

ICAR AIEEA PG

QUESTION PAPER

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PREVIEW QUESTION BANK

Module Name : ANIMAL BIOTECHNOLOGY-ENG
Exam Date : 09-Jul-2023 Batch : 10:00-12:00

Sr. No.	Client Question ID	Question Body and Alternatives	Marks	Negative Marks
Objective Question				
1	2501	<p>In a prokaryotic cell, the DNA is present in the</p> <ol style="list-style-type: none"> 1. Cell envelope 2. Cell membrane 3. Nucleoid 4. Nucleus <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
Objective Question				
2	2502	<p>The four covalent bonds in methane (CH₄) are arranged around carbon to give which one of the following geometries?</p> <ol style="list-style-type: none"> 1. Linear 2. Tetrahedral 3. Trigonal planar 4. Trigonal pyramidal <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
Objective Question				
3	2503	<p>The smallest organelle in a cell is</p> <ol style="list-style-type: none"> 1. Lysosome 2. Spherosome 3. Peroxisome 4. Ribosome <p>A1 : 1</p>	4.0	1.00



A2 : 2

A3 : 3

A4 : 4

Objective Question

4	2504	<p>Which of the following organelles shows similarity to a prokaryotic cell?</p> <p>(A) Mitochondria (B) Chloroplast (C) Nucleus (D) Golgi apparatus</p> <p>Choose the correct answer from the options given below:</p> <ol style="list-style-type: none">(A) and (B) only(A), (B) and (D) only(A), (B), (C) and (D).(B), (C) and (D) only	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		



Objective Question

5	2505	<p>Microfilaments are composed of a protein called</p> <ol style="list-style-type: none">TubulinActinMyosinRibosome	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

6	2506		4.0	1.00
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Lysosomes are known as “suicidal bags” because of

1. Parasitic activity
2. Presence of food vacuole
3. Hydrolytic activity
4. Catalytic activity

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

7 2507

Which of the following are examples of trans-membrane transport between different subcellular compartments?

- (A) Transport from the stroma into thylakoid space
- (B) Transport from the cytoplasm into the lumen of the endoplasmic reticulum
- (C) Transport from the endoplasmic reticulum into the Golgi complex
- (D) Transport from mitochondrial intermembrane space into the mitochondrial matrix

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

8 2508

Which cell organelle is involved in apoptosis?

1. Lysosome
2. Endoplasmic reticulum
3. Golgi apparatus
4. Mitochondria

A1 : 1



A2 : 2

A3 : 3

A4 : 4

Objective Question

9 2509

The simplest hydrophilic moiety present in the membrane lipid is

1. Phosphate group
2. Hydroxyl group
3. Amino group
4. Glucose

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

10 2510

Lipid molecule involved in bio-signaling pathway that include membrane turnover and exocytosis is

1. Phosphatidylinositol
2. Phosphatidylglycerol
3. Myoinositol
4. Cardiolipin

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

11 2511

The presence of cholesterol in plasma membranes of some animals

1. enables the membrane to stay fluid more easily when there is drop in temperature
2. enables the animal to remove hydrogen atoms from saturated phospholipids
3. enables the animals to add hydrogen to unsaturated phospholipids
4. makes the membrane more flexible, allowing it to sustain greater pressure from within the cell

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

12	2512	<p>The golgi complex plays a major role</p> <ol style="list-style-type: none"> 1. in trapping the light and transforming it into chemical energy 2. in digesting the proteins and carbohydrates 3. as energy transferring organelles 4. in post translational modification of proteins and glycosidation of lipids <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

13	2513	<p>The average diameter of a prokaryotic cell is</p> <ol style="list-style-type: none"> 1. 1-10 micrometer 2. 10-100 micrometer 3. 1-10 nanometer 4. 10-100 nanometer <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

14	2514	<p>Which part of the nuclear membranes permit the free passage of the products synthesized in the nucleus into the surrounding cytoplasm?</p> <ol style="list-style-type: none"> 1. Pores 2. G proteins 3. MHC molecules 4. Coated pits 	4.0	1.00
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A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

15 2515

An assembly of nucleosomes constitutes

1. Histo chromosomes
2. Chromatin
3. Chromatosomes
4. Histosomes

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

16 2516

The mitochondrial matrix contains which of the following

- (A) Linear double stranded DNA
- (B) Circular double stranded DNA
- (C) RNA
- (D) Ribosomes

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00



Objective Question

17 2517

4.0

1.00

What is the location of enzymes of electron transport chain in an animal cell?

1. Plasma membrane
2. Inner mitochondrial membrane
3. Rough endoplasmic reticulum
4. Mitochondrial matrix

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

18 2518

Which of the given choices are cytoplasmic filaments?

- (A) Microtubules
- (B) Actin filaments
- (C) Myosin filaments
- (D) Intermediate filaments

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

19 2519

Sodium potassium ATPase is comprised of

1. 2 alpha and 3 beta units
2. 2 alpha and 2 beta units
3. 1 alpha and 2 beta units
4. 1 alpha and 1 beta unit

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

20	2520	Nuclear DNA replicates in which phase of the cell cycle 1. G2 phase 2. M phase 3. S phase 4. D phase A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

21	2521	Which state implies the exit of cells from the cell cycle? 1. S 2. G1 3. G2 4. G0 A1 : 1 A2 : 2 A3 : 3 A4 : 4	4.0	1.00
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Objective Question

22	2522	The spindle apparatus is formed during which phase of mitosis 1. Telophase 2. Metaphase 3. Prophase 4. Anaphase A1 : 1 A2 : 2	4.0	1.00
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A3 : 3

A4 : 4

Objective Question

23 2523

Which of the following dyes are used for staining chromosomes?

- (A) Giemsa
- (B) Quinacrine
- (C) Eosin Y
- (D) Methylene blue

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

24 2524

Histone octamere contains

1. 8 types of histones
2. 5 types of histones
3. 6 types of histones
4. 8 histones of four different types

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0

1.00

Objective Question

25 2525

4.0

1.00



Centrioles take part in the formation of

1. Cell plate
2. Spindle
3. Nucleus
4. Cell membrane

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

26 2526

Which technique is used to visualize the distribution of protein in the membrane ?

1. Patch clamp technique
2. FRAP
3. Freeze-etching
4. Freeze-fracture

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

27 2527

Name the type of cell division in which daughter cells receive an exact copy of chromosomes from parent cell

1. Mitosis
2. Cleavage
3. Interphase
4. Meiosis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

28	2528	<p>Which virus has emerged as a model system to study capsid assembly?</p> <ol style="list-style-type: none">1. Hepatitis B virus2. Pox virus3. Rabies virus4. Picoma virus <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

29	2529	<p>Which of the following leads to the destruction of the host cells?</p> <ol style="list-style-type: none">1. Lysogenic cycle2. Lytic cycle3. Prophage4. Temperate phase <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

30	2530	<p>A virus containing only nucleic acid and a capsid is called a</p> <ol style="list-style-type: none">1. Primitive virus2. Virion3. Naked virus4. Capsovirion <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

31	2531		4.0	1.00
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The cell subunits engaged in protein synthesis and maturation of polypeptide chains are

- (A) Ribosome
- (B) Rough endoplasmic reticulum
- (C) Lysosome
- (D) Golgi apparatus

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

32 2532

Aspartate transcarbamoylase (ATCase) an enzyme of pyrimidine synthesis pathway, the allosteric activator of this enzyme is

- 1. Adenosine triphosphate (ATP)
- 2. Cytidine triphosphate (CTP)
- 3. Cytidine monophosphate (CMP)
- 4. Thiamine triphosphate (TTP)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

33 2533

The antiagulant that is used to inhibit utilization of glucose by the RBC in blood outside the body

- 1. Potassium oxalate
- 2. Heparin
- 3. Sodium fluoride
- 4. EDTA

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

34 2534

4.0 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : If a solution of DNA is heated and DNA molecules in the solution are completely denatured it increases the absorption of UV light at 260nm

Reason (R) : Denaturation causes separation of DNA strands and bases in the DNA strands are exposed.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

35 2535

4.0 1.00



Given below are two statements:

Statement (I) : If two DNA double strands of the same length D1 and D2 are heated in a solution of the same composition and found that D1 and D2 are completely denatured at 60⁰C and 65⁰C temperature respectively.

Statement (II) : Melting temperature of a DNA molecule depends on the ratio of Guanine and Adenine bases present in their structure, D2 contains more guanine base percentage compared to that of D1

In 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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

36 2536

Which of the following are constituent components of deoxyribo nucleosides

- (A) Adenine base
- (B) Ribose sugar
- (C) Thyamine base
- (D) Uracil base

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

37 2537

4.0 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Pericidine A, an antibiotic block the overall process of Electron transport chain (ETC).

Reason (R) : It inhibit electron flow from complex-I to Ubiquinone in electron transport chain.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

38 2538

Arginine is converted to urea and ornithine by the action of enzyme

1. Arginase
2. Arginosuccinase
3. Arginosuccinate synthetase
4. Ornithine transcarbamoylase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

39 2539

4.0 1.00

Metabolism of polyunsaturated fatty acids through β -oxidation require enzymes in addition to enzymes of β -oxidation are

- (A) Δ^3 - Δ^2 -enoyl CoA isomerase
- (B) 2,4-dienoyl CoA reductase
- (C) Enoyl CoA isomerase
- (D) Methyl malonyl CoA mutase

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

40 2540

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : Fatty acids conserve more energy than that of carbohydrates

Reason (R) : Fatty acid contain more reduced form of carbon in their structure than that of carbohydrates.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

41 2541

4.0 1.00

The substrate for enzyme acyl CoA acetyl transferase is

1. Acyl CoA
2. Trans Δ^2 Enoyl CoA
3. L- β -hydroxy acyl CoA
4. β -keto acyl CoA

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

42 2542

The enzyme that catalyzes a reaction of substrate level phosphorylation in cytric acid cycle is

1. Succinyl CoA synthetase
2. Succinate dehydrogenase
3. Fumarase
4. Malate dehydrogenase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

43 2543

The dehydrogenase enzyme of pentose phasphate pathway that catalyze reduction of NADP⁺

1. Alcohol dehydrogenase
2. 6-phosphogluconate dehydrogenase
3. Lactate dehydrogenase
4. Succinate dehydrogenase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

44	2544	<p>Given below are two statements, one is labeled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Production of hypoxia-inducible transcription factor (HIF-1) produced in most carcinogenic tumor cell stimulates the production of glycolytic enzymes and glucose transporters (GLUT-1 and GLUT-3) to meetup their energy requirement.</p> <p>Reason (R) : Most of the tumor cells grow in hypoxic condition.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">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. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

45	2545	<p>The viatmin which is hydrophobic in nature</p> <ol style="list-style-type: none">1. Vitamin C2. Vitamin E3. Vitamin B24. Vitamin B6 <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

46	2546		4.0	1.00
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The vitamins, which also serve as precursors of hormone

- (A) Vitamin A
- (B) Vitamin B12
- (C) Vitamin D
- (D) Vitamin C

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

47 2547

Three fatty acids, F1, F2, and F3 with same chain length has melting point of 45°C , 50°C and 60°C then the number of unsaturated carbon present in

1. F1 is more than F2 and F2 is more than F3
2. F3 is more than F2 and F2 is more than F1
3. F3 is more than F2 and F1 is more than F2
4. F1 is more than F2 and F3 is more than F2

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

48 2548

4.0 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : The lipid present in the membrane produces a closed vesicle in aqueous medium.

Reason (R) : Membrane lipids carries only positive charge and are highly soluble in water.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

49 2549

A reaction mixture containing optimum condition of reaction for enzymes, E1, E2 and E3 react with a particular substrate S. Km of E1, E2 and E3 for that particular substrate S are 5×10^{-12} , 5×10^{-10} and 5×10^{-15} respectively then

- (A) E1 is more specific for that substrate than E2
- (B) E2 is more specific for that substrate than E3
- (C) E3 is more specific for that substrate than E1
- (D) E3 is more specific for that substrate than E2

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

50 2550

4.0 1.00

The class of enzymes that cleave covalent bond in a substrate through elimination reaction and yield a double bond or ring structure in the resulting product

1. Lyases
2. Oxidoreductase
3. Transferase
4. Isomerase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

51 2551

The dietary precursor of coenzyme A is

1. Pantothenic acid
2. Tocopherol
3. Folate
4. Thiamine

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

52 2552

An ideal right handed α -helix is made up of 200 amino acid residues, the length of that helix structure is

1. 200 angstrom
2. 240 angstrom
3. 260 angstrom
4. 300 angstrom

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question				
53	2553	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : A polypeptide chain with a long block of Arginine at pH 7.0 can not form an α-helix in the portion containing long block of arginine.</p> <p>Reason (R) : Positively charged side chains of arginine at pH 7.0 repel each other strongly.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none">Both (A) and (R) are true and (R) is the correct explanation of (A).Both (A) and (R) are true but (R) is NOT the correct explanation of (A).(A) is true but (R) is false.(A) is false but (R) is true. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00

Objective Question				
54	2554	<p>If pI (isoelectric pH) of serine and leucine are 5.68 and 5.98 respectively then in a solution of pH 3.0</p> <ol style="list-style-type: none">Net charge of both Serine and leucine will be positiveNet charge of serine will be positive and net charge of leucine will be negativeNet charge of leucine will be positive and net charge of serine will be negativeNet charge of both serine and leucine will be negative <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00

Objective Question				
55	2555		4.0	1.00

A polypeptide chain containing three lysine and four arginine residues is treated with sufficient concentration of trypsin in a reaction mixture with optimum condition for reaction of trypsin yield. Consider no arginine and lysine residues are present in carboxy and amino terminal end of that polypeptide

1. Four peptides
2. Five peptides
3. Seven peptides
4. Eight peptides

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

56 2556

Given below are two statements:

Statement (I) : Specific activity of an enzyme is the number of an enzyme units in each milligram of protein.

Statement (II) : Specific activity of an enzyme is maximum and on further purification of that protein does not change the specific activity in the condition when enzyme is pure

In 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. **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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

57 2557

4.0 1.00

If a globular protein is solubilized in an aqueous medium then the amino acids which may found on the surface of that protein in that solution are

- (A) Glutamic acid
- (B) Aspartic acid
- (C) Lysine
- (D) Phenyl alanine

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

58 2558

4.0 1.00



Match List-I with List-II

List-I Amino acid	List-II Their symbol
(A) Glycine	(I) M
(B) Glutamine	(II) G
(C) Tryptophan	(III) Q
(D) Methionine	(IV) W

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

59	2559	<p>Which of the following amino acids are represented by triplet codon ?</p> <p>(A) 4-Hydroxy proline (B) Histidine (C) Tyrosine (D) Cysteine</p> <p>Choose the <i>correct</i> answer from the options given below :</p> <p>1. (A), (B) and (D) only. 2. (A), (B) and (C) only. 3. (A), (B), (C) and (D). 4. (B), (C) and (D) only.</p> <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
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Objective Question

60	2560	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : A solution of α-D glucose and a solution of β-D glucose shows identical optical properties</p> <p>Reason (R) : They form identical equilibrium mixture in solution.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <p>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.</p> <p>A1 : 1 A2 : 2 A3 : 3 A4 : 4</p>	4.0	1.00
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Objective Question

61	2561		4.0	1.00
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The catecholamines are produced in the brain and are synthesized from the amino acid

1. Tyrosine
2. Threonine
3. Tryptophan
4. Serine

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

62 2562

Hormones those bind to intracellular receptors

- (A) Androgens
- (B) Estrogen
- (C) Progestine
- (D) Insulin

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

63 2563

4.0 1.00

Match List I with List II

List I	List II
Name of Immunoglobulin	Corresponding Heavy chain
(A) IgG	(I) Alpha Heavy chain
(B) IgM	(II) Epsilon Heavy chain
(C) IgA	(III) Gamma Heavy chain
(D) IgE	(IV) Mu Heavy chain

Choose the *correct* answer from the options given below:

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

64 2564

4.0 1.00

Match List I with List II

List I (Condition)	List II (Effect)
(A) The addition of H^+ to a suspension of RBCs results in	(I) Lower glycolytic rates
(B) The RBC of mammals living in high altitude exhibit	(II) Greater Hb O_2 affinity
(C) RBCs of rats and dogs with Mg deficiency	(III) Decrease O_2 affinity of Hb
(D) Oxy Hb with a relaxed structure	(IV) Lowered binding capacity for CO_2

Choose the *correct* answer from the options given below:

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (III), (B) - (IV), (C) - (II), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

65	2565	<p>Which Hormone receptor in the orexigenic neurons of the arcuate nucleus inhibit the release of the neuropeptide Y (NPY) ?</p> <ol style="list-style-type: none"> 1. Glucagon 2. Adiponectic 3. Ghrelin 4. Insulin 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

66	2566	<p>The major electrolyte lost through gastrointestinal fluid during vomition is mainly</p> <ol style="list-style-type: none"> 1. Sodium and chloride 2. Sodium and Potassium 3. Potassium and chloride 4. Potassium and bicarbonate 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		



Objective Question

67	2567	<p>Name the scientists who won the Nobel prize for isolation of Insulin in 1923.</p> <ol style="list-style-type: none"> 1. Banting and MacLeod 2. Banting and Mering 3. Banting and Thompson 4. Banting and Minkowski 	4.0	1.00
		A1 : 1		

A2 : 2

A3 : 3

A4 : 4

Objective Question

68	2568	<p>Given below are two statements:</p> <p>Statement (I) : If thyroid gland secret insufficient quantity of thyroxin hormone the condition is called hypothyroidism.</p> <p>Statement (II) : In hypothyroidism thyroid stimulating hormone concentration in the blood is also below normal.</p> <p>In light of the above statements, choose the <i>most appropriate</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both Statement I and Statement II are correct Both Statement I and Statement II are incorrect Statement I is correct but Statement II is incorrect Statement I is incorrect but Statement II is correct 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		



Objective Question

69	2569	<p>Who won the Nobel Prize in 1908 for explaining the antibody production ?</p> <ol style="list-style-type: none"> Emil Behring Paul Ehrlich Louis Pasteur Karl Landsteiner 	4.0	1.00
		A1 : 1		
		A2 : 2		
		A3 : 3		
		A4 : 4		

Objective Question

70	2570		4.0	1.00
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Name a commonly used biomarker for early detection of acute myocardial infarction.

1. Creatine kinase -MM
2. Creatine kinase -MB
3. Alkaline phosphatase
4. Gamma glutamyl transferase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

71 2571

Name the hormones having cell surface receptors and the second messenger is calcium or phosphotidyl inositol.

- (A) Thyrotrophic releasing Hormone (TRH)
- (B) Gonadotropin Releasing Hormone (GRH)
- (C) Calcitriol
- (D) Calcitonin

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

72 2572

Which immunoglobulin can cross the placental barrier and protect the new born from infections.

1. IgG
2. IgE
3. IgD
4. IgA

A1 : 1

4.0 1.00

A2 : 2

A3 : 3

A4 : 4

Objective Question

73 2573

4.0 1.00

The most relevant source of histamine in the immune system are:

- (A) Red blood cells
- (B) Basophils
- (C) Mast cells
- (D) Fiber

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

74 2574

4.0 1.00

Deficiency of Vitamin B6 (Pyridoxine) causes :

- (A) Hampers serotonin production
- (B) Epinephrine and Nor epinephrine are not produced properly
- (C) GABA is not produced properly
- (D) Protein is not produced properly

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

75 2575

Immunoglobulin M (IgM) increases in which disease condition?

1. Connective tissue disease
2. Newborn animals before intake of colostrum
3. Hereditary agammaglobulinemia
4. Anaphylaxis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

76 2576

Aldosterone plays a central role maintenance of :

- (A) Hydrogen ion concentration
- (B) Effective circulating fluid volume
- (C) Potassium balance
- (D) Osmolality of body fluids

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

77 2577

The function of enteroglucagon hormone is :

1. Control blood glucose levels.
2. Control of intestinal cell growth
3. Stimulates gastrointestinal motility
4. Gastric acid secretion

4.0 1.00



A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

78 2578

The highest chloride concentration is found in which of the following body fluids :

1. Cerebrospinal Fluid
2. Blood
3. Urine
4. Milk

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

79 2579

Chemical nature of β Endorphins :

1. Steroid
2. Lipid
3. Polypeptide
4. Carbohydrate

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

80 2580

4.0 1.00

Several studies in diabetic dogs have shown that HbA1c is potentially useful for monitoring purposes as HbA1c reflect the average blood glucose level over the preceding :

1. 60 days
2. 120 days
3. 6 months
4. 1 year

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

81 2581

Which hormone is increased during Cushing's syndrome?

1. Progesterone
2. Aldosterone
3. Testosterone
4. Cortisol

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

82 2582

The Oral Glucose Tolerance Test (OGTT) is ineffective in which of the following species:

- (A) Feline
- (B) Goats
- (C) Bovine
- (D) Swine

Choose the **correct** answer from the options given below:

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

4.0 1.00

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

83 2583

The gluconeogenic mechanism is under developed in new born pigs and so they suffer from :

1. Hyperglycemia of newborn baby pigs
2. Hypoglycemia of newborn baby pigs
3. Anemia
4. Ketosis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

84 2584

Given below are two statements:

Statement (I) : A specific receptor is present in the plasma membrane.

Statement (II) : Water soluble hormone bind to the specific receptor and generate a second messenger as a consequence of ligand receptor interaction.

In 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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

85 2585

4.0 1.00

The cyanide nitroprusside reaction detects any compound containing a sulfhydryl group, is used to screen -

1. Cystinuria
2. Glucosuria
3. Aciduria
4. Proteinuria

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

86 2586

Name a liver specific enzyme primarily for the large domestic species and is also a zinc metalloenzyme.

1. Glutamate dehydrogenase
2. Aspartate transaminase
3. Sorbitol Dehydrogenase
4. Alkaline phosphatase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

87 2587

Which technique is of great value when it is necessary to discriminate between antibodies produced in response to vaccination and those produced in response to infection.

1. Enzyme linked Immuno sorbent assay
2. Radio Immuno Assay
3. Western Blot immune assay
4. Flow cytometry

A1 : 1

A2 : 2

A3 : 3

4.0 1.00

A4 : 4

Objective Question

88 2588

Folate is required for the normal DNA synthesis. Folate deficiency impairs the activity of the folate requiring enzyme synthase and thus the synthesis of which nucleotide is decreased.

1. dATP
2. dCTP
3. dTTP
4. dGTP

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

89 2589

The signs and biochemical lesions that are manifested in Cobalt deficiency are referable to deficiency of which vitamin ?

1. Vitamin B₁
2. Vitamin B₆
3. Vitamin B₁₂
4. Vitamin C

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

90 2590

4.0 1.00

Match List-I with List-II

List-I (Name of the Disease)	List-II (Name of the Deficient enzyme)
(A) Pompe disease	(I) Iduronate sulfatase
(B) Gaucher disease	(II) Beta hexosaminidase A
(C) Tay-Sachs disease	(III) Acid beta glucosidase
(D) Hunter syndrome	(IV) Acid alpha glucosidase

Choose the *correct* answer from the options given below:

- (A) - (I), (B) - (II), (C) - (III), (D) - (IV)
- (A) - (I), (B) - (II), (C) - (IV), (D) - (III)
- (A) - (IV), (B) - (III), (C) - (II), (D) - (I)
- (A) - (III), (B) - (IV), (C) - (I), (D) - (II)

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

91 2591

Which of the following group of codons are synonymus in nature?

- GUU and GUC
- UUU and CCU
- CAA and CCU
- AGC and AGG

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question

92 2592

4.0 1.00

During the formation of amino acyl tRNA, the amino acid is attached covalently to which part of tRNA?

1. Cytosine residue of -CCA sequence of acceptor arm of tRNA.
2. Adenosine residue of -CCA sequence of acceptor arm of tRNA
3. Pseudouridine residue of acceptor arm of tRNA
4. Dihydrouridine residue of acceptor arm of tRNA.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

93 2593

Among the list of events happen during the initiation of translation in prokaryotes, find out the exact order in which the initiation factor 3(IF3) is involved.

- (A) Promote the dissociation of inactive 70S ribosomal complex.
- (B) Facilitate the binding of 50S ribosome with the 30S initiation complex.
- (C) Assist the binding of 30S ribosome with the shine-dalgarno sequence of mRNA.

Your response

1. (A), (B), (C)
2. (A), (C), (B)
3. (B), (C), (A)
4. (C), (A), (B)

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

94 2594

4.0 1.00

Given below are two statements, one is labeled as **Assertion (A)** and other one labeled as **Reason (R)**.

Assertion (A) : The genetic code is not universal.

Reason (R) : In mammalian mitochondria, the codon 'UGA' specifies the amino acid 'Trp'

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

95 2595

The antibiotic 'Puromycin' is structural analog of which of the following amino acyl tRNA?

1. Alanyl tRNA
2. Histidyl tRNA
3. Tyrosnyl tRNA
4. Proyl tRNA

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

96 2596

4.0 1.00

Which of the following statements are TRUE with regard to the process of post-translational modifications?

- (A) Cleavage of polyprotein to their component protein.
- (B) Hydroxylation of proline/lysine amino acid residues of collagen protein.
- (C) Formylation of 'Met' amino acid residues.
- (D) Formation of disulphide bridges.

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

97 2597

Among the following find the polypeptides synthesized non-ribosomally.

- (A) Oxytocin
- (B) Gramicidin S
- (C) Insulin
- (D) Actinomycin D

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

98 2598

4.0 1.00

Which of the following functions are associated with the DNA polymerase I

- (A) Proof Reading
- (B) Removal of Primer
- (C) Nick Translation
- (D) DNA Ligation

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

99 2599

Which of the following is explained by the Reiji Okazaki experimentation?

- 1. Continuous synthesis of DNA
- 2. Semiconservative mode of replication.
- 3. Dispersive mode of replication
- 4. Semidiscontinuous synthesis of DNA

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

100 2600

In E.coli, the nonnumeric product of drag gene required for the synthesis of _____.

- 1. Leading strand DNA
- 2. RNA Primer
- 3. Okazaki fragments
- 4. Lagging stand DNA

A1 : 1

A2 : 2

4.0 1.00

A3 : 3

A4 : 4

Objective Question

101	2601	<p>Given below are two statements, one is labelled as Assertion (A) and other one labelled as Reason (R).</p> <p>Assertion (A) : Free energy requirement for DNA ligase enzyme is obtained in a species dependant manner.</p> <p>Reason (R) : In E.coli, DNA ligase enzyme utilizes ATP and catalyzes the sealing of single strand nicks.</p> <p>In light of the above statements, choose the <i>correct</i> answer from the options given below.</p> <ol style="list-style-type: none"> Both (A) and (R) are true and (R) is the correct explanation of (A). Both (A) and (R) are true but (R) is NOT the correct explanation of (A). (A) is true but (R) is false. (A) is false but (R) is true. 	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			



Objective Question

102	2602	<p>Which of the following enzyme is associated with the mitochondrial DNA synthesis?</p> <ol style="list-style-type: none"> DNA Pol α DNA Pol β DNA Pol γ DNA Pol δ 	4.0	1.00
	A1 : 1			
	A2 : 2			
	A3 : 3			
	A4 : 4			

Objective Question

103	2603		4.0	1.00
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Match List-I with List-II

List-I	List-II
Phase of the Cell Cycle	Time Duration
(A) M Phase	(I) ~ 10 hours
(B) G1 Phase	(II) ~ 1 hour
(C) S Phase	(III) 2 to 6 hours
(D) G2 Phase	(IV) 6 to 8 hours

Choose the *correct* answer from the options given below:

- (A) - (III), (B) - (I), (C) - (II), (D) - (IV)
- (A) - (II), (B) - (I), (C) - (IV), (D) - (III)
- (A) - (I), (B) - (III), (C) - (IV), (D) - (II)
- (A) - (IV), (B) - (I), (C) - (II), (D) - (III)

A1 : 1

A2 : 2

A3 : 3

A4 : 4



Objective Question

104 | 2604

4.0 | 1.00

Given below are two statements, one is labelled as **Assertion (A)** and other one labelled as **Reason (R)**.

Assertion (A) : The use of RNA primer eliminates the source of error during replication.

Reason (R) : RNA is eventually replaced by DNA that permits actual base pairing to be achieved.

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

- Both (A) and (R) are true and (R) is the correct explanation of (A).
- Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
- (A) is true but (R) is false.
- (A) is false but (R) is true.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

105	2605	<p>Which of the following function of the RNA Polymerase enzyme is affected when β' subunit is mutated?</p> <ol style="list-style-type: none">1. Template binding2. RNA Chain initiation.3. RNA chain elongation4. Promotor sequence identification. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

106	2606	<p>Which of the following antibiotic specifically inhibits the initiation of transcription in prokaryotes?</p> <p>(A) Rifampicin</p> <p>(B) Azithromycin</p> <p>(C) Rifamycin B</p> <p>(D) Cordycepin</p> <p>Choose the <i>correct</i> answer from the options given below:</p> <ol style="list-style-type: none">1. (A) and (D) only.2. (B) and (D) only.3. (A) and (B) only.4. (A) and (C) only. <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00
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Objective Question

107	2607		4.0	1.00
-----	------	--	-----	------



The inhibition of RNA synthesis in prokaryotes by the action of Actinomycin D emphasizes the importance of which of the following processes?

1. Recognition of promoter sequence
2. Formation of template strand
3. Detection of terminator signal
4. Annealing of primer

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

108 2608

4.0 1.00

Match List-I with List-II

List-I	List-II
Name of the enzyme in Eukaryotes	Type of RNA synthesized
(A) RNA Pol I	(I) mRNA
(B) RNA Pol II	(II) tRNA
(C) RNA Pol III	(III) rRNA

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

109 2609

4.0 1.00



In Catabolite repression model of gene regulation, which of the following compound signals the absence of metabolite of choice for the energy to regulate the gene expression?

1. cAMP
2. cGMP
3. Inositol Phosphate
4. Tyrosine Kinase

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

110 2610

Which of the following process is regulated by the *Trp* operon?

1. Tryptophan synthesis
2. Tryptophan breakdown
3. Interconversion of tryptophan
4. Formation of precursor for tryptophan synthesis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

111 2611

The splice junction of eukaryotic is defined by which of the following sequence?

1. Invariant of 'GU' at introns 5' boundry
2. Invariant of 'AG' at invariant 3' boundry
3. Invariant 'GA' at intron 5' boundry
4. Invariant 'UG' at intron 3' boundry

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00

Objective Question				
112	2612	<p>Identify the order of post-transcriptional processing of yeast tRNA^{Tyr}</p> <p>(A) Addition of -CCA sequence at 3' end of tRNA</p> <p>(B) Modification of Uridine to Dihydrouridine</p> <p>(C) Removal of leader sequence from 5' end of tRNA</p> <p>(D) Self splicing for removal intervening sequence</p> <p>Choose the <i>correct</i> answer from the options given below:</p> <p>1. (C), (D), (A), (B).</p> <p>2. (A), (C), (B), (D).</p> <p>3. (B), (A), (D), (C).</p> <p>4. (C), (B), (D), (A).</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00

Objective Question				
113	2613	<p>Gunaosine, which is a leading nucleotide of the 'CAP' of mRNA is methylated at _____ position.</p> <p>1. N1</p> <p>2. N3</p> <p>3. N7</p> <p>4. N9</p> <p>A1 : 1</p> <p>A2 : 2</p> <p>A3 : 3</p> <p>A4 : 4</p>	4.0	1.00

Objective Question				
114	2614		4.0	1.00

Which of the following methods are used to label the double stranded DNA?

- (A) 5' - end labelling with polynucleotide kinase
- (B) 3' - end labelling with polynulceotide kinase
- (C) 5' - end labelling with terminal transferase
- (D) 3' - end labelling with terminal trasferase

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

115 2615

Which RNA molecule with the following feature used for cDNA synthesis?

- 1. RNA with highly methylated region near to 3' end.
- 2. RNA with leader sequence at 5' end.
- 3. RNA with -CCA sequence at 3' end.
- 4. RNA with poly(A) tail at 3' end.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

116 2616

4.0 1.00

Which of the following parameters affect the annealing of primer to the template in PCR?

- (A) Nucleotide sequence of the primer.
- (B) Temperature of annealing.
- (C) Specificity of Taq DNA Polymerase.
- (D) GC content of the template.
- (E) Concentration of Mg^{2+} ions.

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

117 2617

Which of the following process helps to ascertain the specificity of amplification in the case of realtime PCR technique?

1. Cycle threshold
2. Sequencing of amplified products.
3. Amplification associated florescence.
4. Melt curve analysis

A1 : 1

A2 : 2

A3 : 3

A4 : 4

4.0 1.00



Objective Question

118 2618

4.0 1.00

Given below are two statements, one is labeled as **Assertion (A)** and other one labeled as **Reason (R)**.

Assertion (A) : Bacterial artificial chromosome is useful for the synthesis of RNA used for *in vitro* translation.

Reason (R) : Bacterial artificial chromosome is F factor based cloning vector possessing SP6 and T7 promotor.

In 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.

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

119 2619

4.0 1.00



Match List-I with List-II

List-I	List-II
Cloning Vector	Characterisite Feature
(A) Plasmid	(I) Replication restricted to plant gene.
(B) YAC	(II) Replication restricted to mammalian cells.
(C) Cosmid	(III) Replication restricted to bacteria.
(D) Ti Plasmid	(IV) Replication restricted to yeast.

Choose the **correct** answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4

Objective Question

120 2620

4.0 1.00

Match List-I with List-II

List-I	List-II
Name of the Fluorescent Dye	Colour of the Fluorescent Emission
(A) Amino methyl coumarin	(I) Red
(B) Rhodamine	(II) Green
(C) Flourescien	(III) Blue green
(D) Allophycocyanin	(IV) Blue

Choose the *correct* answer from the options given below:

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

A1 : 1

A2 : 2

A3 : 3

A4 : 4



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