

# National Testing Agency

<b>Question Paper Name :</b>	Veterinary Biochemistry 17th September Shift 2
<b>Subject Name :</b>	Veterinary Biochemistry
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<b>Duration :</b>	120
<b>Total Marks :</b>	480
<b>Display Marks:</b>	Yes

## Veterinary Biochemistry

<b>Group Number :</b>	1
<b>Group Id :</b>	190889106
<b>Group Maximum Duration :</b>	0
<b>Group Minimum Duration :</b>	120
<b>Show Attended Group? :</b>	No
<b>Edit Attended Group? :</b>	No
<b>Break time :</b>	0
<b>Group Marks :</b>	480
<b>Is this Group for Examiner? :</b>	No

## Part A: General Knowledge

<b>Section Id :</b>	190889242
<b>Section Number :</b>	1
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory

<b>Number of Questions :</b>	20
<b>Number of Questions to be attempted :</b>	20
<b>Section Marks :</b>	80
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889282
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 1 Question Id : 19088912022 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Which of the following is the device used to measure the power and speed of the wind?

1. Avometer
2. Anemometer
3. Airometer
4. Aviontimeter

**Options :**

19088947981. 1

19088947982. 2

19088947983. 3

19088947984. 4

**Question Number : 2 Question Id : 19088912023 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 4 Wrong Marks : 1**

Optical fibre used the concept of which of the following?

1. Reflection
2. Refraction
3. Total internal reflection
4. Total internal refraction

**Options :**

- 19088947985. 1
- 19088947986. 2
- 19088947987. 3
- 19088947988. 4

**Question Number : 3 Question Id : 19088912024 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Yellow vein mosaic is the viral disease of which of the following plants?

- 1. Ladyfinger
- 2. Papaya
- 3. Sugarcane
- 4. Banana

**Options :**

- 19088947989. 1
- 19088947990. 2
- 19088947991. 3
- 19088947992. 4

**Question Number : 4 Question Id : 19088912025 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following organ(s) is affected by Mumps disease?

- 1. Entire body
- 2. Skin
- 3. Eye
- 4. Parotid

**Options :**

- 19088947993. 1
- 19088947994. 2
- 19088947995. 3



19088947996. 4

**Question Number : 5 Question Id : 19088912026 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is the chemical name of vitamin B<sub>2</sub>?

1. Riboflavin
2. Calciferol
3. Pyridoxin
4. Niacin

**Options :**

19088947997. 1

19088947998. 2

19088947999. 3

19088948000. 4

**Question Number : 6 Question Id : 19088912027 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is not the input unit of the computer?

1. Mouse
2. Keyboard
3. Screen
4. Scanner

**Options :**

19088948001. 1

19088948002. 2

19088948003. 3

19088948004. 4

**Question Number : 7 Question Id : 19088912028 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**



**Correct Marks : 4 Wrong Marks : 1**

The digital computer operates on which of the following principle?

1. Measurement
2. Calculation
3. Logical
4. Electrification

**Options :**

19088948005. 1

19088948006. 2

19088948007. 3

19088948008. 4

**Question Number : 8 Question Id : 19088912029 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The non-cooperation movement of Gandhiji was launched in which of the following year?

1. 1915
2. 1922
3. 1920
4. 1930

**Options :**

19088948009. 1

19088948010. 2

19088948011. 3

19088948012. 4

**Question Number : 9 Question Id : 19088912030 Question Type : MCQ Option Shuffling : No Is**

**Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

An Islamic revivalist movement named Wahabi movement was founded by which of the following person?

1. Sian Saheb
2. Syed Ahmed
3. Haji Shariat-Allah
4. DaduMian

**Options :**

19088948013. 1

19088948014. 2

19088948015. 3

19088948016. 4

**Question Number : 10 Question Id : 19088912031 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following is considered as the "Magna Carta of England Education in India"?

1. Hunter education commission
2. Lord Macaulay's Minute
3. Wood's Despatch
4. Thomas Babington Macaulay

**Options :**

19088948017. 1

19088948018. 2

19088948019. 3

19088948020. 4

**Question Number : 11 Question Id : 19088912032 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following nutrient does not come under the ambit of 'macro-nutrients in Soil Health Card?

1. Nitrogen
2. Zinc
3. Phosphorous
4. Potassium

**Options :**

19088948021. 1

19088948022. 2

19088948023. 3

19088948024. 4

**Question Number : 12 Question Id : 19088912033 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Cole crops, root crops and legumes come under the ambit of which of the following?

1. Olericulture
2. Pomology
3. Viticulture
4. Arboriculture

**Options :**

19088948025. 1

19088948026. 2

19088948027. 3

19088948028. 4

**Question Number : 13 Question Id : 19088912034 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



The study of individual trees, shrubs, vines, and perennial woody plants is known as which of the following?

1. Turf management
2. Arboriculture
3. Pomology
4. Viticulture

**Options :**

19088948029. 1

19088948030. 2

19088948031. 3

19088948032. 4

**Question Number : 14 Question Id : 19088912035 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The ministry is implementing MIDH (Mission for Integrated Development of Horticulture) with effect from which of the following year?

1. 2012-13
2. 2019-20
3. 2015-16
4. 2014-15

**Options :**

19088948033. 1

19088948034. 2

19088948035. 3

19088948036. 4

**Question Number : 15 Question Id : 19088912036 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The interaction of soils with living things, particularly plants are well known as which of the following?

1. Edaphology
2. Pedology
3. Soil zoology
4. Pedogenesis

**Options :**

19088948037. 1

19088948038. 2

19088948039. 3

19088948040. 4

**Question Number : 16 Question Id : 19088912037 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following systems has also incorporated social aspects in itself?

1. Landscaping
2. Permaculture
3. Horticulture
4. Forest gardening

**Options :**

19088948041. 1

19088948042. 2

19088948043. 3

19088948044. 4

**Question Number : 17 Question Id : 19088912038 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What do you term the phenomenon whereby the specific gene is added to the plant for producing a desirable phenotype?

1. Genetic manipulation
2. Genetic recombination
3. Genetic modification
4. Genetic hybridisation

**Options :**

19088948045. 1

19088948046. 2

19088948047. 3

19088948048. 4

**Question Number : 18 Question Id : 19088912039 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

What is the focus of the participatory plant breeding program?

1. Scientists
2. Plants
3. Environment
4. Farmers

**Options :**

19088948049. 1

19088948050. 2

19088948051. 3

19088948052. 4

**Question Number : 19 Question Id : 19088912040 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



How do you term the form of agriculture, in which, industrialized production of crops and animal products takes place?

1. Manufactured agriculture
2. Modern agriculture
3. Industrial agriculture
4. Mechanistic agriculture

**Options :**

19088948053. 1

19088948054. 2

19088948055. 3

19088948056. 4

**Question Number : 20 Question Id : 19088912041 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Micro-irrigation fund of Rs. 5.000 crore has been placed with which of the following organization?

1. NABARD
2. IDBI
3. SBI
4. RRBs

**Options :**

19088948057. 1

19088948058. 2

19088948059. 3

19088948060. 4

## **Part B Core : Veterinary and Animal Sciences-IV**

**Section Id :** 190889243

**Section Number :** 2

**Section type :** Online

<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889283
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 21 Question Id : 19088912042 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

If protein concentration in the interstitial space increases the GFR will

- |               |                                  |
|---------------|----------------------------------|
| (1) Decrease  | (2) Increase                     |
| (3) No change | (4) First increase then decrease |

**Options :**

19088948061. 1

19088948062. 2

19088948063. 3

19088948064. 4

**Question Number : 22 Question Id : 19088912043 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following cells secrete testosterone?

- |                                  |                       |
|----------------------------------|-----------------------|
| (1) Leydig cells and theca cells | (2) Sertoli cells     |
| (3) Granulosa cells              | (4) Leydig cells only |

**Options :**

19088948065. 1



19088948066. 2

19088948067. 3

19088948068. 4

**Question Number : 23 Question Id : 19088912044 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following anti coagulants is recommended for hematological examination

- |                     |                       |
|---------------------|-----------------------|
| (1) Sodium flouride | (2) Ammonium sulphate |
| (3) EDTA            | (4) Sodium citrate    |

**Options :**

19088948069. 1

19088948070. 2

19088948071. 3

19088948072. 4

**Question Number : 24 Question Id : 19088912045 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Analogous structure to Z disc in smooth muscle fiber is

- |                |                  |
|----------------|------------------|
| (1) Actin      | (2) Myosin       |
| (3) Calmodulin | (4) Dense bodies |

**Options :**

19088948073. 1

19088948074. 2

19088948075. 3

19088948076. 4

**Question Number : 25 Question Id : 19088912046 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**



**Correct Marks : 4 Wrong Marks : 1**

In Myasthenia gravis there is

- (1) Less secretion of Acetyl choline
- (2) More activity of Acetyl choline esterase
- (3) Acetyl choline receptors at postsynaptic membrane increase in number
- (4) Acetyl choline receptors are inactivated due to antigen-antibody reaction

**Options :**

19088948077. 1

19088948078. 2

19088948079. 3

19088948080. 4

**Question Number : 26 Question Id : 19088912047 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Aldosterone is mainly secreted when

- (1) There is increase in  $K^+$  in the blood circulation
- (2) There is decrease in  $K^+$  in the blood circulation
- (3) There is decrease in  $Na^+$  in the blood circulation
- (4) There is increase in  $Na^+$  in the blood circulation

**Options :**

19088948081. 1

19088948082. 2

19088948083. 3

19088948084. 4

**Question Number : 27 Question Id : 19088912048 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following can not decrease methane emission

- (1) More concentrate diet
- (2) More unsaturated fatty acids in diet
- (3) Defaunation
- (4) More cellulose rich diet

**Options :**

19088948085. 1

19088948086. 2

19088948087. 3

19088948088. 4

**Question Number : 28 Question Id : 19088912049 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The body fat in ruminants is mostly

- (1) Unsaturated
- (2) Saturated
- (3) Quality of fat depends on type of diet
- (4) Level of saturation depends upon type of organ

**Options :**

19088948089. 1

19088948090. 2

19088948091. 3

19088948092. 4

**Question Number : 29 Question Id : 19088912050 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which of the following have receptors in cell membrane

- (1) T<sub>3</sub>/T<sub>4</sub> (2) Epinephrine/Nor epinephrine  
(3) Vit D<sub>3</sub> (4) Aldosterone

**Options :**

19088948093. 1  
19088948094. 2  
19088948095. 3  
19088948096. 4

**Question Number : 30 Question Id : 19088912051 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of the following pair is not correct regarding number of carbons in the steroid hormones?

- (1) Corticoids-21C (2) Progesterone-20C  
(3) Testosterone-19C (4) Estrogen-18C

**Options :**

19088948097. 1  
19088948098. 2  
19088948099. 3  
19088948100. 4

**Question Number : 31 Question Id : 19088912052 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : PMSG is necessary for maintenance of pregnancy in mare.

Reason R : PMSG has more of FSH like activity and less of LH like activity.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both A and R are true and R is the correct explanation of A
- (2) Both A and R are true but R is not the correct explanation of A
- (3) A is true but R is false
- (4) A is false but R is true

**Options :**

19088948101. 1

19088948102. 2

19088948103. 3

19088948104. 4

**Question Number : 32 Question Id : 19088912053 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : one is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Progesterone sponges are used to lengthen the onset of heat in cattle.

Reason R : Progesterone reduces the secretion of estrogen.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both A and R are true and R is the correct explanation of A
- (2) Both A and R are true but R is not the correct explanation of A
- (3) A is true but is R is false
- (4) A is false but R is true

**Options :**

19088948105. 1

19088948106. 2

19088948107. 3

19088948108. 4



**Question Number : 33 Question Id : 19088912054 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : In ruminants fats can not be synthesized from glucose.

Statements II : Propionate is the gluconeogenic substance which is precursor in lactose synthesis

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

**Options :**

19088948109. 1

19088948110. 2

19088948111. 3

19088948112. 4

**Question Number : 34 Question Id : 19088912055 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Evaporative heat loss mechanism is most efficient heat loss mechanisms in domestic animals.

Reason R : Water has a very high latent heat of vaporization

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both A and R are true and R is the correct explanation of A
- (2) Both A and R are true but R is not the correct explanation of A
- (3) A is true but R is false
- (4) A is false but R is true



**Options :**

- 19088948113. 1
- 19088948114. 2
- 19088948115. 3
- 19088948116. 4

**Question Number : 35 Question Id : 19088912056 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

- Statement I : Semi-circular canal helps in the equilibrium.
- Statement II : Organ of corti is the main part of the ear where the sound waves cause depolarization.

In the light of the above statements, choose the correct answer from the options given below :

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is correct but Statement II is false
- (4) Statement I is incorrect but Statement II is true

**Options :**

- 19088948117. 1
- 19088948118. 2
- 19088948119. 3
- 19088948120. 4

**Question Number : 36 Question Id : 19088912057 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

For better utilization of dietary urea which of the following is required

- (1) Soluble sugar
- (2) Good quality protein in diet
- (3) Good quality fat is diet
- (4) Good quality green fodder

**Options :**



19088948121. 1

19088948122. 2

19088948123. 3

19088948124. 4

**Question Number : 37 Question Id : 19088912058 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Ketone bodies in urine are tested by

- |                               |                  |
|-------------------------------|------------------|
| (1) Sodium nitroprusside test | (2) Hay's test   |
| (3) Benzedene test            | (4) Sulphur test |

**Options :**

19088948125. 1

19088948126. 2

19088948127. 3

19088948128. 4

**Question Number : 38 Question Id : 19088912059 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The normal ratio of bicarbonate buffer in plasma is

- |          |          |
|----------|----------|
| (1) 20:1 | (2) 1:20 |
| (3) 1:2  | (4) 2:1  |

**Options :**

19088948129. 1

19088948130. 2

19088948131. 3

19088948132. 4

**Question Number : 39 Question Id : 19088912060 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

All types of carbohydrates can be identified by

- |                       |                    |
|-----------------------|--------------------|
| (1) Selivanoff's test | (2) Barfoed's test |
| (3) Benedict's test   | (4) Molisch's test |

**Options :**

19088948133. 1

19088948134. 2

19088948135. 3

19088948136. 4

**Question Number : 40 Question Id : 19088912061 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these amino acids contains two chiral carbons in their structure?

- |                |              |
|----------------|--------------|
| (1) Valine     | (2) Leucine  |
| (3) Isoleucine | (4) Cysteine |

**Options :**

19088948137. 1

19088948138. 2

19088948139. 3

19088948140. 4

**Question Number : 41 Question Id : 19088912062 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which of these is /are examples of sphingolipids?

- (A) Cephalin
- (B) Sphingomyelin
- (C) Cardiolipin
- (D) GM2
- (E) Nervon

Choose the correct answer from the options given below :

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (A), (B) and (C) only
- (4) (B),(D) and (E) only

**Options :**

- 19088948141. 1
- 19088948142. 2
- 19088948143. 3
- 19088948144. 4

**Question Number : 42 Question Id : 19088912063 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Gamma glutamyl transferase is most specific indicator of

- (1) Bone cancer
- (2) Cardiac infarction
- (3) Prostate cancer
- (4) Alcoholic cirrhosis

**Options :**

- 19088948145. 1
- 19088948146. 2
- 19088948147. 3
- 19088948148. 4

**Question Number : 43 Question Id : 19088912064 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**



**Correct Marks : 4 Wrong Marks : 1**

Enzymes present in inactive form are called as

- (A) Pre enzyme
- (B) Pro enzyme
- (C) Prepro enzyme
- (D) Zymogen
- (E) Abzyme

Choose the correct answer from the options given below :

- (1) (A) and (D) only
- (2) (B) and (D) only
- (3) (C) and (D) only
- (4) (D) and (E) only

**Options :**

19088948149. 1

19088948150. 2

19088948151. 3

19088948152. 4

**Question Number : 44 Question Id : 19088912065 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is/are examples of Ketone body?

- (A) Acetic acid
- (B) Aceto acetic acid
- (C) Beta hydroxybutyric acid
- (D) Acetone
- (E) Butyric acid

Choose the most appropriate answer from the options given below :

- (1) (A), (B) and (C) only
- (2) (B), (C) and (D) only
- (3) (B), (D) and (E) only
- (4) (A),(C) and (E) only

**Options :**

19088948153. 1

19088948154. 2

19088948155. 3

19088948156. 4

**Question Number : 45 Question Id : 19088912066 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Match List I with List II

List I	List II
(A) DNA polymerase- $\alpha$ (alpha)	(I) Replication leading strand
(B) DNA polymerase- $\beta$ (beta)	(II) Replication lagging strand
(C) DNA polymerase- $\gamma$ (gama)	(III) Replication mitochondrial DNA
(D) DNA polymerase- $\Delta$ (Delta)	(IV) DNA repair

Choose the most appropriate answer from the options given below:

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(I), (C)-(III), (D)-(IV)
- (3) (A)-(II), (B)-(IV), (C)-(III), (D)-(I)
- (4) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

**Options :**

- 19088948157. 1
- 19088948158. 2
- 19088948159. 3
- 19088948160. 4

**Question Number : 46 Question Id : 19088912067 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Deficiency of Vitamin E may cause :

- (A) White muscle disease                      (B) Fibro cystic breast disease  
(C) Pellagra                                      (D) Xerophthalmia

Choose the most appropriate answer from the options given below :

- (1) (A) only  
(2) (A) and (B) only  
(3) (C) only  
(4) (C) and (D) only

**Options :**

19088948161. 1

19088948162. 2

19088948163. 3

19088948164. 4

**Question Number : 47 Question Id : 19088912068 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Total plasma protein can be estimated by :

- (A) Biuret method                              (B) Bromocresol green dye method  
(C) Brad-ford method                      (D) Lowry's method

Choose the most appropriate answer from the options given below :

- (1) (A) only  
(2) (A) and (B) only  
(3) (A) and (D) only  
(4) (A) (C) and (D) only

**Options :**

- 19088948165. 1
- 19088948166. 2
- 19088948167. 3
- 19088948168. 4

**Question Number : 48 Question Id : 19088912069 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Purity of DNA in a sample can be determined by measuring absorbance at :

- (A) 220 A°
- (B) 260 A°
- (C) 280 A°
- (D) 260 : 280 A° ratio

Choose the most appropriate answer from the options given below :

- (1) (B) and (D) only
- (2) (C) and (D) only
- (3) (D) only
- (4) (A) only

**Options :**

- 19088948169. 1
- 19088948170. 2
- 19088948171. 3
- 19088948172. 4

**Question Number : 49 Question Id : 19088912070 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which of these can be used as a matrix for gel filtration chromatography?

- (A) Carboxy methyl (CM)                      (B) Diethyl Amino Ethyl (DEAE)  
(C) Dextran                                      (D) Agarose  
(E) Silica

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only  
(2) (A) and (E) only  
(3) (C) and (D) only  
(4) (B) and (E) only

**Options :**

19088948173. 1  
19088948174. 2  
19088948175. 3  
19088948176. 4

**Question Number : 50 Question Id : 19088912071 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is/are hyper calcemic hormone?

- (A) Calcitonin (B) Parathyroid hormone  
(C) Calcitriol (D) Glucocorticoid  
(E) Testosterone

Choose the correct answer from the options given below :

- (1) (A) and (C) only  
(2) (A) and (B) only  
(3) (B) and (C) only  
(4) (A) and (D) only

**Options :**

19088948177. 1

19088948178. 2

19088948179. 3

19088948180. 4

**Question Number : 51 Question Id : 19088912072 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Level of direct bilirubin increases in obstructive jaundice

Reason R : Obstructive jaundice causes increased rate of conjugation in liver

In the light of the above statements, choose the most appropriate answer from the options given below :

- (1) Both A and R are correct and R is the correct explanation of A
- (2) Both A and R are correct but R is NOT the correct explanation of A
- (3) A is correct but R is not correct
- (4) A is not correct but R is correct

**Options :**

19088948181. 1

19088948182. 2

19088948183. 3

19088948184. 4

**Question Number : 52 Question Id : 19088912073 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : One mRNA can be translated into one or more proteins.

Statement II : Alternate splicing/RNA editing of mRNA may translate/form two or more proteins.

In the light of the above statements, choose the *correct* answer from the options given below:

- (1) Both statement I and statement II are true
- (2) Both statement I and statement II are false
- (3) Statement I is correct but statement II is false
- (4) Statement I is incorrect but statement II is true

**Options :**

19088948185. 1

19088948186. 2

19088948187. 3

19088948188. 4

**Question Number : 53 Question Id : 19088912074 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these termination codons is also known as 'Ochre'?

- |         |         |
|---------|---------|
| (1) UAA | (2) UAG |
| (3) UGA | (4) AUG |

**Options :**

19088948189. 1

19088948190. 2

19088948191. 3

19088948192. 4

**Question Number : 54 Question Id : 19088912075 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

RFLP stands for

- (1) Recognition fragment length polymorphism
- (2) Restriction fragment length polymorphism
- (3) Restriction fragment locus polymorphism
- (4) Restriction fragment length polymerase

**Options :**

19088948193. 1

19088948194. 2

19088948195. 3

19088948196. 4



**Question Number : 55 Question Id : 19088912076 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In prokaryotes, TATAAT sequence is present at \_\_\_\_\_ bases upstream of initiation site of transcription

- |            |             |
|------------|-------------|
| (1) -35 bp | (2) -10 bp  |
| (3) -25 bp | (4) -105 bp |

**Options :**

19088948197. 1

19088948198. 2

19088948199. 3

19088948200. 4

**Question Number : 56 Question Id : 19088912077 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Trans Golgi Network is the last sorting station of proteins that directs protein to various destinations.

Statement II : Protein synthesis and post-translation modification occurs in rough endoplasmic reticulum.

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948201. 1

19088948202. 2

19088948203. 3

19088948204. 4

**Question Number : 57 Question Id : 19088912078 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

In Electron Transport Chain (ETC), which metal ion acts as membrane bound electron carriers

(A) Mg

(B) Ca

(C) Na

(D) Cu

Choose the most appropriate answer from the options given below :

(1) (A) and (D) only

(2) (A) and (B) only

(3) (B) and (C) only

(4) (D) only

**Options :**

19088948205. 1

19088948206. 2

19088948207. 3

19088948208. 4

**Question Number : 58 Question Id : 19088912079 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements :

Statement I : A cell contains one apical, two lateral and one basal plasma membrane

Statement II : Apical plasma membrane contains proteins and responsible for intra cellular interactions in association with extracellular matrix.

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948209. 1

19088948210. 2

19088948211. 3

19088948212. 4

**Question Number : 59 Question Id : 19088912080 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Codons are degenerate in nature.

Statement II : The frequency of codons, codon usage biasness, controls the translation of protein, which varies among species.

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948213. 1

19088948214. 2

19088948215. 3

19088948216. 4

**Question Number : 60 Question Id : 19088912081 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Match List I with List II :

List I	List II
(a) mRNA	(i) Non-coding RNA
(b) rRNA	(ii) Gene expression study
(c) tRNA	(iii) 5S
(d) miRNA	(iv) Gene silencing

Choose the correct answer from the options given below:

- (1) (a)-(ii), (b)-(iii), (c)-(iv), (d)-(i)
- (2) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)
- (3) (a)-(i), (b)-(iii), (c)-(iv), (d)-(ii)
- (4) (a)-(iv), (b)-(iii), (c)-(ii), (d)-(i)

**Options :**

19088948217. 1

19088948218. 2

19088948219. 3

19088948220. 4

**Question Number : 61 Question Id : 19088912082 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Transcription of all 3-types of RNA is done by RNA polymerase II

Statement II : RNA polymerase II is the only nuclear RNA polymerase of eukaryotic cell

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948221. 1

19088948222. 2

19088948223. 3

19088948224. 4

**Question Number : 62 Question Id : 19088912083 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Gene silencing can be done by

(1) Sno RNA

(2) Si RNA

(3) hn RNA

(4) tRNA

**Options :**

19088948225. 1

19088948226. 2

19088948227. 3

19088948228. 4

**Question Number : 63 Question Id : 19088912084 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Many of the extracellular protein binds to integrins and involves in adhesion or transmission of cell signalling

Reasons R : Integrins contain tripeptide amino acid sequences of arginine-glycine-aspartic acid (RGD)

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both A and R are correct and R is the correct explanation of A
- (2) Both A and R are correct but R is NOT the correct explanation of A
- (3) A is correct but R is not correct
- (4) A is not correct but R is correct

**Options :**

19088948229. 1

19088948230. 2

19088948231. 3

19088948232. 4

**Question Number : 64 Question Id : 19088912085 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Gap junctions have a simple molecular composition and they are entirely composed of integral membrane protein called

- |              |                      |
|--------------|----------------------|
| (1) Cadherin | (2) $\beta$ -catenin |
| (3) Annexin  | (4) Connexin         |

**Options :**

19088948233. 1

19088948234. 2

19088948235. 3

19088948236. 4

Question Number : 65 Question Id : 19088912086 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

p53 is a/an,

- |                           |                       |
|---------------------------|-----------------------|
| (1) Proto oncogene        | (2) Oncogene          |
| (3) Tumor suppressor gene | (4) Pluripotency gene |

Options :

19088948237. 1

19088948238. 2

19088948239. 3

19088948240. 4

Question Number : 66 Question Id : 19088912087 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

DNA quantity in the sample is determined by

- (A) Absorbance at A 260 using nanodrop
- (B) Dye based technique using orbit
- (C) PCR
- (D) Bradford assay

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (B) and (C) only
- (4) (D) only

Options :

19088948241. 1

19088948242. 2

19088948243. 3



19088948244. 4

**Question Number : 67 Question Id : 19088912088 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

RT-PCR differs from PCR in terms of

- |                             |  |
|-----------------------------|--|
| (1) Template cDNA           | (2) Efficiency of amplification          |
| (3) Speed of polymerization | (4) Sensitivity-RT PCR is more sensitive |

**Options :**

19088948245. 1

19088948246. 2

19088948247. 3

19088948248. 4

**Question Number : 68 Question Id : 19088912089 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion A and the other is labelled as Reason R

Assertion A : Cell fusion is a technique where two different cell types or cells from two different species can be fused to produce one cell

Reason R : Cells can be fused by addition of certain inactivated viruses that attach to the surface membrane

In the light of the above statements, choose the *most appropriate* answer from the options given below :

- (1) Both A and R are correct and R is the correct explanation of A
- (2) Both A and R are correct but R is NOT the correct explanation of A
- (3) A is correct but R is not correct
- (4) A is not correct but R is correct

**Options :**

19088948249. 1

19088948250. 2

19088948251. 3

19088948252. 4

**Question Number : 69 Question Id : 19088912090 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

A type II topo-isomerase that relieves the mechanical strain of DNA which builds up during replication is

- |                  |                |
|------------------|----------------|
| (1) DNA gyrase   | (2) Primase    |
| (3) DNA helicase | (4) DNA ligase |

**Options :**

19088948253. 1

19088948254. 2

19088948255. 3

19088948256. 4

**Question Number : 70 Question Id : 19088912091 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Pluripotency genes are present in which type(s) of cells

- (A) Embryonic stem cells
- (B) Cancer stem cells
- (C) Progenitor cells
- (D) Mammary epithelial cells

Choose the most appropriate answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (A) and (C) only
- (4) (C) and (D) only

**Options :**



19088948257. 1

19088948258. 2

19088948259. 3

19088948260. 4

## Part C : Veterinary Biochemistry

<b>Section Id :</b>	190889244
<b>Section Number :</b>	3
<b>Section type :</b>	Online
<b>Mandatory or Optional :</b>	Mandatory
<b>Number of Questions :</b>	50
<b>Number of Questions to be attempted :</b>	50
<b>Section Marks :</b>	200
<b>Enable Mark as Answered Mark for Review and Clear Response :</b>	Yes
<b>Sub-Section Number :</b>	1
<b>Sub-Section Id :</b>	190889284
<b>Question Shuffling Allowed :</b>	Yes

**Question Number : 71 Question Id : 19088912092 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is an example of antiport type of transport?

(1)  $\text{Na}^+$  – Glucose

(2) Glucose transport into muscle cells

(3)  $\text{Cl}^-$  –  $\text{HCO}_3^-$

(4)  $\text{Na}^+$  – Amino acids

**Options :**

19088948261. 1

19088948262. 2

19088948263. 3

19088948264. 4

**Question Number : 72 Question Id : 19088912093 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Addition of NaOH into pure water, increases the pH of water.

Reasons (R) : Due to addition of hydroxyl ions into the water.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948265. 1

19088948266. 2

19088948267. 3

19088948268. 4

**Question Number : 73 Question Id : 19088912094 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements :

Statement I : Bicarbonate buffer is principal buffer system of plasma.

Statement II : The concentration of bicarbonate buffer is highest compared to other buffer system in plasma.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088948269. 1

19088948270. 2

19088948271. 3

19088948272. 4

**Question Number : 74 Question Id : 19088912095 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these buffer systems of blood is directly linked with respiratory system?

- (1) Phosphate buffer system
- (2) Bicarbonate buffer system
- (3) Plasma proteins
- (4) Haemoglobin

**Options :**

19088948273. 1

19088948274. 2

19088948275. 3

19088948276. 4

**Question Number : 75 Question Id : 19088912096 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Unsaturated fatty acids of membrane lipid, increases the fluidity of membrane.

Reasons (R) : Because unsaturated bond of fatty acids exists in 'Trans' configuration that tends to increase the fluidity.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948277. 1

19088948278. 2

19088948279. 3

19088948280. 4

**Question Number : 76 Question Id : 19088912097 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

D and L-glucose stereoisomeric forms differ in configuration of orientation of hydroxyl group at

- |                                       |  |
|---------------------------------------|--|
| (1) First carbon (C <sub>1</sub> )    | (2) Second carbon (C <sub>2</sub> )      |
| (3) Ultimate carbon (C <sub>6</sub> ) | (4) Penultimate carbon (C <sub>5</sub> ) |

**Options :**

19088948281. 1

19088948282. 2

19088948283. 3

19088948284. 4

**Question Number : 77 Question Id : 19088912098 Question Type : MCQ Option Shuffling : No**



**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Glucose and fructose forms same needle shaped crystals (bundle of Hay) on reaction with phenylhydrazine HCl and sodium acetate in acidic medium.

Reasons (R) : Because they are hexose sugar.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948285. 1

19088948286. 2

19088948287. 3

19088948288. 4

**Question Number : 78 Question Id : 19088912099 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is/are identification reactions for cholesterol?

- (A) Libermann -Burchard reaction
- (B) Zak reaction
- (C) Salkowski's reaction
- (D) Acrolein reaction
- (E) Benedict's test

Choose the correct answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (A), (B) and (C) only
- (4) (D) only

**Options :**

19088948289. 1

19088948290. 2

19088948291. 3

19088948292. 4

**Question Number : 79 Question Id : 19088912100 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Aspirin inhibits prostaglandin synthesis.

Reasons (R) : Aspirin inhibits prostaglandin synthesis by inhibiting phospholipase  $A_2$

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948293. 1

19088948294. 2

19088948295. 3

19088948296. 4

**Question Number : 80 Question Id : 19088912101 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Fehling's solution is better than Benedict's reagent in detecting the reducing ability of sugars.

Reasons (R) : Benedict's reagent contains weak alkali ( $\text{NaCO}_3$ ) and enolization is better in weak alkali than strong alkali.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948297. 1

19088948298. 2

19088948299. 3

19088948300. 4

**Question Number : 81 Question Id : 19088912102 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Glycine amino acid is optically inactive.

Reasons (R) : Glycine amino acid doesnot contain as chiral carbon atom.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948301. 1

19088948302. 2

19088948303. 3

19088948304. 4

**Question Number : 82 Question Id : 19088912103 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these amino acids is/are polar but uncharged?

- (A) Glycine
- (B) Aspartate
- (C) Asparagine
- (D) Serine
- (E) Glutamine

Choose the correct answer from the options given below :

- (1) (A) only
- (2) (A) and (B) only
- (3) (C) and (D) only
- (4) (C), (D) and (E) only

**Options :**

19088948305. 1

19088948306. 2

19088948307. 3

19088948308. 4

**Question Number : 83 Question Id : 19088912104 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Match List I with List II :

List I	List II
(A) Glycine	(I) Niacin
(B) Tyrosine	(II) Haem
(C) Tryptophan	(III) Histamine
(D) Histidine	(IV) Epinephrine

Choose the correct answer from the options given below :

- (1) (A)-(I), (B)-(II), (C)-(III), (D)-(IV)
- (2) (A)-(II), (B)-(IV), (C)-(I), (D)-(III)
- (3) (A)-(I), (B)-(IV), (C)-(II), (D)-(III)
- (4) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)

**Options :**

19088948309. 1

19088948310. 2

19088948311. 3

19088948312. 4

**Question Number : 84 Question Id : 19088912105 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : During class switching of immunoglobulin, only C region of heavy chain changes.

Statement II : When class switching occurs, the specificity of the antibody stays the same.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088948313. 1

19088948314. 2

19088948315. 3

19088948316. 4

**Question Number : 85 Question Id : 19088912106 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Sequence of hyperchromicity of following biomolecules is

- (A) dsDNA
- (B) ssDNA
- (C) RNA
- (D) Nucleotide

Choose the correct answer from the options given below :

- (1) (A) > (B) > (C) > (D)
- (2) (A) > (C) > (B) > (D)
- (3) (D) > (C) > (B) > (A)
- (4) (D) > (B) > (C) > (A)

**Options :**

19088948317. 1

19088948318. 2

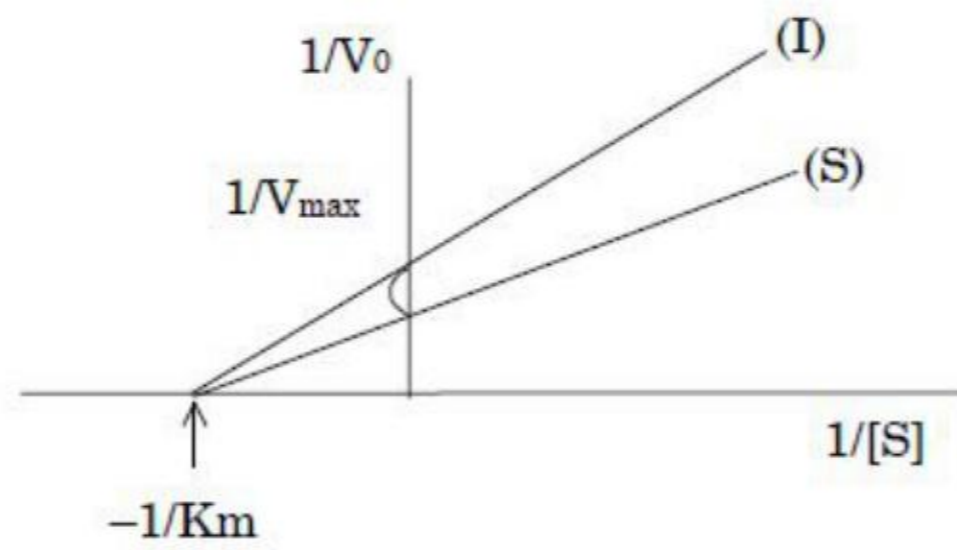
19088948319. 3

19088948320. 4

**Question Number : 86 Question Id : 19088912107 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which type of enzyme inhibition is exhibited in the diagram?

- (1) Competitive inhibition
- (2) Non-competitive inhibition
- (3) Un-competitive inhibition
- (4) Suicidal inhibition

**Options :**

19088948321. 1

19088948322. 2

19088948323. 3

19088948324. 4

**Question Number : 87 Question Id : 19088912108 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements :

Statement I : Template model of enzyme - substrate complex formation states that active site exists in proper preformed confirmation.

Statement II : Template model cannot explain change in enzyme activity in presence of allosteric modulator.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088948325. 1

19088948326. 2

19088948327. 3

19088948328. 4

**Question Number : 88 Question Id : 19088912109 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I :  $K_m$  becomes a measure of the affinity of the enzymes for its substrate when rate of ES complex conversion to product is lower than the rate of ES complex to form enzyme and substrate back.

Statement II : Higher the  $k_m$  of enzyme, weaker the substrate binding.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088948329. 1

19088948330. 2

19088948331. 3

19088948332. 4

**Question Number : 89 Question Id : 19088912110 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these enzymes is most specific indicator of hepatocellular damage in cattle?

- (1) Alanine aminotransferase
- (2) Aspartate aminotransferase
- (3) Alkaline phosphatase
- (4) Sorbitol dehydrogenase

**Options :**

19088948333. 1

19088948334. 2

19088948335. 3

19088948336. 4

**Question Number : 90 Question Id : 19088912111 Question Type : MCQ Option Shuffling : No**



**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Activation of enzyme of reversible covalent modification involves

- (1) Addition and removal of hydroxyl group
- (2) Addition and removal of phosphate group
- (3) Irreversible hydrolysis of one or more peptide bonds
- (4) Generation of new active sites

**Options :**

19088948337. 1

19088948338. 2

19088948339. 3

19088948340. 4

**Question Number : 91 Question Id : 19088912112 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is rate limiting enzyme of glycolysis?

- (1) Hexokinase
- (2) Phosphofructokinase
- (3) Pyruvate kinase
- (4) Enolase

**Options :**

19088948341. 1

19088948342. 2

19088948343. 3

19088948344. 4

**Question Number : 92 Question Id : 19088912113 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Atractyloside blocks the ATP formation.

Reasons (R) : Atractyloside inhibits the ATP synthetase enzyme.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948345. 1

19088948346. 2

19088948347. 3

19088948348. 4

**Question Number : 93 Question Id : 19088912114 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which statement(s) is/are true for HMP shunt?

- (A) Takes place in non-lactating mammary gland
- (B) Oxidizes glucose molecule
- (C) Does not produce ATP
- (D) Also called Warburg-Dicken's pathway
- (E) Provides NADH for ATP production

Choose the correct answer from the options given below :

- (1) (B) and (C) only
- (2) (A) and (E) only
- (3) (B), (C) and (D) only
- (4) (C), (D) and (E) only

**Options :**

19088948349. 1

19088948350. 2

19088948351. 3

19088948352. 4

**Question Number : 94 Question Id : 19088912115 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : There is accumulation of long chain fatty acids in brain, liver and kidneys in Zellweger's syndrome.

Reasons (R) : It is due to absence of peroxisomes and its enzymes in all tissues.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both (A) and (R) are true and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are true but (R) is NOT the correct explanation of (A)
- (3) (A) is true but (R) is false
- (4) (A) is false but (R) is true

**Options :**

19088948353. 1

19088948354. 2

19088948355. 3

19088948356. 4

**Question Number : 95 Question Id : 19088912116 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is rate limiting enzyme of fatty acid biosynthesis?

- |                         |                            |
|-------------------------|----------------------------|
| (1) Fatty acid synthase | (2) Acetyl CoA carboxylase |
| (3) Ketoacyl synthase   | (4) Enoyl reductase        |

**Options :**

19088948357. 1

19088948358. 2

19088948359. 3

19088948360. 4

**Question Number : 96 Question Id : 19088912117 Question Type : MCQ Option Shuffling : No**



**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Triacyl glycerol can not be synthesized in muscle and adipose tissue.

Statement II : Glycerokinase is absent/very low activity in muscle and adipose tissue.

In the light of the above statements, choose the correct answer from the options given below

- (1) Both Statement I and Statement II are true
- (2) Both Statement I and Statement II are false
- (3) Statement I is true but Statement II is false
- (4) Statement I is false but Statement II is true

**Options :**

19088948361. 1

19088948362. 2

19088948363. 3

19088948364. 4

**Question Number : 97 Question Id : 19088912118 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Alimentary ketosis occurs in cattle when spoiled silage is fed to the animal that contains excessive –

- (A) Excessive fatty acids
- (B) Excessive ketone bodies
- (C) Excessive Acetic acid
- (D) Excessive propionic acid
- (E) Excessive butyric acid

Choose the correct answer from the options given below :

- (1) (A) only
- (2) (B) only
- (3) (B) and (C) only
- (4) (D) only

**Options :**

19088948365. 1

19088948366. 2

19088948367. 3

19088948368. 4

**Question Number : 98 Question Id : 19088912119 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Deamination of L-amino acid by L-amino acid oxidase produces

- (1) Volatile fatty acid
- (2) Fatty acids
- (3) Keto acid
- (4) Immino acid

**Options :**

19088948369. 1

19088948370. 2

19088948371. 3

19088948372. 4



**Question Number : 99 Question Id : 19088912120 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Histamine is produced from histidine amino acid by

- |                    |                     |
|--------------------|---------------------|
| (1) Deamination    | (2) Oxidation       |
| (3) Transamination | (4) Decarboxylation |

**Options :**

19088948373. 1

19088948374. 2

19088948375. 3

19088948376. 4

**Question Number : 100 Question Id : 19088912121 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is purely ketogenic amino acids?

- |              |               |
|--------------|---------------|
| (1) Arginine | (2) Leucine   |
| (3) Glycine  | (4) Aspartate |

**Options :**

19088948377. 1

19088948378. 2

19088948379. 3

19088948380. 4

**Question Number : 101 Question Id : 19088912122 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : PRPP synthase is a regulating enzyme of purine biosynthesis.

Reasons (R) : It is allosterically inhibited by feedback effect of NAD and FAD.

In the light of the above statements, choose the most appropriate from the options given below

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088948381. 1

19088948382. 2

19088948383. 3

19088948384. 4

**Question Number : 102 Question Id : 19088912123 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

$N_9$  atom of purine ring is contributed by

- |                              |                              |
|------------------------------|------------------------------|
| (1) Amino group of glutamine | (2) Amide group of glutamine |
| (3) Amino group of glutamate | (4) Amino group of glycine   |

**Options :**

19088948385. 1

19088948386. 2

19088948387. 3

19088948388. 4

**Question Number : 103 Question Id : 19088912124 Question Type : MCQ Option Shuffling : No**



**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Gout may be observed in

- (A) Leukemia
- (B) Polycythemia
- (C) Prolonged fasting
- (D) Liver failure

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only
- (2) (B) and (C) only
- (3) (A), (B) and (C) only
- (4) (D) only

**Options :**

19088948389. 1

19088948390. 2

19088948391. 3

19088948392. 4

**Question Number : 104 Question Id : 19088912125 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Deficiency of LCAT enzyme causes

- (1) Niemann-pick disease
- (2) Gaucer's disease
- (3) Norum's disease
- (4) Forb's disease

**Options :**

19088948393. 1

19088948394. 2

19088948395. 3

19088948396. 4

**Question Number : 105 Question Id : 19088912126 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Diabetes mellitus occurs due to

- (A) Deficiency of insulin hormone
- (B) Deficiency of ADH hormone
- (C) Resistance in insulin hormone receptors
- (D) Resistance in ADH hormone receptors

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only
- (2) (A) and (C) only
- (3) (B) and (D) only
- (4) (A), (B), (C) and (D) only

**Options :**

- 19088948397. 1
- 19088948398. 2
- 19088948399. 3
- 19088948400. 4

**Question Number : 106 Question Id : 19088912127 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these is a structural unit of chromatin?

- (1) Histone
- (2) Nucleosome
- (3) Chromatosome
- (4) DNA

**Options :**

- 19088948401. 1
- 19088948402. 2
- 19088948403. 3





**Options :**

- 19088948409. 1
- 19088948410. 2
- 19088948411. 3
- 19088948412. 4

**Question Number : 109 Question Id : 19088912130 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : During transcription primer is synthesized at TATA box by sigma ( $\sigma$ ) factor.

Statement II : The primer is removed by  $\beta$  sub unit of RNA polymerase enzyme after completion of transcription.

In the light of the above statements, choose the most appropriate answer from the options given below

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

- 19088948413. 1
- 19088948414. 2
- 19088948415. 3
- 19088948416. 4

**Question Number : 110 Question Id : 19088912131 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : A lac operon is a good example of positive control of gene expression.

Reasons (R) : The bound repressor increases the rate of transcription of the structural gene.

In the light of the above statements, choose the most appropriate from the options given below

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088948417. 1

19088948418. 2

19088948419. 3

19088948420. 4

**Question Number : 111 Question Id : 19088912132 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Which of these food ingredients has greatest SDA value?

- |                  |             |
|------------------|-------------|
| (1) Carbohydrate | (2) Protein |
| (3) Fat          | (4) Vitamin |

**Options :**

19088948421. 1

19088948422. 2

19088948423. 3

19088948424. 4

**Question Number : 112 Question Id : 19088912133 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

White muscle disease occurs in lambs due to deficiency of

(1) Vitamin A

(2) Vitamin B<sub>12</sub>

(3) Vitamin D

(4) Vitamin E

**Options :**

19088948425. 1

19088948426. 2

19088948427. 3

19088948428. 4

**Question Number : 113 Question Id : 19088912134 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Which of these statement is correct regarding RQ?

- (A) RQ increases in acidosis
- (B) RQ increases in alkalosis
- (C) RQ increases in advanced cases of diabetes mellitus
- (D) RQ decreases in high fever
- (E) RQ increases during starvation

Choose the correct answer from the options given below :

- (1) (A) and (D) only
- (2) (A), (C) and (D) only
- (3) (B) and (E) only
- (4) (B), (C) and (E) only

**Options :**

19088948429. 1

19088948430. 2

19088948431. 3

19088948432. 4

**Question Number : 114 Question Id : 19088912135 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements : One is labelled as Assertion (A) and the other is labelled as Reason (R)

Assertion (A) : Ingestion of excessive phosphorus results in nutritional secondary hyperparathyroidism.

Reasons (R) : Excessive ingestion of phosphorus, reduces intestinal calcium absorption by forming calcium complexes and thereby stimulate parathyroid gland indirectly to increase secretion of PTH hormone

In the light of the above statements, choose the most appropriate from the options given below

- (1) Both (A) and (R) are correct and (R) is the correct explanation of (A)
- (2) Both (A) and (R) are correct but (R) is NOT the correct explanation of (A)
- (3) (A) is correct but (R) is not correct
- (4) (A) is not correct but (R) is correct

**Options :**

19088948433. 1

19088948434. 2

19088948435. 3

19088948436. 4

**Question Number : 115 Question Id : 19088912136 Question Type : MCQ Option Shuffling : No**

**Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Examples of zinc containing enzymes

- (A) Carbonic anhydrase
- (B) Xanthine oxidase
- (C) Sulfite oxidase
- (D) Glutamate dehydrogenase

Choose the most appropriate answer from the options given below :

- (1) (A) and (B) only
- (2) (A) only
- (3) (A) and (D) only
- (4) (B) and (D) only

**Options :**

19088948437. 1

19088948438. 2

19088948439. 3

19088948440. 4

**Question Number : 116 Question Id : 19088912137 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Given below are two statements :

Statement I : Uncontrolled diabetes mellitus results in acidosis.

Statement II : Hyperventillation may be observed during conditions of metabolic acidosis.

In the light of the above statements, choose the most appropriate answer from the options given below

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948441. 1

19088948442. 2

19088948443. 3

19088948444. 4

**Question Number : 117 Question Id : 19088912138 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

The first protein of which three dimensional structure has been determined by X-ray  
crystallography is

- |               |                 |
|---------------|-----------------|
| (1) Insulin   | (2) Haemoglobin |
| (3) Myoglobin | (4) Myosin      |

**Options :**

19088948445. 1

19088948446. 2

19088948447. 3

19088948448. 4

**Question Number : 118 Question Id : 19088912139 Question Type : MCQ Option Shuffling : No  
Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**



Given below are two statements :

Statement I : With increasing  $p\text{CO}_2$ , the affinity of haemoglobin in the blood for oxygen decreases.

Statement II : Increasing the  $p\text{CO}_2$ , shifts oxygenation curve to the left.

In the light of the above statements, choose the most appropriate answer from the options given below

- (1) Both Statement I and Statement II are correct
- (2) Both Statement I and Statement II are incorrect
- (3) Statement I is correct but Statement II is incorrect
- (4) Statement I is incorrect but Statement II is correct

**Options :**

19088948449. 1

19088948450. 2

19088948451. 3

19088948452. 4

**Question Number : 119 Question Id : 19088912140 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No**

**Correct Marks : 4 Wrong Marks : 1**

Keshan disease occurs in human due to deficiency of

- |              |                |
|--------------|----------------|
| (1) Selenium | (2) Molybdenum |
| (3) Nickel   | (4) Cobalt     |

**Options :**

19088948453. 1

19088948454. 2

19088948455. 3

19088948456. 4

Question Number : 120 Question Id : 19088912141 Question Type : MCQ Option Shuffling : No

Is Question Mandatory : No

Correct Marks : 4 Wrong Marks : 1

Byssinosis occurs due to inhalation of excessive amount of

- |                   |                     |
|-------------------|---------------------|
| (1) Asbestos dust | (2) Sugar cane dust |
| (3) Rice dust     | (4) Cotton dust     |

**Options :**

19088948457. 1

19088948458. 2

19088948459. 3

19088948460. 4