



Balaji College of Pharmacy, Ananthapuramu

Approved by PCI, New Delhi & Affiliated to JNTU Anantapur
Rudrampeta Bypass, Sanapa Road, Ananthapuramu, Andhra Pradesh
515002

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Academic Year: 2024 to 2025

Class: I- II Sem

Program: B. Pharmacy

Name of the Course: **Human Anatomy and Physiology II**

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VISION

. To be recognized as an Institute of excellence, imparting quality pharmacy and healthcare education, producing competent professionals with research orientation and entrepreneurial attitude, capable of meeting the demands of the Industry and serving the Society.

MISSION

- M1:** To provide a conducive environment for student centric teaching - learning process to achieve academic excellence.
- M2:** To foster among students the attitude of research, innovation and entrepreneurship.
- M3:** To establish effective Industry – Institute interaction with the Pharmaceutical and Healthcare sectors.
- M4:** To inculcate ethical and moral values among students to make them responsible to meet the needs of the society.



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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR, ANANTHAPURAMU

ACADEMIC CALENDAR 2024-25

B.Pharm I Year I & II Semesters
(for 2024 admitted batch)

Description	From To	No. of weeks/days
Induction Program (Zero semester)	12.12.2024 to 24.12.2024	(02 weeks)
I Semester		
Commencement of Class work	26.12.2024	-
Instruction Period for the Semester	26.12.2024 to 16.04.2025	(16 weeks)
Examinations:		
I Mid-term Examinations	05.02.2025 to 07.02.2025	(03 Days)
II Mid-term Examinations	14.04.2025 to 16.04.2025	(03 Days)
End laboratory Examinations:	17.04.2025 to 23.04.2025	(01 week)
End Theory Examinations:	25.04.2025 to 08.05.2025	(02 weeks)
Summer Vacation	09.05.2025 to 31.05.2025	(03 weeks)
Commencement of Class Work for I Year B.Pharm II semester	02.06.2025 (Monday)	
Declaration of results for I-I	03.06.2025	
II Semester		
Commencement of Class work	02.06.2025	-
I st spell of Instruction Period for the Semester	02.06.2025 to 20.09.2025	(16 weeks)
Examinations		
I Mid-term Examinations	14.07.2025 to 16.07.2025	(03 Days)
II Mid-term Examinations	18.09.2025 to 20.09.2025	(03 Days)
End laboratory Examinations:	22.09.2025 to 27.09.2025	(01 week)
End Theory Examinations:	29.09.2025 to 11.10.2025	(02 weeks)
Commencement of Class Work for II Year B.Pharm I semester	13.10.2025 (Monday)	
Declaration of results for I-II	30.10.2025	

Note:

- > The Mid-term Examinations should be conducted and completed as per the schedule given.
- > For slippage of 90 instruction days in 16 weeks due to any unavoidable reasons, compensation can be made by conducting class work on second Saturdays, Sundays and other holidays, except on National Holidays and important festivals.

Date : 16-12- 2024

DIRECTOR OF EVALUATION



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PROGRAM: B.Pharmacy

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

Fundamental Knowledge:

- To produce pharmacy graduates with strong fundamental concepts and high technical competence in pharmaceutical sciences and technology, who shall be able to use these tools in pharmaceutical industry and/or institutes where ever necessary for success.
- To provide students with a strong and well-defined concept in the various fields of pharmaceutical sciences viz., Pharmaceutics, Pharmaceutical chemistry, Pharmacology and Pharmacognosy according to the requirement of pharmaceutical industries, community and Hospital Pharmacy and also to develop a sense of teamwork and awareness amongst students towards the importance of interdisciplinary approach for developing competence in solving complex problems in the area of Pharmaceutical Sciences.

Practice and Care:

- To promote the development of trained human resource in Pharmaceutical Sciences for dissemination of quality education with highly professional and ethical attitude, strong communication skills, effective skills to work in a team with a multidisciplinary approach.
- To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries.
- To train the students to contribute towards health care system and counseling for prophylaxis and prevention of diseases.



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Lifelong Learning and Innovation:

- To encourage the students to participate in life-long learning process for a highly productive career and to relate the concepts of Pharmaceutical Sciences towards serving the cause of the society.
- Developing innovative ideas and approaches to enhance quality and overcome professional barriers.
- Engaging in creative thinking to envision better ways of achieving professional goals



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PROGRAM: B. Pharmacy
PROGRAM OUTCOMES (POs)

1. **Pharmacy Knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
2. **Planning Abilities:** Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
3. **Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
4. **Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.
5. **Leadership skills:** Understand and consider the human reaction to change, motivation issues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well-being.
6. **Professional Identity:** Understand, analyze and communicate the value of their professional roles in society (e.g., health care professionals, promoters of health, educators, managers, employers, employees).
7. **Pharmaceutical Ethics:** Honor personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
8. **Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.



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9. **The Pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.
10. **Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
11. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.



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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR

B. Pharmacy – I YEAR II SEMESTER

(23BP201T) HUMAN ANATOMY AND PHYSIOLOGY II-(Theory)

Theory : 3 + 1 Hrs./Week

Objectives: Upon completion of this course the student should be able to

- Explain the gross morphology, structure, and functions of various organs of the human body.
- Describe the various homeostatic mechanisms and their imbalances.
- Identify the various tissues and organs of different systems of the human body.
- Perform hematological tests like blood cell counts, hemoglobin estimation, bleeding/clotting time etc and also record blood pressure, heart rate, pulse and respiratory volume.
- Appreciate coordinated working pattern of different organs of each system.
- Appreciate the interlinked mechanisms in the maintenance of normal functioning (homeostasis) of human body.

Text Books (Theory):

1. Essentials of Medical Physiology by K. Sembulingam and P. Sembulingam. Jaypee brothers' medical publishers, New Delhi.
2. Anatomy and Physiology in Health and Illness by Kathleen J.W. Wilson, Churchill Livingstone, New York
3. Physiological basis of Medical Practice-Best and Taylor. Williams & Wilkins Co, Riverview, MI USA
4. Textbook of Medical Physiology- Arthur C, Guyton and John E. Hall. Miamisburg, OH, U.S.A.
5. Principles of Anatomy and Physiology by Tortora Grabowski. Palmetto, GA, U.S.A.
6. Textbook of Human Histology by Inderbir Singh, Jaypee brothers' medical publishers, New Delhi.
7. Textbook of Practical Physiology by C.L. Ghai, Jaypee brothers' medical publishers, New Delhi.
8. Practical workbook of Human Physiology by K. Srinageswari and Rajeev Sharma, Jaypee brother's medical publishers, New Delhi.

Detailed syllabus and lecture wise schedule:

UNIT I

Nervous system: Organization of nervous system, neuron, neuroglia, classification and properties of nerve fiber, electro physiology, action potential, nerve impulse, receptors, synapse, neurotransmitters. **Central nervous system:** Meninges, ventricles of brain and cerebrospinal fluid. Structure and functions of brain (cerebrum, brain stem, cerebellum), spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex activity)



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UNIT II

Anatomy of GI Tract with special reference to anatomy and functions of stomach, (Acid production in the stomach, regulation of acid production through parasympathetic nervous system, pepsin role in protein digestion) small intestine and large intestine, anatomy and functions of salivary glands, pancreas and liver, movements of GIT, digestion and absorption of nutrients and disorders of GIT.

Energetics

Formation and role of ATP, Creatinine Phosphate and BMR.

UNIT III

Respiratory system

Anatomy of respiratory system with special reference to anatomy of lungs, mechanism of respiration, regulation of respiration, Lung Volumes and capacities transport of respiratory gases, artificial respiration, and resuscitation methods.

Urinary system

Anatomy of urinary tract with special reference to anatomy of kidney and nephrons, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid base balance, role of RAS in kidney and disorders of kidney.

UNIT IV

Endocrine system

Classification of hormones, mechanism of hormone action, structure and functions of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas, pineal gland, thymus and their disorders.

UNIT V

Reproductive system

Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition

Introduction to genetics

Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance



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23BP201P HUMAN ANATOMY AND PHYSIOLOGY II-(practical) LAB 4 Hrs.

EXPERIMENTS:

1. To study the integumentary and special senses using specimen, models, etc.,
2. To study the nervous system using specimen, models, etc.,
3. To study the endocrine system using specimen, models, etc
4. To demonstrate the general neurological examination
5. To demonstrate the function of olfactory nerve
6. To examine the different types of taste.
7. To demonstrate the visual acuity
8. To demonstrate the reflex activity
9. Recording of body temperature
10. To demonstrate positive and negative feedback mechanism.
11. Determination of tidal volume and vital capacity.
12. Study of digestive, respiratory, cardiovascular systems, urinary and reproductive systems with the help of models, charts and specimens.
13. Recording of basal mass index .
14. Study of family planning devices and pregnancy diagnosis test.
15. Demonstration of total blood count by cell analyzer
16. Permanent slides of vital organs and gonads.



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LESSON PLAN

Academic Year: 2024 to 2025

Class: I Sem: II

Program: B. Pharmacy

Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Theory: 3 + 1 Hrs./Week

Scheduled Date: 02/06/2025 to 11/10/2025

Reference Books:

1. Physiological basis of Medical Practice-Best and Tailor. Williams & Wilkins Co, Riverview, MI USA
2. Textbook of Medical Physiology- Arthur C, Guyton and John. E. Hall. Miamisburg, OH, U.S.A.
3. Human Physiology (vol 1 and 2) by Dr. C.C. Chatterrje, Academic Publishers Kolkata



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S.NO	CHAPTER NAME	TOPIC	NO.HOURS	NAME OF FACULTY
1	Nervous system& Central nervous system	Organization of nervous system, neuron, neuroglia, classification and properties of nerve fiber, electro physiology, action potential, nerve impulse, receptors, synapse, neurotransmitters. Meninges, ventricles of brain and cerebrospinal fluid. Structure and functions of brain (cerebrum, brain stem, cerebellum), spinal cord (gross structure, functions of afferent and efferent nerve tracts, reflex activity)	09	K.P.Anusha
2	Digestive System& Energetics	Anatomy of GI Tract with special reference to anatomy and functions of stomach, (Acid production in the stomach, regulation of acid production through parasympathetic nervous system, pepsin role in protein digestion) small intestine and large intestine, anatomy and functions of salivary glands, pancreas and liver, movements of GIT, digestion and absorption of nutrients and disorders of GIT. Formation and role of ATP, Creatinine Phosphate and BMR.	09	K.P.Anusha
3	Respiratory system& Urinary system	Anatomy of respiratory system with special reference to anatomy of lungs, mechanism of respiration, regulation of respiration, Lung Volumes and capacities transport of respiratory gases, artificial respiration, and resuscitation methods. Anatomy of urinary tract with special reference to anatomy of kidney and nephrons, functions of kidney and urinary tract, physiology of urine formation, micturition reflex and role of kidneys in acid base balance, role of RAS in kidney and disorders of kidney.	10	K.P.Anusha
4	Endocrine system	Classification of hormones, mechanism of hormone action, structure and functions of pituitary gland, thyroid gland, parathyroid gland, adrenal gland, pancreas, pineal gland, thymus and their disorders.	08	K.P.Anusha



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5	Reproductive system & Introduction to genetics	Anatomy of male and female reproductive system, Functions of male and female reproductive system, sex hormones, physiology of menstruation, fertilization, spermatogenesis, oogenesis, pregnancy and parturition. Chromosomes, genes and DNA, protein synthesis, genetic pattern of inheritance.	09	K.P.Anusha
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COURSE OUTCOMES

Academic Year: 2024 to 2025

Class: I Sem: II

Program: B. Pharmacy

Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Theory: 3 + 1 Hrs./Week

Scheduled Date: 02/06/2025 to 11/10/2025

Course Outcomes

CO NO.	Course Outcome
C23BP201T.1	To understand the structure and functions of the nervous system, mechanisms of electrochemical signaling, organization of the brain and spinal cord and Reflex activity.
C23BP201T.2	To Acquire sufficient knowledge on gastrointestinal (GI) tract.
C23BP201T.3	To understand the Anatomy of respiratory system & urinary tract.
C23BP201T.4	To Acquire sufficient knowledge on Endocrine system.
C23BP201T.5	To understand the structure and functions of Reproductive system & Concept of genetics



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CO-PO MAPPING

Academic Year: 2024 to 2025

Class: I Sem: II

Program: B. Pharmacy

Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Theory: 45Hrs

Scheduled Date: 02/06/2025 to 11/10/2025

Course Outcomes

CO NO.	Course Outcome
C23BP201T.1	To understand the structure and functions of the nervous system, mechanisms of electrochemical signaling, organization of the brain and spinal cord and Reflex activity.
C23BP201T.2	To Acquire sufficient knowledge on gastrointestinal (GI) tract.
C23BP201T.3	To understand the Anatomy of respiratory system & urinary tract.
C23BP201T.4	To Acquire sufficient knowledge on Endocrine system.
C23BP201T.5	To understand the structure and functions of Reproductive system & Concept of genetics



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CO – PO Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C201.1	3	2	-	-	-	1	-	-	-	1	1
C201.2	3	2	-	-	-	1	-	-	-	1	1
C201.3	3	2	-	-	-	1	-	-	-	1	1
C201.4	3	1	-	-	-	1	-	-	-	1	1
C201.5	3	2	-	-	-	2	-	-	-	1	2
Average	3	1.8	-	-	-	1.2	-	-	-	1	1.2

Overall average = 1.64

High: 3

Medium: 2

Low: 1

Gaps identified from CO – PO Mapping

1. Design of pharmaceutical solutions or formal complex investigations/experimentation.
2. Societal/Ethical implications of health and practicing team collaboration

Plan of action/corrective measure taken to overcome the gap

1. Introduce mandatory case studies and problem-based learning sessions (e.g., analyzing drug action in a disease state)
2. Conduct guest lectures on ethics/societal health issues and introduce mandatory group assignments or seminars to embed soft skills and professional conduct into the course assessment.

Revised CO – PO Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C201.1	3	2	-	-	-	1	-	-	-	1	1
C201.2	3	2	-	-	-	1	-	-	-	1	1
C201.3	3	2	-	-	-	1	-	-	-	1	1
C201.4	3	2	-	-	-	1	-	-	-	1	1
C201.5	3	2	-	-	-	2	-	-	-	1	2
Average	3	2	-	-	-	1.2	-	-	-	1	1.2

Overall average = 1.68

High: 3

Medium: 2

Low: 1



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CO – PO Matrix Justification

Mapped Po's: PO – 1,2,6,10,11

PO-1: Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

PO-2: Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

PO-6: Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g., health care professionals, promoters of health, educators, managers, employers, employees)

PO-10: Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO-11: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.



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Justification for CO-PO Mapping

CO'S	PO'S	JUSTIFICATION
C201.1	PO-1,2,6,10,11	The entire course is fundamental knowledge on the structure and function of various human body systems (Nervous, Digestive, Respiratory, Urinary, Endocrine, Reproductive). This is the core knowledge of the profession.
C201.2	PO-1,2,6,10,11	Students learn to analyze physiological processes and their homeostatic imbalances (e.g., explaining respiratory or endocrine disorders), which is a basic step in analyzing complex pharmaceutical problems.
C201.3	PO-1,2,6,10,11	Understanding body systems is essential for assessing the health and safety implications of drug action and disease, especially for sensitive topics like reproductive health.
C201.4	PO-1,2,6,10,11	Students develop the ability to communicate complex scientific information (physiology and anatomy) clearly through written and verbal explanations in exams, assignments, and tutorials.
C201.5	PO-1,2,6,10,11	The field of health sciences is constantly evolving. A strong foundation in HAP-II encourages students to continuously update their knowledge about emerging disorders and pharmaceutical advancements related to these core body systems.



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COURSE OUTCOMES

Academic Year: 2024 to 2025

Class: I Sem: II

Program: B. Pharmacy

Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Practical: 4Hrs./Week

Scheduled Date: 02/06/2025 to 11/10/2025

Course Outcomes

CO NO.	Course Outcome
C23BP201P.1	To Know about integumentary, nervous, endocrine, digestive, respiratory, cardiovascular, urinary, and reproductive systems using models, charts, and specimens.
C23BP201P.2	To have practical experience in demonstrating and evaluating neurological functions such as olfaction, taste, visual acuity, reflexes, and general neurological examinations.
C23BP201P.3	To have Knowledge on physiological parameters, including tidal volume, vital capacity, body temperature, and basal metabolic index (BMI).
C23BP201P.4	To Understand and be able to demonstrate the principles of positive and negative feedback mechanisms within the body, linking theoretical knowledge to practical observations.
C23BP201P.5	To acquire skills in clinical diagnostics, such as pregnancy testing, family planning devices, and blood count analysis, using modern equipment like cell analyzers, preparing them for healthcare and clinical environments.



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CO-PO MAPPING

Academic Year: 2024 to 2025

Class: I Sem: II

Program: B. Pharmacy

Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Practical: 4Hrs./Week

Scheduled Date: 02/06/2025 to 11/10/2025

Course Outcomes

CO NO.	Course Outcome
C23BP201P.1	To Know about integumentary, nervous, endocrine, digestive, respiratory, cardiovascular, urinary, and reproductive systems using models, charts, and specimens.
C23BP201P.2	To have practical experience in demonstrating and evaluating neurological functions such as olfaction, taste, visual acuity, reflexes, and general neurological examinations.
C23BP201P.3	To have Knowledge on physiological parameters, including tidal volume, vital capacity, body temperature, and basal metabolic index (BMI).
C23BP201P.4	To Understand and be able to demonstrate the principles of positive and negative feedback mechanisms within the body, linking theoretical knowledge to practical observations.
C23BP201P.5	To acquire skills in clinical diagnostics, such as pregnancy testing, family planning devices, and blood count analysis, using modern equipment like cell analyzers, preparing them for healthcare and clinical environments.



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CO – PO Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C201P.1	3	2	1	2	-	1	-	1	-	-	-
C201P.2	3	2	3	3	-	2	1	3	-	2	-
C201P.3	2	2	3	3	-	2	3	3	-	3	-
C201P.4	3	2	1	-	-	1	1	2	-	3	-
C201P.5	2	2	2	3	-	3	1	2	-	1	-
Avg	2.6	2	2	2.2		1.8	1.2	2.2		1.8	

High: 3 Medium: 2 Low: 1

Overall average = 1.3

Gaps identified from CO – PO Mapping

1. The practical curriculum focuses heavily on the procedure and results (anatomy, physiology, testing) but often skips the formal documentation and handling of biological and chemical waste.
2. The procedure is given, reducing the need for students to think critically about the steps, resource allocation, or contingency measures.

Plan of action/corrective measure taken to overcome the gap

1. Students must document the type of waste generated and the specific disposal procedure (e.g., sharps container, neutralizer bath, biohazard bag) for each experiment, emphasizing adherence to environmental protocols.
2. Students must document the type of waste generated and the specific disposal procedure (e.g., sharps container, neutralizer bath, biohazard bag) for each experiment, emphasizing adherence to environmental protocols.

Revised CO – PO Matrix

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11
C201P.1	3	1	1	2	-	1	-	1	-	-	-
C201P.2	3	2	3	3	-	2	1	3	-	2	-
C201P.3	2	2	3	3	-	2	3	3	-	3	-
C201P.4	3	1	1	-	-	1	1	2	-	3	-
C201P.5	2	2	2	3	-	3	1	2	-	1	-
Avg	2.6	1.6	2	2.2		1.8	1.2	2.2		1.8	

High: 3 Medium: 2 Low: 1

Overall average = 1.2



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CO – PO Matrix Justification

Mapped Pos: PO – 1,2,3,4,6,7,8,10

PO-1: Pharmacy Knowledge: Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.

PO-2: Planning Abilities: Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.

PO-3: Problem analysis: Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.

PO-4: Modern tool usage: Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of the limitations.

PO-6: Professional Identity: Understand, analyze and communicate the value of their professional roles in society (e.g., health care professionals, promoters of health, educators, managers, employers, employees).

PO-7: Pharmaceutical Ethics: Honor personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.

PO-8: Communication: Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.

PO-10: Environment and sustainability: Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.



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Justification for CO-PO Mapping

CO'S	PO'S	JUSTIFICATION
C201.1	PO-1,2,3,4,6,8	Direct application of core anatomical and physiological knowledge to identify structures, Utilizes models, charts, and sometimes simple instruments like microscopes
C201.2	PO-1,2,3,4,6,7,8,10	Requires high knowledge and critical problem analysis to interpret results of neurological and sensory tests (e.g., is the reflex normal?). Strong, Demonstrating and reporting tests clearly requires effective communication, Relates to general patient screening in a healthcare setting.
C201.3	PO-1,2,3,4,6,7,8,10	Involves critical thinking and analysis to compare measured data (BP, BMI, TC/VC) against normal ranges. Direct, essential use of modern tools (Sphygmomanometer, Spirometer, etc.)
C201.4	PO-1,2,3,4,6,7,8,10	Concepts like family planning and system function heavily involve the pharmacist's role in society and patient education
C201.5	PO-1,2,3,4,6,7,8,10	Developing hands-on competence in using instruments like a cell analyzer/microscope and proficiency in laboratory techniques, which builds professional identity



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Academic Year: 2024 to 2025 Class: I Sem: II

Program: B. Pharmacy Duration of the year: 2024- 2025

Name of the Course: HUMAN ANATOMY AND PHYSIOLOGY II

Prescribed Hours: Theory: 3 + 1 Hrs./Week

Scheduled Date: 02/06/2025 to 11/10/2025

ASSIGNMENTS

ASSIGNMENTTOPIC	COURSE OUTCOME	BTL
Assignment1		
Write a short note on Organization of nervous system, neuron, neuroglia, classification and properties of nerve fiber	C23BP201T.1	Understanding
Label a neat diagram of brain	C23BP201T.1	Remembering
Discuss in detail about anatomy and functions of stomach, small intestine and large intestine	C23BP201T.2	Creating
Assignment2		
Explain in detail about anatomy of lungs, mechanism of respiration, regulation of respiration, Lung Volumes and capacities	C23BP201T.3	Evaluating
Label a neat diagram of male and female reproductive system	C23BP201T.5	Remembering

Format of the assignment:

1. Minimum & Maximum number of pages.
2. It shall be written draft copy.
3. Name and signature of the student.
4. Assignment can be a combined seminar presentation at the end of the semester.
5. Time allocated for seminar may be 8+2 Min.



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BALAJI COLLEGE OF PHARMACY
B. PHARMACY I YEAR II SEMESTER (R23) I MID EXAMINATION
JULY 2024
SUB: (23BP201T) HUMAN ANATOMY AND PHYSIOLOGY – II
Time: 120 min **Max Marks: 25 M**

I. ANSWER ALL QUESTIONS (5x2=10M)	MARKS	CO-A	BTL
1. List any three functions of Spinal Cord and Cerebrum?	02	CB201.1	Remembering
2. Summarize a note on Neuroglia Cells?	02	CB201.1	Understanding
3. Summarize a short note on Ventricles of Brain?	02	CB201.1	Understanding
4. Define Peristalsis?	02	CB201.2	Remembering
5. What are the stages of movements of GIT?	02	CB201.2	Remembering
II. ANSWER THREE QUESTIONS (3x10=30M)			
1. Label a neat diagram of neuron & explain in detail about classification and properties of Nerve Fibre? OR	10	CB201.1	Remembering
2. Explain in details about structure of brain?	10	CB201.1	Understanding
3. Discuss in detail about neurotransmitters? OR	10	CB201.1	Creating
4. Explain in detail about the small intestine and large intestine?	10	CB201.2	Understanding
5. Explain in detail about the liver and diseases related to it? OR	10	CB201.2	Understanding
6.a. Explain in detail about the salivary glands and diseases related to it?	5	CB201.2	Understanding
b. Explain in detail about the Pancreas and diseases related to it?	5	CB201.2	Understanding



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Course Outcome analysis:

CO	Total CO Marks	%CO
CB23BP201T.1	26M	65%
CB23BP201T.2	14M	35%
CB23BP201T.3	0M	0%
CB23BP201T.4	0M	0%
CB23BP201T.5	0M	0%
Total	40M	100%

Blooms taxonomy analysis for educational objectives

Taxonomy	Taxonomy Marks	% Taxonomy
Remember	16M	40%
Understand	14M	35%
Apply	0M	0%
Analyze	0M	0%
Evaluate	0M	0%
Create	10M	25%
TOTAL	40M	100%



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BALAJI COLLEGE OF PHARMACY

B. PHARMACY I YEAR II SEMESTER (R23) II MID EXAMINATION AUGUST 2024

SUB: Human Anatomy and Physiology-II (23BP201T) Time:120min

Max Marks:25M

I. ANSWER ALL QUESTIONS (5x2=10m)	MARKS	CO-A	BTL
A. List out endocrine Glands and hormones released by them.	02	CB201.4	Remembering
B. Define GFR.	02	CB201.3	Remembering
C. What are resuscitation methods.	02	CB201.3	Remembering
D. Define Oogenesis.	02	CB201.5	Remembering
E. Write a note Sex Hormones.	02	CB201.5	Remembering
II. ANSWER THREE QUESTIONS (3x10=30m)			
1.Explain in detail about Lung volumes and Capacities and transportation of Respiratory gases. OR	10	CB201.3	Understanding
2.Write a short note on role of Kidneys in acid-base balance and Role of RAS in Kidney.	10	CB201.3	Understanding
3.Explain in detail about parathyroid gland and adrenal gland. OR	10	CB201.4	Understanding
4.Write a brief note on pituitary gland and its functions.	10	CB201.4	Understanding
5.Write the structure and function of male reproductive system and add a note on spermatogenesis. OR	10	CB201.5	Understanding
6.Explain in detail about Protein Synthesis.	10	CB201.5	Understanding



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Course Outcome analysis:

CO	Total CO Marks	%CO
CB23BP201T.1	0	0%
CB23BP201T.2	0	0%
CB23BP201T.3	14	35%
CB23BP201T.4	12	30%
CB23BP201T.5	14	35%
	40M	100%

Blooms taxonomy analysis for educational objectives:

Taxonomy	Taxonomy Marks	% Taxonomy
Remember	10	25%
Understand	30	75%
Apply	0	0%
Analyze	0	0%
Evaluate	0	0%
Create	0	0%
TOTAL	40M	100%



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UNIT WISE IMPORTANT QUESTIONS

QUESTIONS

UNIT I

- What are the major divisions of the nervous system, and what are their functions?
- Differentiate between the central and peripheral nervous systems.
- Explain the role of the autonomic nervous system, including its sympathetic and parasympathetic divisions.
- What are the types of neuroglia found in the CNS and PNS, and what roles do they play?
- How do neurons and neuroglia work together to support nervous system function?
- What is the difference between myelinated and unmyelinated nerve fibers, and how does this affect conduction speed?
- Explain the significance of the refractory period in nerve conduction.
- How does the all-or-none principle apply to nerve impulses?
- Explain saltatory conduction and its benefits in nerve impulse transmission.
- Describe how the intensity of a stimulus is encoded by nerve fibers.
- List the major types of neurotransmitters and their roles in the nervous system.
- Explain how neurotransmitters are removed from the synaptic cleft.
- What are the effects of dopamine, serotonin, acetylcholine, and GABA in the nervous system?
- Describe the major regions of the cerebrum and their functions.
- What are the functions of the brainstem (midbrain, pons, and medulla oblongata)?

UNIT II

- Describe the anatomy of the stomach and explain its role in digestion, particularly in acid production and protein digestion.
- How is hydrochloric acid (HCl) produced in the stomach, and how is this process regulated by the parasympathetic nervous system (vagus nerve)?
- Explain the role of pepsin in protein digestion and describe how it is activated in the stomach.
- Describe the anatomy of the small intestine and explain how it facilitates the digestion and absorption of nutrients.
- What is the anatomy of the large intestine, and what are its primary functions in water absorption and feces formation?
- What are the major salivary glands, and how do they contribute to the digestion of food, particularly carbohydrates?



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- Explain the dual role of the pancreas in digestion and metabolism. What is the role of the liver in bile production and nutrient metabolism?
- Differentiate between peristalsis and segmentation movements in the gastrointestinal tract. How do these movements aid in digestion?
- Describe the process of digestion and absorption of carbohydrates, proteins, and fats in the GI tract.
- What is the role of ATP in cellular metabolism, and how is it produced during aerobic and anaerobic respiration?
- Explain the function of creatine phosphate in energy production and how basal metabolic rate (BMR) is regulated.

UNIT III

- Describe the anatomy of the respiratory system with a focus on the structure and function of the lungs, including alveoli and their role in gas exchange.
- Explain the mechanics of inspiration and expiration, including the role of the diaphragm, intercostal muscles, and pleural pressure in breathing.
- How is respiration regulated by the nervous system, and what is the role of the medulla oblongata and pons in controlling the respiratory rate?
- Define and differentiate lung volumes and capacities, such as tidal volume, vital capacity, inspiratory reserve volume, and residual volume.
- Describe how oxygen is transported in the blood, and explain the role of hemoglobin. How is carbon dioxide transported from tissues to the lungs?
- What are the different methods of artificial respiration and resuscitation (e.g., CPR), and how do they assist in restoring normal breathing?
- Explain the detailed anatomy of the kidney, including the structure and function of nephrons in urine formation.
- Describe the three main processes of urine formation: glomerular filtration, tubular reabsorption, and tubular secretion.
- How do the kidneys maintain acid-base balance in the body, and what is the role of bicarbonate in this process?
- Explain the role of the renin-angiotensin system (RAS) in regulating blood pressure and kidney function. How does RAS affect sodium retention and fluid balance?

UNIT IV

- How are hormones classified based on their chemical nature (e.g., peptide hormones, steroid hormones, amino acid derivatives)? Give examples of each type.
- What is the structure of the pituitary gland, and how is it divided into the anterior and posterior lobes? What hormones are secreted by each lobe, and what are their functions?
- Describe the structure and function of the thyroid gland. How do thyroid hormones (T3 and T4) regulate metabolism, and what are the common disorders associated with thyroid dysfunction (e.g., hypothyroidism, hyperthyroidism)?
- What is the role of the parathyroid gland in calcium regulation? Explain the effects of parathyroid hormone (PTH) on bone, kidneys, and intestines.



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UNIT V

- Describe the anatomy of the male and female reproductive systems, including the structure and function of key organs such as the testes, ovaries, uterus, and accessory glands.
- What are the primary functions of the male and female reproductive systems? How do they differ in terms of gamete production, hormonal regulation, and reproductive processes?
- Explain the role of sex hormones like testosterone, estrogen, and progesterone in regulating reproductive functions. How do they influence secondary sexual characteristics and reproductive cycles?
- Describe the phases of the menstrual cycle, including the hormonal changes that regulate each phase (follicular phase, ovulation, luteal phase, and menstruation).
- What is spermatogenesis, and where does it occur? Explain the stages of spermatogenesis and the hormonal control involved in sperm production.
- What is oogenesis, and how does it differ from spermatogenesis? Explain the process and stages of oocyte maturation in the ovaries.
- Describe the process of fertilization, including how sperm and egg meet, and what happens during the early stages of zygote formation.
- How is pregnancy maintained, and what are the key hormonal changes during pregnancy? Describe the stages of labor and parturition.
- What are chromosomes, and how do they carry genetic information in the form of genes? Explain the structure of DNA and how it relates to genetic inheritance.



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03/10/2023

Code: 23BP201T

R23

B.Pharm I Year II Semester (R23) Regular & Supplementary Examinations September/October 2025

HUMAN ANATOMY & PHYSIOLOGY - II

(B.Pharmacy)

Time: 3 hours

Max. Marks: 70

PART – A
(Compulsory Question)

- 1 Answer the following: (10 X 02 = 20 Marks)
- | | |
|--|----|
| (a) Differentiate between electrical and chemical synapses. | 2M |
| (b) Write the functions of the dura mater. | 2M |
| (c) What is the role of the enteric nervous system in GI motility? | 2M |
| (d) Write a note on Pepsin and its Role in Protein Digestion. | 2M |
| (e) What is artificial respiration and when is it needed? | 2M |
| (f) What is the role of the urinary bladder in urine storage? | 2M |
| (g) Explain how dysfunction of the pineal gland affects sleep-wake cycles and reproductive function. | 2M |
| (h) Differentiate between the anterior and posterior pituitary in terms of hormone secretion. | 2M |
| (i) Explain the role of testosterone in male reproduction. | 2M |
| (j) Describe the role of the zona pellucida in fertilization. | 2M |

PART – B
(Answer all the questions: 05 X 10 = 50 Marks)

- | | |
|--|----|
| 2 (a) Describe the structure of a synapse and explain synaptic transmission. | 5M |
| (b) Explain the structure and functions of the cerebrum. | 5M |
| OR | |
| 3 (a) What is a reflex arc? Explain its components with an example. | 5M |
| (b) What are neuroglial cells? Discuss their types and functions. | 5M |
| 4 (a) Discuss the how gastric acid secretion regulated by the parasympathetic nervous system? | 5M |
| (b) Describe the different types of salivary glands and their functions. | 5M |
| OR | |
| 5 (a) Explain how proteins are digested and absorbed in the gastrointestinal tract. | 5M |
| (b) Discuss the anatomy and functions of the small intestine. | 5M |
| 6 (a) Explain the neural regulation of respiration, including the role of the medulla and pons. | 5M |
| (b) Explain the process of urine formation. | 5M |
| OR | |
| 7 (a) Describe the mechanisms of carbon dioxide transport in the blood. | 5M |
| (b) Write a note on role of RAS in the kidney. | 5M |
| 8 (a) Explain the synthesis and functions of thyroid hormones (T3 & T4). | 5M |
| (b) Describe the structure and functions of pancreas. | 5M |
| OR | |
| 9 (a) Describe the structure of the adrenal gland and functions of adrenal cortex hormones. | 5M |
| (b) Discuss the role of thymus in immunity and development of T-lymphocytes. | 5M |
| 10 (a) Explain the phases of the menstrual cycle. | 5M |
| (b) Explain the hormonal and physiological mechanisms involved in parturition (childbirth). | 5M |
| OR | |
| 11 (a) Explain the role of mRNA, tRNA and ribosomes in protein synthesis. | 5M |
| (b) Discuss the functions of estrogen and progesterone in the regulation of the female reproductive cycle. | 5M |



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BALAJI COLLEGE OF PHARMACY, ANANTHAPURAMU, ANDHRA PRADESH.							
B.PHARMACY I YEAR I SEMESTER (R23) INTERNAL ASSESSMENT SHEET - THEORY							
Subject Name & Code : HUMAN ANATOMY PHYSIOLOGY-II (23BP201T)							
INTERNAL ASSESSMENT - THEORY							
S. No.	Hall ticket Number	Name of the Student	n	II MID Marks	80 % Weightage for better (x0.8) – A	20 % for other (x0.2) - B	FINAL MID SEMESTER MARKS
			(30Marks)	(30Marks)			(A+B)
1	24T11R0001	Billi Abhinay	11	19	15	2	17
2	24T11R0002	Shaik Afreen		27	22	0	22
3	24T11R0003	Mulla Afsa Sulthana	14	21	17	3	20
4	24T11R0004	Basapuram Aishwarya	18	27	22	4	26
5	24T11R0005	Kondajogula Akhila	21	25	20	4	24
6	24T11R0006	Harijana Akshaya	28	28	22	6	28
7	24T11R0007	Pullalarevu Akshaya	12	20	16	2	18
8	24T11R0008	Rayachoti Amulya	12	24	19	2	21
9	24T11R0009	Subbara Angeswar Kumar			0	0	0
10	24T11R0010	Moghal Apsha	18	20	16	4	20
11	24T11R0011	Pilliboina Archana	13	19	15	3	18
12	24T11R0012	Shaik Ayesha Thaseen	11	19	15	2	17
13	24T11R0013	Parnapalli Bharath	13	13	10	3	13
14	24T11R0014	Bharika Chandu		15	12	0	12
15	24T11R0015	Pasulayappa Gari Danavendra	11	22	18	2	20
16	24T11R0016	Neelam Daniyelu	12	24	19	2	21
17	24T11R0017	T Deekshitha			0	0	0
18	24T11R0018	Yalamakuru Deepika Prasanna	15	23	18	3	21
19	24T11R0019	Vaggam Balaji Divya	26	26	21	5	26
20	24T11R0020	Bandla Divyasree	5	14	11	1	12
21	24T11R0021	D C Fardeen	6	14	11	1	12
22	24T11R0022	Batti Fouziya Shabnam	29	29	23	6	29
23	24T11R0023	Gandluri Ganesh	19	15	15	3	18
24	24T11R0024	Mandala Gayathri	19	17	15	3	18
25	24T11R0025	Yelama Gayathri	21	22	18	3	21
26	24T11R0026	Mattam Gouri	12	23	18	2	20
27	24T11R0027	Jagadish Gari Govardhan	16	25	20	3	23
28	24T11R0028	Velpula Govardhan Yadav	8	19	15	2	17
29	24T11R0029	Parikidona Hareesh Naidu	7	18	14	1	15



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30	24T11R0030	Nimmakayala Harsha Vardhan Sai	13	21	17	3	19
31	24T11R0031	Nallamanna Sanjeevarayappa Gari Harshitha	24	24	19	5	24
32	24T11R0032	Shaik Hena Rahima	14	19	15	3	18
33	24T11R0033	Alakunta Jagan	15	17	14	3	17
34	24T11R0034	Ediga Jayasimha	21	26	21	4	25
35	24T11R0035	Arikeri Jhansi	26	27	22	5	27
36	24T11R0036	K Jyothsna			0	0	0
37	24T11R0037	Kapadam Kalpana	12	13	10	2	13
38	24T11R0038	Honnur Karishma Mehek	19	21	17	4	21
39	24T11R0039	Shaik Karishma	18	22	18	4	21
40	24T11R0040	Dungavath Karthik Naik	15	16	13	3	16
41	24T11R0041	Kasandula Kavya	23	25	20	5	25
42	24T11R0042	Guduru Kavya Sree	14	21	17	3	20
43	24T11R0043	Madiga Krupa Kumari	19	25	20	4	24
44	24T11R0044	Velpula Lalitha	18	24	19	4	23
45	24T11R0045	Koyaladinne Lokeswari	16	26	21	3	24
46	24T11R0046	Kalla Manasa	19	26	21	4	25
47	24T11R0047	Gallamory Manikumari	7	14	11	1	13
48	24T11R0048	Kondakamarla Mohammad Affan	18	15	14	3	17
49	24T11R0049	P N Mudraju	10	21	17	2	19
50	24T11R0050	M Muskan Banu	20	26	21	4	25
51	24T11R0051	Cheruvu Mythri	22	25	20	4	24
52	24T11R0052	G V Nagabhushana	6		0		
53	24T11R0053	Mandala Nagalakshmi	23	26	21	5	25
54	24T11R0054	Neelampalli Nagatejaswini	22	22	18	4	22
55	24T11R0055	Mude Nagendra Naik			0	0	0
56	24T11R0056	Boya Nanda Kishore	22	24	19	4	24
57	24T11R0057	Jerripothula Nandini	21	22	18	4	22
58	24T11R0058	Therukati Neeha Sulthana	12	16	13	2	15
59	24T11R0059	Pileru Shaik Noorain	22	25	20	4	24
60	24T11R0060	Kandukuru Poornesh	13	25	20	3	23
61	24T11R0061	E Pradeep Gowd		18	14	0	14
62	24T11R0062	N Pranav Kumar Reddy	15	17	14	3	17
63	24T11R0063	Bandaru Purandhar Bhavani Prasad	15	24	19	3	22
64	24T11R0064	O Baghavendra	15	15	12	3	15



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65	24T11R0065	Mandala Rahul	18	25	20	4	24
66	24T11R0066	Kamsali Rajesh		6	5	0	5
67	24T11R0067	Palthya Rajitha	14	16	13	3	16
68	24T11R0068	Madakasira Rakesh	17	20	16	3	19
69	24T11R0069	Koneti Rakshitha	16	20	16	3	19
70	24T11R0070	Aakula Shaik Ruheena	26	26	21	5	26
71	24T11R0071	Dudekula Ruksana	23	18	14	4	18
72	24T11R0072	Mahaldar Rukshana Begum	21	18	14	4	19
73	24T11R0073	Shaik Sadiq	21	26	21	4	25
74	24T11R0074	Shaik Sadiya	29	28	22	6	28
75	24T11R0075	Pulaiguri Saigowtham		17	14	0	14
76	24T11R0076	Uramekala Sai Kumar	5	17	14	1	15
77	24T11R0077	Rayachoti Sai Priya		18	14	0	14
78	24T11R0078	Matta Sailaja	27	27	22	5	27
79	24T11R0079	Madiga Saipadmini		22	18	0	18
80	24T11R0080	Katam Sandeep			0	0	0
81	24T11R0081	Shaik Saniya Banu	21	26	21	4	25
82	24T11R0082	Dudekula Shameem	26	27	22	5	27
83	24T11R0083	Kodala Sharuk Khan		5	4	0	4
84	24T11R0084	Obulappa Gari Shivaraj	9	16	13	2	15
85	24T11R0085	Rathinapi Sindhu	24	26	21	5	26
86	24T11R0086	Obulareddypalli Sirivennela	20	23	18	4	22
87	24T11R0087	Sugali Sony	15	24	19	3	22
88	24T11R0088	Bayaji Gari Spandana	17	18	14	3	18
89	24T11R0089	Sanna Mandaiah Gari Sravani		16	13	0	13
90	24T11R0090	Kenchala Srilatha	26	25	20	5	25
91	24T11R0091	Madhugonde Sruthi	16	19	15	3	18
92	24T11R0092	Shivalingappa Gari Suchitra	11	15	12	2	14
93	24T11R0093	Vadla Supraja Rani	10	13	10	2	12
94	24T11R0094	Mandha Tharun	21	25	20	4	24
95	24T11R0095	Harijana Thippamma		27	22	0	22
96	24T11R0096	Sake Thulasi	15	21	17	3	20
97	24T11R0097	K Usha	28	27	22	5	27
98	24T11R0098	Chakali Usha Rani	27	27	22	5	27
99	24T11R0099	Gudipi Vanaja	20	22	18	4	22
100	24T11R00A0	Kurakula Varshini	18	20	16	4	20
101	24T11R00A1	Gangappa Gari Veena	14	24	19	3	22
102	24T11R00A2	T.N.Vidya	27	28	22	5	28



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103	24T11R00A3	Golla Yamini	15	23	18	3	21
104	24T11R00A4	Shaik Yasmin	10	12	10	2	12
105	24T11R00A5	Yakhubji Zoya Afreen	16	23	18	3	22



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BALAJI COLLEGE OF PHARMACY, ANANTHAPURAMU, ANDHRA PRADESH. B.PHARMACY I YEAR I SEMESTER (R23) INTERNAL ASSESSMENT SHEET - PRACTICAL							
Subject Name & Code : HUMAN ANATOMY AND PHYSIOLOGY -II LAB-23BP201P							
INTERNAL ASSESSMENT - LAB							
S. No.	Hall ticket Number	Name of the Student	I MID Marks	II MID Marks	80 % Weightage for better (x0.8) – A	20 % for other (x0.2) - B	FINAL MID SEMESTER MARKS
			(30Marks)	(30Marks)			(A+B)
1	24T11R0001	Billi Abhinay	20	18	16	4	20
2	24T11R0002	Shaik Afreen		21	0	4	4
3	24T11R0003	Mulla Afsa Sulthana	22	21	18	4	22
4	24T11R0004	Basapuram Aishwarya	24	22	19	4	24
5	24T11R0005	Kondajogula Akhila	20	21	17	4	21
6	24T11R0006	Harijana Akshaya	24	26	21	5	26
7	24T11R0007	Pullalarevu Akshaya	22	21	18	4	22
8	24T11R0008	Rayachoti Amulya	24	22	19	4	24
9	24T11R0009	Subbara Angeswar Kumar			0	0	0
10	24T11R0010	Moghal Apsha	24	22	19	4	24
11	24T11R0011	Pilliboina Archana	22	19	18	4	21
12	24T11R0012	Shaik Ayesha Thaseen	21	20	17	4	21
13	24T11R0013	Parnapalli Bharath		19	0	4	4
14	24T11R0014	Bharika Chandu	21	19	17	4	21
15	24T11R0015	Pasulayappa Gari Danavendra	22	20	18	4	22
16	24T11R0016	Neelam Daniyelu	21	19	17	4	21
17	24T11R0017	T Deekshitha			0	0	0
18	24T11R0018	Yalamakuru Deepika Prasanna	22	24	19	4	23
19	24T11R0019	Vaggam Balaji Divya	23	24	19	5	24
20	24T11R0020	Bandla Divyasree	24	19	19	4	23
21	24T11R0021	D C Fardeen		17	14	0	14
22	24T11R0022	Batti Fouziya Shabnam	27	27	22	5	27
23	24T11R0023	Gandluri Ganesh	21	20	17	4	21
24	24T11R0024	Mandala Gayathri	23	24	19	5	24
25	24T11R0025	Yelama Gayathri	24	22	19	4	24
26	24T11R0026	Mattam Gouri	21	22	18	4	22
27	24T11R0027	Jagadish Gari Govardhan	22	20	18	4	22
28	24T11R0028	Velpula Govardhan Yadav	22	18	18	4	21



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29	24T11R0029	Parikidona Hareesh Naidu	22	19	18	4	21
30	24T11R0030	Nimmakayala Harsha Vardhan Sai	21	19	17	4	21
31	24T11R0031	Nallamanna Sanjeevarayappa Gari Harshitha	22	21	18	4	22
32	24T11R0032	Shaik Hena Rahima	25		20	0	20
33	24T11R0033	Alakunta Jagan	24	22	19	4	24
34	24T11R0034	Ediga Jayasimha	24	23	19	5	24
35	24T11R0035	Arikeri Jhansi	24	21	19	4	23
36	24T11R0036	K Jyothsna			0	0	0
37	24T11R0037	Kapadam Kalpana	24	24	19	5	24
38	24T11R0038	Honnur Karishma Mehek	24	24	19	5	24
39	24T11R0039	Shaik Karishma	25	22	20	4	24
40	24T11R0040	Dungavath Karthik Naik	21	21	17	4	21
41	24T11R0041	Kasandula Kavya	25	24	20	5	25
42	24T11R0042	Guduru Kavya Sree	21	20	17	4	21
43	24T11R0043	Madiga Krupa Kumari	24	22	19	4	24
44	24T11R0044	Velpula Lalitha	25	21	20	4	24
45	24T11R0045	Koyaladinne Lokeswari	27	22	22	4	26
46	24T11R0046	Kalla Manasa	24	23	19	5	24
47	24T11R0047	Gallamory Manikumari	23	22	18	4	23
48	24T11R0048	Kondakamarla Mohammad Affan	23	23	18	5	23
49	24T11R0049	P N Mudraju	22	21	18	4	22
50	24T11R0050	M Muskan Banu	21	22	17	4	21
51	24T11R0051	Cheruvu Mythri	22	MP	18	0	18
52	24T11R0052	G V Nagabhushana	21		17	0	17
53	24T11R0053	Mandala Nagalakshmi	21	20	17	4	21
54	24T11R0054	Neelampalli Nagatejaswini	21	20	17	4	21
55	24T11R0055	Mude Nagendra Naik			0	0	0
56	24T11R0056	Boya Nanda Kishore	25	23	20	5	25
57	24T11R0057	Jerripothula Nandini	24	23	19	5	24
58	24T11R0058	Therukati Neeha Sulthana	22	22	18	4	22
59	24T11R0059	Pileru Shaik Noorain	26	23	21	5	25
60	24T11R0060	Kandukuru Poornesh	20	19	16	4	20
61	24T11R0061	E Pradeep Gowd		21	0	4	4
62	24T11R0062	N Pranav Kumar Reddy	21	21	17	4	21
63	24T11R0063	Bandaru Purandhar Bhavani				4	23
		Prasad	23	21	18		



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64	24T11R0064	O Raghavendra		21	17	0	17
65	24T11R0065	Mandala Rahul	22	21	18	4	22
66	24T11R0066	Kamsali Rajesh	15	19	15	3	18
67	24T11R0067	Palthya Rajitha	20	21	17	4	21
68	24T11R0068	Madakasira Rakesh	19	20	16	4	20
69	24T11R0069	Koneti Rakshitha	20	21	17	4	21
70	24T11R0070	Aakula Shaik Ruheena	26	26	21	5	26
71	24T11R0071	Dudekula Ruksana	20	22	18	4	22
72	24T11R0072	Mahaldar Rukshana Begum	21	25	20	4	24
73	24T11R0073	Shaik Sadiq	23	22	18	4	23
74	24T11R0074	Shaik Sadiya	27	24	22	5	26
75	24T11R0075	Pulaiguri Saigowtham	19	20	16	4	20
76	24T11R0076	Uramekala Sai Kumar	18	19	15	4	19
77	24T11R0077	Rayachoti Sai Priya		23	18	0	18
78	24T11R0078	Matta Sailaja	26	25	21	5	26
79	24T11R0079	Madiga Saipadmini	21	20	17	4	21
80	24T11R0080	Katam Sandeep			0	0	0
81	24T11R0081	Shaik Saniya Banu	21	22	18	4	22
82	24T11R0082	Dudekula Shameem		23	18	0	18
83	24T11R0083	Kodala Sharuk Khan		20	16	0	16
84	24T11R0084	Obulappa Gari Shivaraj	20		16	0	16
85	24T11R0085	Rathinapi Sindhu	22	24	19	4	23
86	24T11R0086	Obulareddypalli Sirivennela	22	23	18	4	22
87	24T11R0087	Sugali Sony	19	23	18	4	22
88	24T11R0088	Bayaji Gari Spandana	19	22	18	4	22
89	24T11R0089	Sanna Mandaiah Gari Sravani	20	21	17	4	21
90	24T11R0090	Kenchala Srilatha	24	24	19	5	24
91	24T11R0091	Madhugonde Sruthi	22	21	18	4	22
92	24T11R0092	Shivalingappa Gari Suchitra	21	21	17	4	21
93	24T11R0093	Vadla Supraja Rani	20	20	16	4	20
94	24T11R0094	Mandha Tharun	21	20	17	4	21
95	24T11R0095	Harijana Thippamma	22	24	19	4	23
96	24T11R0096	Sake Thulasi	23	23	18	5	23
97	24T11R0097	K Usha	27	26	22	5	27
98	24T11R0098	Chakali Usha Rani	27	26	22	5	27
99	24T11R0099	Gudipi Vanaja	24	26	21	5	26
100	24T11R00A0	Kurakula Varshini	24		19	0	19



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101	24T11R00A1	Gangappa Gari Veena	20	20	16	4	20
102	24T11R00A2	T N Vidya	22	23	18	4	22
103	24T11R00A3	Golla Yamini	22	22	18	4	22
104	24T11R00A4	Shaik Yasmin	22	21	18	4	22
105	24T11R00A5	Yakhubji Zoya Afreen	24	24	19	5	24