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2.5.1: Offline question paper sample

B. Pharm. 3rd Year 6th Semester, 2023-24, 1st CA
COURSE: B. PHARM

PAPER: Quality Assurance
Time: 50 min.

CODE: PT-611
Full Marks: 25

WRITE THE ASSIGNMENT IN AN A4 PAPER AND UPLOAD IN PDF FORMAT IN THE UPLOADING SECTION OF GOOGLE FORM.

Assignment/Topic	Map. CO	Marks
Write any one of the following: 1. Define Total Quality Management (TQM). Elaborate the concepts of Total Quality Management (TQM) for pharmaceutical industry. 2. Define validation. Write in details of process validation.	CO1 CO3	25

ASSIGNMENT AND CO. MAPPING

CO	NO OF QUES.	MARKS
CO. 1	1	25
CO. 2		
CO. 3	1	25
CO. 4		
CO. 5		
TOTAL	1	25

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B. Pharm. 3rd Year 6th Semester, 2023-24, 1st continuous Assessment

COURSE: B. Pharm.

PAPER: Medicinal Chemistry III **CODE: PT- 613**

Time: 40minutes **Full Marks: 25**

WRITE THE ASSIGNMENT IN AN A4 PAPER AND UPLOAD IN PDF FORMAT IN THE UPLOADING SECTION OF GOOGLE FORM.

Assignment/Topic	Map. CO	Marks
Explain the steps of synthesis of the following compounds (*any five*): Chloroquine, Pamaquine, Chloramphenicol, Isoniazide, Para amino salicylic acid, Ciprofloxacin, Nitrofurantoin, Acyclovir **Or,** Discuss the structure-activity-relationship (SAR) of the followings (*any three*): Quinoline as antimalarials, β-Lactam antibiotics, Aminoglycosides, Tetracyclines **Or,** Write down name and structures of the starting materials and structures of the final compounds of synthetic route of the followings (*any eight*): Miconazole , Tolnaftate, Metronidazole, Diethylcarbamazine citrate, Mebendazole, Sulfamethoxazole, Sulfacetamide, Trimethoprim, Dapsone	CO-2, CO-3 CO-1, CO-2 CO-4	25 25 25

ASSIGNMENT AND CO. MAPPING

CO	NO OF QUES.	MARKS
CO. 1	1	25
CO. 2	2	23
CO. 3	1	25
CO. 4	1	27
CO. 5	0	0
TOTAL	5	100

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B. Pharm 4thYear 8th Semester, 2023-24, 1st Continuous Assessment (CA1)

COURSE: B. PHARM

PAPER: Biostatistics and Research Methodology **CODE:** PT-817

Time: 50 minutes **Full Marks:** 25

WRITE THE ASSIGNMENT IN AN A4 PAPER AND UPLOAD IN PDF FORMAT IN THE UPLOADING SECTION OF GOOGLE FORM.

Assignment/Topic	Map. CO	Marks
Differentiate between population and Sample. Write about different types of central tendencies. Illustrate different types of graphs that are used in Biostatistics. (5+10+10)	CO1	25
OR		
Elaborate the Measures of dispersion used to represent the properties of a distribution. Explain the term "Regression". Describe the The linear regression model by Method of least Square. (10+5+10)	CO1	25

ASSIGNMENT AND CO. MAPPING

CO	NO OF QUES.	MARKS
CO. 1	2	50
CO. 2		
CO. 3		
TOTAL	2	50

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M. Pharm. 1st Year 1st Semester, 2022-23, 2nd CA

COURSE: M. PHARM. (PHARMACEUTICAL ANALYSIS)

PAPER: ADVANCED PHARMACEUTICAL ANALYSIS **CODE: MPT1012**

Time: **Full Marks: 25**

WRITE THE ASSIGNMENT IN AN A4 PAPER AND UPLOAD IN PDF FORMAT IN THE UPLOADING SECTION OF GOOGLE FORM AND FOLLOW OTHER GUIDELINE PROVIDED BY IC_EXAM IN THE NOTICE GIVEN ON 22/12/2023. LAST DATE FOR SUBMISSION ON OR BEFORE 10.01.2024.

Assignment/Topic	Map. CO	Marks
Mr. Asit Roy is going to pathology lab for testing the total 25-OH Vitamin D, Triiodothyroxine (T3) and Tyhroxine (T4) by providing his blood. By using C.L.I.A., the total 25-OH Vitamin D, Triiodothyroxine (T3) and Tyhroxine (T4) were found to be present 24.77 ng/ml, 111 ng/dL, and 6.39 ng/dL respectively in his serum. What is full form of C.L.I.A. Explain in details the principal, requirement of various reagents, methods, merits and demerits of the technique used in the above assay. Enlighten about the production of antibodies as well as flow chart.	MPT1012.CO4	25

ASSIGNMENT AND CO. MAPPING

CO	NO OF QUES.	MARKS
CO. 1		
CO. 2		
CO. 3		
CO. 4	1	25
CO. 5		
TOTAL	1	25

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M.Pharm. (Industrial Pharmacy) 1st Year 2nd Semester CA3 Examination AY: 2023-2024

PAPER: Pharmaceutical Production Technology **CODE: MIP 203**

Time: 50mint Full Marks: 25

Answer any five of the questions. **5*1=5**

1 a) What is use of cellulose acetate phthalate in tablet formulations? (CO- 1)

b) Define mottling. (CO- 1)

c) Name one water-soluble lubricant. (CO- 1)

d) Why mannitol is used as a diluent in the chewable tablets?(CO- 1)

e) Gelatin Type-A is

(i) Alkali treated (ii) Acid treated (iii) Base treated (iv) Both acid and alkali treated (CO-2)

f) Arrange the empty capsule cell in ascending order as per filling capacity (weight). (CO-2)

(i) 5<4<3<2<1<0<00<000 (ii) 5>4>3>2>1>0>00>000

(iii) 1>2>3>4>5>0>00>000 (iv) None of them

g) Define bloom strength? (CO-2)

Answer any four of the following. (Short answer question) **5*4=20**

2. Describe granulation process and enlist its various objectives. (CO- 1)
3. Explain the functional roles of diluents, binders and disintegrating agents in tablet formulation. (CO- 1)
4. Briefly describe the dry granulation process with suitable flow diagram and explain its limitations. (CO- 1)
5. Differentiate between hard gelatin capsule and soft gelatin capsule. (CO-2)
6. Illustrate about the key steps involved in the production of gelatine. (CO-2)
7. Explain the common materials used for manufacturing of capsules. (CO-2)

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M. Pharm. 1ST Year 1ST Semester, 2023-24, CA-1 Examination
COURSE: M. PHARM

PAPER: PHARMACEUTICAL VALIDATION **CODE: MPT1013**
Time: 1 hr Full Marks: 25
Answer any five of the questions. **5*1=5**

1.i) ---------- is an important aspect of equipment validation (CO-1)
ii). The purpose of IQ is to check the ---------- (CO-1)
iii). 12. Design qualification should be performed when new---------- Procedure (CO-1)
iv). What is the full form of USPTO? (CO-4)
v). Design Patent Protected..... Years from date of grant (CO- 4)
vi). The validity of Utility patent is.....years (CO-4)
vii). The term Intellectual Property Rights covers---------- (CO-4)

Answer any four of the following. (Short answer question) **5*4=20**

2. Advantage of Validation, **Apply your understanding** to **describe** in details Validation Master Plan (CO-1)
3. **Illustrate** the importance of Streamlining of Qualification & Validation process? (CO-1)
4. **Describe** in details design Qualification, Installation Qualification, Operational Qualification, and Performance Qualification (CO-1)
5. **What** is IPR? What is the **Importance** of IPR in industry? (CO-4)
6. **Describe** different types of IPR? (CO- 4)
7. **Explain** in details Intellectual Property Protection Mechanisms. (CO-4)

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B. Pharm. 1st Year 1st Semester, 2023-2024 CA1 Examination

PAPER: Pharmaceutical Analysis **CODE: PT101**
Time: 50mints Full Marks: 25

1. Answer any five of the questions. **5*1=5**

i. Sodium hydroxide: whether it is primary standard or secondary standard and why?(CO.PT 101N.1)
ii. What is the strength of concentrated sulphuric acid?(CO.PT 101N.4)
iii. 1.8 g of hydrated oxalic acid is dissolved in water and the volume is made up to 250 ml. What is the molarity and normality of the resulting solution?(CO.PT 101N.4)
iv. What is the function of an indicator in titrimetric analysis?(CO.PT 101N.1)
v. What is a self-indicator? Give one example of a self-indicator.(CO.PT 101N.1)
vi. At what pH range does Phenolphthalein show the endpoint in acid-base titration?(CO.PT 101N.4)
vii. Calculate the normality of H_2SO_4 solution (density = 1.5 g/ml) containing 30% by weight of H_2SO_4.(CO.PT 101N.4)

2. Answer any four of the questions

a) Differentiate between a. Titrant and titrand b. Stoichiometric endpoint and visual endpoint? (CO.PT 101N.1)

b) Define Normality, Molarity, and Molality. Which of these is/are independent of temperature and why? (CO.PT 101N.1)

c) A 200 ml solution is prepared by dissolving 0.5 gsodium carbonate. Calculate the concentration of the solution in a. ppm, b. %w/v, c. Mole/Litre d. Molarity e.Normality (CO.PT 101N.1)

d) What do you mean by primary standard? What are the characteristics of primary standard? (CO.PT 101N.1)

e) Define and classify titration. What are the criteria for titrimetric analysis? (CO.PT 101N.1)

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B. Pharm 1ST Year 1ST Semester, 2023-2024, CA-1 Examination

PAPER: PHARMACEUTICAL INORGANIC CHEMISTRY — **CODE: PT-103**
Time: 50mints — Full Marks: 25

Answer any five of the questions. **5*1=5**

1	Define antacid?	CO-2
2	What is assay?	CO-1
3	Why Sulphuric acid is secondary standard?	CO-1
4	What is the normality of concentrated Hydrochloric acid?	CO-1
5	Define buffer solution with example.	CO-2
6	Write down mathematical expression of pH.	CO-2

Answer any four of the following. (Short answer question) **5*4=20**

1	Briefly discuss about different characteristics of an ideal antacid	CO-2
2	Explain the overdose of antacids.	CO-2
3	Find out the amount (in gm) of sodium hydroxide is required to prepare 125ml of 1.15(N) sodium hydroxide solution?	CO-1
4	Discuss about the different sources of Impurities.	CO-1
5	Find out the pH of 0.001(M) solution of sulphuric acid. (assume 100% dissociation of sulphuric acid)	CO-2
6	Derive Henderson-Hasselbalch equation for a weak acid, HA.	CO-2

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PAPER: BIOCHEMISTRY (THEORY) **CODE: PT214**
Time: 1 hr Full Marks: 25
Answer any five of the questions. **5*1=5**

1 a) Define Bioenergetics. (CO-PT214N.2)
b) Energy required in converting one mole of reactants to one mole of products at pH 7.0, 25°C and 1 atmospheric pressure is known as _____. (CO-PT214N.2)
c) Which laws governs the quantitative study of energy relationships in biological systems? (CO-PT214N.2)
d) $ATP + H_2O \rightarrow ADP + Pi$
This reaction is an example of Endergonic reaction. This statement is True/False. (CO-PT214N.2)
e)Which enzyme complexes in the inner mitochondrial membrane act as a proton pump in electron transport chain? (CO-PT214N.2)
f) Which enzyme complex in the inner mitochondrial membrane is the site of oxidative phosphorylation? (CO-PT214N.2)
g) Which compounds inhibits terminal transfer of electrons to molecular O_2? (CO- PT214N.2)

Answer any four of the following. (Short answer question) **5*4=20**

2. Define Gibb's free energy and Entropy? Relate Gibb's free energy with the enthalpy and entropy of a reaction system. 2+3 = 5 (CO-PT214N.2)
3. Compare between the Exergonic and Endergonic reactions. (CO-PT214N.2)
4. Explainhigh energyand low energy compounds. Classify high energy compounds with giving one example. 2+3 = 5(CO-PT214N.2)
5. Describe the First and second laws of thermodynamics. Derive the relationship between free energy change and equilibrium constant of a biochemical reaction system at equilibrium.2+3 = 5 (CO-PT214N.2)
6. Define electron transport chain (ETC). Illustrate the distinct carriers sequentially arranged in the inner mitochondrial membrane that are responsible for the transfer of electrons from a given substrate to ultimately combine with proton and oxygen to form water. 1+4= 5 (CO- PT214N.2)
7. Write a note on inhibitors of electron transport chain (ETC). (CO-PT214N.2)

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B. Pharm. 2nd Year 3rd Semester, 2023-2024 3rd CA

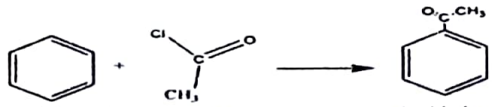
PAPER: Pharmaceutical Organic chemistry-II CODE: PT314
Time: 1 hr Full Marks: 25

Answer any five of the questions. 5x1=5

1. What are the reactants used for synthesis of Tolune through Friedel Craft's alkylation? (CO-1)
2. Chemically Gammexane is a γ isomer of _____. (CO-1)
3. Write down one example of electrophilic aromatic substitution reaction. (CO-1)
4. What are the necessary conditions for chlorination in benzene? (CO-1)
5. What are ring deactivating groups? Give examples. (CO-1)
6. What type of reaction is the nitration of benzene? (CO-1)
7. Write down the structure of DDT. (CO-1)

Answer any four of the following. (Short answer question) 5x4=20

1. What are the rules for aromaticity? (CO-1)
2. Explain the mechanism of following reaction using $AlCl_3$ as catalyst. (CO-1)



3. Discuss the structure of benzene laying emphasis on resonance and orbital structure.(CO-1)
4. Write down the limitations of Friedel Craft's acylation raction of benzene. (CO-1)
5. What is fuming H_2SO_4? How it is act as catalyst in nitration of benzene. (CO-1)
6. Write down the planner structure and uses of the following compounds:
   a) BHC b) Saccharine (CO-1)

Dr. B. C. Roy College of Pharmacy and AHS
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B. Pharm. 2nd Year 3rd Semester, 2023-2024 3rd CA

PAPER: Pharmaceutical Organic chemistry-II CODE: PT314
Time: 1 hr Full Marks: 25

Answer any five of the questions. 5x1=5

1. What are the reactants used for synthesis of Tolune through Friedel Craft's alkylation? (CO-1)
2. Chemically Gammexane is a γ isomer of _____. (CO-1)
3. Write down one example of electrophilic aromatic substitution reaction. (CO-1)
4. What are the necessary conditions for chlorination in benzene? (CO-1)
5. What are ring deactivating groups? Give examples. (CO-1)
6. What type of reaction is the nitration of benzene? (CO-1)
7. Write down the structure of DDT. (CO-1)

Answer any four of the following. (Short answer question) 5x4=20

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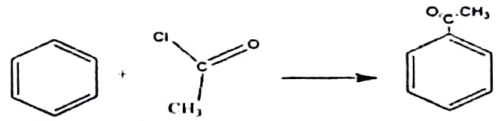

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Dr. B. C. Roy College of Pharmacy and AHS
Bidhannagar, Durgapur-06
B. Pharm. 2nd Year 3rd Semester, 2023-2024 2nd CA

PAPER: PHYSICAL PHARMACEUTICS-I **CODE: PT316**
Time: 1 hr Full Marks: 25
Answer any five of the questions. **5*1=5**

1. Span 60 is chemically _____(CO-2)
2. Name a method/instrument used for the measurement of interfacial tension between benzene and water.(CO-2)
3. The point at which there is sudden increase in solubility of liquids at CMC is known as _____
4. HLB value of wetting agents lie between _____(CO-1)
5. The advantage of non-ionic surfactants over ionic surfactants is _____ (CO- 2)
6. With increase in temperature, surface tension of a liquid _____(CO-2)
7. Surface tension is defined as _____.(CO-2)

Answer any four of the following. (Short answer question) **5*4=20**

1. Classify and explain each type of surfactants with 2 examples each. (CO-3)
2. Derive and explain any one method for determination of surface tension. (CO-3)
3. Deduce an expression for spreading coefficient. How is spreading caused? (CO- 3)
4. What is CMC? Explain the factors affecting micelle formation. (CO- 2)
5. Write notes on HLB scale and determination of HLB value (CO- 2)
6. True/ False. Explain in detail.

Solutions A and B have same density. Their surface tension values are 72.8 and 36.4 dynes/cm respectively. The capillary rise of liquid A is half to that of liquid B. (CO- 3)

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