

## **Foreign Pharmacy Graduate Equivalency Examination**

**Equivalency Examination for Bachelor pharmacy holders graduated from colleges of pharmacy outside of Iraq**

## Foreign Pharmacy Graduate Equivalency Examination

تاقیکردنه‌وهی یه‌کسانکردنی بېروانامه‌ی دهرمانسازي بو دهرچوانی کولپژته‌کانی دهرمانسازي دهره‌وهی عیراق

۱. تاقیکردنه‌وه‌که (۳) جار نه نجام ددریټ نه هر سالیک نه مانگه‌کانی (۲، ۶، ۱۰). به‌رواری هر تاقیکردنه‌وه‌یه‌که نه ده‌ستپیکي هر مانگیکي دیاریکراو بلاوده‌کریته‌وه. ماوهی تاقیکردنه‌وهی تیوری (۳) کاترمیر ده‌بیټ نه کولپژي دهرمانسازي \ زانکوی هه‌ولپیری پزشکی نه نجام‌ده‌دریټ.

۲. تاقیکردنه‌وه‌که نه دوو به‌ش پیکدیټ:

أ. تاقیکردنه‌وهی تیوری (۷۰ نمره) نه‌م بابه‌تانه نه خوده‌گریټ:

- Pharmaceutics
- Pharmacology
- Pharmacognosy
- Pharmaceutical chemistry

ب. تاقیکردنه‌وهی چاوپنیکه‌وتن (Interview) (۲۰ نمره) نه‌م بابه‌تانه نه خوده‌گریټ:

- Clinical pharmacy
- Clinical biochemistry
- Pharmaceutical technology
- Community pharmacy

## **Foreign Pharmacy Graduate Equivalency Examination**

1. Foreign Pharmacy Graduate Equivalency Examination is conducted at college of pharmacy, Hawler medical university 3 times per year, during February, Jun, and October of each year. The exact date for exam will be announced at the beginning of each specified month. The didactic theoretical exam duration is 3 hours.

### **2. The equivalency exam consisting of two parts:**

a. Theoretical exam (70 marks) including the following subjects:

- Pharmaceutics
- Pharmacology
- Pharmacognosy
- Pharmaceutical chemistry

b. Interview exam (30 marks) including the following subjects:

- Clinical pharmacy
- Clinical biochemistry
- Pharmaceutical technology (American Pharmacy)
- Community pharmacy

### **3. References for the subjects included in the examination**

#### **○ Pharmacognosy:**

##### **Trease and Evans, Pharmacognosy**

1. General methods associated with the phytochemical investigation of herbal products (chromatography)
2. Phenolic glycosides
3. Saponins, cardioactive glycosides
4. Cyanogenetic glycosides, glucosinolate compounds
5. Alkaloids

#### **○ Pharmaceutics**

##### **Ansel's Pharmaceutical dosage forms and drug delivery systems**

1. Section II/ Drug dosage form and drug delivery system design.
2. Section III/ Solid dosage form and solid modified released drug delivery systems.
3. Section IV/ Semisolid dosage forms and transdermal systems.
4. Section V/ Pharmaceutical inserts
5. Section VI/ Liquid dosage forms
6. Section VII/ Sterile dosage forms and delivery systems.
7. Physical pharmacy capsules

#### **○ Pharmacology**

##### **Harvey R.A., Champe P.C., and Mycek M.J., Pharmacology: Lippincotts Illustrated Reviews**

1. Introduction and pharmacokinetics

2. Drugs affecting the autonomic nervous system
3. Drugs affecting the central nervous system
4. Drugs affecting the cardiovascular system
5. Drugs affecting the respiratory system, gastrointestinal system
6. Insulin and oral hypoglycemic drugs
7. Chemotherapeutic drugs

○ **Pharmaceutical chemistry**

**Wilson and Gisvold's textbook of Organic Medicinal and Pharmaceutical Chemistry, 11th Edition**

1. Physicochemical properties in relation to Biological Action
2. Metabolic Changes of Drugs and Related Organic Compounds
3. Prodrugs and Drug Latentiation
4. Antibacterial Antibiotics
5. Antiviral Agents
6. Central nervous System Depressants
7. Central nervous System Stimulants
8. Adrenergic Agents
9. Analgesic Agents
10. Proteins, Enzymes, and Peptide Hormones

● **Clinical pharmacy**

**Roger Walker (Professor of Pharmacy Practice Welsh School of Pharmacy)**

1. Pharmaceutical care
2. Clinical pharmacy functions and knowledge
3. Drug interactions
4. Adverse drug reactions
5. Drugs affecting liver and renal functions

6. Drug use restriction in different life stages (Neonates, Pediatrics, Geriatrics, pregnancy, Breast feeding.....)

- **Community pharmacy**

**Paul Rutter, Community pharmacy (symptoms, diagnosis, and treatment)**

1. Respiratory system
2. Women's health
3. Otic conditions
4. Ophthalmology
5. Gastroenterology
6. Dermatology
7. Painful Conditions
8. Paediatrics

- **American Pharmacy (Pharmaceutical technology)**

**(An introduction to pharmaceutical technics and dosage forms)**

**Joseph B. Sprowls and Harold M. Beal (6th edition)**

1. Pharmaceutical measurements
2. Solution containing nonvolatile materials
3. Aqueous solutions containing aromatic principles
4. Solution using mixed solvent systems
5. Coarse dispersion
6. Semisolid dosage forms
7. Molded solid dosage forms (Suppositories)
8. Powdered dosage forms

- **Clinical Biochemistry**

**Tietz Fundamentals of Clinical Chemistry and Molecular Diagnostics**

1- Abnormal Carbohydrate Metabolism

2- Hormones

3- Dyslipidemia

4- Liver Function tests

5- Kidney Function Tests