CBSGS
Sem-I
SUB-POC

10/04/2017

Q.P. Code : 00231

[Time: Three Hours] **[Marks:70]**

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.
2. Answer all sub questions together.
3. Figures to right indicate full marks.

Q.1 a. **Explain the terms (Any 5)** 5

i) Electronic configuration
ii) Energy of activation
iii) Symmetry elements
iv) Specific base
v) Activated complex
vi) Charge transfer complex

b. **Fill in the blanks** 5

i) In a first order reaction half-life of reactant is found to be 23 minutes. The rate constant for the reaction is.....
ii) Lewis structure for H_2SO_4 is.....
iii) ..... is an example of phase transfer catalyst
iv) Charge transfer complex example is.....
v) Ground state electronic configuration for boron is.....

c. **Match the following.** 5

Column A	**Column B**
d_{yz}	Electrophilic catalysis
Fe valence electrons (At.No.26)	OH^-
$AlCl_3$	Sp^3 hybridization
Water	pi symmetry
Nucleophilic catalyst	$3d^64s^2$

Q.2 a) Draw resonating structures for : 2

i) $H_2PO_4^-$ ii) CO_3^{-2}

b) Explain the formation of ethylene and clearly indicate HOMO and LUMO. 3

c) What is an isotope effect? Mention its significance. 3

d) State different catalysis types and explain any one in detail. 3

Q.3 a) Compare the geometries of NH_3 and BH_3 by using their group orbitals. 3

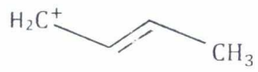
b) With the help of Walsh diagram explain energies for linear and bent CH_2. 3

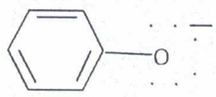
c) State Eyring equation. Explain each term involved in it. 3

d) For a reaction following first order kinetics calculate half-life if 30 % reaction gets completed in 1 hour. 2

Q.4 a) Discus salient features pertaining to Molecular orbital theory. 3
b) What is QMOT? State any three rules for QMOT. 3
c) Elaborate on first order kinetics with suitable examples. 3
d) Explain Nucleophilic catalysis in brief. 2

Q.5 a) Draw the resonating structure for the given molecules. 3

1) 

2) 

b) Explain the formation of carbanion by molecular orbital theory. 3
c) A plot of lnK vs 1/T is a straight line with a slope $-2.8X10^2$. Calculate the energy of activation for the reaction. 2
d) Give the classification of charge transfer complexes with suitable examples. 3

Q.5 a) Complete the following table on the basis of hybridization concept. 3

Molecule	Hybridization state of the underlined atom	Bond angle
$\underline{C}H_4$		
$\underline{B}F_3$		
$\underline{P}C1_5$		

b) Derive an expression for general base catalysis and show relevant kinetic plots. 4
c) State and explain principle of microscopic reversibility. 2
d) What is Hammond's postulate? Explain it by showing relevant energy profile diagrams. 2

5/4/17

sem-I PP-I

5/4/17

CBSGS

Q.P. Code :00581

[Time: Three Hours] **[Marks:70]**

Please check whether you have got the right question paper.

N.B: 1. All questions are compulsory.
2. Draw neat, labelled diagrams wherever necessary.

Q.1. **a)** Explain supercritical fluid state & give its applications. **(03)**

b) What is optical activity? Give its applications. **(02)**

c) When 0.44gm of a substance was dissolved in 22.2gm benzene, the freezing point of benzene was lowered by 0.567^{0}C. If K_f=5.12^{0}C, mol^{-1}, calculate the molecular weight of the substance. **(03)**

d) Define thermodynamics & give its applications & limitations. Classify thermodynamic systems. **(04)**

e) State & Explain Faraday's law of electrolysis **(03)**

Q.2. **a)** Explain Linde's method for liquefaction of gases. **(04)**

OR

Elaborate on Claude's method for liquefaction of gases.

b) What is dielectric constant? Give its applications in pharmacy. **(03)**

c) Explain Hess's law of constant heat summation. **(04)**

Q.3. **a)** Explain Ostwald & Walker's Dynamic method for measurement of relative lowering of vapour pressure. **(04)**

b) Explain efficiency of heat engine. An engine operating between 150^{0}C & 25^{0}C takes 500 J from high temperature reservoir. Calculate the work done by it, assuming that there are no frictional losses. **(04)**

OR

Give different statements of second law of thermodynamics. What is entropy? Explain its importance

c) Explain equivalent conductance of a weak electrolyte at infinite dilution. **(03)**

Q.4. **a)** Derive the equation for deviation of real gases from ideal gas. **(04)**

b) Explain principle and working of Abbe's refractometer. **(03)**

c) Explain a method to determine the molecular weight of a non-volatilve solute by elevation in boiling point. **(04)**

OR

Justify 'Depression in freezing point is a colligative property'.

P.T.O

Q.5. **a)** Write a short note on polymorphism. **(04)**

b) What is Osmosis and describe modern Osmometer. **(04)**

c) Define the following **(03)**

i) Heat of formation

ii) Heat of combustion

iii) Heat of solution

OR

Define Bond energy. Calculate ΔH for reaction: **(03)**

$C_2H_4\ (g) + 3O_2\ (g) \rightarrow 2CO_2\ (g) + 2H_2O(g)$ from the following values of bond energies:

Bond	Bond energies (KJ)
C-H	414
O=0	499
C=0	724
O=H	460
C=C	619

Q.6. **a)** The Van der Waal's constant for ethane are **(03)**

a=5.57, b=0.064

Calculate the external pressure and internal pressure for ethane at 300 K. The volume of ethane is 2.5 m^3/Kmol and R=8.3153 KJ/Kmol.K

b) Write a short note on fractional distillation **(03)**

c) Write a short note on Gibb's Free Energy **(03)**

d) State the postulates of Arrhenious theory of electrolytic dissociation. **(02)**

E7A78C21672AFC40F7DED7D4B85DE05B

F.Y. Bharm Sem-I (CBSGS) 20/04/17
Sub-APP-I

Q.P. Code :06724

[Time: 3 Hours] [Marks: 70]

Please check whether you have got the right question paper.

N.B:
1. All questions are compulsory.
2. Answer all sub questions together.
3. Draw neat labeled diagram wherever necessary.

Q.1 a) Answer the following. **12**

i) Give functions of adipose tissue & connective tissue.
ii) Define: Osmosis & passive transport
iii) Give functions of Lymphatic system
iv) Explain blood transfusion reaction.
v) Enlist any four inflammatory mediators.
vi) Comment on all or none principle of muscle contraction.

b) Define the following terms: **03**

i) Hemostasis
ii) Motor unit
iii) Chemotaxis

Q.2 a) Answer **any TWO** of the following: **08**

i) Explain synthesis of hemoglobin with its structure.
ii) Write classification of immunity. Explain in brief adaptive immunity.
iii) Enlist types of leukocyte. Explain in brief arganulocytosis.

b) Answer **any ONE** of the following: **03**

i) Write a note on Leucopoiesis
ii) Write the pathophysiology of Myasthenia gravis.

Q.3 a) Answer **any TWO** of the following. **08**

i) Explain contraction of skeletal muscle in brief.
ii) Draw a neat diagram of sarcomere.
iii) Explain the energy metabolism in the muscle.

b) Answer **any ONE** of the following: **03**

a) Explain the process of pinocytosis & phagocytosis.
b) Write a note on cardiac muscle.

Q.4 a) Answer **any TWO** of the following: **08**

i) Write the classification of organs of lymphatic system. Explain the process of formation of lymph.
ii) Explain the histology & functions of lymph.
iii) Write a note on AIDS.

DB7C17DA780706E58B3407530C8A5C45

b) Answer **any ONE** of the following: **03**

i) Differentiate between simple & compound exocrine glands.

ii) Write a note on hypersensitivity reactions.

Q.5 a) Answer **any TWO** of the following: **08**

i) Draw a diagram of plasma membrane & write its functions.

ii) Draw a diagram of neuromuscular junction & explain the role of acetyl choline in muscle contraction.

iii) Write a note on acute inflammation.

b) Answer **any ONE** of the following: **03**

i) Explain the process of tissue repair.

ii) Write a note on active transport process.

Q.6 a) Answer **any TWO** of the following: **08**

i) Explain the steps involved in hemostasis & write the role of platelets in coagulation of blood.

ii) Explain the life cycle of RBC.

iii) Define blood & write its composition & functions.

b) Answer **any ONE** of the following: **03**

i) Explain the process of cell mediated immunity.

ii) Write a note on role of prostaglandins in inflammation.

DB7C17DA780706E58B3407530C8A5C45

F.Y. B.Pharm, Sem-I (CBSGS) 26/04/17

Sub - EVS

Q.P. Code : 02739

[Time: 3 Hours] [Marks:70

Please check whether you have got the right question paper.

N.B:
1. **All questions are compulsory**
2. **Draw neat diagrams wherever necessary**
3. **Figures to right indicate full marks**

Q. 1 (a)	What are abiotic components of an ecosystem?	1
(b)	What do you understand by Biological Oxygen Demand.	1
(c)	What is "Carrying capacity"?	1
(d)	What is the need for studying environmental issues.	2
(e)	Outline Global Environmental Crisis related to sanitation.	2
(f)	What do you mean by non-point sources of water? Give examples.	2
(g)	What are greenhouse gases? Give examples.	2
(h)	Give diagrammatic representation of carbon cycle.	2
(i)	Enlist the functional components of ecosystem.	2
Q. 2 (a)	Explain food chains and food webs? Give examples.	4
(b)	With a neat labelled diagram, explain Flash Steam Distillation.	4
	OR	
(b)	With a neat labelled diagram, explain the working of Photovoltaic Cell.	4
(c)	What are the major causes and consequences of deforestation?	3
Q. 3 (a)	Classify solid waste. Explain sanitary landfills as one of the methods of solid waste management.	4
(b)	Enumerate on any two methods for control of Air Pollution.	4
	OR	
(b)	Enumerate on any two approaches adopted in secondary treatment of waste water.	4
(c)	Discuss the causes and effects of noise pollution.	3
Q. 4 (a)	Discuss the salient features of Forest (Conservation Act), 1980.	4
	OR	
(a)	Enumerate the functions of State Pollution Control Board.	4
(b)	What are the agents responsible for Ozone layer depletion? What are the effects of Ozone depletion.	4
(c)	What are the major impacts of acid rain and how can we control it?	3
Q. 5 (a)	Explain the concept of carbon credit.	4
(b)	What is EIA? Explain the procedure for obtaining Environmental Clearance.	4

TURN OVER

(c) What do you mean by sustainable development? What are the measures to attain sustainability? 3

OR

(c) Explain the conservation of water using the 3R approach.

Q. 6 (a) Explain the concept of 'Green Buildings'. 4

(b) Explain the role of technology in Environment and health. 4

OR

(b) Explain disaster management with respect to Tsunami. 4

(c) Give an account of indoor air pollution. 3

05/05/17

SCHOOL OF PAHARMACY
SEMESTER I EXAM 2016

First Year B.Pharm
Total Marks: 80
Date: 05/05/2017

Sub: Communication Skills & Ethics
Duration: 3 Hours

Q.1] Do as Directed: **[10M]**

1. They are Knocking down the old school.(Change the voice)
2. Harry planted a tree.(Identify the tense)
3. The flock of birds (was, were) flying south for the winter.(Rewrite using correct verb)
4. The party start before the show over.(correct the sentence)
5. i live In john street in Norwich England.(punctuate)
6. It has become the rallying point for unorganized labour movement.(Add question tag)
7. In 1956, the hamals went on their first ever strike demanding decent wages. (Change into Infinitive)
8. The horse is excellent in swimming. (Frame a Wh- type question to get the underlined part as an answer)
9. Give Synonym: Obedient
10. Give Antonym: Knowledge

Q.2] Fill in the blanks: **[5M]**

1. Almost all politicians were involved_____ the scandal.
2. I am looking forward_____ having a meeting with you next week.
3. It doesn't matter whether they get the job_____ not.
4. We played very well_____ we still lost the game.
5. The book was _____ the table.

Q.3] Give the Phonetic Transcription: **[10M]**

1. Dancing
2. Launch
3. Fresh
4. Evening
5. Yes
6. Theory
7. Pet
8. Form
9. Art
10. Home

Q.4] Define the following: { Any Five } **[10M]**

1. Communication
2. Gesture
3. Technical Communication
4. Resume
5. Leadership
6. Stress Management

Q.5] Write Short Notes on: { Any Three } **[15M]**

1. Barriers of Communication
2. Five C's of Technical Communication
3. Types of Letters
4. Report Writing
5. Flow of Communication in Organization
6. Impact of Media & Technology
7. Family Responsibilities

Q.6] Write an ESSAY on any one of the following topics: **[10M]**

1. "Pharmacy Day", celebration in the campus
2. "Field Project" that you did for Communication Skills Subject
3. "Health is Wealth" Discuss
4. Discuss how you will Communicate with Cancer Patient & Mentally Challenge

Q.7] Draft a Report for a General Meeting of all the co-ordinators for keeping the events For the upcoming fest in the college. **[10M]**

Q.8] Attempt any One: **[10M]**

(a) You want to go abroad for your Higher studies in Pharmacy. Write an Inquiry Letter to Citibank inquiring about an educational loan.

OR

(b) You are dissatisfied with the garments consignment you have received from a supplier. Write down a Complaint Letter for the same and mention the details regarding the problem.

*****BEST OF LUCK*****