RAFFLES UNIVERSITY

TEACHING PLAN: PATHOPHYSIOLOGY

SCHOOL: (SOP) SCHOOL OF PHARMACY		**ACADEMIC SESSION: 2023 – 2024**	**FOR STUDENTS' BATCH: 2023 – 2024**	
1	**Subject Code**	BP204T		
2	**Subject**	**PATHOPHYSIOLGY**		
3	**Credits**	**4**		
4	**Learning Hours**	Assessments 10 Guided Study 20 **Contact Hours 45** **75 hours**		
5	**Course Objective**	1. Describe the etiology and pathogenesis of the selected disease states; 2. Name the signs and symptoms of the diseases. 3. Mention the complications of the diseases. 4. Diagnosis and treatment of diseases.		
6	**Course Outcomes**	1. Employ a broad understanding pathophysiology. 2. Understand and employ the etiology of diseases and pathogenesis of diseases.		
7	**Outline syllabus:**			
7.01	**Paper Code**	**Unit**	**Introduction**	**Page Numbers[1]**	**Lectures**
	BP204T	Unit I	• **Basic principles of Cell injury and Adaptation:** Introduction, definitions, Homeostasis, Components and Types of Feedback systems, Causes of cellular injury**,** Pathogenesis (Cell membrane damage, Mitochondrial damage, Ribosome damage, Nuclear damage)**,** Morphology of cell injury – Adaptive changes (Atrophy, Hypertrophy, hyperplasia, Metaplasia, Dysplasia)**,** Cell swelling, Intra cellular accumulation, Calcification, Enzyme leakage and Cell Death Acidosis &Alkalosis, Electrolyte imbalance. • **Basic mechanism involved in the process of inflammation and repair:** Introduction, Clinical signs of inflammation, Different types of Inflammation, Mechanism of Inflammation – Alteration in vascular permeability and blood flow, migration of WBC's, Mediators of inflammation, Basic principles of wound healing in the skin, Pathophysiology of Atherosclerosis. .		10

		Unit II	• **Cardiovascular System:** Hypertension, congestive heart failure, ischemic heart disease (angina, myocardial infarction, atherosclerosis and arteriosclerosis) • **Respiratory system:** Asthma, Chronic obstructive airways diseases. • **Renal system:** Acute and chronic renal failure	81-129	10
		Unit III	• **Haematological Diseases:** Iron deficiency, megaloblastic anaemia (Vit B12 and folic acid), sickle cell anaemia, thalassemia, hereditary acquired anaemia, haemophilia. • **Endocrine system:** Diabetes, thyroid diseases, disorders of sex hormones. • **Nervous system:** Epilepsy, Parkinson's disease, stroke, psychiatric disorders: depression, schizophrenia and Alzheimer's disease. • **Gastrointestinal system:** Peptic Ulcer	131-204	10
		Unit IV	• Inflammatory bowel diseases, jaundice, hepatitis (A,B,C,D,E,F) alcoholic liver disease. • **Disease of bones and joints:** Rheumatoid arthritis, osteoporosis and gout • **Principles of cancer:** classification, etiology and pathogenesis of cancer • **Diseases of bones and joints:** Rheumatoid Arthritis, Osteoporosis, Gout • **Principles of Cancer:** Classification, etiology and pathogenesis of Cancer	208-256	08
		Unit V	• **Infectious diseases:** -Meningitis, Typhoid, Leprosy, Tuberculosis Urinary tract infections • **Sexually transmitted diseases:** AIDS, Syphilis, Gonorrhoea	257-296	07
8	**Course Evaluation**				
8.1	**CA: 30%**				
8.11	**Attendance**	80%			
8.12	**Homework**	4 Assignments, 10%			
8.13	**Quizzes**	4 Quizzes, 80%			
8.14	**Projects**	1 Project, 5%			

8.15	**Presentation**	1 Presentation, 5%
8.16	**Any other**	--
8.2	**MTE**	20%
8.3	**End-term examination: 50%**	
9	**Text Books & References**	
9.2	BOOKS	1. Vinay Kumar, Abul K. Abas, Jon C. Aster; Robbins &Cotran Pathologic Basis of Disease; South Asia edition; India; Elsevier; 2014. 2. Harsh Mohan; Text book of Pathology; 6th edition; India; Jaypee Publications; 2010. 3. Laurence B, Bruce C, Bjorn K. ; Goodman Gilman's The Pharmacological Basis of Therapeutics; 12th edition; New York; McGraw-Hill; 2011. 4. Dr.B.B jain , naitic d. Trivedi,Priyanka singh, pathophysiology1st edition thakur publication ; 2021. 5. Best, Charles Herbert 1899-1978; Taylor, Norman Burke 1885-1972; West, John B (John Burnard); Best and Taylor's Physiological basis of medical practice; 12th ed; united states; 6. William and Wilkins, Baltimore;1991 [1990 printing]. 7. Nicki R. Colledge, Brian R. Walker, Stuart H. Ralston; Davidson's Principles and Practice of Medicine; 21st edition; London; ELBS/Churchill Livingstone; 2010. 8. Guyton A, John .E Hall; Textbook of Medical Physiology; 12th edition; WB Saunders Company; 2010. 9. Joseph DiPiro, Robert L. Talbert, Gary Yee, Barbara Wells, L. Michael Posey; Pharmacotherapy: A Pathophysiological Approach; 9th edition; London; McGraw-Hill Medical; 2014. 10. V. Kumar, R. S. Cotran and S. L. Robbins; Basic Pathology; 6th edition; Philadelphia; WB Saunders Company; 1997. 11. Roger Walker, Clive Edwards; Clinical Pharmacy and Therapeutics; 3rd edition; London; Churchill Livingstone publication; 2003

Mapping of Outcomes v. Topics

Outcome no. → Syllabus topic↓	1	2	3	4	5
Paper Code.Unit I (a)	✓				
Paper Code. Unit I (b)		✓			
Paper Code. Unit II (a)			√		
Paper Code.Unit II (b)				✓	
Paper Code. Unit III()				✓	
Paper Code. Unit III()				✓	
Paper Code.Unit IV (a)				✓	✓
Paper Code. Unit IV(b)				✓	✓
Paper Code. Unit V(c)				✓	✓

QUESTION BANK FOR PHARMACOLOGY II (BP503T)

□ UNIT I

1. What a note on the homeostasis process. Explain the concept of feedback system.
2. Write a note on cause of cellular adaption.

3. Explain the reversible cell injury. note on mitochondria damage, cell membrane and ribosomes damage.
4. Explain the electrolyte imbalance.
5. Explain acidosis and alkalosis.
6. Explain the principle of wound healing of skin.
7. Explain the inflammation its mechanism and types of events, and mediators of inflammation.
8. Define following terms

a. Pathophysiology
b. Pathogenesis
c. Etiology
d. Apoptosis
e. Necrosis
f. Atropy
g. Metaplasia
h. Aplasia
i. Dypalsia
j. Calcification
k. Gangrare.

UNIT II

1. Explain the etiology, pathogenesis, sign and symptoms and complication of hypertension.
2. Write a note on myocardial infraction.
3. Explain the etiology, pathogenesis, sign and symptoms Acute renal failure.
4. Write down the complete pathophysiology of CHF.
5. Explain the atherosclerosis and arteriosclerosis.
6. Explain the etiology, pathogenesis, sign and symptoms and complication, diagnosis of asthma.

UNIT III

1. Explain the etiology, pathogenesis, sign and symptoms and complication, diagnosis of diabetes.
2. Write down the complete pathophysiology of megaloblastic anaemia and haemophilia.
3. Write a note on iron deficiency anaemia.
4. Explain the etiology, pathogenesis, sign and symptoms and complication, diagnosis of peptic ulcer.
5. Write down the complete pathophysiology depression and epilepsy.

UNIT IV

1. Explain hepatitis A ,B,C and D.
2. Write a note on rheumatoid arthritis.
3. Explain the etiology, pathogenesis, sign and symptoms and complication, diagnosis of cancer.
4. Write down the complete pathophysiology of IBD.
5. Write a note a jaundice.

6. Write down the complete pathophysiology osteoporosis and gout.

UNIT V

1. Explain the etiology, pathogenesis, sign and symptoms and complication, diagnosis of tuberculosis.
2. Write down the complete pathophysiology of typhoid and syphilis.
3. Write a note on AIDS.
4. Write down the complete pathophysiology of urinary tract infection.

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