

*Sharma*

*Vaishali Sharma*

हस्ताक्षर

कक्ष निरीक्षक का नाम

परीक्षार्थी द्वारा सम्पूर्ण विवरण भर लिए गये है।



R

2018-

भाग-2

M.Sc. Internal

### चौधरी चरण सिंह विश्वविद्यालय, मेरठ Ch. Charan Singh University, Meerut

निम्नलिखित विवरण परीक्षार्थी द्वारा स्वयं भरा जाए (To be filled by the Examinee)

परीक्षा का नाम *M.Sc. 1st year* वर्ष 20 *2019* भाग/सेमेस्टर *II*  
(Name of Exam) (Year 20.....) (Part / Semester)

विषय *Zoology - Biochemistry* प्रश्न-पत्र/पाठ्यक्रम पेपर कोड नं. *H-2065*  
(Subject) (Paper / Course) (Paper Code No.)

परीक्षा का दिन *Monday* दिनांक *6/5/18*  
(Day of Examination) (Date)

प्राप्तांक एवं पूर्णांक परीक्षकों द्वारा भरे जायें

पूर्णांक (Max. Marks)

प्रश्नों की क्रम संख्या	a/I	b/II	c/III	d/IV	e/V	f/VI	g/VII	h/VIII	i/IX	j/X	योग
1	<i>h</i>	<i>1</i>	<i>1</i>	<i>h</i>						<i>3</i>	
2	<i>h</i>	<i>h</i>								<i>3</i>	
3	<i>h</i>	<i>h</i>								<i>3</i>	
4											
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13											
14											

*135714*

*Vaishali*

प्राप्तांक (शब्दों में)	अंकों में

जाँचकर्ता के हस्ताक्षर एवं तिथि

परीक्षक के हस्ताक्षर एवं तिथि



### चौधरी चरण सिंह विश्वविद्यालय, मेरठ

R

Date Stamp to be affixed here

*meerut*

(परीक्षार्थी द्वारा भरा जाए)

परीक्षा का नाम *M.Sc. 1st year* भाग/सेमेस्टर *II*  
विषय *Zoology - Biochemistry*  
प्रश्न पत्र दिनांक *6/5/19*

परीक्षार्थी का अनुक्रमांक (Roll Number)

उत्तर-पुस्तिका क्रमांक

M	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
C	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
D	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
E	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
F	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
G	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
H	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
I	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
J	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
K															
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P															
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T															
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V															
W															

KM-I-01-

कालेज कोड

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1	1	1
2	2	2
3	3	3
4	4	4
5	5	5
6	6	6
7	7	7
8	8	8
9	9	9

(परीक्षार्थी की श्रेणी)

- संस्थागत
- व्यक्तिगत
- बैक पेपर
- अंक सुधार
- भूतपूर्व
- एकल विषय

नामांकन संख्या (Enrollment Number)

M	1	5	5	4	1	3	8	6							
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

पेपर कोड

H	2	0	6	5
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परीक्षार्थी का पूरा नाम

*Vaishali Sharma*

कक्ष निरीक्षक का नाम

*Sharma*

# Section 'A'

Q.1.

## Purine

→ In Purin A, G are present ✓

→ Purine 3 Bonds contain ✓

→ They are present in DNA ✓

→ Uracil ~~absent~~ ✓

## Pyrimidine

→ In this C, T, U are present. ✓

→ Pyrimidine 2 Bonds contain ✓

→ They are present in DNA & RNA. ✓

→ Uracil ~~present~~ ✓

Q-2.

### c DNA

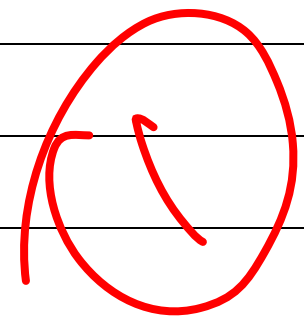
### c DNA

→ it is the Complementary DNA.

→ c DNA is the type of DNA.

→ it is synthesized in Lab.

→ it occurred naturally.



## Q-3 Vitamin →

Vitamins are not synthesized in our Body. These are taken by the various components like - milk, fruit, vegetables, & other materials.

⇒ These are very essential for our body.

⇒ Vitamins protect from various Disease.

⇒ Vitamins are the various type -

- 1) fat soluble vitamins
- 2) Water soluble vitamins.

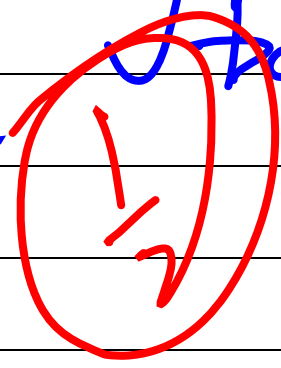
# Enzymes

Enzymes are secreted in our body. Enzymes are very complex structure.

→ These are help in chemical rxn. in our body.

→ These small quantity is essential for our Biological reactions.

Deep Diff.?



~~Q-4~~ Difference b/w Co factor & enzyme

Co-factor →

→ The apoenzyme are 2 types

→ These are non protein factors.

⇒ In Co-factor prosthetic group  
occured.

→ Co-factor are found in Organic  
& inorganic nature.



Enzyme →

Enzymes are the complex  
 str. they help in the rate  
 of reaction in Biological  
 cycle.

→ Co-factor found in Enzymes.  
 Co-factor is the type of  
 apoenzyme & Holoenzyme.

Diff. ?

## Glucogenesis

→ formation of glucose is called Glucogenesis.

→ glucose molecule occurred

## Gluconeogenesis

→ formation of glucose is called Gluconeogenesis.

→ fructose molecule occurred.



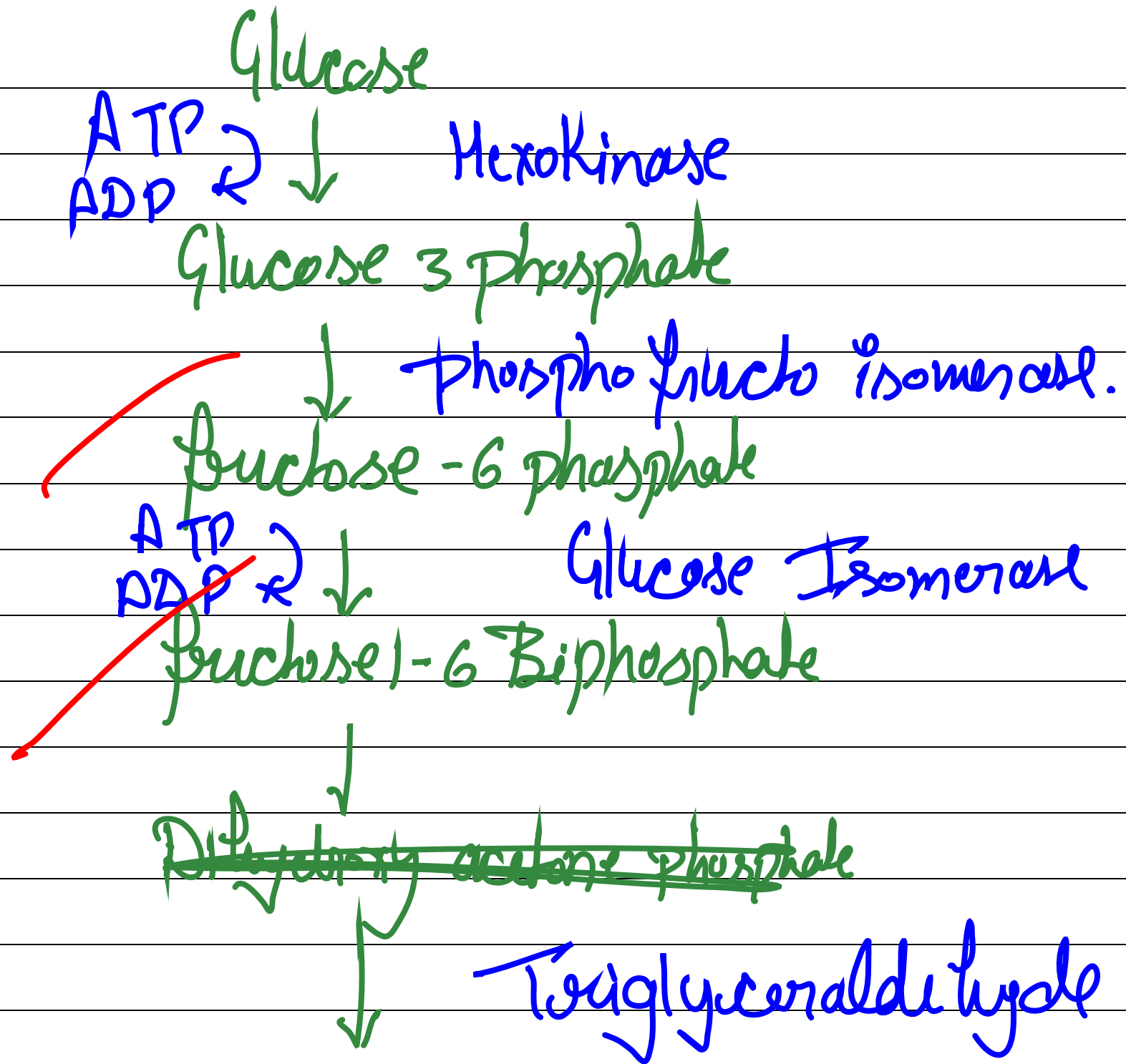
# Section 'C'

Q10. Mechanism of glycolysis →.

→ In the Mechanism of glucose  
& Different steps occurred  
in the Different enzymes help  
in the cycle of glycolysis.

→ In this Glucose is the 1st molecule  
used & ATP is required for  
Starting this mechanism. firstly

→ 2 Molecules of ATP (Adenosine Tri  
phosphate) is required.



Glyceraldehyde-3-phosphoric acid Aldolase

2 NAD → ↓ Glycerate 3-phosphate  
2 NADH ← Dithydroxyacetone phosphate

1, -6 Biphosphoglycerate

ADP → ↓ Phosphoglycerate -3 phosphate  
ATP ←

1-3 Biphosphoglycerate

↓ Phosphoglycerate

2 Phosphoglycerate pyruvate

↓ Phosphoglycerate fructose  
Aldolase pyruvate

$\text{ADP} \rightarrow \downarrow$  Phosphofructose mutase.  
 $\text{ATP} \leftarrow \downarrow$   
Pyruvate acid

$\Rightarrow$  In glycolysis cycle 8 molecule  
 ATP are synthesis. 2

$\Rightarrow$  The final products of glycolysis  
 Mechanism is ~~its~~ Pyruvate!  
NADH 2 -2

Mal. 1864

in 2

Q-11

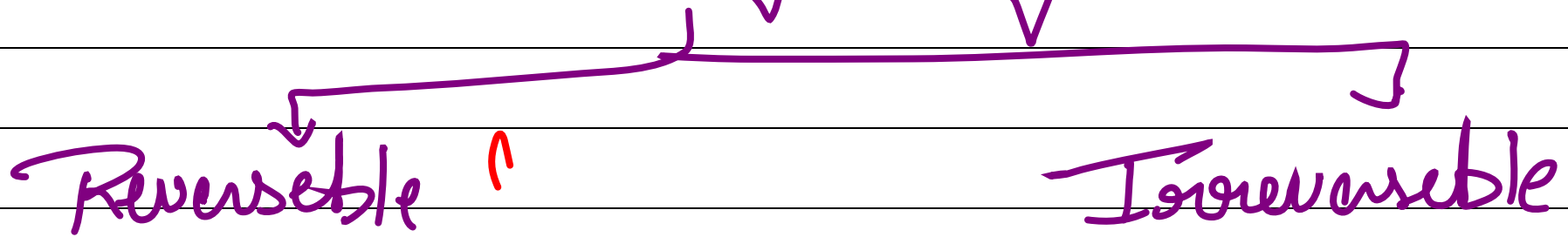
## Enzyme regulation

Enzymes are in Biological Body. The complex structure of Enzymes help in chemical reaction in our Body.

→ Enzyme is the small quantity of reaction not continuous help in reaction.

→ Enzyme types → Made of working various Hydrolysis, Decarboxylation, Oxidation & Reduction, Coagulation.

# Enzyme regulation



→ Competitive regulation

→ Uncompetitive regulation

→ Mixed Competitive regulation

→ Non Competitive regulation.

Reversible regulation → There are four types of regulation occurred based on inhibition & Substrate.

Competitive regulation → In this regulation Inhibitor & Substrate are competitive. In enzyme at actual site are occurred so attachment of this site competition b/w the inhibitor & Substrate.



# Uncompetitive regulation

also called Uncompetitive inhibitors this are

→ In this type of inhibition there are no competitive inhibitors & substrates.

→ In this type Enzyme have two sites for inhibition.

→ Inhibitors & substrates are increased rate of reaction.

## Mixed Competitive Inhibitor

In this type of inhibition the rate of reaction is decreased. The inhibitor & substrate are found.

## Non Competitive Inhibition

In this specific type of inhibition it is inhibitor & substrate are both not affected.

~~Reversible~~

Inhibition

Enzyme  
reaction

inhibits the rate of  
is called inhibition.

→ The rate of reaction stop  
due to the inhibition.

Activation

→

rate of  
is increased.

Enzyme  
reaction

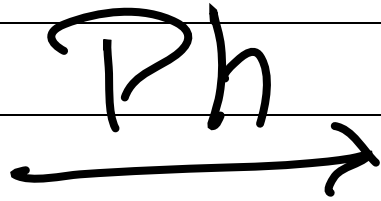
active the  
when enzyme

→ The reaction is active when  
rate of enzyme is increased.

~~Reduction  
and mixture~~

# Section 'B'

Q-7



Ph is the negative charged ion.  $\text{H}^+$

→ it is the negative algorithm of hydrogen ion.

→ Ph is decide the nature of any material & substances.

→ if Ph is less than 7 this are called acidic.

→ if the Ph is 7 then are called neutral.

→ if the Ph of any Substrates are more than 7 is the Basic nature.

## Role in Digestion →

Q. In the reaction of Digestion enzymes & acids are required for Digestion of food.

→ In Stomach the Ph is  
2 So acidic nature found  
in Stomach.

→ Various acids are help in  
the Digestion of food.

→ We Can decide the Ph by  
Ph strip, Ph meter etc.

→ acids are mixed in the food  
& Digestion than fast.

→ Due to acidic nature of food digestion reaction easily processed. pH  $\approx 7.4$  (circled 7.4)

Q-2.

Blood as Buffer →

a substance which maintains the pH.

→ Buffer is the neutral in nature. it is not acidic & not basic in Nature.



→ Blood is the main vein the Ph Buffs. it of our blood.

→ Blood is not acidic & Basic. it is the neutral in nature.

→ Blood is a fluid connective tissue. Its matrix is liquid.

→ So this liquid nature is also called Buffer liquid Blood.

g.





































