

SRI DEVARAJ URS ACADEMY OF HIGHER EDUCATION & RESEARCH
(A DEEMED TO BE UNIVERSITY)

Bachelor of Physiotherapy (CBCS), First Year Semester-II
March-2021 Examination.

TIME -2.30 HRS

MAX MARKS: 80

BICHEMISTRY

Q.P. CODE: B2040

Your answers should be specific to questions asked.
Draw neat labelled diagrams wherever necessary

LONG ESSAY (Answer any two)

2 x 10 =20 Marks

1. Define Enzyme Inhibition. Describe various types of enzyme inhibition with Suitable graphs. 2+8
2. Describe the sources, Recommended Daily Allowance, biochemical functions and deficiency manifestations of Vitamin A. 1+1+5+3
3. Define Glycogenesis. Write the reactions of Glycogenesis. Add a note on its regulation. 1+5+4

SHORT ESSAY (Answer any six)

6 x 5 = 30 Marks

4. Classify proteins based on their function with suitable examples.
5. Define Specific Dynamic Action. Mention the values for carbohydrates, fats and proteins. Mention the causes for high SDA for proteins. 1+2+2
6. Describe the Structure of B form of DNA with neat labeled diagram.
7. What are Phospholipids? Classify them with suitable examples and enumerate the important function of any two of them. 1+2+2
8. Describe briefly the digestion and absorption of carbohydrates.
9. Define polysaccharides? Classify them and give examples with their composition 1+4
10. Write the role of Carnitine in the oxidation of fatty acid.
11. Enumerate the biochemical functions of Vitamin C.

SHORT ANSWER (Answer any Ten)

10 x 3 = 30 Marks

12. Write the Coenzyme forms of I. Thiamine II. Riboflavin III. Niacin
13. Write any 3 differences between DNA & RNA.
14. What is protein Denaturation? List two factors causing Denaturation.
15. List the Essential Fatty acids.
16. List any three factors that regulate blood pH.
17. Write the enzyme defect and any 2 clinical features of Phenylketonuria.
18. List any 3 functions of Calcium.
19. Write the Biological reference interval for Serum a) Uric acid b) Calcium c) Total Cholesterol.
20. Define Isoenzymes. Give any two examples.
21. What are lipotropic factors? Give 2 examples.
22. List any 3 functions of Phosphorus.
23. What is metabolic acidosis? Give 2 causes for metabolic acidosis.

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Bachelor of Physiotherapy, First Year Semester-II

March-2021 Examination.

Time: 3.00 Hrs.

[Max. Marks: 100]

BIOMECHANICS

Q.P Code: B2030

*Your answers should be specific to the questions asked.
Draw neat labelled diagrams wherever necessary.*

LONG ESSAY (Answer any Two)

2 X 10 = 20 Marks

1. List out the joints forming the shoulder complex. Explain the kinematics of gleno humeral joint.
2. Define gait. Discuss the kinetics and kinematics of normal gait.
3. Define posture. And postural control. Discuss the postural analysis

SHORT ESSAY (Answer any Ten)

10X 5 = 50 Marks

4. Analyze the various types of grips and pinches. Describe the movement occurring in the relevant joints.
5. Enumerate the various types of joints. Explain in detail each type giving example.
6. Describe the articulations in knee joint. Explain the screw home mechanism.
7. Explain the types of muscle fibers and its function. Describe the type of muscle contraction with suitable examples
8. Discuss scapula humeral rhythm.
9. Describe the role of trunk and upper extremity during normal gait.
10. Explain the mechanical behavior of the tissues. Add a note on load deformation curve.
11. Discuss the kinetics and kinematics of lumbar spine
12. explain the role of abductors in bilateral and unilateral stance with an example
13. Mention the ligaments of vertebral column and explain their role in stability of it.
14. Classify pulleys and explain any one with example in human body.
15. Discuss the determinants of gait

SHORT ANSWER (Answer any Ten)

10 X 3 = 30 Marks

16. Define stress- strain curve.
17. What is closed packed position? Give one example.
18. Define cadence, angle of toe out, gait speed.
19. Movements of tempor mandibular joint.
20. Define nutation and counter nutation.
21. Define lumbar pelvic rhythm.
22. Define metatarsal break.
23. Define synergist and antagonist.
24. Define convex-concave rule.
25. Define movements of rib cage during ventilation
26. What are the postural changes seen during pregnancy.
27. Define annular pulley with example.

