



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

S. Y. B. Pharm. (Semester -III)  
Periodic Theory Examination (2016 - 2017)

Subject: Organic chemistry-I  
Marks: 15 M

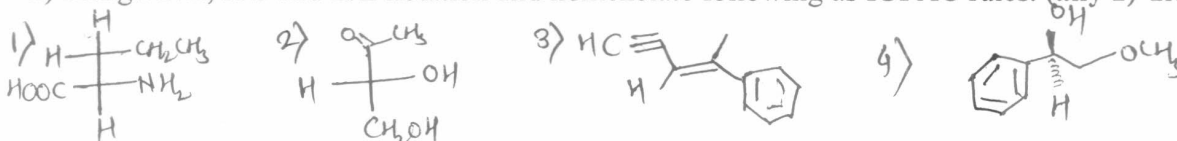
Date: - 19-09-2016  
Time: - 10.30 am-11.30 am

Q1 A) Give suitable structures for the following: (Any 2) 2M

- 1) Cyclohexa-1,4-diene-1-carboxamide      3) 4-Bromomethoxy benzene  
2) 3, Diethyl-3-methylpentanedioate      4) 2-Hydroxycyclopentanecarboxamide

B) Draw possible resonating structures of phenol and Benzoic acid. 2M

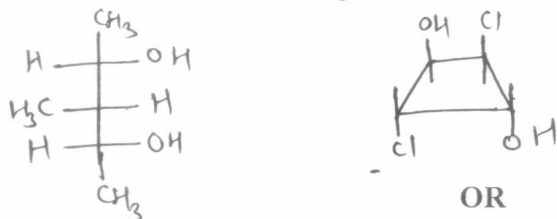
C) Assign D/L, R/S and E/Z notation and nomenclature following as IUPAC rules. (any 2) 2M



Q2 A) Arrange the following in increasing order of basicity and justify 3M

Aniline, p-nitroaniline, cyclohexylamine

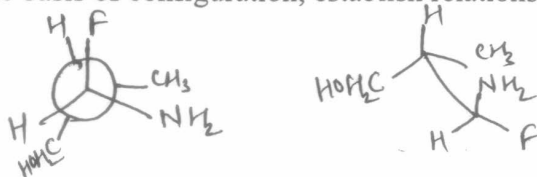
B) Identify whether following molecules are chiral or achiral. Justify 2M



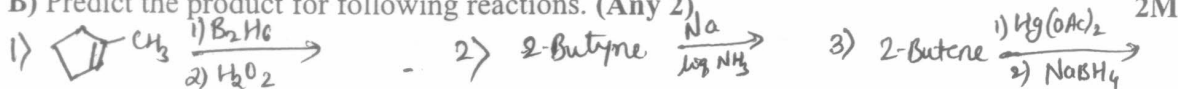
Identify whether following molecules are aromatic, antiaromatic or nonaromatic based on Huckel's rule. (Any 2)



Q3.A) On the basis of configuration, establish relationship between following molecules. 2M



B) Predict the product for following reactions. (Any 2) 2M



**S. Y. B. Pharm. (Semester –III)  
Periodic Theory Examination (2016 – 2017)**

Subject: Biochemistry-II  
Marks: 15 M

Date: - 20-09-2016  
Time: - 10:30-11:30

Answer the following questions

1. Write the functions of cholesterol. [2M]
2. Give the name and structures of the substrate and product of the following enzyme reactions. (Any 2) [4M]
  - ✓ Enoyl-coA hydratase
  - ✓ Enoyl-coA isomerase
  - ✓ HMG-coA synthase
  - ✓ Acetyl coA ACP transferase
3. Write the structure of the given substrate and product and name the enzyme catalysing the reaction. (Any 2) [4M]
  - ✓ Xanthine to uric acid
  - ✓ Squalene to squalene epoxide
  - ✓ Guanine to xanthine
  - ✓ Palmitoyl-coA to trans  $\Delta^2$ -enoyl-coA
4. Describe the biosynthesis of purines or pyrimidines. [5M]



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**S. Y. B. Pharm. (Semester –III)**  
**Periodic Theory Examination**

**Subject: Dispensing Pharmacy**  
**Marks: 15M**

**Date: - 21.9.2016**  
**Time: - 10.30 am-11.30 am**

**Questions**

**Marks**

1. Answer any **three**

**3X2=6**

- (a) Calculate the dose of a child of 3 years if adult dose is 300 mg.
- (b) State the type of emulsion formed using the following emulsifying agents.
- i) Lime soap
- ii) Triethanolamine srearate
- (c) State the type of powders for which double wrapping is used.
- (d) What are the advantages of solutions taken orally?
- (e) Discuss in brief 'Poultice' as a type of dispensed preparation.

2. Write notes on ( **any one**).

**4X1=4**

- (a) Enlist various types of ointment bases. Write a note on ointment prepared by chemical reaction.
- (b) State the properties of an ideal suspension. Differentiate between diffusible and indiffusible suspension.



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c) Mention the container/closure and labelling instruction of the following

preparations-

- i) Creams
- ii) Gargles
- iii) Paints
- iv) Enemas

**3) Answer any two**

**2.5X2=5**

- a) Write a note on lozenges as a dosage form.
- b) Enlist the reasons for cracking in an emulsion.
- c) Why ammonium chloride is used in white liniments?
- d) Why dried sodium phosphate is used in the preparation of effervescent granules.



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**S. Y. B. Pharm. (Semester -III)**  
**Periodic Theory Examination (2016 - 2017)**

**Subject: Pharmaceutical Engineering**  
**Max Marks: 15 M**

**Date: - 22/09/2016**  
**Time: - 1 Hour**

**Note: Draw neat and well labeled diagram where ever necessary**

- Q1** A) Explain working of piston pump with diagram. 3M  
B) Explain principle, construction and working of Orifice meter. 4M  
**OR**  
B) Explain Bernoulli's principle and Distinguish between Orifice meter and ventury meter. 4M
- Q2** Explain Mier's theory of supersaturation and draw labeled diagram of Krystal crystallizer. 4M
- Q3** Write Short note on following (any two) 4M  
a) Pneumatic conveyor  
b) Horizontal tube evaporator  
c) Centrifugal rotary evaporator  
d) Bucket trap  
e) Brine systems



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**S. Y. B. Pharm. (Semester –III)**  
**Periodic Theory Examination (2016 – 2017)**

Subject: APP-II  
Marks: 15M

Date: 23 - 9 -2016  
Time: 10.30 am-11.30 am

Q-1. Describe conduction system of heart with neat and labelled diagram? [2M]

Q-2. Explain hormonal control of Blood pressure? [2M]

Q-3. Explain phases of digestion? [3M]

OR

Q-3. Describe cardiac cycle. [3M]

Q-4. Describe digestion and absorption of proteins and fats along GIT? [3M]

Q-5. Explain pathophysiology of (any two) [4M]

- Peptic ulcer
- Hypertension
- Jaundice
- Angina pectoris

Q-6. Define [1M]

- Stroke volume
- .....cells secrete pepsinogen and gastric lipase



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Subject: Mathematics I  
Marks: 15  
Class: SY B Pharm

Date: 24/09/2016  
Duration: one Hr  
Periodic Test

Q.1 Solve any THREE. ( 1 mark each)

a) The value of determinant of a matrix  $A = \begin{bmatrix} 1 & 0 & 1 \\ 0 & 1 & 1 \\ 4 & 1 & 1 \end{bmatrix}$  is -----.

b) If  $f(x) = x^2 - 3x + 1$  then  $\Delta f(x) =$  -----.

c) The rank of a Matrix  $A = \begin{bmatrix} 1 & 0 & 2 \\ -3 & 4 & 0 \\ 1 & 5 & 3 \end{bmatrix}$  is -----.

d) If  $u = x^2 - xy + y \sin x + x \log y$  then  $\frac{\partial u}{\partial x} =$  -----.

Q. 2 Solve any FOUR. ( 3 marks each )

a) Find Inverse of A using adjoint method.  $A = \begin{bmatrix} 1 & 2 & 3 \\ 2 & 4 & 5 \\ 3 & 5 & 6 \end{bmatrix}$

b) Solve using Cramer's Rule  $x + y + z = 6$ ,  $x - y + z = 2$ ,  $2x - y + 3z = 9$ ,

c) Evaluate  $I = \int_0^4 x^2 dx$  using trapezoidal Rule.

d) Use Lagrange's formula to find a polynomial passing through  $(-1,1)$ ,  $(0,1)$ ,  $(2,7)$

e) Estimate the missing term using E and  $\Delta$ .

X	0	1	2	3	4
y	1	3	9	-	81

f) Prove that  $\begin{vmatrix} 1 & x & x^2 \\ 1 & y & y^2 \\ 1 & z & z^2 \end{vmatrix} = (x-y)(y-z)(z-x)$ .

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