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Roll No. [ ][ ][ ][ ][ ][ ]

S. No. of Question Paper : **1910**

Unique Paper Code : **42174307**

Name of the Paper : **Biochemistry and Immunology**

Name of the Course : **B.Sc. Applied Life Sciences with Agrochemical Management (CBCS)**

Semester : **III**

Duration : **Three Hours** 75

(Write your Roll No. on the top immediately on receipt of this q

Attempt *six* questions in all,

Section A : Answer *three* questions including Question No. 1 which

Write structural formulae where specified.

Section B : Answer *three* questions including Question No.1 which

Section A

(Biochemistry)

1. (*i*) Define the following : 2

(*a*) Holoenzyme

(*b*) Zwitter ion

(*c*) Oxidative Deamination

(*d*) Complement.

(*ii*) Differentiate between : 8

(*a*) Glucokinase and Hexokinase

(*b*) Acetyl CoA and Acyl CoA

(*c*) B-DNA and Z-DNA

(*d*) Glycolipids and Phospholipids.

and draw the structure of : 4

phospholipid which is also a sphingolipid

C unsaturated fatty acid

urine

trogenic steroid.

2 (i) oe the pathway of glycolysis with structural formulae under anaerobic ns. 8

the function of transaminases in the catabolism of amino acids. 4

3 (i) e various mechanisms of action of enzymes. 8

(ii) s the activation and transport of fatty acid across the mitochondria during dation. 4

4. Write notes on any *three* of the following : 4×3

tructure and function of *one* simple and one complex lipids.

Watson and Crick model of DNA structure.

luconeogenesis

nzyme inhibition

econdary and tertiary structure of proteins.

Section B

(Immunology)

1. (i) the following : 4

gglutination

pitope

ransplantation

djuvant.

(*ii*) Defferentiate between any *three* of the following : 6

(*a*) Immunogen and antigen

(*b*) Primary and secondary immune response

(*c*) Innate and adaptive immunity

(*d*) Sabin and Salk vaccine.

(*iii*) Expand the following : 3

(*a*) MHC

(*b*) RIA

(*c*) ADCC

(*d*) PMN

(*e*) CDR

(*f*) TLR.

2. (*i*) Enumerate the cells involved in immune response and briefly ' ion. 8

(*ii*) Give a brief account of different kinds of vaccines. 4

3. (*i*) Differentiate between exogenous and endogenous antigen. Ex' in tigen processing and presentation of exogenous antigen. 8

(*ii*) Explain the structure and function IgG. 4

4. Write short notes on any *three* of the following : 3×4

(*i*) Factors affecting immunogenicity

(*ii*) Antigen–antibody interactions

(*iii*) AIDS

(*iv*) Hybridoma technology

(*v*) Lymphoid organs.