



HINDU COLLEGE OF PHARMACY (AUTONOMOUS)

Amaravathi Road – GUNTUR -522002. A.P.

Regd. No:

BP-101T

Total No. of Questions: 32

Total No. of Pages: 02

I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations - April, 2026
(Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP-101T Human Anatomy and Physiology – I

Time Duration: 3.00 Hrs.

Max. Marks: 75 Marks.

CO1	Introduction to human body, Cellular level of organization, Tissue level of organization
CO2	Integumentary system, Skeletal system, Joints
CO3	Body fluids and blood, Lymphatic system
CO4	Peripheral nervous system, Special senses
CO5	Cardiovascular system

Bloom's Taxonomy Levels-(BL) (L1-Remembering, L2-Understanding, L3–Applying, L4-Analysing, L5–Evaluating, L6-Creating)

SECTION – A

ANSWER ALL QUESTIONS [Multiple Choice Questions]

(20 X 1M = 20 Marks)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	Which of the following is the basic unit of brain?	Neurone	Nephron	Hepatocyte	Glomerulus
2	The largest organ of the human body is	Skin	Heart	Lungs	Brain
3	Which pigment is responsible for the colour of blood	Melanin	Bilirubin	Haemoglobin	Myoglobin
4	Which type of connective tissue connects muscles to bones?	Cartilage	Tendon	Cartilage	Fascia
5	Which joint type allows the greatest range of motion?	Hinge Joint	Ball & Socket Joint	Pivot Joint	Saddle Joint
6	Why does the integumentary system contribute to thermoregulation?	By producing hormones	By storing calcium	By sweating and altering blood flow	By releasing enzymes
7	Damage to the cochlea would most directly impair	Hearing	Vision	Smell	Taste
8	What is the life span of RBC	30 Days	120 Days	7 Days	90 Days
9	Auto rhythmic cells are present in which region of Heart	Purkinji fibers	SA Node	AV Node	Bundle of his
10	Which part is responsible for the color visibility in human	Cornea	Rods	Cones	Sclera
11	What is the example for the positive feedback mechanism?	Glucose control	Regulation of Blood pressure	Regulation of Body temperature	Oxytocin release during childbirth
12	What is the basic unit of life	Cell	Organ	Molecule	Tissue
13	Smallest bone in the body	Malleus	Incus	Stapes	Hyoid
14	Name the vein that carries oxygenated blood	Pulmonary Artery	Pulmonary Vein	Aortic arch	Pulmonary trunk
15	What is the approximate duration of one cardiac cycle in a normal adult at rest?	0.6 sec	0.8 sec	1.26 sec	2.35 sec

16	Intercalated discs are present in which muscle	Skeletal	Smooth	Cardiac	Nerve fiber
17	The P wave represents	Ventricular contraction	Ventricular relaxation	Atrial depolarization	Blood flow
18	Wernicke's area is responsible for	Voluntary movements	Balance	Speech Comprehension	Memory
19	Which of the following connects the two cerebral hemispheres?	Thalamus	Corpus callosum	Pons	Basal Ganglia
20	Smell was recognized by which sensory nerve?	Optic Nerve	Facial Nerve	Olfactory nerve	Hypoglossal nerve

SECTION – B

ANSWER ANY THREE QUESTIONS

(3 X 10 M = 30 Marks)

Q. No.	Questions	Marks	CO	B L
21	Explain the structure, functions and various transport mechanisms across the plasma membrane	10	1	L2
22	Describe the difference between sympathetic and para sympathetic nervous system	10	4	L2
23	Discuss the composition and function of Blood	10	3	L2
24	Draw a neat labeled diagram of skin and explain its layers.	10	2	L3
25	Explain cardiac cycle and mention the role in ECG to determine various cardiac diseases.	10	5	L4

SECTION – C

ANSWER ANY FIVE QUESTIONS

(5 X 5 M = 25 Marks)

Q. No.	Questions	Marks	CO	B L
26	Classify the blood cells and its function	5	3	L1
27	What are the various feedback mechanism involved in homeostasis	5	1	L2
28	Discuss the anatomy of spleen	5	3	L2
29	Classify various types of joints and give one example each	5	2	L3
30	Draw a neat labeled diagram of ear	5	4	L1
31	Define any two cardiac disorders along with symptoms and changes in ECG	5	5	L1
32	Compare the neural and hormonal mechanisms involved in blood pressure regulation	5	5	L4

*** *All the Best* ***



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I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations - April, 2026

(Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP-102T Pharmaceutical Analysis – I

Time Duration: 3.00 Hrs.

Max. Marks: 75 Marks.

CO1	To study source of errors, types of errors and methods of minimizing errors.
CO2	To understand sources of impurities in medicinal agents and limit tests.
CO3	To understand theory and applications of Volumetric methods of analysis.
CO4	To understand the principle and steps involved in gravimetric analysis.
CO5	To understand the principles of electrochemical methods of analysis.

Bloom's Taxonomy Levels-(BL) (L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

SECTION – A

ANSWER ALL QUESTIONS (Multiple Choice Questions)

(20 X 1 M = 20 Marks)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	_____ is number of moles of solute per kilogram of solvent	Mole fraction	molality	molarity	normality
2	Ceric ammonium sulphate is standardized using	Oxalic acid	Arsenic trioxide	Osmic acid	Potassium hydrogen phthalate
3	Which stain paper is used in limit test for arsenic	Sodium chloride paper	Starch iodide paper	pH paper	Mercuric chloride paper
4	Sodium hydroxide is	Strong acid	Weak acid	Primary standard	Secondary standard
5	The pH range of phenolphthalein solution used as indicator in Acid-base titration is	3.0-4.5	4.5-6.0	8.0-10.5	6.5-8.0
6	The pH of 0.01 M NaOH is	10	-2	2	12
7	Indicator used in non-aqueous titration	Ferrous ammonium sulphate	phenolphthalein	Mordant black II	Crystal violet
8	Water is an example for _____ solvent	amphiprotic	aprotic	protogenic	protophilic
9	In Mohr's method the following indicator is used	Methyl red	Potassium indicator	Crystal violet	Ferric alum
10	Calcium gluconate is assayed by	Acid-base titration	Iodimetric titration	Complexometric titration	Non-aqueous titration
11	Pore size of G4 glass crucible is	25-50 μ	100-120 μ	5-10 μ	200-500 μ
12	Temperature range in diazotization titration	45-50 $^{\circ}$ C	0-5 $^{\circ}$ C	20-25 $^{\circ}$ C	60-75 $^{\circ}$ C
13	The oxidation state of Mn in KMnO ₄ is	3	2	7	5

14	Hydrogen peroxide is assayed by	Non-aqueous titration	Acid base titration	Iodometric titration	Gravimetry
15	Reduction is	removal of oxygen	removal of carbon	removal of halogen	removal of hydrogen
16	Potassium iodate is used	for assay of acids	for assay of oxidizing agents	used as indicator	as primary standard
17	In potentiometric titrations, the equivalence point is determined by plot of	Electromotive force (eMF) v/s volume of titrant	Current v/s time	Electromotive force (eMF) v/s time	pH v/s time
18	Antimony electrode is	Indicator electrode	Reference electrode	Hydrogen electrode	Secondary reference electrode
19	In a conductometric titration, the equivalence point is reached when:	the temperature of the solution stabilizes	the voltage across the electrodes becomes constant	the conductance of the solution levels off or plateaus	the pH of the solution reaches a specific value
20	In polarography, the Ilkovic equation is	$I_d = 607 n D^{2/2} m^{2/3} t^{1/6} C$	$I_d = 607 n D^{1/2} m^{1/3} t^{1/6} C$	$I_d = 607 n D^{1/2} m^{2/3} t^{1/6} C$	$I_d = 707 n D^{1/2} m^{2/3} t^{1/6} C$

SECTION – B

ANSWER ANY THREE QUESTIONS

(3 X 10 M = 30 Marks)

Q. No.	Questions	Marks	CO	B L
21	a) Explain any five methods of expressing the concentration of volumetric solutions. b) Elaborate on primary and secondary standards.	5+5	1 & 3	L2 & L6
22	What are non-aqueous titrations? Explain the principle involved in the estimation of ephedrine HCl along with the reactions.	2+8	3	L1 & L2
23	Explain in detail about direct, replacement and back complexometric titrations with suitable examples.	10	3	L2
24	Define redox titration? Explain the principle involved in each type of redox titration in brief.	2+8	3	L1 & L5
25	a) Describe the conductometric titration curve obtained in titration of strong base vs weak acid with suitable example. b) Explain the principle of polarography and enlist applications of this technique.	5+5	5	L3 & L1

SECTION – C

ANSWER ANY FIVE QUESTIONS

(5 X 5 M = 25 Marks)

Q. No.	Questions	Marks	CO	B L
26	Summarize the preparation and standardization of 0.1M ceric ammonium sulphate solution.	5	3	L2
27	Discuss about neutralization curves with neat illustrated diagrams.	5	3	L6
28	Write a note on Mohr's and fajan's method with advantages and disadvantages?	5	3	L2
29	Discuss the role of precipitation in gravimetric analysis.	5	4	L3
30	List out the key points that differentiate iodometry with iodimetric titration.	5	3	L4
31	Explain the methods of determining the end points in potentiometric titration.	5	5	L2
32	Explain the construction and working of glass electrode.	5	5	L5



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BP-103T

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I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations - April, 2026
(Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP-103T Pharmaceutics – I

Time Duration: 3.00 Hrs.

Max. Marks: 75 Marks.

CO1	Know the history of profession of pharmacy
CO2	Understand the basics of different types of dosage forms, packaging and labelling of pharmaceuticals, pharmaceutical incompatibilities
CO3	Know about pharmaceutical calculations; inter conversions, professional way of handling of the prescription
CO4	Know about preparation of various conventional dosage forms. eg. Liquid orals, monophasic liquids for external use, galenicals and powders, suppositories
CO5	Summarize Formulation and evaluation of semi solid dosage forms

Bloom's Taxonomy Levels-(BL) (L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

SECTION – A

ANSWER ALL QUESTIONS [Multiple Choice Questions]

(20 X 1M = 20 Marks)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	The part of the prescription called the inscription contains?	Direction to the patient	Direction to the patient's relatives	Patient information	Name and quantity of ingredients
2	The Chairman of the first edition of IP was	Dr. B. Mukherjee	Dr. Nityanand	Mr. PrasanaTotta	Dr. B.N. Ghosh
3	Douches are meant for application in	Nasal cavity	Rectal cavity	Buccal cavity	Vaginal cavity
4	What is the ideal particle size for topical powders?	50 to 100 micron	150 to 250 micron	250 to 500 micron	Above 1000 micron
5	_____ is a hydroalcoholic preparation	Elixir	Syrup	Suspension	Emulsion
6	Witepsol is classified as which type of suppository base?	Glycerogelatin base	Synthetic base	Cocoa butter base	Macrogol base
7	The purpose of posology	Calculate pharmaceutical incompatibilities	Determine appropriate dose based on patient factors (age, body weight, body surface area)	Prepare dosage forms	Handle prescriptions only
8	_____ are sweet, viscous liquid dosage form of medicaments meant for cough relief.	Lozenges	Inhalations	Tablets	Linctus
9	An assembly in which a pair of electrodes connected to an electric bulb is dipped into an emulsion and the bulb glows. The emulsion is of which type?	o/w	w/o	g/o	o/s
10	_____ are semisolid preparations for external application that differ from ointments in containing a high proportion of finely powdered medicaments.	Ointments	Pastes	Gels	Creams
11	Using Clark's formula, calculate the dose for a child weighing 20 lb. The adult dose is 300 mg.	35mg	200mg	110mg	40mg
12	How many grams of dextrose are required to prepare 3000 ml of 5% w/v solution?	150grams	200grams	250grams	300grams
13	The proportion of Oil : Water : Gum for preparing a primary emulsion of mineral oil by dry gum method is ____	3:2:1	2:2:1	1:1:1	2:1:2

14	Which base should be selected when water washability is the key requirement for a semisolid dosage form?	Hydrocarbon base	Absorption base	Emulsion base	Water Soluble Base
15	Hard cake formation is a characteristic feature of which type of suspension?	Flocculated	Thixotropic	Structured	Deflocculated
16	Phase inversion observed when emulsion prepared by using soaps of monovalent cation is mixed with polyvalent cations is an example of incompatibility	Chemical	Physical	Therapeutic	Biological
17	Which of the following tests can be used to identify the type of emulsion?	Dilution test only	Dye test Only	Conductivity test only	All of the above
18	Geometric dilution is used in the preparation of powders to ensure:	Uniform mixing of potent drugs with diluents	Increase in particle size	Liquefaction of eutectic mixtures	Effervescence
19	In a prescription with aspirin and sodium bicarbonate, the likely incompatibility is:	Physical (effervescence)	Chemical (acid-base reaction)	Therapeutic	None
20	One disadvantage of cocoa butter suppository base is:	Solid at room temperature but melts in body	Polymorphism	Miscibility with many ingredients	Blandness

SECTION – B

ANSWER ANY THREE QUESTIONS

(3 X 10 M = 30 Marks)

Q. No.	Questions	Marks	CO	B L
21	Explain the historical background and development of the profession of pharmacy in India. Discuss its relation with pharmacy education, industry and organization. Also explain pharmacy as a career and give a brief introduction to IP, BP, USP and Extra Pharmacopoeia.	10M	01	02
22	Describe the various pharmaceutical calculations with examples. Include weights and measures (Imperial & Metric systems), percentage solutions, alligation, proof spirit and isotonic solutions based on freezing point and molecular weight.	10M	02	03
23	Give a detailed account of monophasic and biphasic liquid dosage forms. Explain definitions, advantages, disadvantages, classification and methods of preparation of Suspensions and Emulsions	10M	04	02
24	Define pharmaceutical incompatibilities. Explain physical, chemical and therapeutic incompatibilities with suitable examples.	10M	02	02
25	Write a detailed note on semisolid dosage forms. Explain definition, classification, preparation of ointments, pastes, creams and gels and factors affecting dermal penetration of drugs.	10M	04	03

SECTION – C

ANSWER ANY FIVE QUESTIONS

(5 X 5 M = 25 Marks)

Q. No.	Questions	Marks	CO	B L
26	Define prescription. Describe the different parts of a prescription and common errors in prescription handling.	05M	03	02
27	Define posology. Explain the factors affecting posology and pediatric dose calculations based on age, body weight and body surface area.	05M	02	02
28	Write a short note on powders: definition, classification, advantages, disadvantages and geometric dilutions.	05M	04	01
29	Explain the preparation and uses of monophasic liquid dosage forms (Elixirs, Liniments and Lotions).	05M	04	03
30	Differentiate between flocculated and deflocculated suspensions. Mention methods to overcome stability problems in suspensions.	05M	04	02
31	Write a note on suppositories: definition, types, advantages, disadvantages and displacement value.	05M	04	02
32	List the excipients used in the formulation of semisolid dosage forms (ointments, pastes, creams and gels).	05M	04	01

*** All the Best ***



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BP-104T

Total No. of Questions: 32

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I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations - April, 2026

(Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP-104T Pharmaceutical Inorganic Chemistry

Time Duration: 3.00 Hrs.

Max. Marks: 75 Marks.

CO1	Know the sources of impurities and limit tests.
CO2	To understand the medicinal and pharmaceutical importance of acids, bases, buffers, major extra and intracellular electrolytes and dental products.
CO3	To understand medicinal and pharmaceutical importance of gastrointestinal agents and antimicrobials.
CO4	To understand the medicinal and pharmaceutical importance of miscellaneous compounds.
CO5	To understand the medicinal and pharmaceutical imp of radiopharmaceuticals.

Bloom's Taxonomy Levels-(BL) (L1-Remembering, L2-Understanding, L3-Appling, L4-Analysing, L5-Evaluating, L6-Creating)

SECTION – A

ANSWER ALL QUESTIONS

(20 X 1M = 20 Marks)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	Thioglycolic acid in the limit test for iron acts as:	Reducing agent	Oxidizing agent	Flavouring agent	Colouring agent
2	The colour of potassium permanganate for the limit test is decolourised by boiling with	Acetic acid	Alkali	Alcohol	Nitric acid
3	Acid used in the limit test for chloride is	Sulphuric acid	Hydrochloric acid	Acetic acid	Nitric acid
4	Sixth edition of Indian Pharmacopoeia was published in the year	2006	2010	2011	2016
5	Ammonium chloride and ammonia pair is an examples for	Acidic buffer	Basic buffer	Salt buffer	Amphoteric buffer
6	Hypokalemia refers to disorders of ions:	Potassium	Sodium	Calcium	Phosphate
7	Example for anti-caries agent is	Sodium chloride	Potassium chloride	Sodium fluoride	Calcium carbonate
8	The formula for sodium fluoride is	NaF	Na ₂ F	NaF ₂	Na ₂ F ₂
9	Assay of hydrogen peroxide is done by the following method of titration	Neutralization titration	Precipitation titration	Complexometric titration	Permanganometric titration
10	Magnesium sulphate acts as	Anti-microbial	Emetic	Anti-dysenteric	Cathartic
11	Dilute hydrochloric acid is used in the treatment of	Achlorhydria	Hypoxia	Sepsis	Anxiety
12	Synonym of aqueous iodine solution is	Iodine tincture	Throat paint	Legal's	Lugol's
13	Green vitriol is the synonym for	Ferrous chloride	Ferric chloride	Ferric sulphate	Ferrous sulphate
14	Which of the following is an astringent	Potassium iodide	Potash alum	Sodium potassium tartrate	Sodium thiosulphate
15	Use of sodium thiosulphate	Antipyretic	Haematinic	Antidote	Astringent

16	Charcoal is an example for	Mechanical antidote	Chemical antidote	Physical antidote	Physiological antidote
17	Gamma rays are commonly used in the sterilization of	Surgical instruments	Operation theatre	Pharma manufacturing area	Thermo stable objects
18	Alpha particle is made of	Two protons and two neutrons	Two protons and two electrons	Two neutrons and two electrons	Four protons
19	Sodium iodide must be stored in a	Well closed container	Dark, cool, tightly closed container	Refrigerator	Transparent container
20	Which of the following has high penetrating power	Alpha rays	Beta rays	Delta particle rays Gamma rays	Gamma rays

SECTION – B

ANSWER ANY THREE QUESTIONS

(3 X 10 M = 30 Marks)

Q. No.	Questions	Marks	CO	B L
21	Describe the principle, procedure and role of reagents involved in the limit test for iron based on Indian Pharmacopoeia	3+4+3	1	L1
22	Enlist various physiological ions along with their classification. Explain the role of any two physiological ions.	2+4+4	2	L2
23	Define dentifrices. Explain the role of fluoride in the treatment of dental caries. Write the properties and preparation of calcium carbonate.	2+4+4	2	L1 & L3
24	Classify gastrointestinal agents. List out the ideal properties of antacids. Explain the preparation of Magnesium Hydroxide Gel.	2+4+4	3	L2
25	a) Classify anti-microbial agents. Explain the mechanism of action of anti-microbial agents with examples. b) Write a note on iodine and its preparations.	6+4	3	L2 & L3

SECTION – C

ANSWER ANY FIVE QUESTIONS

(5 X 5 M = 25 Marks)

Q. No.	Questions	Marks	CO	B L
26	Write the principle and procedure involved in the limit test for arsenic.	5	1	L3
27	Describe the role of fluorides as anti-caries agent.	5	2	L1
28	What are acidifiers? Write the preparation of ammonium chloride.	5	2	L3
29	Explain the method of preparation and principle involved in the assay of chlorinated lime	5	3	L2
30	What are emetics? Give the principle involved in the assay of copper sulphate.	5	4	L2
31	Describe Geiger Muller counter with its application.	5	5	L1
32	Define radioactivity. Explain the properties of different types of radiations.	5	5	L2

***** All the Best *****



HINDU COLLEGE OF PHARMACY AUTONOMOUS)

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BP-105T

Total No. of Questions: 16

Total No. of Pages:02

I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations April, 2026 (Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP105T Communication skills

Duration: 1. 30 Hrs

Max. Marks:35M

CO1	Understand the behavioural needs for a Pharmacist to function effectively in the areas of pharmaceutical operation.
CO2	Communicate effectively through verbal and Non-verbal skills. (Verbal and Non Verbal)
CO3	Effectively communicate as a team player.
CO4	Develop speaking/ writing skills
CO5	Through enhanced vocabulary, presentation skills and accent modulation, able to develop Leadership qualities.

Bloom's Taxonomy Levels **B L** (L1-Remembering, L2-Understanding, L3-Appling, L4-Analyzing, L5-Evaluating, L6-Creating)

SECTION - A

ANSWER ALL QUESTIONS

(10 X 1M = 10M)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	Communication can be defined as:	Writing messages only	Sending information without feedback	Exchange of information between sender and receiver	Speaking loudly
2	Which of the following is the first step in the communication process?	Feedback	Encoding	Message	Sender
3	The process of converting ideas into symbols or words is called:	Decoding	Encoding	Feedback	Noise
4	The person who receives the message is called:	Encoder	Sender	Receiver	Speaker
5	Which of the following is an example of non-verbal communication?	Speech	Letter	Facial expressions	Telephone call
6	Noise in communication refers to:	Loud sound only	Any disturbance that affects communication	Good communication	Written message
7	Which of the following is a physical barrier to communication?	Language difference	Poor listening	Distance between sender and receiver	Attitude problem
8	Feedback in communication helps to:	Stop Communication	Confirm understanding of message	Increase noise	Delay Communication
9	Which communication style shows high assertiveness and high responsiveness?	Passive	Aggressive	Assertive	Passive-aggressive
10	Verbal communication includes:	Gestures	Eye contact	Spoken and written words	Body posture

SECTION - B

ANSWER ANY ONE QUESTIONS

(1 X 10M = 10M)

Q. No.	Questions	Marks	CO	BL
11	What is Communication? Explain importance of Communication in detail?	10	2	L3
12	Explain Communication Process by giving suitable examples.	10	3	L3

SECTION - C

ANSWER ANY THREE QUESTIONS

(5 X 3 M = 15M)

Q. No.	Questions	Marks	CO	BL
13.	What do you mean by Encoding and Decoding of the message? What is the role of Source and Receiver in Communication?	5	3	L3
14.	Differentiate between Verbal and Non-Verbal Communication?	5	4	L4
15.	What are different barriers to Communication and how will you eliminate them?	5	3	L3
16.	What are different elements of Communication?	5	3	L3

****All the Best****



HINDU COLLEGE OF PHARMACY (AUTONOMOUS)

Amaravathi Road – GUNTUR -522002. A.P.

Regd. No:

BP-106RMT

Total No. of Questions: 16

Total No. of Pages: 02

I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations April, 2026 (Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP-106RMT Remedial Mathematics

Duration: 1 Hr. 30 Min.

Max. Marks: 35Marks.

CO1	Know different types to resolve the given fraction into partial fractions, Theorems on Logarithms, Introduction to Functions, Limits and Continuity
CO2	Know about different types of matrices, calculation of determinant, adjoint, inverse, solution of system of linear equations, Cramer's rule, characteristic equation, Cayley Hamilton theorem
CO3	Know about differentiation
CO4	Introduction to Analytical Geometry, how to find slope value, slope – intercept form of straight line
CO5	Solutions for variable separable, homogeneous, linear and exact differential equations
CO6	Pharmaceutical Mathematics with Application to Pharmacy

B L - Bloom's Taxonomy Levels (L1-Remembering, L2-Understanding, L3-Applying, L4-Analysing, L5-Evaluating, L6-Creating)

SECTION – A

ANSWER ALL QUESTIONS

(10 X 1M = 10M)

Q. No.	Questions
1	What is the correct form for $\frac{x^2+1}{(x-2)(x+3)^2}$? A) $\frac{A}{x-2} + \frac{B}{(x+3)^2}$ B) $\frac{A}{x-2} + \frac{B}{x+3} + \frac{C}{(x+3)^2}$ C) $\frac{A}{x-2} + \frac{Bx+C}{(x+3)^2}$ D) $\frac{A}{x-2} + \frac{B}{x+3} + \frac{Cx+D}{(x+3)^2}$
2	What form of rational function $\frac{px+q}{(x-a)(x-b)}$, $a \neq b$ represents? a) $\frac{A}{(x-a)}$ b) $\frac{B}{(x-b)}$ c) $\frac{A+B}{(x-a)(x-b)}$ d) $\frac{A}{(x-a)} + \frac{B}{(x-b)}$
3	What is the logarithm of 1 to any base? A) 0 B) 1 C) Depends on the base D) Infinite
4	Which function is considered a transcendental real-valued function? A. $f(x) = x^3 + 2x$ B. $f(x) = \sqrt{x}$ C. $f(x) = \tan(x)$ D. $f(x) = \frac{1}{x}$

5	A matrix A is singular if A) $\text{Det } A = 0$ B) $\text{Det } A = 1$ C) A is a square matrix D) A is not a square matrix
6	What is the derivative of $f(x) = x^n$ with respect to x? A) $n x^{n-1}$ B) $n x^{n+1}$ C) x^{n-1} D) $n x^n$
7	What is the slope of the line passing through (20, 8) and (9, 16)? A) $8/11$ B) $-8/11$ C) $11/8$ D) $-11/8$
8	Evaluate $\int \frac{1}{x} dx$ A) $x^2 + C$ B) $\log x + C$ C) $-x^2 + C$ D) $1/x^2 + C$
9	Which of the following is a homogeneous linear differential equation? A. $\frac{dy}{dx} + y = x$ B. $\frac{dy}{dx} + 5y = 0$ C. $y'' + \sin(x)y' = e^x$ D. $\frac{dy}{dx} + y^2 = 0$
10	Find the Laplace transform of $f(t) = \cos(\omega t)$. a) $\frac{\omega}{s^2 + \omega^2}$ b) $\frac{s}{s^2 - \omega^2}$ c) $\frac{s}{s^2 + \omega^2}$ d) $\frac{\omega}{s^2 - \omega^2}$

SECTION – B

ANSWER ANY ONE QUESTION

(1 X 10M = 10M)

Q. No.	Questions	Marks	CO	BL
11	Verify Cayley-Hamilton theorem for the square matrix $\begin{bmatrix} 1 & 2 \\ 2 & 1 \end{bmatrix}$	10	2	L5
12	Find the maximum and minimum values of the function $x^3 - 6x^2 + 9x + 15$	10	3	L5

SECTION – C

ANSWER ANY THREE QUESTIONS

(3 X 5M = 15M)

Q. No.	Questions	Marks	CO	BL
13	Define real valued function and write about classification of real valued functions	5	1	L5
14	Find the equation of the straight-line having slope $\frac{4}{7}$ and y intercept 4	5	4	L5
15	If the amount of drug that dissolve in the body is given by the equation $c(t) = e^{2t}$. Calculate the total amount of drug that dissolve between 0 to 2 hours, where 2 is elimination rate constant. For this find $\int_0^2 e^{2t} dt$	5	6	L3
16	Find the Inverse Laplace transform of $\frac{1}{(s-4)^3}$	5	5	L5



HINDU COLLEGE OF PHARMACY (AUTONOMOUS)

Amaravathi Road – GUNTUR -522002. A.P.

Regd. No:

BP-106RBT

Total No. of Questions: 16

Total No. of Pages: 01

I/IV B. Pharmacy Regular Degree 1st Semester end Theory Examinations - April/May 2026
(Admitted in 2025-2026 Autonomous Batch)

Subject Code & Name: BP106RBT Remedial Biology

Duration: 1.45 Hrs.

Max. Marks: 35 M.

CO1	Living World, Morphology of Flowering Plants
CO2	Body fluids and Circulation, Digestion and Absorption, Respiration
CO3	Excretory products and their elimination, Nervous System, Reproduction
CO4	Chemical Coordination and regulation
CO5	Plants and Mineral Nutrition, Photosynthesis
CO6	Plant Anatomy, Cytology

B L - Bloom's Taxonomy Levels (L1 - Remembering, L2 - Understanding, L3 - Applying, L4 - Analysing, L5 - Evaluating, L6 - Creating)

SECTION – A

ANSWER ALL QUESTIONS [Multiple Choice Questions]

(10 X 1M = 10 Marks)

Q. No.	Questions	Option A	Option B	Option C	Option D
1	Microorganisms can be seen with	Microscope	Eye	Nose	Torch
2	Example of Prokaryotic Cell	Bacteria	Plant	Animal	Man
3	How many cells are in meiosis?	4	2	6	10
4	Which pigment is present in RBC?	Chlorophyll	Haemoglobin	Thiamine	Caratinine
5	Structural & Functional unit of Kidney?	Nephron	Nerve Cell	Small Intestine	Villi
6	Which type of circulation is present in man?	Mixed Circulation	Double Circulation	Single Circulation	None
7	Which part of the alimentary canal is useful for absorption?	Mouth	Large intestine	Small intestine	Rectum
8	The gap between two neurons is called	Dendrite	Synapse	Axon	Place
9	Which endocrine gland is called Mixed gland	Liver	Stomach	Rectum	Pancreas
10	Female sex hormone is	Insulin	Amylase	Bile	Oestrogen

SECTION - B

ANSWER ANY 1 QUESTION

(1Q X 10 M= 10 M)

Q. No.	Questions	Marks	CO	BL
11	Explain about Dark reaction	10	1	L2
12	Write the endocrine glands & hormones in man	10	2	L2

SECTION - C

ANSWER ANY 3 QUESTIONS

(3Q X 5M = 15M)

Q. No.	Questions	Marks	CO	BL
13	How can you maintain the healthy food habits?	5	6	L4
14	Describe about Bacteria	5	6	L2
15	Explain Nucleus	5	6	L2
16	Write a short note on Pachytene	5	2	L1

*** All the Best ***