**Rajiv Gandhi University of Health Sciences, Karnataka**

**4th T Block Jayanagar, Bengaluru**

Curriculum delivery design of B. Pharm. course of Semester VII System

w.e.f Academic year 2020-21

**SEMESTER-VII**

**BP703T: PHARMACY PRACTICE (Theory)**

1. Departmental objectives (what the learners will be able to perform after completing the subject):

A. Learning Objectives:

 Upon completion of this course the student should be able to

1. Know various drug distribution methods in a hospital
2. Appreciate the pharmacy stores management and inventory control
3. Monitor drug therapy of patient through medication chart review and clinical review
4. Obtain medication history interview and counsel the patients
5. Identify drug related problems
6. Detect and assess adverse drug reactions
7. Interpret selected laboratory results (as monitoring parameters in therapeutics) of specific disease states
8. Know pharmaceutical care services
9. Do patient counseling in community pharmacy
10. Appreciate the concept of Rational drug therapy
11. Content distribution as per the list of topics, time allotted for each topic, distribution for ‘Must know’, ‘Desirable to know’ and ‘Nice to know’ and the probable weightage.

 The following table can also be a reference frame for continuous and formative assessment of learning. If the curriculum management is scheduled as per the tabulation, there can be clarity for both learners and teachers to take stock of the mastery achieved in each objective. This will also help for professional excellence that goes beyond the examination process.

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| **UNIT-I** | **Hours: 10** | **Weightage: 22 Marks** |
| **Learning content distribution** | **Topics** |
| **Hospital and it’s organization, Hospital pharmacy and its organization, Adverse drug reaction, Community Pharmacy** |
| **Must to know** | Definition, Classification of hospital- Primary, Secondary and Tertiary hospitals, Classification based on clinical and non- clinical basis, Organization structure of a hospitalDefinition, functions of hospital pharmacy, Adverse drug reactions- Classifications - Excessive pharmacological effects, secondary pharmacological effects, idiosyncrasy, allergic drug reactions, genetically determined toxicity, toxicity following sudden withdrawal of drugs, Drug interaction- beneficial interactions, Adverse interactions, and pharmacokinetic drug interactions, Methods for detecting drug interactions, spontaneous case reports and record linkage studies, and Adverse drug reaction reporting and management. Dispensing of proprietary products, maintenance of records of retail and wholesale drug store. |
| **Desirable to know** | Organization structure, location, Layout and staff requirements, and Responsibilities and functions of hospital pharmacists, Organization and structure of retail and wholesale drug store, types and design, Legal requirements for establishment and maintenance of a drug store,  |
| **Nice to know** | Medical staffs involved in the hospital and their functions,  |

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| **UNIT-II** | **Hours: 10** | **Weightage: 22 Marks** |
| **Learning content distribution** | **Topics** |
| **Drug distribution systemin a hospital, Hospital formulary, Therapeutic drug monitoring, Medication adherence, Patient medication history interview, Community pharmacy management** |
| **Must to know** | Dispensing of drugs to inpatients, Dispensing of controlled drugs. Definition, contents of hospital formulary, preparation and revision, and addition and deletion of drug from hospital formulary. Causes of medication non-adherence, monitoring of patient medication adherence,  |
| **Desirable to know** | Types of drug distribution systems, charging policy and labelling, Dispensing of drugs to ambulatory patients, Need for Therapeutic Drug Monitoring, Factors to be considered during the Therapeutic Drug Monitoring, Financial, materials, staff, and infrastructure requirements. |
| **Nice to know** | Differentiation of hospital formulary and Drug list, Indian scenario for Therapeutic Drug Monitoring. pharmacist role in the medication adherence, Need for the patient medication history interview, medication interview forms. |

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| **UNIT-III** | **Hours: 10** | **Weightage: 21 Marks** |
| **Learning content distribution** | **Topics** |
| **Pharmacy and therapeutic committee, information services, counselling, Education and training program in the hospital, Prescribed medication order and communication skills** |
| **Must to know** | Policies of the pharmacy and therapeutic committee in including drugs into formulary, inpatient and outpatient prescription, automatic stop order, and emergency drug list preparation, steps involved in patient counselling, Prescribed medication order- interpretation and legal requirements |
| **Desirable to know** | Organization, functions of P and T committee, Sources of drug information, Definition of patient counseling; Special cases that require the pharmacist, Role of pharmacist in the interdepartmental communication and community health education. |
| **Nice to know** | Drug and Poison information centre, Computerised services, and storage and retrieval of information. Role of pharmacist in the education and training program, Internal and external training program, Services to the nursing homes/clinics, Code of ethics for community pharmacy, Communication skills- communication with prescribers and patients |

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| **UNIT-IV** | **Hours: 8** | **Weightage: 19 Marks** |
| **Learning content distribution** | **Topics** |
| **Preparation and implementation, Clinical Pharmacy, Over the counter (OTC) sales** |
| **Must to know** | Drug therapy monitoring - medication chart review, clinical review, pharmacist intervention, Ward round participation, Medication history and Pharmaceutical care. Dosing pattern and drug therapy based on Pharmacokinetic & disease pattern |
| **Desirable to know** | Introduction to Clinical Pharmacy, Concept of clinical pharmacy, functions and responsibilities of clinical pharmacist Rational use of common over the counter medications. |
| **Nice to know** | Budget preparation and implementation, Introduction and sale of over the counter,  |

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| **UNIT-V** | **Hours: 7** | **Weightage: 11 Marks** |
| **Learning content distribution** | **Topics** |
| **Drug store management and inventory control, Investigational use of drugs, Interpretation of Clinical Laboratory Tests** |
| **Must to know** | Purchase and inventory control: principles, purchase procedure, purchase order, procurement and stocking, Economic order quantity, Reorder quantity level, Blood chemistry, hematology, and urinalysis |
| **Desirable to know** | Organisation of drug store, types of materials stocked and storage conditions, Methods used for the analysis of the drug expenditure |
| **Nice to know** | Description, principles involved, classification, control, identification, role of hospital pharmacist, advisory committee |

**Blueprint of question paper, for each QP.**

This shows the weightage given to each chapter in the summative assessment.

This improves the content validity by distributing the assessment of learners in the competencies that are represented by learning objectives under each chapter.

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| BLUE PRINT OF MODEL QUESTION PAPER**BP 703T PHARMACY PRACTICE(Theory)** TIME: 3 HOURS MAX. MARKS: 75 |
| **Unit No** | **Hours** | **Must know** | **Desirable to know** | **Weightage of marks** |
| **LE****(10X3)** | **SE****(5X8)** | **SA****(2X7)** | **LE****(10X0)** | **SE****(5X1)** | **SA****(2X3)** |
| Unit-I | 10 | 1 | 2 | 1 | \_ | - | - | 22 |
| Unit-II | 10 | 1 | 2 | 1 | \_ | - | - | 22 |
| Unit-III | 10 | 1 | 1 | 2 | \_ | - | 1 | 21 |
| Unit-IV | 08 |  | 2 | 1 | \_ | 1 | 1 | 19 |
| Unit-V | 07 |  | 1 | 2 | \_ | - | 1 | 11 |
| **Total** | **45** | **30** | **40** | **14** | **-** | **5** | **6** | **95** |
|  |  | **84** | **11** | **95** |

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