



ARKA JAIN University, Jharkhand

1st Semester End Semester Examination – 2019-20

Subject: PHARMACEUTICS-I

Course: B. Pharma

Full Marks: 75

Pass Marks: 38

Time : 3 Hours

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts –A,B& C**
- **Part-A** is compulsory.
- **Part- B** contains **THREE** questions out of which **TWO** questions are to be answered.
- **Part- C** contains **NINE** questions out of which **SEVEN** questions are to be answered

The figures in right hand margin indicate marks.

Part-A

Q1 Objective Answer Type Questions (Answer all)

(2×10=20)

- Define drug and dosage form.
- Define aerosol.
- What is Tachyphylaxis.
- ~~State Young's rule to calculate paediatric dose from an adult dose.~~
- What do you understand regarding simple powder?
- Define simple syrup.
- What is wetting agent?
- What is significance of superscription in a prescription?
- What is water for injection?
- Define ointment.

Part-B

Q2 Long Answer Type Questions (Answer Any TWO)

(2×10=20)

- Define and classify suspension. Briefly discuss different methods for preparation of suspension.
- Define suppository, describe different methods for preparation of Suppository.
- Discuss what are the various factors affecting dose of a drug.

Part-C

Q3 Short Answer Type Questions Answer Any SEVEN

(7×5=35)

- What is prescription and what are the different parts of a prescription?
- Using allegation method, calculate the parts required for preparation of 200 ml of 60% alcohol from 80% alcohol.
- Write a note on 8th edition Indian Pharmacopoeia.
- Discuss various advantage and disadvantage of powders.
- Discuss how complexation is helpful in enhancing the solubility (with example).
- Discuss different identification tests of emulsions.
- What is the role of suspending agent in a suspension?
- Correct the following prescription for preparation of emulsion and mention what kind of incompatibility it undergoes?
Rx
Olive oil 30 ml
Water up to 120 ml
- Define Proof Spirit and calculate real strength of 50° O.P. and 60° U.P.



ARKA JAIN University, Jharkhand
1st Semester End Semester Examination -2019-20

Subject: PHARMACEUTICAL ANALYSIS

Course: B.Pharma

Time:3 Hours

Full Marks: 75

Pass Marks : 38

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts –A,B& C**
- **Part-A** is compulsory.
- **Part- B** contains **Three** questions out of which **Two** questions are to be answered.
- **Part- C** contains **Nine** questions out of which **Seven** questions are to be answered.

Part-A

Q1 Objective Answer Type Questions (Answer all) (2×10=20)

- 1) Define neutralization curve? What are the different types of neutralization curve?
- 2) Describe the advantages and disadvantages of instrumental methods of analysis?
- 3) What are the different methods to detect the end point?
- 4) What is the pH range of basic solution and give an example of weak acid indicator?
- 5) What is sampling? Define accuracy and precision.
- 6) What are significant figures? Write any two conventions for significant figures.
- 7) Write about the requirements for precipitation reaction.
- 8) What is potentiometric titration?
- 9) Why EDTA used in complex metric titration?
- 10) According to Bronsted and Lowry theory what are Acids and Bases?

Part-B

Q2 Long Answer Type Questions (Answer Any TWO) (2 X10=20)

- a) What is complex metric titration? Describe the different types of complex metric titration.
- b) Is titration a qualitative method or quantitative method? Write in details about the theory of acids and bases.
- c) What is common ion effect? Show the salt hydrolysis of class III salt and class II salts.

Part-C

Q3 Focused- Short Answer Type Questions Answer Any SEVEN (5×7=35)

- a) Write short notes masking and damasking agents.
- b) What a note on Fajan's method.
- c) Derive the equation for calculating the pH of acidic buffer solution. Find the pH of a solution having 0.1M acetic acid ($K_a = 10^{-5}$) and 0.2M sodium acetate.
- d) Write a note on choice of indicators
- e) Write short note on fractional precipitation.
- f) Derive the Henderson- Hasselbalch reaction.
- g) Briefly describe about non-aqueous solvents.
- h) Write a note on reference electrodes used in potentiometric titration.
- i) Write about co-precipitation and post precipitation.



ARKA JAIN University, Jharkhand

1st Semester End Semester Examination –

Subject: HUMAN ANATOMY & PHYSIOLOGY-I

Course: B.Pharma

Time: 3 Hours

Full Marks: 75

Pass Marks : 38

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts –A,B& C**
- **Part-A** is compulsory.
- **Part- B** contains **Three** questions out of which **Two** questions are to be answered.
- **Part- C** contains **Nine** questions out of which **Seven** questions are to be answered.

The figures in right hand margin indicate marks.

Part-A

Q1 Objective Answer Type Questions (Answer all)

(1×20=20)

1. What connects bones to each other at the joints?

- (a) Ligaments
- (b) Filaments
- (c) Stings
- (d) Condiment

2. Fluid present in synovial joints is known as

- (a) Tendon fluid
- (b) Friction fluid
- (c) Synovial fluid
- (d) Fibrous fluid

3. What is the name of the iron-containing protein that gives blood their colour?

- (a) Hemocyanin
- (b) Pyrite
- (c) Hemoglobin
- (d) Myoglobin

4. In human body, longest bone is

- (a) Femur
- (b) Tibia
- (c) Ulna
- (d) Clavicle

5..... are cells that tear down and remodel bone

- (a) Macrophages
- (b) Osteocytes
- (c) Chondroclast
- (d) Osteoclasts

6. Pigmentation of skin is due to

- (a) Lymphocytes
- (b) Monocytes
- (c) Leucocytes
- (d) Melanocytes

7. 2nd order neurons of the autonomic nervous system are located in

- (a) Autonomic ganglia
- (b) Ganglia
- (c) Both a and b
- (d) None of the above

8. Most postganglionic fibers are

- (a) Adrenergic
- (b) Cholinergic/nitroxidergic
- (c) Both a and b
- (d) Dopaminergic

9. All parasympathetic fibers release

- (a) Acetylcholine (ACh) (b) Atropine
(c) Adrenergic (d) Epinephrine

10. Memory consolidation is moving from

- (a) Midterm to long term (b) Long term to short term
(c) Short term to long term (d) all of the above

11. Cardiac output is the product of the

- (a) Heart beat (b) Heart rate
(c) Both a and b (d) None of the above

12. Systemic blood circulation contains

- a) Carbon dioxide (b) Oxygen
(c) Nitrogen Dioxide (d) Hydrogen

13. Heart pump blood through the

- (a) Blood vessels (b) Blood cells
(c) Cardiac cells (d) None of the above

14. Arteries carry blood

- (a) Away from the heart (b) Towards the heart
(c) Downwards the heart (d) All of the above

15. Which of followings are two types of bone marrow?

- a) Red bone marrow and yellow bone marrow
b) Red bone marrow and white bone marrow
c) White bone marrow and yellow bone marrow
d) Blue bone marrow and yellow bone marrow

16. The joints between atlas and axis are

- (a) Ball & socket joints (b) Saddle joints
(c) Pivot joints (d) Hinge joints

18. Graveyard of RBCs is

- a) Liver (b) Spleen
c) Kidney (d) Thyroid

19. Which blood cells secretes antibody?

- (a) Monocytes (b) Lymphocytes
(c) Eosinophils (d) Neutrophils

20. The blood corpuscles are of --- types

- (a) 5 (b) 4
(c) 2 (d) 3

Part-B

Q2 Long Answer Type Questions (Answer Any TWO)

(2×10=20)

- a) Define joints. Classify it and write a note on synovial joints.)
- b) Describe the neuromuscular junction with a suitable diagram. Add a note on neuromuscular transmission
- c) Classify peripheral nervous system and draw a neat and clean diagram of brain. Give detail note on function of different parts of brain and spinal cord.

Part-C

Q3 Focused- Short Answer Type Questions Answer Any SEVEN

(5×7=35)

- a) Write a brief note on ABO system.
- b) Brief outline on Physiology and functions of the autonomic nervous system
- c) Write a note on Haversian system.
- d) What is the major difference between ANS and SNS
- e) Enlist the various transport mechanism. Explain active transport process.
- f) Write a notes on calcium homeostasis.
- g) Enlist the types of anemia and describe it.
- h) Write five difference between PNS and CNS
- i) What is tissue? Classify it and write a note on nervous tissue.



ARKA JAIN University, Jharkhand
1st Semester End Semester Examination – 2019-20

Subject: PHARMACEUTICAL INORGANIC CHEMISTRY-I
Time: 3 Hours

Course: B.Pharm
Full Marks: 75
Pass Marks: 38

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts –A,B& C**
- **Part-A** is compulsory.
- **Part- B** contains **Three** questions out of which **Two** questions are to be answered.
- **Part- C** contains **Nine** questions out of which **Seven** questions are to be answered.

Part-A

Q1 Objective Answer Type Questions (Answer all) (2×10=20)

- 1) What is the function of mucous membrane?
- 2) What is the role of H⁺ - K⁺ ATPase Pump?
- 3) What is the side effect of antacids?
- 4) What do you mean by dyspepsia?
- 5) What is constipation?
- 6) What is duodenal ulcer?
- 7) Write the chemistry involved in the formation of Dental Caries
- 8) What do you mean by Buffer capacity?
- 9) What are electrolytes?
- 10) According to Bronsted and Lowry theory what are Acids and Bases?

Part-B

Q2 Long Answer Type Questions (Answer Any TWO) (2X10=20)

- a) Classify antimicrobial agents? Write in detail mechanism of antimicrobial agents.
- b) Classify purgative? What are the common causes of constipation? What is the drug treatment for constipation?
- c) Draw a labeled diagram on teeth. Discuss different types of dental products with example.

Part-C

Q3 Focused- Short Answer Type Questions Answer Any SEVEN (5×7=35)

- a) Write short notes on half-life.
- b) What is non-systemic antacids
- c) Write short note on Aluminum hydroxide gel.
- d) Write short note on sources of impurities.
- e) Write short note on Blood buffer system.
- f) Write short note on Physiological role of Sodium.
- g) Write a short note on composition of dentifrices.
- h) Write a note on importance of buffer in pharmacy.
- i) Write short note on Physiological role of Magnesium.



ARKA JAIN University, Jharkhand
1st Semester Final Examination – 2019-20

Subject: Communication Skills
Code:
Time : 1.5 hr

Course: B.PHARMA
Full Marks: 35
Pass Marks:18

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Two Parts –A & B**
- **Part-A** is compulsory.
- **Part- A** contains **TWO** questions out of which **ONE** question is to be answered.
- **Part- B** contains **SEVEN** questions out of which **FIVE** questions are to be answered.

Answer all the questions

PART A

1. **Answer any one of the following questions (Long answer) (1×10=10)**
- i. What do you mean by Communication? Discuss its features in detail.
 - ii. Discuss the different Cs in Communication Process.

PART B

2. **Answer any five of the following questions (Short answer) (5×5=25)**
- a. What are the features of Non-Verbal Communication?
 - b. What are Voiced and Voiceless Consonant sounds?
 - c. What is meant by Nasal Sounds? Give examples.
 - d. How are Fricative Consonants different from Bilabial Consonants?
 - e. Discuss the role of Gestures in the Communication Process.
 - f. What is Panel Interview process?
 - g. Discuss the Vowel Sounds.



ARKA JAIN University, Jharkhand

1st Semester Final Examination – 2019-20

Subject: Remedial Biology
Code: BP106RBT
Time: 1.5 hr

Course: B. Pharmacy
Full Marks: 35
Pass Marks: 12

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Two Parts –A & B**
- **Part-A** is compulsory.
- **Part- A** contains **TWO** questions out of which **ONE** question is to be answered.
- **Part- B** contains **SEVEN** questions out of which **FIVE** questions are to be answered.

Answer all the questions

PART A

1. Answer any one of the following questions (Long answer) (1×10=10)

- Describe the functions of hormones released by pituitary gland.
- What is permanent tissue in plant? Write the characteristics of different types of permanent tissue in plants.

PART B

2. Answer any five of the following questions (Short answer) 5×5=25

- Write the characteristics of living organisms.
- Write in detail of five kingdom classifications of organisms.
- Write the difference between prokaryotic and eukaryotic cell.
- Write the structure and functions of Golgi complex.
- What is hormone? Write the properties of hormones.
- What is nephron? Draw a labeled diagram of nephron.
- Write briefly about
 - Lung volume
 - Lung capacity.



ARKA JAIN University, Jharkhand

1st Semester Final Examination – 2019-20

Subject: Remedial mathematics

Theory

Course: B.Pharma

Code:

Full Marks: 35

Time : 1.5 hr

Pass Marks 18

Candidates are required to give their answers in their own words as far as practicable.

- Question Paper is divided into **Two Parts –A & B**
- **Part-A** is compulsory.
- **Part- A** contains **TWO** questions out of which **ONE** question is to be answered.
- **Part- B** contains **SEVEN** questions out of which **FIVE** questions are to be answered.

Answer all the questions

PART A

1. Answer **any one** of the following questions (Long answer) 1×10=10

i. Find the eigen values of the matrix $A = \begin{bmatrix} 1 & 1 & 3 \\ 1 & 5 & 1 \\ 3 & 1 & 1 \end{bmatrix}$

ii. To solve equation by matrix method

$$3x+y+2z=3$$

$$2x-3y-z=-3$$

$$X+2y+z=4$$

PART B

2. Answer **any five** of the following questions (Short answer) 5×5=25

i.) Express the matrix $A = \begin{bmatrix} 2 & 3 & 1 \\ 2 & 4 & 2 \\ 2 & 7 & 1 \end{bmatrix}$ as the sum of symmetric and skew symmetric matrices

ii. Solve $\frac{dy}{dx} = e^{x-2y} + x^2 e^{-2y}$

iii. Find the value of $\int (\tan x + \cot x)^2 dx$

iv. . if $y = x^{\cos x} + \cos x^{\log x}$ find $\frac{dy}{dx}$

v. Prove that $\begin{vmatrix} 1 & 1 & 1 \\ a & b & c \\ a^3 & b^3 & c^3 \end{vmatrix} = (a-b)(b-c)(c-a)(a+b+c)$

vi. Find the co-ordinate of the point which divides the join of the A (-5, 11) and B (4,-7) in the ratio of 2:7.

vii. Evaluate $\int_0^{\frac{\pi}{2}} \frac{\sin^n x}{\sin^n x + \cos^n x} dx$



ARKA JAIN University, Jharkhand

1st Semester Regular B. Pharm Final Examination - 2019-23

Subject: Human Anatomy and Physiology (Practical) Course: B. Pharm

SUB. CODE: BP107P

Time: 4 Hours

Full Marks: 35

Pass Marks:

- Candidates are required to give their answers in their own words as far as practicable.
- All the questions from each group is compulsory.
- The figures in right hand margin indicate marks.

Group-A

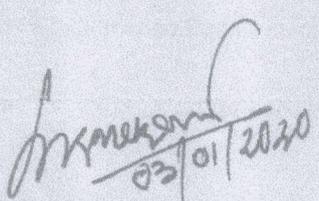
- Q1 Classify the WBCs. Explain their functions (5)
- Q2 Determination of heart rate and pulse rate (25)
- Q3 Viva-voce (5)

Group-B

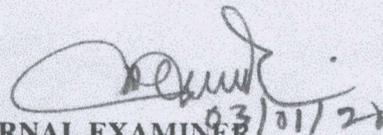
- Q1 What is Lymph? Write down flow and function of lymph (5)
- Q2 Recording of blood pressure (25)
- Q3 Viva-voce (5)

Group-C

- Q1 What are the divisions of ANS (5)
- Q2 Estimation of hemoglobin content (25)
- Q3 Viva-voce (5)


03/01/2020
EXTERNAL EXAMINER

.....
EXTERNAL EXAMINER


03/01/2020
INTERNAL EXAMINER



ARKA JAIN University, Jharkhand
1st Semester Final Examination – 2019-23

Subject: BP108PP Pharmaceutical Analysis Practical
Course: B. Pharm

Time: 4 Hour

Full Marks: 35

- Candidates are required to give their answers in their own words as far as practicable.
- Question Paper is divided into **Three Parts – A, B & C**
- **All Parts are compulsory.**

(GROUP A)

PART A

Q.1) Write a Synopsis on theory of complexometry titration. (05)

PART B

Q.2) Carry out the practical for standardization of sodium hydroxide (25)

PART C

Q.3) Viva voce (05)

(GROUP B)

PART A

Q.1) Write a Synopsis on finding the pH of acidic buffer (05)

PART B

Q.2) Carry out the practical for standardization of ammonium chloride. (25)

PART C

Q.3) Viva voce (05)

(GROUP C)

PART A

Q.1) Write a Synopsis on Fajan's method. (05)

PART B

Q.2) Carry out the practical for standardization of potassium permanganate. (25)

PART C

Q.3) Viva voce (05)

J. C. Singh
EXTERNAL EXAMINER

EXTERNAL EXAMINER

Amey 4/1/2020
INTERNAL EXAMINER



ARKA JAIN University, Jharkhand

1st Semester Regular B. Pharm Final Examination – 2019-23

Subject: PHARMACEUTICS-I (Practical)

Course: B. Pharm

SUB. CODE: BP109P

Time : 4 Hours

Full Marks: 35

Pass Marks:

- Candidates are required to give their answers in their own words as far as practicable.
- All the questions from each group is compulsory.
- The figures in right hand margin indicate marks.

Group-A

- Q1 Write a synopsis on various parts of prescription and discuss. (5)
Q2 Prepare and submit 10 ml of Camphor Liniment. (25)
Q3 Viva voce (5)

Group-B

- Q1 Write a synopsis on Effervescence granules. (5)
Q2 Prepare and submit 10 gm of non medicated effervescent granules. (25)
Q3 Viva voce (5)

Group-C

- Q1 Write a synopsis on Capsules. (5)
Q2 Prepare and submit 100 ml of Lugol's (aqueous iodine solution I.P.66) solution (25)
Q3 Viva voce (5)

Practical
Prepared by (5)
Sumit



ARKA JAIN University, Jharkhand

1st Semester Regular B. Pharm Final Examination – 2019-23

Subject: PHARMACEUTICAL INORGANIC CHEMISTRY-I (Practical)

Course: B. Pharm

SUB. CODE: BP110P

Time: 4 Hours

Full Marks: 35
Pass Marks:

- Candidates are required to give their answers in their own words as far as practicable.
- All the questions from each group is compulsory.
- The figures in right hand margin indicate marks.

Group-A

- Q1 Write synopsis on renal mechanism for regulation of pH. (5)
Q2 Perform the limit test for Arsenic (25)
Q3 Viva-voce (5)

Group-B

- Q1 Write synopsis on function of different part of GIT. (5)
Q2 Perform the limit test for Iron (25)
Q3 Viva-voce (5)

Group-C

- Q1 Write synopsis on Fluid and Electrolyte Imbalance (5)
Q2 Perform the limit test for heavy metal (25)
Q3 Viva-voce (5)

Arumy
BP-01-2020
EXTERNAL EXAMINER

EXTERNAL EXAMINER

Arumy
INTERNAL EXAMINER