

**GUJARAT NATIONAL LAW UNIVERSITY  
GANDHINAGAR**

Course: Pharmaceutical Science  
Semester-IV (Batch: 2014-19)

**End Semester Examination: April-May 2016**

Date: 11<sup>th</sup> May, 2016

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 any thing on the question paper.
- **Draw the diagrams only with pencil.**
- Indicate correct question numbers in front of the answers.
- No questions or clarifications can be sought during the exam period, answer as it is, giving reason, if any.

**Part-A****Marks**

Q.1 Answer the following questions:

(4x1=  
04)

- (a) What are the common variables in manufacturing the tablets?
- (b) State any two roles and responsibilities of Central Pharmacy Council of India.
- (c) What is Good Manufacturing Practices (GMP) and who enforces it?
- (d) State one latest judgment of pharmaceutical industry in the year 2016.

Q.2 Answer **any four** the following questions:(4x2=  
08)

- (a) Read the case and answer the following questions:  
Sharon a 20 years old girl had a severe episode of depression and sometimes felt that she just wants to get prescription and not to talk to doctor.
  - (i) State the types of antidepressants she can be suggested.
  - (ii) Are there side effects of antidepressant drugs?
- (b) What are the types of diabetes? What should be an ideal blood sugar level? What are the late and early symptoms of low blood sugar?
- (c) Read the case and answer the questions:  
Pruthvi a 13 year old boy was suffering from severe headache while preparing for this Matriculation exam. His physician suggested him a medicine which used to cure his pain and relaxes his central nervous system.
  - (i) Has he become addicted to his medicine?
  - (ii) How would you establish that it is a drug dependency?
- (d) Write physiological and pharmacological action of insulin.
- (e) Define and mention the clinical significance of the following:
  - (i) Cumulative drugs.
  - (ii) Drug half life.

Q.3 Answer the following questions:

(4x3=  
12)

- (a) Read the case and the following question:  
Santiago, a two-year-old boy with cancer was admitted with a severe infection. The chemotherapy drugs he's on are an improvised cocktail, instead of the preferred combination.

- (i) How often will he receive the chemotherapy?
- (ii) Can he miss the dose of chemotherapy?
- (iii) Can he be prescribed and other drugs along with chemotherapy treatment?
- (b) Give the classification of antiarrhythmic drugs.
- (c) Tarun a 17 year old boy sniffs petrol with his friends. He often goes without sniffing for a few days, with no withdrawal symptoms. However, when he has not sniffed for a week or more, he can feel a strong urge to sniff, despite knowing the dangers of petrol sniffing. The urges to sniff can be very strong if he feels depressed or bored.
  - (i) What sort of physical symptoms might a physically dependent person demonstrate if they go without that substance for a significant period of time?
  - (ii) While not all drugs are considered capable of leading to physical dependence, how is it possible for any drug to lead to psychological dependence?
- (d) Write a note on essentials of active treatment for drug dependency.

### Part-B

Q.4 Answer **any three** of the following:

(3x4  
=12)

- (a) What are cell junctions? Briefly describe the structure and functions of the five main types of cell junctions.
- (b) What are catecholamines? How are they synthesized from amino acid tyrosine?
- (c) Read the case and answer the questions.

Ann a 50 year old woman is diagnosed with Atrial Fibrillation (an abnormal heart rhythm). To reduce the risk of stroke, her physician recommends Warfarin. Ann's clinical characteristics like age, weigh, gender and diet were considered for recommending the initial dose. However Ann has to visit clinic every day for INR monitoring (International Normalized Ratio regular testing of this is essential for all people taking Warfarin. It is a blood test that checks how long it takes for blood to clot).

- (i) What is Warfarin?
- (ii) Can genetic testing help Ann and her physician? (Answer should revolve around pharmacogenomic warfarin phenotypes based on CYP genotype).
- (d) Read the case and answer the question.

Martina is a 25 year old African American mother of two daughters. She along with her daughters visit the doctor for discussion about upcoming tonsillectomy for her younger daughter, Stanley. Martina is concerned about post-OP pain management for Stanley, given that her older daughter Nancy had a severe adverse reaction to codeine when she had her tonsils removed one year ago. Martina herself being nursing student feels that Stanley should undergo pharmacogenomic testing for codeine response prior to tonsillectomy.

Do you think that pharmacogenomic testing will help Stanley's post-operative pain management? (Answer should revolve around pharmacogenomiccodeine phenotypes based on CYP genotype).

### Part-C

Q.5 Answer the following questions:

(2x2=  
04)

- (a) Write any four features that reflect the nature of market for Pharmaceutical Industry in India.
- (b) Define the classes of prescription: New, Proprietary

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