

**GUJARAT NATIONAL LAW UNIVERSITY  
GANDHINAGAR**

Course: **Pharmaceutical Sciences**  
Semester-IV (Batch: 2017-22)

End Semester Examination: April-May 2019

Date: 10<sup>th</sup> May, 2019

Duration: 2 hours

Max. Marks: 40

**Instructions:**

- Read the questions properly and write the answers in the given answer book.
- The respective marks for each question are indicated in-line.
- Do not write anything on the question paper.
- Indicate correct question numbers in front of the answers.
- No questions or clarifications can be sought during the test period, answer as it is, giving a reason if any.
- Draw diagrams only with pencil.

**Part-A**

**Marks**

Q.1 Read the problem and answer **any two** the following questions:

(2x5=  
10)

- (a) A 22-year-old is a marijuana addict in withdrawal stage. The signs and symptoms all indicate a runny nose, stomach cramps, dilated pupils, muscle spasms, chills, despite the warm weather, elevated heart rate, and blood pressure, and is running a slight temperature. He may or may not have other drug issues. Blood analysis may provide some answers to this question. Preliminary marijuana *withdrawal* or marijuana *dependence*. Explain in detail the scientific definition of physiological dependency and withdrawal symptoms.

- (b) Reese is an 18-year-old single male who was born in Los Angeles, California, where he still lives with his mother and his brother. His dad is a sales rep and is on the road during the week. Reese writes the following:

*‘When he’s home on the weekend he just drinks and watches the ball games on TV. He drinks all the time that he’s home. Like he’s a total lightweight. Mom also drinks. I started drinking and smoking when I was 13, in the eighth grade. It was a total drag, not that any of the other grades were any better, but all the kids were talking about high school and the classes they were going to take, and me, I was just trying to figure out where I was gonna get money for my next pack of cigarettes. Now I smoke about a pack a day, plus a couple of joints too. I have a cup of coffee in the morning before school and that’s it. At night I’ll drink 3 or 4 beers plus a few shots of vodka. On the weekends is when I really get down to partying. I’ve played around with lots of stuff. If I drink too much I black out. If any drug is my favorite, aside from cigarettes and coffee, it’d be ‘speed.’ I saw a doctor when I was eight. My folks took me. They said I was out of control. The doctor said I had attention deficit disorder and gave me Ritalin?’*

- (i) Based on the information Reese has given you, what other information would you need to determine Reese’s level of drug use?
- (ii) Based on what Reese has told you, where would you place him on the Addiction-Compulsion?
- (c) A 25-year-old Caucasian male presents to the outpatient detoxification and rehabilitation facility, for opioid and alcohol detoxification. For the past two weeks, this patient has been using 15 bags of heroin intravenously, two 48-ounce cans of

beer, and has inhaled one hundred dollars' worth of cocaine per day. According to the patient, the main reason for his seeking medical attention is to avoid going to jail. The patient has a history of law violations and has been monitored by a probation officer once a week. Suggest the management plans for him.

Q.2 Develop a comparison chart of the drug vs deceive regulations and control laws in our country. (02)

Q.3 Read the problem and answer the following questions: (2x4=08)

- (a) A 25-yr-old woman with morbid obesity (body mass index: 54 kg/m<sup>2</sup>) and noninsulin-dependent diabetes was scheduled for knee implant surgery. She had two previous surgeries without incident during childhood. She denied any history of atopy or drug allergy. Explain the type of anesthesia which can be used for performing the surgery with a valid elucidation.
- (b) A 48-year-old man with a diagnosis of HIV infection since 2003, on highly active anti-retroviral therapy (HAART) with stable CD4 count and undetectable viral load for years and seizure disorder presented with recurrent drowsiness. His seizures were well controlled on phenobarbitone for years. The findings suggest the possible diagnosis of barbiturate drug automatism in this patient. Explain the problem in relation to the sleep cycle.

Q.4 Read the problem and answer the following questions: (2x3=06)

- (a) An 18-year old girl was admitted in the medicine department in an unconscious state with no response to deep painful stimuli (Grade III coma). Explain the dose-independent in adverse drugs reactions.
- (b) Explain the route of drugs administration in detail.

#### Part-B

Q.5 Answer the following questions: (2x3=06)

- (a) An owner of a pharmaceutical company, in order to understand and improve upon the aspects related to pharmacovigilance, requires a note on the aims of pharmacovigilance. Enlist any six aims to enable the owner to understand the aims of pharmacovigilance.
- (b) A pharmacy company recruited a few freshers. Write a note on any six conditions that shall be observed, in order to orient them about the conditions that shall be observed in the provision of free samples to a person qualified to prescribe such product under the Uniform Code for Medical Device Marketing Practices.

#### Part-C

Q.6 Answer the following: (2x4=08)

- (a) Preclinical studies in animals are essential before undertaking clinical trials. Explain the four kinds of toxicity studies done in animals.
- (b) Name some excitatory and inhibitory neurotransmitters. How do they exert their effects?

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