factors affecting resolution and applications of the following:

a) Paper chromatography b) Thin Layer chromatography

c) Ion exchange chromatography d) Column chromatography

e) Gas chromatography f) High Performance Liquid chromatography

g) Affinity chromatography

5. a. Electrophoresis: Principle, Instrumentation, Working conditions, factors affecting separation and applications of the following:

a) Paper electrophoresis b) Gel electrophoresis c) Capillary

electrophoresis d) Zone electrophoresis e) Moving boundary

electrophoresis f) Iso electric focusing

b. X ray Crystallography: Production of X rays, Different X ray diffraction methods, Bragg's law, Rotating crystal technique, X ray powder technique, Types of crystals and applications of Xray diffraction.

6. Immunological assays : RIA (Radio immuno assay), ELISA, Bioluminescence assays.

Part II

1. Basic Aspects of Organic Chemistry:

1. Organic intermediates: Carbocations, carbanions, free radicals, carbenes and nitrenes. Their method of formation, stability and synthetic applications.

2. Types of reaction mechanisms and methods of determining them,

3. Detailed knowledge regarding the reactions, mechanisms and their relative reactivity and orientations. Addition reactions a) Nucleophilic uni- and bimolecular reactions (SN1 and SN2) b) Elimination reactions (E1 & E2; Hoffman & Saytzeff's rule) c) Rearrangement reaction

2. Study of mechanism and synthetic applications of following named Reactions: Ugi reaction, Brook rearrangement, Ullmann coupling reactions, Dieckmann Reaction, Doebner-Miller Reaction, Sandmeyer Reaction, Mitsunobu reaction, Mannich reaction, Vilsmeier-Haack Reaction, Sharpless asymmetric epoxidation, Baeyer-Villiger oxidation, Shapiro & Suzuki reaction, Ozonolysis and Michael addition reaction

3. Synthetic Reagents & Applications:

Aluminiumisopropoxide, N-bromosuccinamide, diazomethane, dicyclohexylcarbodiimide, Wilkinson reagent, Wittig reagent. Osmium tetroxide, titanium chloride, diazopropane, diethyl azodicarboxylate, Triphenylphosphine, Benzotriazol-1-yloxy tris (dimethylamino) phosphonium hexafluoro-phosphate (BOP). Protecting groups

a. Role of protection in organic synthesis

b. Protection for the hydroxyl group, including 1,2- and 1,3-diols:

ethers, esters, carbonates, cyclic acetals & ketals

c. Protection for the Carbonyl Group: Acetals and Ketals

d. Protection for the Carboxyl Group: amides and hydrazides, esters

e. Protection for the Amino Group and Amino acids: carbamates

and amides

4. Heterocyclic Chemistry: Organic Name reactions with their respective mechanism and application involved in synthesis of drugs containing five, six

membered and fused heterocyclics such as Debus-Radziszewski imidazole synthesis, Knorr Pyrazole Synthesis Pinner Pyrimidine Synthesis, Combes Quinoline Synthesis, Bernthsen Acridine Synthesis, Smiles rearrangement and Traube purine synthesis. Synthesis of few representative drugs containing these

heterocyclic nucleus such as Ketoconazole, Metronidazole, Miconazole, celecoxib, antipyrin, Metamizole sodium, Terconazole, Alprazolam, Triamterene, Sulfamerazine, Trimethoprim, Hydroxychloroquine, Quinine, Chloroquine, Quinacrine, Amsacrine, Prochlorperazine, Promazine, Chlorpromazine, Theophylline, Mercaptopurine and Thioguanine.

5. Synthon approach and retrosynthesis applications

i. Basic principles, terminologies and advantages of retrosynthesis; guidelines for dissection of molecules. Functional group interconversion and addition (FGI and FGA)

ii. C-X disconnections; C-C disconnections – alcohols and carbonyl compounds; 1,2-, 1,3-, 1,4-, 1,5-, 1,6-difunctionalized compounds

iii. Strategies for synthesis of three, four, five and six-membered ring.

Part III

1. a. Documentation in Pharmaceutical industry: Master formula record, DMF (Drug Master File), distribution records. Generic drugs product development Introduction, Hatch-Waxman act and amendments, CFR (CODE OF FEDERAL REGULATION), drug product performance, in-vitro, ANDA regulatory approval process, NDA approval process, BE and drug product assessment, in-vivo, scale up process approval changes, post marketing surveillance, outsourcing BA and BE to CRO.

b. Regulatory requirement for product approval: API, biologics, novel, therapies obtaining NDA, ANDA for generic drugs ways and means of US registration for foreign drugs

2. CMC, post approval regulatory affairs. Regulation for combination

products and medical devices. CTD and ECTD format, industry and FDA liaison. ICH - Guidelines of ICH-Q, S E, M. Regulatory requirements of EU, MHRA, TGA and ROW countries.

3 Non clinical drug development: Global submission of IND,

NDA, ANDA. Investigation of medicinal products dossier, dossier

(IMPD) and investigator brochure (IB).

4 Clinical trials: Developing clinical trial protocols. Institutional review board/ independent ethics committee Formulation and working procedures informed Consent process and procedures. HIPAA- new, requirement to clinical study process, pharmacovigilance safety monitoring in clinical trials.

5. Quality control tests for Tablets and Parenterals

Part IV

1. Drugs and Cosmetics Act 1940 and Rules 1945 and New Amendments

Objectives, Definitions, Legal definitions of schedules to the Act and Rules Import of drugs – Classes of drugs and cosmetics prohibited from import, Import under license or permit.

Manufacture of drugs – Prohibition of manufacture and sale of certain drugs, Conditions for grant of license and conditions of license for manufacture of drugs, Manufacture of drugs for test, examination and analysis, manufacture of new drug, loan license and repacking license.

Study of schedule C and C1, G, H, H1, K, P, M, N, and X.

Sale of Drugs – Wholesale, Retail sale and Restricted license, Records to be kept in a pharmacy

Drugs Prohibited for manufacture and sale in India

Administration of the Act and Rules – Drugs Technical

Advisory Board, Central Drugs Laboratory, Drugs

Consultative Committee, Government analysts, licensing authorities, controlling authorities, Drug Inspectors.

2. Narcotic Drugs and Psychotropic Substances Act 1985 and Rules Objectives, Definitions, Authorities and Officers, Prohibition, Control and Regulation, Offences and Penalties.

3. Drugs and Magic Remedies (Objectionable Advertisements) Act 1954

Objectives, Definitions, Prohibition of certain advertisements, Classes of Exempted advertisements, Offences and Penalties.

SYLLABUS FOR POST OF ASSISTANT MANAGER (TOURS & TRAVELS) IN MYSORE SALES INTERNATIONAL LTD.

- 1) Tourism concepts and linkages
- 2) Travel agency and tour operations
- 3) Hospitality management
- 4) Organisation behaviour
- 5) Cultural heritage of India
- 6) Business communication
- 7) Tourism Geography
- 8) Airfares and ticketing management
- 9) Front office operations
- 10) Tourism marketing
- 11) Cultural heritage of Karnataka
- 12) Forex management
- 13) Eco Tourism
- 14) Medical and Wellness Tourism
- 15) House keeping operations
- 16) Tourism research methodology
- 17) Basics of accounting and finance
- 18) Destination planning and Development
- 19) Itinerary preparation and package tour
- 20) Cargo management

**SYLLABUS FOR POST OF ASSISTANT MANAGER (ACCOUNTS) IN
MYSORE SALES INTERNATIONAL LTD.**

- 1) Economics for Managers
- 2) Organizational Behaviour
- 3) Accounting for Managers
- 4) Statistics for Management
- 5) Marketing for Customer Value
- 6) Legal Aspects and Intellectual
- 7) Managerial Skills – 1
- 8) Technology for Management
- 9) Management Research Methods
- 10) Entrepreneurship & Ethics
- 11) Human Capital Management
- 12) Financial Management
- 13) Quantitative techniques and Operation Research
- 14) Managerial Skill-2
- 15) Finance
- 16) Marketing
- 17) Human Resources
- 18) Health care management
- 19) Banking Finance & Insurance Services Management (BFIS)
- 20) Startups & SMES Management
- 21) Business Analytics
- 22) Logistics & Supply Chain Management

**SYLLABUS FOR POST OF ASSISTANT MANAGER
(PERSONAL) IN MYSORE SALES INTERNATIONAL LTD.**

- 1) Introduction to social work
- 2) Working with individuals
- 3) Working with groups
- 4) Working with community
- 5) Personal and professional growth
- 6) Social policy and social planning
- 7) Application of computer and statistics
- 8) Counseling
- 9) Communication for social work practice
- 10) Social legislation
- 11) Social movements and social action
- 12) Social welfare administration
- 13) Social work intervention in disaster management
- 14) Organizational behaviour and development
- 15) Human resource management and development
- 16) Labour legislations and employee welfare
- 17) Industrial relations
- 18) Social work intervention in health care
- 19) Medical and psychiatric social work
- 20) Social change and sustainable development