



S.V.K.P. & Dr. K.S. RAJU ARTS & SCIENCE COLLEGE

(Autonomous)

Recognized by UGC as "College with Potential for Excellence"

Accredited by NAAC with "A" Grade

(Affiliated to Adikavi Nannaya University - Recognised by Govt. of Andhra Pradesh)

PENUGONDA-534 320, West Godavari District., (A.P.)

BIOCHEMISTRY	CODE: 19BC1	2019-20	B.Sc.
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Semester – I

BIOCHEMISTRY

Time: 3 Hours

Paper – I

MODEL QUESTION PAPER
(BIOMOLECULES)

Max. Marks: 75

Part – 1

Answer any five questions choosing at least two from each section. Each question carries 10 marks.

5x10=50 marks

Section-A

1. Explain in detail about the importance of buffers in biological system?
2. Explain Donnan membrane equilibrium and significance of osmotic pressure in biological system?
3. Describe the detail about storage polysaccharides ?
4. Explain the structure and biological significance of three disaccharides?
5. Write an essay on classification of lipids?

Section-B

6. Describe the composition and organisation of membranes .Explain fluid mosaic model?
7. Explain briefly the structure and classification of aminoacids?
8. Write an account on chemical reactions of aminoacids?
9. Explain about classification of proteins?
10. Explain briefly about the structural organisation of proteins?

Part – 2

Answer any five questions. Each question carries 5 marks.

5x5=25 marks

11. Water Importance
12. Oxygen Electrode
13. Anomers and Epimers
14. Trisaccharides
15. Cholestrol
16. Formation of micelle
17. Essential and non essential aminoacids
18. Denaturation and renaturation of proteins.

S.V.K.P & Dr K.S.RAJU ARTS & SCIENCE COLLEGE (A), PENUGONDA
I Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY
BLUEPRINT

Part-1 : Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER I

The blueprint for Internal examination question paper for Biochemistry ()

3 questions to be answered out of 5 questions

Each question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				



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PENUGONDA-534 320, West Godavari District., (A.P.)

BIOCHEMISTRY	CODE: 19BC2	2019-20	B.Sc.
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Semester – II

BIOCHEMISTRY

Time: 3 Hours

Paper – II

MODEL QUESTION PAPER

Max. Marks: 75

(NUCLEIC ACIDS AND BIOCHEMICAL TECHNIQUES)

Part – 1

Answer any five Questions choosing at least two from each section. Each Question carries 10 marks.

5x10=50 marks**Section-A**

1. Describe the chemical structure of DNA?
2. Explain different types of RNA?
3. Write note on types of porphyrins?
4. Describe the structure and function of heme and chlorophyll?
5. Describe the instrumentation and applications of density gradient centrifugation?

Section-B

6. Explain about TLC and its applications?
7. Write principle, instrumentation and applications of SDS PAGE?
8. Describe the uses of Radio Isotopes in biology?
9. Describe the principle instrumentation and applications of spectrophotometry?
10. Write about colorimetry and its applications?

Part – 2

Answer any five questions. Each question carries 5 marks.

5x5=25 marks

11. Phosphodiester bond
12. Hyper chromic effect?
13. Cytochromes
14. Gel filtration
15. Partition Coefficient.
16. Agarose Gel Electrophoresis.
17. Units of radio isotopes
18. Beer -lamberts Law

S.V.K.P & Dr K.S.RAJU ARTS & SCIENCE COLLEGE (A), PENUGONDA
II Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY
BLUEPRINT

Part-1 : Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER II

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				



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PENUGONDA-534 320, West Godavari District., (A.P.)

BIOCHEMISTRY	CODE:19BC3	2020-21	B.Sc.
Semester – III	BIOCHEMISTRY		Time: 3 Hours
Paper – III	MODEL QUESTION PAPER		Max. Marks: 75
	(Enzymology and Bioenergetics)		

Part – 1

Answer any five questions choosing at least two from each section. Each question carries 10 marks.

Section-A**5x10=50 Marks**

1. Write an essay on nomenclature and classification of enzymes?
2. Write details about Enzyme assay methods?
3. What is enzyme inhibition explain its types?
4. Describe the different factors effecting on enzyme activity?
5. Write about the mechanism of action of Enzyme?

Section-B

6. Explain the Zymogen activation of Chymotrypsin?
7. Describe structure and Biological importance of high energy compounds?
8. Write an essay on free energy change in Biological transformation in Living system?
9. Explain the mechanism of Electron transport chain in detail?
10. Write in detail about Oxidative phosphorylation?

Part – 2

Answer any five questions. Each question carries 5 marks.

5 x 5=25 Marks

11. Enzyme specificity
12. Active site
13. Significance of K_m and V_{max}
14. Michaelis- Menten equation
15. Allosteric Enzymes
16. Ribozyme
17. Free energy
18. Uncouplers

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III Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY
BLUEPRINT

Part-1 : Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER III

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				



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BIOCHEMISTRY	CODE:19BC4	2020-21	B.Sc.
Semester – IV	BIOCHEMISTRY		Time: 3 Hours
Paper – IV	MODEL QUESTION PAPER		Max. Marks: 75
	(Intermediary Metabolism)		

Part – 1

Answer any five Questions choosing at least two from each section. Each Question carries 10 marks.

Section-A

5x10=50 Marks

1. Discuss about the HMP shunt and its significance?
2. Write about the Dark reaction of Photosynthesis?
3. Write an essay on β -Oxidation of fatty acid?
4. Describe about Biosynthesis & Degradation of Triacylglycerol
5. Describe about Urea cycle and its regulation

Section-B

6. Explain the metabolism of Phenylalanine
7. Describe the catabolism of Heme & purines
8. Write about Denovo synthesis of pyrimidines
9. What is Diabetes write About different types of Diabetes?
10. Write an essay on Four inborn errors of amino acid metabolism

Part – 2

Answer any five questions. Each question carries 5 marks.

5 x 5=25 Marks

11. Gluconeogenesis
12. Pasture effect
13. Ketogenesis
14. Transamination
15. Ketogenic amino acids
16. Thymidylate synthase
17. Gout
18. Arthrosclerosis

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IV Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY
BLUEPRINT

Part-1 Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER IV

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				

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BIOCHEMISTRY	CODE:19BC5	2020-21	B.Sc.
Semester – V	BIOCHEMISTRY		Time: 3 Hours
Paper – V	MODEL QUESTION PAPER		Max. Marks: 75

(Physiology, Clinical Biochemistry and Immunology)

Biochemis

PART –I

Answer any five Questions choosing at least two from each section. Each Question carries 10 marks.

5x10 =50marks**SECTION –A**

- .1) Write the digestion and absorption of lipids
- 2) Write in detail extrinsic and intrinsic pathway of blood coagulation process?
- 3) why pituitary called as Master gland explain in detail?
- 4) Write about adrenaline hormones ?
- 5) what is BMR explain the factors effecting BMR?

SECTION –A

- 6) Write the biological significance of calcium and copper?
- 7) Write the structure and functions of liver?
- 8) Write the homeostasis mechanism of kidneys?
- 9) What is immunity and write about different types of immunity?
- 10) Write in detail antigen-antibody reactions?

PART-II**Answer any Five questions****5x5 =25marks**

- 11) Myofibril
- 12) parathyroid gland
- 13) Bomb calorimeter
- 14) RDA
- 15) Sickle cell anaemia
- 16) Jaundice
- 17) Nephron
- 18) IgA

S.V.K.P & Dr K.S.RAJU ARTS & SCIENCE COLLEGE (A), PENUGONDA
V Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY

BLUEPRINT

Part-1 Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER IV

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				



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BIOCHEMISTRY	CODE:19BC5A	2020-21	B.Sc.
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Semester – V

BIOCHEMISTRY

Time: 3 Hours

Paper – VA

MODEL QUESTION PAPER

Max. Marks: 75

(Molecular Biology and Recombinant DNA technology)

Part-I

Answer any five Questions choosing at least two from each section. Each Question carries 10 marks.

5x10 =50marks

SECTION –A

1. Write the mechanism of semi conservative process of replication
2. Write in detail about the transcription of prokaryotes?
3. explain in detail about gene expression
4. Write an account of genetic code and degeneracy of genetic code
5. what is r-DNA technology and its applications?

SECTION-B

6. Write a history about gene cloning?
7. illustrate the construction of c-DNA libraries ?
8. write an account DNA sequencing ?
9. write the various types of fermentations and their applications?
10. discuss the immobilization of the enzymes ?

Part-II

Answer any Five Questions

5x5 =25marks

11. Okazaki fragments
12. DNA polymerase –I
13. Amin acyl t-RNA synthetase
14. Inhibitors of transcription
15. Edible vaccines
16. Growth hormones
17. PCR
18. Application of immobilized enzyme

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V Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY

BLUEPRINT

Part-1 Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER V

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				



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BIOCHEMISTRY	CODE:19BC5A	2020-21	B.Sc.
Semester – VI	BIOCHEMISTRY	Time: 3 Hours	
Paper – VI	MODEL QUESTION PAPER	Max. Marks: 75	
	(BASIC MICROBIOLOGY)		

Part-I

Answer any five Questions choosing at least two from each section. Each Question carries 10 marks.

5x10 =50marks

SECTION –A

1. Describe the Contributions of Louis Pasteure and Alexander Fleming?
2. Explain about Germ theory of disease ?
3. Discuss about Classification of microorganisms?
4. Write about Difference Between Prokaryotic and Eukaryotic Microorganisms?
5. Describe about Bacterial Diseases?

SECTION-B

6. Write detail about Protozoan Diseases?
7. Give an account of General Characters of Algae?
8. Write about Applications of Algae in Agriculture?
9. Explain about sexual and asexual reproduction of Fungi?
10. Write about Economic Importance of Fungi in agriculture?

Part-II

Answer any Five Questions

5x5 =25mark

11. Joseph Lister
12. Edward Jenner
13. Viroids
14. Poxvirus
15. TMV
16. Thallas organization
17. Vegetative reproduction
18. Heterokaryosis

S.V.K.P & Dr K.S.RAJU ARTS & SCIENCE COLLEGE (A), PENUGONDA
VI Semester (w.e.f. 2019-2020 Admitted Batch)
BIOCHEMISTRY
BLUEPRINT

Part-1 Answer any five questions choosing at least two from each section. Each question carries 10 marks. 5x10=50 marks

Part-2 Answer any five questions. Each question carries 5 marks. 5x5=25 marks

Unit	Part-1		Part-2	Total Marks
	Section-A	Section-B		
Unit I	2		2	30
Unit II	2		2	30
Unit III	1	1	1	25
Unit IV		2	1	25
Unit V		2	2	30
				140

SEMESTER VI

The Blueprint for Internal examination Question paper for Biochemistry

3 Questions to be answered out of 5 Questions

Each Question carries 5 marks

MID TERM EXAMINATION- I

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit I	2	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit II	2				
Unit III	1				

MIDTERM EXAMINATION- II

Unit	No.of Questions to be set	No.of Questions to be answered	Co-Curricular Activity	Extra-Curricular Activity	Total Marks
Unit III	1	Any 3 (3 X 5 = 15 marks)	5 marks	5 marks	25
Unit IV	2				
Unit V	2				