



Symbol of Secularism
& National Integration

**ANJUMAN-I-ISLAM'S
KALSEKAR TECHNICAL CAMPUS, NEW PANVEL**

School of Pharmacy

*Approved & Recognised by: All India Council for Technical Education and Council of Architecture, New Delhi
Directorate of Technical Education, Govt. of Maharashtra Affiliated to: University of Mumbai*

**T. Y. B. Pharm. (Semester –V)
Periodic Theory Examination (2016)**

**Subject: PHARMACEUTICAL BIOTECHNOLOGY
Marks: 15 M**

**Date: - 21/09/2016
Time: - 10.30 am-11.30am**

NOTE:

1) Draw diagram wherever necessary

1. Enlist the types of fermenter and explain any one in detail (3M)

OR

Explain Insulin Production by rDNA technology.

2. Differentiate between three types of Blotting techniques (3 points) (3M)

3. Explain any one method of DNA sequencing (3M)

OR

Classify enzyme immobilization methods and explain any one in detail

4. Explain in detailed fermentation process for production of Penicillin G OR Amylase (3M)

5. Explain DNA ligases role in rDNA technology and draw structure of pBR322 Plasmid (3M)



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T.Y.B. Pharm. (Semester -V)
Periodic Theory Examination (2015 - 2016)

Subject: Organic Chemistry-III
Marks: 15 M

Date: - -09-2016
Time: - 11.00 am-12.00 pm

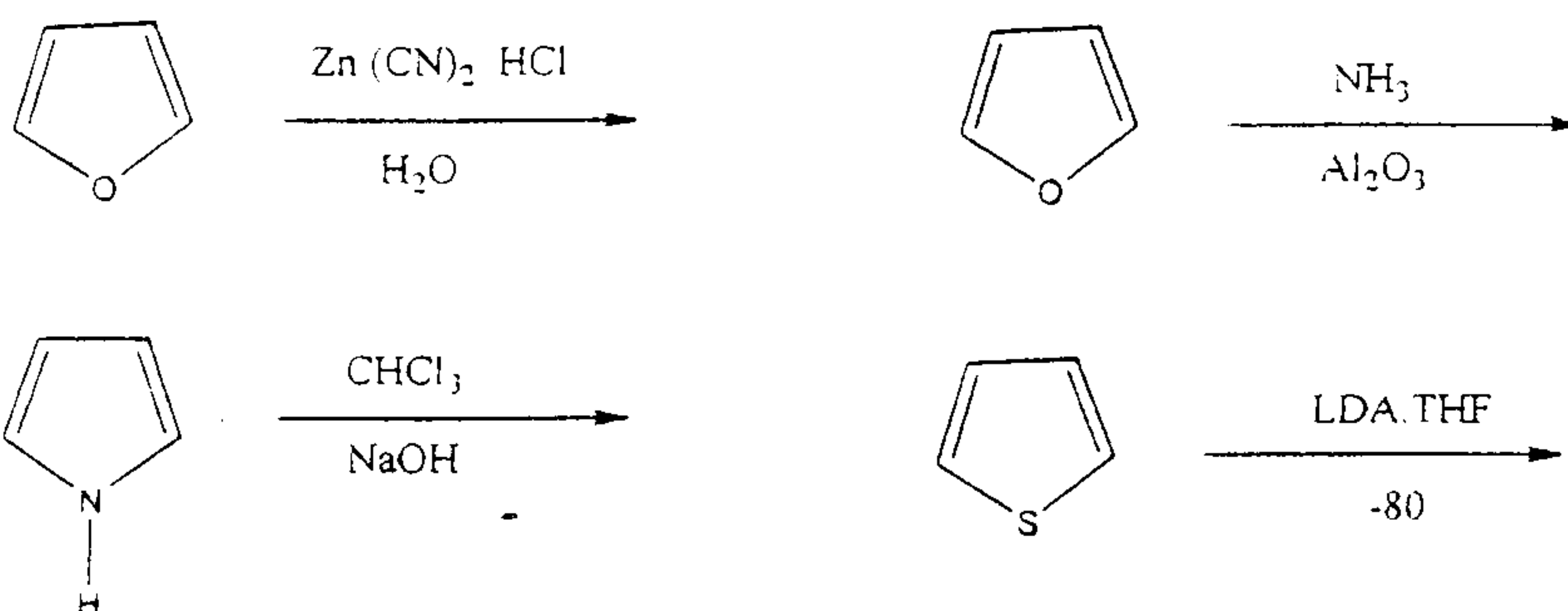
Q 1) Write the following reaction with mechanism? [6M]

1. Fischer-Indole synthesis
2. Pict-gams Synthesis
3. Hantzsch synthesis of pyrrole

Q 2) Attempt the conversion (any one) [2M]

1. Isatin to 2-methylquinolin
2. Aniline to 4-methyl-2-quinoline

Q 3) Give Product ? [4M]



Q 4) Give reasons ? [3M]

1. Electrophilic substitution of furan is easier than benzene ?
2. Justify furan is heteroaromatic ?
3. Justify pyrrole is weak acid ?



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**T. Y. B. Pharm. (Semester -V)
Periodic Theory Examination (2016 - 2017)**

**Subject: Pharmacology II
Marks: 15 M**

**Date: -
Time: - 11.00 am-12.00 pm**

All Questions are compulsory

Q.1: State whether the following statements are true/false and justify your answer

(ANY TWO)

(2 Marks)

- i. Carbimazole inhibit peripheral conversion of T_4 to T_3 .
- ii. Insulin inhibits glycogenolysis and gluconeogenesis.
- iii. Calcitonin inhibits bone resorption.
- iv. Repaglinide is a selective agonist of PPAR γ .

Q.2: Attempt any TWO of the following.

(3 Marks)

- i. Give the classification of oral hypoglycemic drugs and Mechanism of action of Sulphonylurea.
- ii. Discuss in detail pharmacotherapy of osteoporosis.

Q.3: Give mechanism of actions of following. (ANY TWO)

(4 Marks)

- i. Sulphonamides
- ii. Fluoroquinolones
- iii. Macrolides

Q.3: (ANSWER ANY ONE)

(3 Marks)

- i. Rationale for combining sulphonamides with trimethoprim
- ii. Mechanism of action of penicillin

PTO



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Q.4: (ANSWER ANY ONE)

(3 Marks)

- i. Describe mechanism of action of Aminoglycosides and pharmacology of Gentamicin
- ii. Classify Cephalosporins. Describe their anti-bacterial spectrum and mechanism of action



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**T. Y. B. Pharm. (Semester –V)
Periodic Theory Examination (2016 – 2017)**

**Subject: COSMETICS
Marks: 15 M**

**Date: -20/9/16
Time: -**

Questions

Marks

Qs.1] Name the following: [Any 4]

[2M]

- Any two plasticizers used in nail lacquers
- Maximum percentage of beeswax used in cold cream.
- Any two skin bleaching agent.
- Role of glycerine in vanishing cream
- Any two anti-acne agents used in cosmetics.

Qs 2] Enumerate the quality control tests in lipsticks. Explain any two quality control tests according to BIS. [3M]

Qs 3] Explain the etiology and treatment of acne condition [3M]

[3M]

Qs 4] Give an account of raw materials used in cold creams [3M]

[3M]

OR

Qs. 4] What are preservatives? Describe the factors affecting efficacy of anti- microbial ? [3M]

[3M]

Qs 5] What are the different in-vitro and in-vivo evaluation tests for sunscreens. [4M]

[4M]



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T. Y. B. Pharm. (Semester - ~~3~~V)
Theory Examination

Subject: Pharmaceutical Management
Marks: 15M

Date: - 23.9.2016
Time: - 10.30-11.30

Questions

Marks

1. Answer any ONE

5

(a) Describe with case study SWOT analysis.

(b) Analyze different strategies taken in Product Life Cycle.

Case Study

Two years after Pfizer launched its blockbuster drug Viagra in India, the world's largest pharmaceutical company voiced its concern over the availability of counterfeits of Viagra in the Indian market. Unlike in the developed markets in the west, in India, Pfizer also had to contend with tough competition from multiple cost-based competitors for its popular and widely used drug to treat erectile dysfunction (ED) in men. Pfizer launched Viagra in India on December 26, 2005, almost seven years after the international launch of the drug in the US. Pfizer was reluctant to launch Viagra in India earlier, fearing competition from Indian companies producing generics in view of the loose patent regime prevalent in the country at that time. As a result, since 2001, various Indian pharmaceutical companies launched their own generic versions of the drug. By the time Pfizer launched Viagra in India, more than 40 local generic versions of the drug were available in the Indian market. Pfizer launched Viagra in India at price of Rs.594 for a single tablet (Rs.463 for 50mg). Most of the local versions of the drug were available at Rs25 or less (for a 50mg tablet). Some industry experts felt that the timing of Pfizer launch of Viagra in India was late as many local versions of the drug were already available. Moreover, many doctors were of the opinion that ED



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patients did not get any additional benefit out of Viagra when compared to local versions, to justify its high price. However, despite its late entry and premium pricing, Pfizer was confident of capturing 10-15 percent of the ED market in India within the first one to two years of Viagra's launch. India was considered a lucrative market for ED drugs with an estimated 70-90 million men suffering from this disorder. Within two months of its launch in India, Viagra seemed well on its way to surpass its target for the year. Pfizer reported that Viagra had already cornered a 1.8 percent of the ED market in India. This was despite the marketing dynamics of the Indian pharmaceutical market being very different from that in the US, where the brand was very successful. Unlike in the US, in India Pfizer had to compete against multiple cost-based local competitors and it could not promote Viagra through direct-to-consumer(DTC) advertising which was not permitted in India. Nevertheless, the company was banking on market research data that suggested that there was a demand for Viagra in India in grey market, and it hoped to convert that demand into sales of the original product. Pfizer was importing the original Viagra from France for the Indian market, and the package of Viagra before a distinctive hologram.

Analysts felt that marketing Viagra at such a high price compared to the local versions of the drug would be a big challenge for Pfizer. Though the company maintained that sales of Viagra were satisfactory, Pfizer was tight-lipped about the sales figures of Viagra in India since March 2006.

By December 2007, almost two years since its launch, it was evident that Viagra was feeling the pressure from local competitors as well as counterfeit Viagra sold by unscrupulous elements. Its sales were estimated to be a fraction of that of the top three players in the Indian ED market- Manforce of Mankind Pharma Private Ltd, Penegra of ZydusAlidac, and Caverta of Ranbaxy Laboratories Ltd. These three brands had market shares of 39 percent, 14.21 percent and 12.13 percent, respectively.

Moreover, in keeping with the worldwide trend in the ED market, the ED market in India (estimated to be Rs 1,230 million in 2007) was witnessing sluggish growth. In addition to this, the sales of Viagra were affected by the wide availability of counterfeits that were made locally and also sourced from countries such as China and Pakistan.

A spokesperson for the company said, "Viagra sales have been satisfactory, however, we believe the product could grow faster if patients were more careful about purchasing the original drug." The company said that there were significant health risks associated with counterfeits of Viagra and consumers ought to be aware of it. Pfizer advised consumers to take precautions while buying Viagra, such as looking for the hologram, desisting from buying Viagra over-the-counter (i.e., without a prescription), and always insisting on a bill for every purchase of the drug.



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Questions to Analyse (Attempt any one from Q:2& Q:3)

Q.2.a Did Pfizer take a right decision to launch Viagra late in India? Justify. (5 Marks).

Q.2.b How did Pfizer compete against its competitors in India? (5 Marks)

Q:3. If you were the Product Manager assigned for Viagra, how would you launch Viagra in China?
(10 Marks)