NTA - GAT-B And BET April 2022 Examination

(Candidate Response Sheet)

Roll Number	UP12000285
Name of the Candidate	ANANT GUPTA
Examination Name	Biotechnology Eligibility Test BET 2022
Exam Date & Time	23-04-2022 03:00:00

Subject: BET SECTION S1 A

Question ID:- 577

You are measuring blood glucose level by glucose oxidase method. Following are the absorbance values that you got for the standard and the test sample. Determine the glucose concentration in the test sample:

Sample	Concentration	A ₅₀₅
Standard 1	0.4 mmol/L	0.120
Standard 2	0.6 mmol/L	0.180
Standard 3	0.8 mmol/L	0.240
Unknown	?	0.210

Options:-

.0.65 mM, Option ID: - 2305,

• 0.70 mM, Option ID: - 2306,

• 0.725 mM, Option ID: - 2307,

• 0.75 mM, Option ID: - 2308,

Answer Given:- 0.70 mM, Option ID: -2306

Question ID:- 595

If $2^x = 3^y = 6^z = K$, then the relationship between x, y, and z is given by:

Options:-

•x+y = z, Option ID :- 2377,

• xy = z, Option ID: - 2378,

• 1/x + 1/y = 1/z, Option ID: - 2379,

• xy=yx=z, Option ID: - 2380,

Answer Given:- Not Attempted

Question ID:- 613

What will be the length of a DNA molecule containing 10 million bp? Options:-

.340 mm, Option ID :- 2449,

• 34 mm, Option ID :- 2450,

• 3.4 mm, Option ID :- 2451,

• 0.34 mm, Option ID :- 2452,

Answer Given: - 0.34 mm, Option ID: -2452

Question ID:- 608

If the numerator of a fraction is increased by 15% and its denominator is decreased by 8%, the new fraction becomes 15/16. Find the original fraction.

Options:-

•4/3, Option ID :- 2429,

• 15/4, Option ID :- 2430,

. 3/4, Option ID: - 2431,

• 4/15, Option ID: - 2432,

Answer Given: - 3/4, Option ID: -2431

Question ID:- 589

The line y = 2x from x = 0 to 1 is rotated around the y-axis. The volume generated is:

Options:-

•1/2 π , Option ID :- 2353,

• $2/3 \pi$, Option ID :- 2354,

• $3/4 \pi$, Option ID :- 2355,

• π , Option ID :- 2356,

Answer Given:- Not Attempted

Question ID:- 580

You are preparing a 500 ml solution containing 50 mM Tris (FW 120) buffer, 10 mM NaCl (FW 58.5), 5 mM EDTA (supplied solution is 500 mM). The quantity of each of the ingredients would be:

Options:-

•6.0 g Tris, 2.92 g NaCl, 5 ml EDTA, Option ID :- 2317,

• 3.0 g Tris, 0.292 g NaCl, 5 ml EDTA, Option ID :- 2318,

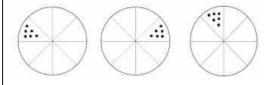
1.5 g Tris, 0.292 g NaCl, 5 ml EDTA, Option ID :- 2319,

• 0.75 g Tris, 0.029 g NaCl, 5 ml EDTA, Option ID :- 2320,

Answer Given:- Not Attempted

Question ID:- 586

Find the next image in the series.



Options:-



Option ID :- 2341,



Option ID :- 2342,



Option ID :- 2343,



Option ID :- 2344,



Answer Given:-

, Option ID : -2341

Question ID:- 578

The introduction of the nonpolar molecule (toluene) into water results in: Options:-

- •a decrease in the entropy of water., Option ID :- 2309,
- an increase in the entropy of water., Option ID :- 2310,
- no change in entropy of water., Option ID :- 2311,
- modest exothermic dissolution., Option ID: 2312,

Answer Given:- a decrease in the entropy of water., Option ID: -2309

Question ID:- 591

The probability that 1st of January is a Sunday in at least one of the 3 randomly chosen years is given by:

Options:-

•3/7, Option ID: - 2361,

 \cdot 1 - $(6/7)^3$, Option ID: - 2362,

• $(3/7)^3$, Option ID: - 2363,

• $(1 - 3/7)^3$, Option ID: - 2364,

Answer Given:- Not Attempted

Question ID:- 590

The function $y = f(x) = X^2 - 6$ is plotted along with its inverse function $y = f^{-1}(x)$, where essentially the x & y axis are interchanged. These two curves will intersect at:

Options:-

•(0, 0), Option ID: - 2357,

• (2, 3), Option ID: - 2358,

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• (2, 2) & (3, 3), Option ID: - 2359,
• (-2, -2) & (3, 3) , Option ID :- 2360,
Answer Given:- Not Attempted
Question ID:- 600
During signal transduction, one molecule of phosphatidylinositol 4,5-bisphosphate (PIP2) is
cleaved into one molecule each of inositol triphosphate (IP3) and diacylglycerol (DAG) by the
enzyme:
Options:-
.Lipolyase C, Option ID: 2397,
• Phosphatase C, Option ID: - 2398,
• Phosphodiesterase C, Option ID: - 2399,
• Phospholipase C, Option ID: - 2400,
Answer Given: Phospholipase C, Option ID: -2400
Question ID:- 592
An aircraft circumnavigates the earth 10 km above the earth's surface. If it completes one full
circle, the distance covered will be ____ greater than the circumference of the earth. (Assume
earth radius is 3280 km, and \pi = 3.14)
Options:-
.62.8 km , Option ID :- 2365,

    628 km , Option ID :- 2366,

    6280 km , Option ID :- 2367,

. 12560 km, Option ID: - 2368,
Answer Given: - 6280 km , Option ID: -2367
Question ID:- 587
How many words can be formed with the letters of the word 'PATALIPUTRA'?
Options:-
•11!/2! 3!, Option ID :- 2345,
• 11!/2! 2! 3!, Option ID :- 2346,
• 11!/3! 1! 2!, Option ID :- 2347,
• 11!/3!, Option ID :- 2348,
Answer Given:- 11!/2! 2! 3!, Option ID: -2346
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Question ID:- 574

The cytosine residues in the DNA are methylated at specific di- or trinucleotide sequences. Which among these methylation motifs are found predominantly in case of protein-coding genes in plants? H stands for A, T or C.

Options:-

- CpG and CpHpG, Option ID: 2293,
- CpHpG and CpHpH, Option ID: 2294,
- CpGpG and CpHpH, Option ID: 2295,
- CpG and CpHpH, Option ID: 2296,

Answer Given:- Not Attempted

Question ID:- 601

Identify the INCORRECT statement for a competitive reaction.

Options:-

- •The V_{max} is unchanged., Option ID: 2401,
- The dissociation constant (K_d) is increased., Option ID: 2402,
- . Km will increase., Option ID: 2403,
- The intercept on the x-axis will shift towards the left in the Lineweaver-Burk plot. , Option ID :- 2404.

Answer Given:- The dissociation constant (K_d) is increased., Option ID: -2402

Question ID:- 572

500 mg of a drug (Molecular weight 100) was intravenously injected into an individual having a blood volume of 5 liter. The drug is neither absorbed by the tissues nor it is excreted. If the drug is metabolized so that half of it is degraded in eight hours, what would be the molar concentration of the drug one day after injection?

Options:-

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2.5 mM , Option ID :- 2285,
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- 1.25 mM, Option ID: 2286,
- 0.625 mM , Option ID :- 2287,
- . 0.0312 mM, Option ID: 2288,

Answer Given: - 1.25 mM, Option ID: -2286

Question ID:- 610

Add one more element to the given number series: 71, 76, 69, 74, 67, 72: Options:-

- p...-...

- .77, Option ID :- 2437,. 65, Option ID :- 2438,
- . 80, Option ID :- 2439,
- , , ,

• 76, Option ID :- 2440,

Answer Given: - 65, Option ID: -2438

Question ID:- 602

The melting temperature (t_m) of DNA is higher when the content of:

Options:-

- A:T base pairs is higher. , Option ID :- 2405,
- G:C base pairs is higher., Option ID: 2406,
- A:T base pairs is same as G:C base pairs. , Option ID :- 2407,
- G:C base pairs is lower. , Option ID :- 2408,

Answer Given: - G:C base pairs is higher. , Option ID: -2406

Question ID:- 596

A plasmid has three sites for *EcoRI*. When digested by this enzyme, incidentally partial digestion took place, though no uncut or nicked plasmid remained in the digestion mixture. The maximum number of bands that can be visualized in an agarose gel would be:

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•1, Option ID: - 2381,
. 3, Option ID: - 2382,
• 7, Option ID: - 2383,
. 10, Option ID: - 2384,
Answer Given:- 7, Option ID: -2383
Question ID:- 606
Which one of the following acts as a linker histone?
Options:-
•H1, Option ID :- 2421,

    H2A, Option ID :- 2422,

• H2B, Option ID :- 2423,

    H3, Option ID :- 2424,

Answer Given:- H1, Option ID: -2421
Question ID:- 614
If 8% of x = 4\% of y, then 20% of x is?
Options:-
•10% of y, Option ID :- 2453,
• 16% of y, Option ID :- 2454,
. 80% of y, Option ID :- 2455,
• 40% of y, Option ID :- 2456,
Answer Given: - 10% of y, Option ID: -2453
Question ID:- 615
If x=y^a, y=z^b, z=x^c, find the value of abc?
Options:-
•1, Option ID :- 2457,
. 3, Option ID: - 2458,
• 0, Option ID :- 2459,
. Cannot be determined, Option ID: - 2460,
Answer Given:- 1, Option ID: -2457
Question ID:- 571
In the Table given below, the column (A) lists three eukaryotic RNA Polymerases and column (B)
lists group of genes they transcribe. Identify the correct match from the options below:
Options:-
•i & c; ii & b; iii & a , Option ID :- 2281,
• i & b; ii & c; iii & a , Option ID :- 2282,
• i & b; ii & a; iii & c , Option ID :- 2283,
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• i & c; ii & a; iii & b , Option ID :- 2284,
Answer Given:- i & c; ii & a; iii & b , Option ID : -2284
Question ID:- 619
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In Reverse Phase chromatography of a mixture of protein and sodium chloride: Options:-

- •The salt will elute before the protein, Option ID :- 2473,
- The salt and protein will co-elute, Option ID: 2474,
- The salt will elute after the protein, Option ID: 2475,
- The salt will elute but the protein will not, Option ID :- 2476,

Answer Given:- Not Attempted

Ouestion ID:- 607

If you mixed 20 mL of 50 mM sodium acetate (NaOAc) with 30 mL of 25 mM glucose, what would be the concentration of each in the final solution?

Options:-

- .50 mM NAOAc, 25 mM Glucose, Option ID: 2425,
- 20 mM NaOAc, 15 mM Glucose, Option ID: 2426,
- 30 mM NaOAc, 20 mM Glucose, Option ID: 2427,
- 40 mM NaOAc, 10 mM Glucose, Option ID: 2428,

Answer Given: - 20 mM NaOAc, 15 mM Glucose, Option ID: -2426

Question ID:- 598

A culture contains two bacterial populations 'X' and 'Y' in equal proportion. On dilution plating only two colonies were obtained due to excessive dilution. The probability that one will be X and other will be Y is:

Options:-

- •100%, Option ID: 2389,
- 75%, Option ID: 2390,
- 50%, Option ID: 2391,
- 25%, Option ID: 2392,

Answer Given: - 50%, Option ID: -2391

Question ID:- 599

For transcribing protein coding genes, the RNA Polymerase forms the preinitiation complex (PIC) in association with:

Options:-

- •TFIIA, TFIID, TFIIG, Option ID :- 2393,
- TFIIA, TFIIG, TFIIH, Option ID :- 2394,
- TFIIH, TFIIF, TFIID, Option ID :- 2395,
- TFIIC, TFIID, TFIIF, Option ID :- 2396,

Answer Given:- TFIIH, TFIIF, TFIID, Option ID: -2395

Question ID:- 581

In eukaryotes, nucleosomes comprise of which one of the following histones?

Options:-

•H1, H2A, H2B, and H3, Option ID: - 2321,

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    H2A, H2B, H3, and H4, Option ID: 2322,

    H1, H2B, H3, and H4, Option ID: 2323,

    H1, H2A, H3, and H4, Option ID: 2324,

Answer Given:- H2A, H2B, H3, and H4, Option ID: -2322
Question ID:- 584
Which one of the following compound(s) is/are NOT the carbon source of acetyl Co-A?
Options:-
Ethanol , Option ID :- 2333,
· Valine/ isoleucine, Option ID: - 2334,

    Pyruvate , Option ID :- 2335,

    Oxaloacetate/ acetoacetate, Option ID: 2336,

Answer Given:- Not Attempted
Ouestion ID:- 616
Find the number of triangles in the given figure:
Options:-
•12, Option ID :- 2461,
• 13, Option ID :- 2462,

    14, Option ID :- 2463,

. 15, Option ID: - 2464,
Answer Given: 12, Option ID: -2461
Question ID:- 612
A 100 m long train is running at a speed of 68 km/h. A man is also running in the same direction
with a speed of 8 km/h. In what time will the train overtake the running man?
Options:-
.6 sec, Option ID :- 2445,
• 9 sec, Option ID :- 2446,

    6 min, Option ID :- 2447,

• 9 min, Option ID :- 2448,
Answer Given: - 6 sec, Option ID: -2445
Question ID:- 579
Eukaryotic RNA Polymerase II transcribes:
Options:-
rRNA and tRNA genes, Option ID :- 2313,

    mRNA and tRNA genes, Option ID: - 2314,

    mRNA and 5S rRNA genes, Option ID: 2315,

    mRNA, miRNA and snRNA genes, Option ID :- 2316,

Answer Given:- mRNA and 5S rRNA genes, Option ID: -2315
Question ID:- 597
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An enzyme is governed by Michaelis-Menten Kinetics. The apparent K_{M} increases four fold due

to the addition of inhibitor but the reaction rate declines by 50%. The substrate concentration in the reaction is:

Options:-

- •S = K_M , Option ID :- 2385,
- S = 2 K_M, Option ID :- 2386,
- $S = 3 K_M$, Option ID :- 2387,
- S = 4 K_M , Option ID :- 2388,

Answer Given:- Not Attempted

Question ID:- 573

The motifs commonly found in the core promoter of eukaryotic protein coding genes are: Options:-

- •TATA and Pribnow box, Option ID :- 2289,
- . Motif ten element and TATA, Option ID: 2290,
- BRE and Kozak consensus sequence, Option ID: 2291,
- TRE and TATA, Option ID: 2292,

Answer Given:- Not Attempted

Question ID:- 583

Which one of the following statements is true with respect to optical activity?

Options:-

- •A relationship exists between the (R) and (S) configurations of enantiomers and the direction [(+) or (-)] in which they rotate plane-polarized light., Option ID: 2329,
- Equimolar mixture of D and L isomers of the same compound will be optically active. , Option ID :- 2330,
- Meso compounds that are optically inactive may contain stereogenic centers or chiral centers.
 Option ID :- 2331,
- Optical activity is independent of temperature. , Option ID :- 2332,

Answer Given:- Not Attempted

Question ID:- 604

The enzyme that links carbon and nitrogen metabolism is: Options:-

- •Glutamine synthetase., Option ID: 2413,
- Transketolase., Option ID: 2414,
- Glutamate dehydrogenase., Option ID :- 2415,
- Enolase., Option ID: 2416,

Answer Given:- Not Attempted

Question ID:- 618

What is the molecular formula for the structure given below?

- •C₁₂H₁₇CIN₄OS, Option ID :- 2469,
- C₁₀H₁₆CIN₄OS, Option ID :- 2470,

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• C<sub>11</sub>H<sub>16</sub>CIN<sub>4</sub>OS, Option ID :- 2471,
• C<sub>13</sub>H<sub>16</sub>CIN<sub>4</sub>OS, Option ID :- 2472,
Answer Given:- C<sub>12</sub>H<sub>17</sub>CIN<sub>4</sub>OS, Option ID: -2469
Question ID:- 617
Which one of these cubes (labelled A - D) will have the highest surface to volume ratio? The
length of sides of each cube are given in cm.
A.
В.
C.
D.
Options:-
.A , Option ID :- 2465,
• B, Option ID: - 2466,
. C, Option ID: - 2467,
. D , Option ID :- 2468,
Answer Given:- D , Option ID : -2468
Question ID:- 620
What is the concentration of D<sub>2</sub>0 in heavy water (density 1.11 g/ml)?
Options:-
•0.5 M, Option ID: - 2477,
• 5.0 M, Option ID: - 2478,
• 50.0 M, Option ID: - 2479,
• 55.5 M, Option ID: - 2480,
Answer Given:- Not Attempted
Question ID:- 582
Match the items in List I with the items in List II
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Choose the correct answer from the options given below:

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Options:-
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•A-II, B-IV, C-I, D-III, Option ID: 2325,
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- . A-I, B-III, C-IV, D-II, Option ID: 2326,
- . A-III, B-II, C-I, D-IV, Option ID: 2327,
- . A-IV, B-III, C-II, D-I , Option ID :- 2328,

Answer Given:- A-IV, B-III, C-II, D-I, Option ID: -2328

Question ID:- 593

A growing bacterial culture doubles in 1 hr; the increase in cell mass in 30 minutes will be: Options:-

- Zero, Option ID: 2369,
- 50%, Option ID: 2370,
- . Less than 50%, Option ID: 2371,
- . More than 50%, Option ID: 2372,

Answer Given:- Not Attempted

Question ID:- 605

The cytosine residues in the DNA are methylated at specific di- or tri-nucleotide sequences. Which among these methylation motifs is predominantly found in case of protein-coding genes in animals? (H stands for A, T or C)

Options:-

- •CpG, Option ID: 2417,
- CpHpG , Option ID :- 2418,
- CpHpH , Option ID :- 2419,
- . CpGpG, Option ID: 2420,

Answer Given: - CpG , Option ID : -2417

Question ID:- 594

Two random numbers are generated between zero and one and added. The probability that the sum of these two numbers will be between 0.5 and 1.5 is:

Options:-

.50%, Option ID :- 2373,

- . 75%, Option ID: 2374,
- 90%, Option ID: 2375,
- . 100%, Option ID: 2376,

Answer Given:- Not Attempted

Question ID:- 576

You are given a 5 mM solution of sucrose. If you hydrolyse it by adding equal volume of 10 mM

HCl, what would be the final concentration of glucose and fructose in the hydrolysate? Options:-

- .5 mM glucose and 5 mM fructose, Option ID :- 2301,
- 2.5 mM glucose and 2.5 mM fructose, Option ID: 2302,
- 1.25 mM glucose and 1.25 mM fructose, Option ID: 2303,
- 1.25 mM glucose and 2.5 mM fructose, Option ID: 2304,

Answer Given:- Not Attempted

Question ID:- 609

Identify the sum of a+b+c, provided the total of each row and each column is same.

Options:-

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.32, Option ID: - 2433,
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- . 36, Option ID: 2434,
- 27, Option ID: 2435,
- . 30, Option ID: 2436,

Answer Given: - 36, Option ID: -2434

Question ID:- 588

A ladder leaning against a wall is making an angle of 60° with the ground. If the length of the ladder is 18 m, find the distance of the foot of the ladder from the wall.

Options:-

- .9√3 m, Option ID :- 2349,
- 9 m, Option ID :- 2350,
- . 18/√2 m, Option ID :- 2351,
- . 18√3 m, Option ID :- 2352,

Answer Given:- 18√3 m, Option ID: -2352

Ouestion ID:- 575

While measuring the potassium concentration in a drug formulation, the technologist took 10 μ l of the sample and mixed it with 90 μ l of test buffer. From the resulting solution, he took 5 μ l and measured its total potassium content as 25 ng. What would be the concentration of potassium in the drug formulation?

Options:-

- •50 ng/ μl, Option ID :- 2297,
- 25 ng/ μl, Option ID :- 2298,
- 75 ng/ μl, Option ID :- 2299,
- 100 ng/ μl, Option ID :- 2300,

Answer Given:- Not Attempted

Question ID:- 585

How many rectangles are there in the diagram?

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Options:-
.8, Option ID :- 2337,

    9, Option ID :- 2338,

. 10, Option ID: - 2339,
. 12, Option ID: - 2340,
Answer Given: 12, Option ID: -2340
Question ID:- 603
Gap junctions are absent in:
Options:-
Brain cells., Option ID: - 2409,
• Cardiac muscle cells., Option ID: - 2410,

    Liver cells., Option ID: 2411,

• Erythrocytes., Option ID: - 2412,
Answer Given:- Not Attempted
Question ID:- 611
If 48 men can do a piece of work in 25 hours, how much time will it take for 15 men to finish the
same task?
Options:-
.75 hours, Option ID :- 2441,
• 60 hours, Option ID :- 2442,
• 80 hours, Option ID :- 2443,
. 85 hours, Option ID :- 2444,
Answer Given: - 80 hours, Option ID: -2443
Subject: BET SECTION S1 B
Question ID:- 748
Where is the greatest likelihood of the occurrence of a Cysteine residue in a protein structure?
Options:-
In the active site pocket, Option ID: - 2989,
. In the beta sheets, Option ID: - 2990,
. In the turns and loops, Option ID: - 2991,

    In the alpha helices, Option ID: 2992.

Answer Given:- In the active site pocket, Option ID: -2989
Question ID:- 706
Which one of the following is NOT a typical feature of the hypersensitive response observed in
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plants during the attack of invading microbes?

Options:-

- •Onset of programmed cell death in the region surrounding the infection site, Option ID: 2821,
- Rapid accumulation of reactive oxygen species, Option ID: 2822,
- Rapid spike in photosynthetic rate, Option ID: 2823,
- Rapid spike in nitric oxide production accompanying the oxidative burst, Option ID: 2824, **Answer Given:- Not Attempted**

Question ID:- 752

The measure of similarity between two structurally aligned macromolecules is:

Options:-

- •Median Distance between the Centroids (MDC), Option ID: 3005,
- Root Mean Square Deviation (RMSD), Option ID: 3006,
- Squared Mean Distance between atoms (SMD), Option ID: 3007,
- Mean Distance between Centroids (DBC), Option ID: 3008,

Answer Given:- Not Attempted

Ouestion ID:- 764

Given below are two statements:

Statement I: Fungi are important degraders of polymers and are used in the composting and biodegradation of toxic organic substances.

Statement II: Fungi are able to selectively excrete toxins present in these polymers.

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

Options:-

- •Both Statement I and Statement II are true, Option ID: 3053,
- Both Statement I and Statement II are false, Option ID: 3054,
- Statement I is true but Statement II is false, Option ID: 3055,
- Statement I is false but Statement II is true, Option ID: 3056,

Answer Given:- Not Attempted

Question ID:- 647

The term Dysbiosis is associated with:

Options:-

- Kinome, Option ID: 2585,
- . Immunome, Option ID: 2586,
- . Genome, Option ID: 2587,
- . Microbiome, Option ID: 2588,

Answer Given:- Not Attempted

Question ID:- 746

Your friend runs a BLASTp on his unknown sequence and finds a match with E-value of 3 with a target. What does this mean?

Options:-

- •There are e³ sequences in the database that match the unknown sequence. , Option ID :- 2981,
- There are 3 mismatches between the unknown and target sequences., Option ID: 2982,
- The random chance of unknown sequence matching the target is 1 in 3., Option ID: 2983,
- There are 3 hits of similar score that can be found by random chance. , Option ID :- 2984,
 Answer Given:- Not Attempted

Ouestion ID:- 751

During analysis of Next-Gen Sequencing data, what is the advantage of BAM files over SAM files?

Options:-

•BAM files are human readable while SAM files are not., Option ID: - 3001,

- BAM files are larger than SAM files., Option ID: 3002,
- BAM files are smaller than SAM files and hence easier to transfer., Option ID: 3003,
- BAM files can hold more information than SAM files. , Option ID :- 3004,

Answer Given:- Not Attempted

Question ID:- 692

Nod gene products:

Options:-

- function as receptors of certain flavonoids, Option ID: 2765,
- lack the ability to activate the expression of other Nod factors, Option ID: 2766,
- cause activation of homeobox genes, Option ID: 2767,
- are involved in photosynthesis, Option ID :- 2768,

Answer Given:- Not Attempted

Question ID:- 731

Yeast cells obtained from batch fermentation can be reutilized for the production of:

Options:-

- .Beer , Option ID :- 2921,
- . Trypsin, Option ID: 2922,
- . Chloramphenicol, Option ID: 2923,
- Acetic acid , Option ID :- 2924,
 Answer Given:- Not Attempted

Question ID:- 657

Given below are two statements:

Statement I: Polycistronic mRNAs are found in archaea and bacteria.

Statement II: Plastid genes in eukaryotes have only mono-cistronic mRNA.

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

Options:-

- .Both Statement I and Statement II are correct., Option ID: 2625,
- Both Statement I and Statement II are incorrect. , Option ID: 2626,
- Statement I is correct but Statement II is incorrect., Option ID: 2627,
- Statement I is incorrect but Statement II is correct., Option ID: 2628,

Answer Given:- Not Attempted

Question ID:- 638

A protein with 10 lysines and 2 arginine residues was digested with trypsin and the peptide mixture was resolved on an SDS-PAGE. After silver staining, 10 bands were detected instead of 13. Select the plausible reasons from the following:

- A. Some of the Arginines and Lysines were inside the protein core.
- B. Some of the Arginines and Lysines were followed by a Proline residue.
- C. Some of the Arginines and Lysines were followed by a negatively charged residue.
- D. Some of the Lysines were modified at the epsilon Nitrogen atom.
- E. One of the Lysine or Arginine was at the extreme C-terminus.

Choose the correct answer from the options given below:

Options:-

- .A, B, C and D., Option ID: 2549,
- . A, B, C and E., Option ID: 2550,
- . B, C, D and E., Option ID: 2551,
- . A, B, D and E., Option ID: 2552,

Answer Given:- Not Attempted

Question ID:- 669

Which one of the following types of mutations can lead to a major change in the encoded protein?

A. Insertion of a single nucleotide near the end of the coding sequence.

- B. Removal of a single nucleotide from the beginning of the coding sequence.
- C. Deletion of three consecutive nucleotides of a codon in the middle of the coding sequence.
- D. Deletion of four consecutive nucleotides in the middle of the coding sequence.

Options:-

- •A, D, Option ID :- 2673,
- B, D, Option ID :- 2674,
- B, C, Option ID :- 2675,
- . A, E, Option ID :- 2676,

Answer Given:- B, D, Option ID: -2674

Ouestion ID:- 682

The animal embryonic stem cells that can differentiate into any embryonic cell type are known as:

Options:-

- Pluripotent stem cells, Option ID :- 2725,
- Multipotent stem cells, Option ID: 2726,
- Oligopotent stem cells, Option ID: 2727,
- . Unipotent stem cells, Option ID: 2728,

Answer Given:- Pluripotent stem cells, Option ID: -2725

Question ID:- 729

For determining V_m and K_m of an enzyme catalyzed reaction, we often use a double reciprocal plot of 1/v versus 1/s. This is NOT the best method because:

Options:-

- Errors in measurement are not normally distributed, Option ID: 2913,
- A straight line fit does not minimize the error, Option ID: 2914,
- Errors increase for larger values of v & s , Option ID :- 2915,
- Errors increase for smaller values of v & s , Option ID :- 2916,

Answer Given:- Not Attempted

Question ID:- 762

Which one of the following process is NOT used to convert the hydrocarbons present in the organic compounds to central metabolic intermediates?

Options:-

Hydration , Option ID :- 3045,

```
    Extraction , Option ID :- 3046,

    Nitroreduction , Option ID :- 3047,

• Reductive dehydroxylation, Option ID: - 3048,
Answer Given:- Not Attempted
Question ID:- 745
Which one of the following is comparatively the best E-value to a pairwise sequence match?
Options:-
.1e-4, Option ID: - 2977,
• 10e-3, Option ID :- 2978,
• 100e-2, Option ID :- 2979,
• 1000e-1, Option ID: - 2980,
Answer Given:- Not Attempted
Ouestion ID:- 718
Yeast cells are immobilized in a column and glucose is fed through the inlet at a concentration of
90 g/l. If all the glucose is consumed and we can treat this as an anaerobic fermentation with
negligible cell growth, then the ethanol concentration at the outlet will be:
Options:-
.90 g/l
, Option ID :- 2869,
. 60 g/l
, Option ID :- 2870,
. 36 g/l
, Option ID :- 2871,
. 46 g/l
, Option ID :- 2872,
Answer Given:- Not Attempted
Question ID:- 658
A conventional light microscope allows us to magnify cells up to 1000 times and to resolve
details as small as ___
Options:-
•200 μm, Option ID :- 2629,

    200 nm, Option ID :- 2630,

• 0.2 nm, Option ID :- 2631,
• 20 nm, Option ID: - 2632,
Answer Given:- Not Attempted
```

Question ID:- 644

A laboratory is trying to purify a Histone-binding protein from its native source. Which one of the following purification techniques should be used for one-step purification of the protein?

- Cation exchange chromatography, Option ID: 2573,
- Immuno affinity chromatography, Option ID: 2574,
- Gel exclusion chromatography, Option ID: 2575,
- Metal affinity chromatography, Option ID: 2576,

Answer Given:- Not Attempted

Question ID:- 687

Which one of the following is NOT applicable for a chemical synapse?

Options:-

- •Usually synaptic cleft is approx. 20 40 nm., Option ID: 2745,
- May release excitatory or inhibitory neurotransmitter., Option ID: 2746,
- Cannot modulate signal intensity., Option ID: 2747,
- There is a delay of signal propagation. , Option ID :- 2748,

Answer Given:- Not Attempted

Question ID:- 653

Which one of the following markers is NOT routinely used for DNA fingerprinting?

Options:-

- Amplification short tandem repeats, Option ID: 2609,
- Analysis of copy number variations, Option ID: 2610,
- Restriction fragment length polymorphism, Option ID: 2611,
- Amplification variable number tandem repeats, Option ID: 2612,

Answer Given:- Not Attempted

Question ID:- 721

If the respiratory quotient (R.Q.) for growing cells is 1.1 and the exit gas analyzer of a bioreactor shows 3% CO₂ in the outlet gases; then given normal air as input to the reactor, you expect the outlet O₂ concentration to read approximately:

Options:-

- •3.3%, Option ID :- 2881,
- 2.7%, Option ID :- 2882,
- 18.3%, Option ID: 2883,
- 17.7%, Option ID :- 2884,

Answer Given:- Not Attempted

Ouestion ID:- 701

Which one of the following is commonly used as a selection marker for developing transgenic plants?

Options:-

- Green fluorescent protein, Option ID: 2801,
- . β-lactamase, Option ID: 2802,
- β-galactosidase, Option ID :- 2803,
- . Hygromycin phosphotransferase, Option ID: 2804,

Answer Given:- Not Attempted

Question ID:- 740

Which one of the following DOES NOT represent known interactions of RNA secondary structural elements?

Options:-

Pseudo knot , Option ID :- 2957,

 Kissing hairpins, Option ID: 2958, Hairpin-bulge contact, Option ID: 2959, • Helix-turn-helix, Option ID: 2960, Answer Given:- Helix-turn-helix, Option ID: -2960 **Question ID:- 655** Which of the following are the sulfur containing amino acids? i. Methionine ii. Histidine iii. Leucine iv. Cysteine **Options:-**•(ii) and (i), Option ID :- 2617, . (i) and (iv), Option ID: - 2618, (iv) and (ii), Option ID :- 2619, . (iii) and (ii), Option ID :- 2620, Answer Given:- (i) and (iv), Option ID: -2618 Ouestion ID:- 681

Match items in List I with items in List II.

Choose the correct answer from the options given below:

Options:-

```
•A-I, B-IV, C-II, D-III, Option ID: - 2721,

    A-IV, B-II, C-III, D-I, Option ID: 2722,

• A-IV, B-I, C-II, D-III , Option ID :- 2723,
• A-III, B-I, C-IV, D-II, Option ID: 2724,
Answer Given:- A-IV, B-I, C-II, D-III, Option ID: -2723
```

Question ID:- 750

Proteins usually have hydrophobic interiors or cores and hydrophilic exteriors. If a protein comprises hydrophobic patches on its outer surface, what can it mean? **Options:-**

- .The protein is unstable, Option ID: 2997,
- Structure prediction was done wrongly, Option ID: 2998,
- It could be part of a multimeric protein complex, Option ID: 2999,
- It is a DNA-binding protein, Option ID: 3000,

Answer Given:- Not Attempted

Question ID:- 739

A protein sequence has twenty consecutive hydrophobic amino acids followed by a few hydrophilic residues and this pattern repeats itself five to seven times. Which kind of a protein is

described here? Options:-

- .A secretory protein, Option ID: 2953,
- . A transmembrane protein, Option ID: 2954,
- . A cytoplasmic soluble enzyme, Option ID: 2955,
- . A ribosomal protein, Option ID: 2956,

Answer Given:- A transmembrane protein, Option ID: -2954

Question ID:- 736

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

Assertion A: The dot matrix method of sequence alignment is a very basic method that should be used first, before other more complex methods.

Reason R: The diagonal Dot Matrix Display can readily reveal presence of insertions/deletions and direct and inverted repeats that are more difficult to find by the other, more automated methods.

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

Options:-

- •Both A and R are correct and R is the correct explanation of A , Option ID :- 2941,
- Both A and R are correct but R is not the correct explanation of A, Option ID: 2942,
- A is correct but R is not correct, Option ID: 2943,
- A is not correct but R is correct , Option ID :- 2944,

Answer Given:- Not Attempted

Question ID:- 625

Options:-

- •Molecular weight of the two are identical, Option ID: 2497,
- Molecular weight of A is less by 20 Daltons, Option ID: 2498,
- Molecular weight of A is more by 14 Daltons, Option ID: 2499,
- $_{\bullet}$ Molecular weight of B is more by 2 Daltons , Option ID :- 2500,

Answer Given:- Molecular weight of the two are identical, Option ID: -2497

Question ID:- 643

Which one of the following statements are true?

Options:-

- •The rate at which A changes to B is independent of E1, Option ID: 2569,
- The rate at which B converts to A is determined by E3, Option ID: 2570,
- The rate at which A converts to B is determined by E2, Option ID: 2571,
- The rate at which B converts to A is independent of E3, Option ID: 2572,

Answer Given:- The rate at which B converts to A is determined by E3, Option ID: -2570

Question ID:- 668

Which one of the following enzymes help the DNA to overcome the tension generated by the unwinding during replication?

Options:-

- Nickase , Option ID :- 2669,
- Helicase , Option ID :- 2670,
- Topoisomerase, Option ID: 2671,
- DNA ligase, Option ID: 2672,

Answer Given: - Topoisomerase , Option ID: -2671

Question ID:- 680

A probiotic is a live microorganism that is claimed to confer a health benefit by altering the indigenous microflora of the intestinal tract. Which one of the following bacteria has been used widely in probiotics?

Options:-

- .Klebseilla pneumonie, Option ID: 2717,
- Pseudomonas putida, Option ID: 2718,
- . Lactobacillus lactis, Option ID: 2719,
- Escherichia coli , Option ID :- 2720,

Answer Given:- Not Attempted

Question ID:- 679

A bacterial signaling system that regulates population density-dependent gene expression using secreted chemical signals is known as :

Options:-

- •G protein-coupled receptor signalling, Option ID: 2713,
- Quorum sensing, Option ID: 2714,
- Receptor-mediated signalling, Option ID: 2715,
- Two component system, Option ID: 2716,

Answer Given:- Quorum sensing, Option ID: -2714

Question ID:- 735

Commercial production of citric acid is done by fermentation using:

Options:-

Aspergillus niger , Option ID :- 2937,

- Clostridium butyricum, Option ID: 2938,
- · Saccharomyces cerevisiae, Option ID: 2939,
- . Lactobacillus acidophilus, Option ID: 2940,

Answer Given:- Not Attempted

Question ID:- 631

Which one of these is a metal containing Vitamin? Options:-

- .Vitamin C, Option ID :- 2521,
- Vitamin B1, Option ID: 2522,
- Vitamin B12, Option ID :- 2523,
- Vitamin A, Option ID :- 2524,
 Answer Given:- Not Attempted

Question ID:- 675

Latency is a characteristic of which one of the following viruses?

Options:-

- .Herpes virus, Option ID: 2697,
- Polio virus, Option ID: 2698,
- . Rhino virus, Option ID: 2699,
- Influenza virus, Option ID: 2700,

Answer Given:- Not Attempted

Question ID:- 737

Given below are two statements:

Statement I: An alignment is generated by starting at the ends of the two sequences and attempting to match all possible pairs of characters between the sequences and by following a scoring scheme for matches, mismatches, and gaps.

Statement II: For proteins, an amino acid substitution matrix, such as the Dayhoff percent accepted mutation matrix 250 (PAM250) or Blosum substitution matrix 62 (BLOSUM62) is used to score matches and mismatches.

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

Options:-

- Both Statement I and Statement II are correct, Option ID: 2945,
- Both Statement I and Statement II are incorrect, Option ID: 2946,
- Statement I is correct but Statement II is incorrect, Option ID: 2947,
- Statement I is incorrect but Statement II is correct, Option ID: 2948,
 Answer Given: Not Attempted

Question ID:- 635

Amide bonds between two amino acids (as shown below) are generally in trans-conformation. The atoms are labeled as A1 through A6. The angle measured for defining the trans-conformation of the amide bond is the angle between:

Options:-

- •the atoms A2, A3 and A4., Option ID :- 2537,
- the planes formed by A1,A3,A4 and A3,A4,A6., Option ID: 2538,
- the planes formed by A2,A3,A4 and A6,A4,A5., Option ID: 2539,
- the planes formed by A2,A3,A4 and A3,A4,A6. , Option ID :- 2540,

Answer Given:- the planes formed by A2,A3,A4 and A3,A4,A6. , Option ID: -2540

Question ID:- 672

Which one of the following statements is most relevant to leishmaniasis?

Options:-

- •Large domestic animals such as cattle are the principal reservoir of *L. donovani*, Option ID :- 2685.
- Both visceral leishmaniasis and cutaneous leishmaniasis are transmitted by the bite of sandflies. , Option ID :- 2686,
- Artemisinin is effective in the treatment of leishmaniasis. , Option ID :- 2687,
- Leishmaniasis is transmitted by the bite of female Anopheles mosquitoes. , Option ID :- 2688, Answer Given:- Not Attempted

Question ID:- 666

Which one of the following will NOT change upon adding an enzyme to a chemical reaction or changing the concentration of reactants or products?

- A. ΔG°
- B. Kea
- C. ΔG

Options:-

- •A, B, Option ID: 2661,
- . B, C, Option ID: 2662,
- A, B, C, Option ID: 2663,
- Only A , Option ID :- 2664,

Answer Given:- Not Attempted

Question ID:- 649

Which one of the following Immunoglobulins cause type 1 allergic reaction? Options:-

- •lgG, Option ID :- 2593,
- IgM, Option ID :- 2594,
- IgE, Option ID: 2595,
- IgA, Option ID: 2596,

Answer Given: IgE, Option ID: -2595

Question ID:- 704

In a metabolic engineering experiment the flux from primary carbon metabolism was diverted towards methylerythritol phosphate (MEP) pathway. Which one of the following class of secondary carbon compounds do you think will accumulate more?

Options:-

- Alkaloids, Option ID: 2813,
- . Glucosinolates, Option ID: 2814,
- . Phenolics, Option ID: 2815,
- . Terpenes, Option ID: 2816,

Answer Given:- Not Attempted

Question ID:- 760

In animal cloning, donor somatic cells should be in which stage of cell cycle? Options:-

- •G1, Option ID: 3037,
- S, Option ID :- 3038,
- G2, Option ID: 3039,
- . G0, Option ID: 3040,

Answer Given:- Not Attempted

Question ID:- 713

A concentrated feed of substrate is added at a constant rate in a fed-batch reactor. If all the substrate is utilized, the specific growth rate (μ) pattern will be:

Options:-

- •Exponential growth with constant μ, Option ID :- 2849,
- Exponential growth with increasing μ , Option ID :- 2850,
- Growth with decreasing μ , Option ID :- 2851,
- Growth with fluctuating μ , Option ID :- 2852,

Answer Given:- Not Attempted

Question ID:- 753

Which command is suitable to list out all the directories in the working directory, in linux/unix environment?

Options:-

```
•Is -1|grep ^d , Option ID :- 3009,
```

- grep ^d | Is -1 , Option ID :- 3010,
- Is -I | grep ^d , Option ID :- 3011,
- Is | grep 'dir , Option ID :- 3012,

Answer Given:- Not Attempted

Question ID:- 640

A protein completely unfolds in 8 M Urea. The stability of the folded state in water is calculated to be 8 kCal/mole at 25°C. What is the likely ΔG of the following reaction in 8 M Urea?

A(native) → A(unfolded)

Choose the correct answer:

Options:-

- Zero , Option ID :- 2557,
- . Less than zero, Option ID: 2558,
- 82 kcal/mole, Option ID: 2559,
- 8 kcal/mole, Option ID: 2560,

Answer Given:- Not Attempted

Question ID:- 633

Given the molecular structure of glucose, the molecular formula and molecular weight of maltose will be:

Options:-

- •C₁₂H₂₄O₁₂, 360 Daltons , Option ID :- 2529,
- C₁₂H₂₄O₁₂, 460 Daltons , Option ID :- 2530,
- C₁₂H₂₂O₁₁, 342 Daltons, Option ID: 2531,
- C₁₂H₂₂O₁₁, 490 Daltons, Option ID: 2532,

Answer Given:- C₁₂H₂₂O₁₁, 342 Daltons , Option ID : -2531

Question ID:- 630

The CO-NH moiety between two C-alpha atoms constitutes the Peptide bond. The measured bond lengths (Angstroms) are: C(alpha)-CO (1.51); C=O (1.24); C-N(1.33); N-C(alpha)1.46. In which of these, there is a decrease from the expected bond length due to partial double bond character of the peptide bond?

Options:-

- .C(alpha)-CO, Option ID: 2517,
- C=0, Option ID :- 2518,
- . C-N, Option ID: 2519,
- N-C(alpha), Option ID :- 2520,

Answer Given: - C-N, Option ID: -2519

Question ID:- 747

Where is the greatest likelihood of the occurrence of a proline residue in a protein structure? Options:-

- .In the active site pocket, Option ID: 2985,
- . In the beta sheets, Option ID: 2986,
- In the turns and loops, Option ID: 2987,
- . In the alpha helices, Option ID: 2988,

Answer Given:- In the turns and loops, Option ID: -2987

Ouestion ID:- 688

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

Assertion A: Heating of preoptic anterior hypothalamic area of the brain caused profuse sweating and dilation of blood vessels of the skin.

Reason R: The above (in A) is to absorb more heat into the body and throw out waste from the

body.

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

Options:-

- .Both A and R are correct and R is the correct explanation of A, Option ID: 2749,
- Both A and R are correct but R is not the correct explanation of A, Option ID: 2750,
- A is correct but R is incorrect, Option ID: 2751,
- A is incorrect but R is correct, Option ID: 2752,

Answer Given:- A is correct but R is incorrect, Option ID: -2751

Question ID:- 727

In a batch culture of cells following Monod Kinetics, the declining log phase lasts longer when: Options:-

- •Initial substrate concentration is high, Option ID: 2905,
- . Initial substrate concentration is low, Option ID: 2906,
- K_s values are large, Option ID: 2907,
- K_s values are small, Option ID: 2908,

Answer Given:- Not Attempted

Question ID:- 734

The red color of beetroot is due to the presence of:

Options:-

- Betalains, Option ID: 2933,
- Anthocyanins, Option ID: 2934,
- Flavonoids, Option ID: 2935,
- . Carotenoids, Option ID: 2936,

Answer Given:- Not Attempted

Question ID:- 651

Given below are two statements:

Statement I: MacConkey agar is a media used for recovery of Gram positive bacteria from mixed bacterial culture.

Statement II: The bile salts and crystal violet in MacConkey agar inhibit growth of some bacteria.

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

Options:-

- •Both Statement I and II are true and Statement II is the correct explanation of Statement I, Option ID :- 2601,
- Both Statement I and II are true but Statement II is not the correct explanation of Statement I , Option ID :- 2602,
- Statement I is true but Statement II is false, Option ID: 2603,
- Statement I is false but Statement II is true, Option ID: 2604,

Answer Given:- Not Attempted

Question ID:- 622

What is the molarity of 100 g Glycine (75 Daltons) dissolved in 1 liter water? Options:-

•75.0 M, Option ID :- 2485,

- 0.0133 M, Option ID :- 2486,
 1.33 M, Option ID :- 2487,
 10.0 M, Option ID :- 2488,
- Answer Given: 1.33 M, Option ID: -2487

Question ID:- 714

For Bingham Plastics and pseudo plastic liquids, the apparent viscosity:

Options:-

- .Increases with increase in shear force, Option ID: 2853,
- Decreases with increase in shear force, Option ID: 2854,
- Remains constant with increase in shear force, Option ID: 2855,
- Changes in an unpredictable fashion with change in shear force, Option ID: 2856,
 Answer Given: Not Attempted

Ouestion ID:- 667

Which of the following statements are correct?

- A. Lipid bilayer lacking proteins is highly impermeable to all the charged molecules.
- B. Channels have specific binding pockets for the solute molecules they allow to pass.
- C. Transporters allow solutes to cross a membrane at much slower rates than do channels.
- D. The plasma membrane of many animal cells contains open K⁺ channels, yet the K⁺ concentration in the cytosol is much higher than outside the cell.
- E. The membrane potential of an axon temporarily becomes more negative when an action potential excites it.

Options:-

- .A, C, D, Option ID: 2665,
- A, C, E, Option ID: 2666,
- A, B, E, Option ID: 2667,
- B, D, E, Option ID: 2668,

Answer Given:- A, C, E, Option ID: -2666

Question ID:- 699

Which one of the following genes can be used to generate male sterile crop plants? Options:-

- Barnase, Option ID: 2793,
- . Bar, Option ID :- 2794,
- Lectinase, Option ID: 2795,
- . Chalcone Synthase, Option ID: 2796,

Answer Given:- Not Attempted

Question ID:- 705

A haploid sperm from one species and a haploid egg from another species may form a diploid interspecies hybrid. Meiosis in these plants generally fails but can also lead to rare duplicated gametes called:

- •Allopolyploid, Option ID: 2817,
- Aneuploid, Option ID: 2818,

- Autopolyploid, Option ID: 2819,
- . Heteroployploid, Option ID: 2820,

Answer Given:- Not Attempted

Question ID:- 678

T- cell clones in an individual recognize peptides only when bound and displayed by that individual's MHC molecules on the surface of antigen presenting cells. This process is known as: Options:-

- MHC selection, Option ID :- 2709,
- MHC restriction, Option ID: 2710,
- . MHC interaction, Option ID: 2711,
- MHC display, Option ID: 2712,

Answer Given:- Not Attempted

Question ID:- 685

Protein A used for the purification of IgG is isolated from: Options:-

- Staphylococcus aureus, Option ID: 2737,
- Streptomyces lividans, Option ID: 2738,
- Streptomyces pyogenes, Option ID: 2739,
- Staphylococcus carnosus, Option ID: 2740,

Answer Given:- Not Attempted

Question ID:- 709

In a plant transformation vector, the selectable marker gene is ideally located next to the "left border" of T-DNA region, because:

- A. Left border of T-DNA enters last into the plant cell.
- B. Right border of T-DNA enters last into the plant cell.
- C. It ensures complete transfer of T-DNA into the plant cell.

Choose the most appropriate answer from the options given below:

Options:-

- A and B Only, Option ID: 2833,
- . B and C Only, Option ID: 2834,
- . A and C Only, Option ID: 2835,
- . C Only , Option ID :- 2836,

Answer Given:- A and C Only, Option ID: -2835

Question ID:- 621

Green Fluorescent Protein (GFP) emits green light due to the presence of a: Options:-

- prosthetic fluorophore that emits green light., Option ID :- 2481,
- group of amino acids that are not found in other proteins., Option ID :- 2482,
- metal cofactor that shifts the emission to green wavelength., Option ID: 2483,
- \bullet post translational modification that generates a unique fluorophore., Option ID :- 2484,

Answer Given:- Not Attempted

Question ID:- 733

The principle microorganism for yogurt is:

Options:-

- .Streptococcus thermophilus, Option ID: 2929,
- . Lactobacillus acidophilus, Option ID: 2930,
- . Streptococcus lactis, Option ID: 2931,
- Leuconostoc citrovorum, Option ID: 2932,

Answer Given:- Not Attempted

Ouestion ID:- 756

Which one of the following cell separation techniques allows cells from different stages of the cell cycle to be separated simultaneously with minimal perturbation to their physiology?

Options:-

- counterflow centrifugal elutriation, Option ID: 3021,
- fluorescent activated cell sorter, Option ID: 3022,
- size exclusion chromatography, Option ID: 3023,
- . ultracentrifugation, Option ID: 3024,

Answer Given:- Not Attempted

Ouestion ID:- 765

Which one of the following method can be used to treat crude sewage and nitrify secondary effluent?

Options:-

- Duck weed ponds, Option ID: 3057,
- . Reed beds, Option ID: 3058,
- . Algal fish ponds, Option ID: 3059,
- Water hyacinth ponds, Option ID: 3060,

Answer Given:- Not Attempted

Question ID:- 741

Which one of the following can be considered as a Data Matrix? Options:-

- Your weight in kg, Option ID: 2961,
- Marks and ages of students in a classroom, Option ID: 2962,
- Name of a pet, Option ID: 2963,
- A list of things to do, Option ID: 2964,

Answer Given:- Not Attempted

Question ID:- 716

You wish to reduce the maximum shear rate in your reactor (given by impeller tip speed), without changing the power consumption (agitator power). For this, you will:

Options:-

- •Increase the diameter of impeller and reduce the RPM, Option ID :- 2861,
- Reduce the diameter of impeller and increase the RPM, Option ID: 2862,
- Reduce RPM only, Option ID: 2863,
- . Reduce diameter of impeller only, Option ID: 2864,

Answer Given:- Not Attempted

Question ID:- 694

Cryptochromes control photomorphogenesis in response to:

Options:-

- Red light, Option ID: 2773,
- Far-red light, Option ID: 2774,
- . Infra-red light, Option ID: 2775,
- Blue and UV-A light, Option ID :- 2776,

Answer Given:- Not Attempted

Question ID:- 624

How many times is the Ostrich egg bigger than the mitochondrion?

Options:-

- •100, Option ID: 2493,
- 1000, Option ID :- 2494,
- 10000, Option ID :- 2495,
- . 100000, Option ID: 2496,

Answer Given: - 100000, Option ID: -2496

Question ID:- 732

Which one of the following is NOT a food rich in Vitamin A?

Options:-

- .Potato, Option ID: 2925,
- . Squash, Option ID: 2926,
- . Sweet potato, Option ID: 2927,
- Spinach , Option ID :- 2928,

Answer Given:- Not Attempted

Question ID:- 717

An exponentially increasing feed of concentrated substrate is fed into a fed batch reactor to maintain a constant specific growth rate $0.35 \, h^{-1}$. If the feed is 5 ml/hr at time, t = 0, then feed after 4 hrs will be approximately:

Options:-

- •5 ml/hr, Option ID: 2865,
- 10 ml/hr, Option ID: 2866,
- 20 ml/hr , Option ID :- 2867,
- 80 ml/hr, Option ID: 2868,

Answer Given:- Not Attempted

Question ID:- 742

Which one of the following can be considered as an Atomic Vector? Options:-

- .Your name, Option ID: 2965,
- Your thoughts, Option ID: 2966,
- · Your marks in all subjects, Option ID: 2967,

· Your list of friends and their birthdays, Option ID: - 2968,

Answer Given:- Not Attempted

Question ID:- 689

Sleep loss may induce:

Options:-

- increased learning ability and increased body weight., Option ID :- 2753,
- increased memory loss and reduced infection., Option ID: 2754,
- increased memory retention, increased infection and reduced cognitive ability., Option ID :-2755,
- increased memory loss, compromised immune system, and deceased cognitive ability., Option ID :- 2756,

Answer Given:- increased memory loss, compromised immune system, and deceased cognitive ability., Option ID: -2756

Question ID:- 674

AIDS is caused by a human retrovirus that kills:

Options:-

- .B lymphocytes, Option ID: 2693,
- . Lymphocytes stem cells, Option ID: 2694,
- CD4-positive T-lymphocytes, Option ID: 2695,
- CD8-positive T-lymphocytes, Option ID: 2696,

Answer Given:- Not Attempted

Question ID:- 708

The most likely sub-cellular localization of NAC transcription factors is: Options:-

- .Nucleus, Option ID: 2829,
- Cytoplasm, Option ID: 2830,
- Mitochondria, Option ID: 2831,
- Plastid, Option ID: 2832,

Answer Given:- Not Attempted

Question ID:- 645

A 1 M Tris-HCl (pH 8.0) solution was diluted 10 fold. What will be the pH of the resulting solution?

Options:-

- •8.0, Option ID :- 2577,
- 7.0, Option ID :- 2578,
- 0.08, Option ID :- 2579,
- 0.8, Option ID :- 2580,

Answer Given:- Not Attempted

Question ID:- 730

For monoclonal antibody production, mammalian expression systems are preferred over bacterial expression systems, primarily because:

- mammalian cultures have better productivity, Option ID: 2917,
- mammalian cultures produce extra-cellular product simplifying the purification steps, Option ID
 2918,

- mammalian system provide necessary post-translational modifications, Option ID: 2919,
- mammalian genes can only be expressed in mammalian systems, Option ID: 2920,
 Answer Given: Not Attempted

Ouestion ID:- 677

Which one of the following is the most accurate statement regarding giardiasis? Options:-

- •The drug of choice for giardiasis is chloroquine., Option ID :- 2705,
- Giardia lamblia produces an enterotoxin that increases cAMP within the enterocyte, resulting in diarrhea., Option ID :- 2706,
- Giardia lamblia infection is acquired by ingestion of food or water contaminated with human feces only (i.e. there is no animal reservoir for this organism)., Option ID :- 2707,
- Infection by Giardia lamblia occurs principally in the small intestine frequently resulting in the malabsorption of protein and fat., Option ID :- 2708,

Answer Given:- Not Attempted

Question ID:- 763

In a water sample collected from an industrial cluster, the ratio of BOD:COD is found to be less than 0.3. Which one of the following may be presumed from this initial data?

Options:-

- •There are numerous carbon-based compounds in the sample which are not utilizable by the microbial population. , Option ID :- 3049,
- ullet The microbial population efficiently utilizes all the organic compounds present in the sample. , Option ID :- 3050,
- The water sample may contain carbohydrates that promote microbial growth. , Option ID :- 3051,
- The sample contains lipids and fatty acids which require less oxygen for breakdown. , Option ID :- 3052,

Answer Given:- Not Attempted

Question ID:- 690

Which one of the following is NOT a function of the glial cells in the brain?

Options:-

- Transporting neurotransmitter vesicles from soma to terminal., Option ID: 2757,
- Directing axons to their targets. , Option ID :- 2758,
- Promoting the survival of nascent neurons., Option ID: 2759,
- Forming the synapse. , Option ID :- 2760,

Answer Given:- Not Attempted

Ouestion ID:- 722

If in a bioreactor, the gas hold up (ε) is 0.1 and the average diameter of the air bubbles is 1 mm; then the interfacial area (of the air bubble – liquid interface), per unit reactor volume is:

- •6000 cm³/l , Option ID :- 2885,
- 600 cm³/l , Option ID :- 2886,
- 60 cm³/l , Option ID :- 2887,

• 6 cm³/l , Option ID :- 2888, Answer Given:- Not Attempted

Question ID:- 629

How many chiral centers are there in each of these two molecules?

Options:-

- •1 and 1, Option ID :- 2513,
- 1 and 2, Option ID :- 2514,
- 2 and 2, Option ID :- 2515,
- 4 and 3, Option ID :- 2516,

Answer Given:- 1 and 2, Option ID: -2514

Question ID:- 754

Which regions of the genome are best suited for generating DNA Barcodes for species identification?

Options:-

- •Organellar genes, Option ID: 3013,
- . Ribosomal genes, Option ID: 3014,
- . Histone genes, Option ID: 3015,
- . Non coding regions of the genome, Option ID: 3016,

Answer Given:- Not Attempted

Question ID:- 707

Given below are two statements:

Statement I: Large subunit of rubisco is encoded by chloroplast genome while small subunit of Rubisco is encoded by nuclear genome

Statement II: Small subunit of rubisco has a transit peptide, which is cleaved off at the time of its translocation into plastids.

Choose the correct answer from the options given below:

Options:-

- •Both Statement I and Statement II are true, Option ID: 2825,
- Both Statement I and Statement II are false, Option ID: 2826,
- Statement I is true but Statement II is false, Option ID: 2827,
- Statement I is false but Statement II is true, Option ID: 2828,

Answer Given:- Not Attempted

Question ID:- 636

Which one of the molecular processes utilize 2', 3' Dideoxy-ribonucleoside triphosphates?

- DNA synthesis for primers., Option ID: 2541,
- Okazaki fragment formation during lagging strand synthesis., Option ID: 2542,

- DNA sequencing by synthesis., Option ID: 2543,
- . Transcript chain elongation., Option ID: 2544,

Answer Given: - DNA sequencing by synthesis. , Option ID: -2543

Question ID:- 720

A continuous reactor has a productivity of 0.5 g/l/h. The volume of reactor required to produce 1.2 ton/day of the product is:

Options:-

- •100 L , Option ID :- 2877,
- 1 m³, Option ID :- 2878,
- 10 m³, Option ID: 2879,
- 100 m³, Option ID: 2880,

Answer Given: - 100 m³, Option ID: -2880

Question ID:- 626

What may be the simplest and most inexpensive way to know that the product is formed in the reaction given below?

Options:-

- Mass spectrometry, Option ID: 2501,
- . Reverse Phase HPLC, Option ID: 2502,
- CD spectroscopy, Option ID: 2503,
- Change of color upon addition of alkali, Option ID: 2504,

Answer Given:- Not Attempted

Ouestion ID:- 652

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

Assertion A: Mycoplasma is a bacteria without cell wall, and it stains negative in Gram staining. Reason R: Only bacteria that have a cell wall would stain positive in Gram staining.

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

Options:-

- •Both A and R are true and R is the correct explanation of A, Option ID: 2605,
- Both A and R are true but R is not the correct explanation of A, Option ID: 2606,
- . A is true but R is false, Option ID: 2607,
- . A is false but R is true, Option ID: 2608,

Answer Given:- Not Attempted

Question ID:- 662

Match the items in left column with those in the right column :

Choose the correct answer from the options given below:

Options:-

```
•A-V, B-IV, C-I, D-III, E-II, Option ID: - 2645,
```

- A-III, B-IV, C-I, D-V, E-II, Option ID: 2646,
- A-V, B-IV, C-II, D-III, E-I, Option ID: 2647,
- A-III, B-IV, C-II, D-V, E-I, Option ID: 2648,

Answer Given:- A-V, B-IV, C-I, D-III, E-II, Option ID: -2645

Question ID:- 641

A following reaction is occurring in a test tube:

$$A + B \rightleftharpoons C$$

100 nM solution of A is incubated with an equal volume of 100 nM solution of B and left at 25°C till the equilibrium is reached. Finally, when the concentration of A is measured, it is found to be 10 nM. What is the approximate concentration of C when 2 nM solution of A is incubated with an equal volume of 100 nM solution of B under identical conditions?

Choose the correct answer:

Options:-

```
., Option ID:-,
```

.0.95 nM, Option ID: - 2561,

., Option ID: - 2561,

.0.8 nM, Option ID: - 2562,

., Option ID: - 2562,

.0.1 nM, Option ID: - 2563,

• 10 nM, Option ID: - 2564,

Answer Given:- Not Attempted

Question ID:- 634

What will be the absorbance of a 1 mM solution of molecule X whose molar extinction coefficient is 1000 M⁻¹cm⁻¹ & path length of the cuvette used is 1 cm?

Options:-

```
•1.0, Option ID :- 2533,
```

• 0.1, Option ID :- 2534,

• 0.5, Option ID: - 2535,

• 2.0, Option ID: - 2536,

Answer Given:- Not Attempted

Question ID:- 695

Which one among the following is an important constituent of RNA induced silencing complex in plants?

Options:-

- Argonaute , Option ID :- 2777,
- LHP1, Option ID: 2778,
- RNaseP , Option ID :- 2779,
- RNA dependent RNA polymerase, Option ID: 2780,

Answer Given:- Not Attempted

Question ID:- 698

One centimorgan is defined as the genetic distance between two loci with a statistically corrected recombination frequency of:

Options:-

- .0.1%, Option ID: 2789,
- 0.5%, Option ID: 2790,
- 1.0%, Option ID: 2791,
- 5.0%, Option ID :- 2792,

Answer Given: - 1.0%, Option ID: -2791

Question ID:- 757

Choose the correct statement in respect to metazoan development:

Options:-

- •Delta is a cell surface protein while Notch is an intracellular protein., Option ID: 3025,
- Notch is a cell surface protein while Delta is an intracellular protein., Option ID: 3026,
- Delta and Notch are not present on the same cell. , Option ID :- 3027,
- Notch and Delta both are cell surface proteins present on the same precursor cell., Option ID:-3028.

Answer Given:- Delta and Notch are not present on the same cell., Option ID: -3027

Question ID:- 659

Arrange the following chemical bonds/interactions in the order of their strengths in vacuum -

Hydrogen bond, Covalent bond, van der Waals attraction and Ionic bond:

Options:-

- Covalent bond > Ionic bond> hydrogen bond > van der Waals attraction, Option ID: 2633,
- Ionic bond> Covalent bond > hydrogen bond > van der Waals attraction, Option ID: 2634,
- Covalent bond > Ionic bond > van der Waals attraction > hydrogen bond, Option ID: 2635,
- Ionic bond > Covalent bond > van der Waals attraction > hydrogen bond , Option ID :- 2636,
 Answer Given:- Ionic bond > Covalent bond > hydrogen bond > van der Waals attraction , Option ID :-2634

Question ID:- 671

Differential expression of the genetic material depending on its parentage of inheritance is known as:

- Penetrance , Option ID :- 2681, Expressivity , Option ID :- 2682, . Epistasis, Option ID: - 2683, • Genomic imprinting, Option ID: - 2684, Answer Given: Penetrance, Option ID: -2681 **Question ID:- 755** Which one of the following is true for PAM250 Scoring Matrix? **Options:-**.It is used for structural database search., Option ID: - 3017, It is based on an evolutionary model that predicts the types of amino acid changes over long periods of time., Option ID: - 3018, It can be used to score alignments for nucleotide changes over long periods of time.
 Option ID :- 3019, It can distinguish synonymous and non-synomynous mutations. , Option ID: - 3020, **Answer Given:- Not Attempted Ouestion ID:- 768** Ground shark cartilage ointment is popular for its role in fast wound recovery. The active ingredient primarily responsible for this function is: **Options:-** N-acetylglucosamine, Option ID: 3069, Hydroxyproline, Option ID: 3070, • Dihydroxyproline, Option ID: - 3071, • 3,4-dihydroxyphenylalanine (DOPA), Option ID: - 3072, **Answer Given:- Not Attempted Question ID:- 770** Choose the correct option to fill up the blanks: _ nourish the host coral as well as help it deposit its skeleton. They perform _ and pass on some of the _____ they make to the coral. **Options:-**
- hermatypic corals, scavenging, organic matter, Option ID: 3077,
- scleractinian, respiration, calcium, Option ID: 3078,
- ahermatypic corals, synthesis, calcium, Option ID: 3079,
- Zooxanthellae, photosynthesis, organic matter, Option ID :- 3080,

Answer Given:- Not Attempted

Question ID:- 724

In an enzyme catalyzed reaction following Michaelis-Menten kinetics, both the enzyme amount and substrate (S) are doubled and we observe that the reaction rate is also doubled. From this, we can conclude that:

Options:-

- Enzyme amount has no effect on enzyme kinetics, Option ID: 2893,
- The substrate is toxic to enzyme, Option ID: 2894,
- Initial substrate (S) concentration << K_m, Option ID :- 2895,

Initial substrate (S) concentration >> K_m, Option ID :- 2896,
 Answer Given:- Not Attempted

Question ID:- 744

Which one of the following is NOT a Data Type?

Options:-

- •Numeric, Option ID: 2973,
- String, Option ID: 2974,
- . Logical, Option ID: 2975,
- Thread , Option ID :- 2976,
 Answer Given:- Not Attempted

Question ID:- 703

A spectrum that depicts the magnitude of response of a biological system to light as a function of wavelength is called:

Options:-

- Action spectrum, Option ID: 2809,
- Absorption spectrum, Option ID: 2810,
- Visible spectrum, Option ID :- 2811,
- . Hypothetical spectrum, Option ID: 2812,

Answer Given:- Not Attempted

Question ID:- 696

miRNAs are major regulators of gene expression. In an experiment, it was observed that gene 'X' is a direct target of miRNA 'A'. Upon overexpression of miRNA 'A' in *Arabidopsis thaliana*:

Options:-

- only transcript abundance of X will be affected, Option ID: 2781,
- the resultant protein X will be of smaller size, Option ID: 2782,
- only specific activity of protein X will get reduced, Option ID: 2783,
- both transcript and protein abundance of X may get reduced, Option ID: 2784,
 Answer Given: Not Attempted

Question ID:- 676

Which one of the following is the drug of choice for sexually transmitted diseases urethritis and cervicitis caused by *Chlamydia trachomatis*?

Options:-

- Ampicillin , Option ID :- 2701,
- Ciprofloxacin , Option ID :- 2702,
- . Rifampin, Option ID: 2703,
- Azithromycin , Option ID :- 2704,

Answer Given:- Not Attempted

Question ID:- 660

Which one of the following is NOT a major checkpoint in the cell division cycle of eukaryotic cell?

Options:-

- .Beginning of S-phase, Option ID: 2637,
- . Transition from S to G2 phase, Option ID: 2638,
- Transition from G2 to M phase, Option ID: 2639,
- Transition from Metaphase to Anaphase during Mitosis, Option ID: 2640, Answer Given: Transition from G2 to M phase, Option ID: -2639

Question ID:- 726

Penicillin titers have been increased more than 1000 fold by classical mutagenesis from the original Fleming strain. The reason behind this increase in the titer is:

Options:-

- .Increase in the promoter strength of the penicillin encoding genes, Option ID: 2901,
- Increase in the stability of the mRNA of these genes, Option ID: 2902,
- Increase in the stability of the proteins encoded by these genes, Option ID: 2903,
- Removal of the regulatory controls in the penicillin pathway, Option ID: 2904,
 Answer Given: Not Attempted

Question ID:- 691

Skotomorphogenesis is characterized by:

Options:-

- •Small and closed cotyledons and elongated hypocotyl, Option ID :- 2761,
- Fully open cotyledons, Option ID: 2762,
- Robust foliage and root growth, Option ID: 2763,
- Early flowering resulting from short-day conditions, Option ID :- 2764, Answer Given:- Early flowering resulting from short-day conditions, Option ID : -2764

Question ID:- 623

What will be the molecular weight of the tri-peptide Trp-Gly-His? Molecular weights of Trp, Gly, and His are 204.2, 75.07, and 155.2 respectively.

Options:-

```
•434.47 , Option ID :- 2489,
```

• 300.00 , Option ID :- 2490,

• 398.47 , Option ID :- 2491,

• 502.25 , Option ID :- 2492,

Answer Given: - 398.47 , Option ID : -2491

Question ID:- 767

Due to the difficulty of isolating and culturing, many marine microorganisms are regarded as "viable but non-culturable" (VBNC). Which one of the following is a suitable method to hunt for useful genes in these organisms?

Options:-

- in situ cultivation, Option ID: 3065,
- growing them in a large bioreactor, Option ID: 3066,
- barcode sequencing, Option ID: 3067,

 metagenomic analysis, Option ID: 3068, Answer Given: Not Attempted

Question ID:- 632

How many different kinds of post translational modifications are present in this peptide?

Options:-

- •One, Option ID :- 2525,
- Two, Option ID :- 2526,
- Four, Option ID :- 2527,
- . Nine, Option ID :- 2528,

Answer Given:- Not Attempted

Question ID:- 683

RTS,S vaccine for malaria consists of the central repeat (R) region derived from *Plasmodium* falciparum circumsporozoite protein (CSP) that is genetically fused to the T-cell epitope (T) and surface antigen (S) regions derived from:

Options:-

- Vaccinia virus , Option ID :- 2729,
- . Hepatitis B virus, Option ID: 2730,
- Adenovirus , Option ID :- 2731,
- . Influenza virus, Option ID: 2732,

Answer Given:- Not Attempted

Question ID:- 663

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

Assertion A: Histones bind to DNA with high affinity.

Reason R: Histones are small proteins rich in valine and isoleucine residues.

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

Options:-

- •Both A and R are true and R is the correct explanation of A., Option ID: 2649,
- Both A and R are true but R is not the correct explanation of A., Option ID: 2650,
- . A is true but R is false., Option ID: 2651,
- A is false but R is true., Option ID: 2652,

Answer Given:- Not Attempted

Question ID:- 627

What will be the final concentration of the solute when 10 ml of its 10 M solution is mixed with 990 ml solvent?

Options:-

- •1 M, Option ID :- 2505,
- 0.1 M, Option ID :- 2506,
- 10 M, Option ID :- 2507,

• 0.001 M, Option ID :- 2508, Answer Given:- 0.1 M, Option ID : -2506

Question ID:- 642

A protein sample isolated from natural source was electrophoresed on a non-reducing SDS-PAGE. It migrated as a band corresponding to 60 kDa. When the same protein was electrophoresed on a native-PAGE its migration corresponded to a 120 kDa marker protein. What is a reasonable inference?

Options:-

- •The protein is a dimer of 60 kDa subunits that are not linked with disulfides., Option ID: 2565,
- The protein has two 60 kDa subunits that are linked with disulfides., Option ID: 2566,
- No inference concerning protein size can be drawn since proteins don't run according to their masses in native PAGE., Option ID: 2567,
- The protein is unusually rich in aspartic and glutamic acid., Option ID: 2568,
 Answer Given: Not Attempted

Question ID:- 700

Which one among the following is the correct function of leghaemoglobin?

Options:-

- It sequesters oxygen to facilitate nitrogen fixation, Option ID: 2797,
- It protects nitrogenase from CO₂, Option ID: 2798,
- It facilitates the supply of CO₂ to nitrogen fixing bacteria, Option ID: 2799,
- It binds to nitrogen and moves it out of the nodule , Option ID :- 2800,
 Answer Given:- It sequesters oxygen to facilitate nitrogen fixation , Option ID : -2797

Question ID:- 769

Which one of the following is NOT extracted from seaweeds:

Options:-

- ·Agar, Option ID: 3073,
- . Alginate, Option ID: 3074,
- Calcium, Option ID: 3075,
- Aginomoto , Option ID :- 3076,

Answer Given: - Aginomoto , Option ID: -3076

Question ID:- 766

Identify the correct statement about Fucoidans:

Options:-

- •Fucoidans are iron containing proteins, found in blue green algae., Option ID: 3061,
- Fucoidans are sulphur containing amino acids found in marine derived proteins. , Option ID :- 3062.
- Fucoidans are iron containing lipopolysaccharides found in algal biomass. , Option ID :- 3063,
- Fucoidans are sulfated polysaccharides, found in brown algae, that contain L-fucose among their constituent sugars. , Option ID :- 3064,

Answer Given:- Not Attempted

Ouestion ID:- 693

The ligand binding domain of a ligand gated channel (LGC) has a serine residue, phosphorylation of which is essential for ligand binding. By site directed mutagenesis it was replaced by aspartic acid. The likely consequences will be:

Options:-

- LGC becomes non-functional, Option ID: 2769,
- LGC becomes constitutively active, Option ID: 2770,
- No change in function, Option ID: 2771,
- It will rapidly shift between active and inactive forms, Option ID: 2772,
 Answer Given: Not Attempted

Question ID:- 639

15 to 30% of collagen residues are 4-hydroxyproline residues (Hyp). When rats are fed with ¹⁴C labeled Hyp, the collagen produced by them is not radioactive, but when they are fed with ¹⁴C labeled Proline, the collagen produced is radioactive. What is the most plausible reason?

Options:-

- •Hyp is an essential amino acid in rats., Option ID: 2553,
- Free Hyp is dehydroxylated to form Proline in the rats., Option ID: 2554,
- Proline residues are hydroxylated once they are incorporated into collagen in rats. , Option ID : 2555,
- Free ¹⁴C labelled Hyp is degraded in rats., Option ID: 2556,

Answer Given:- Proline residues are hydroxylated once they are incorporated into collagen in rats. , Option ID: -2555

Question ID:- 738

Given below are two statements:

Statement I: RNA secondary structure is composed primarily of double-stranded RNA regions formed by folding of the single-stranded molecule back on itself.

Statement II: Like protein secondary structure, RNA secondary structure can be conveniently viewed as an intermediate step in the formation of a three-dimensional structure.

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

Options:-

- Both Statement I and Statement II are correct, Option ID: 2949,
- Both Statement I and Statement II are incorrect, Option ID: 2950,
- Statement I is correct but Statement II is incorrect, Option ID: 2951,
- Statement I is incorrect but Statement II is correct, Option ID: 2952,
 Answer Given: Not Attempted

Ouestion ID:- 664

The color of emitted light of Quantum dots used in fluorescence microscopy depend on: Options:-

- •The antibody they are coupled with, Option ID :- 2653,
- The size of the nanocrystal, Option ID: 2654,
- Time at which they are visualized, Option ID: 2655,

• The material that coats them, Option ID: - 2656,

Answer Given:- Not Attempted

Question ID:- 711

If an enzyme is NOT damaged during the process of entrapment in a bead, then internal pore diffusion will:

Options:-

- Change the observed V_{max} only, Option ID: 2841,
- Change the observed K_m only , Option ID :- 2842,
- \bullet Change both the V_{max} and K_m , Option ID :- 2843,
- ullet Both the observed V_m and K_m will remain unchanged , Option ID :- 2844,

Answer Given:- Not Attempted

Question ID:- 723

A Continuous Stirred Tank Reactor (CSTR) is running at a dilution (D) of 0.3 h⁻¹ and the product formed is growth associated with $Y_{P/x} = 0.2$ g/g. In order to obtain productivity = 1.2 gl⁻¹h⁻¹ we need to have at steady state a biomass concentration of:

Options:-

- •0.8 g/l, Option ID :- 2889,
- 1.8 g/l, Option ID :- 2890,
- . 0.072 g/l, Option ID :- 2891,
- . 20 g/l, Option ID :- 2892,

Answer Given:- Not Attempted

Ouestion ID:- 758

The technique used in animal biotechnology for rapid multiplication and production of animals with a desired genotype is:

Options:-

- Protoplast fusion and embryo transfer, Option ID: 3029,
- Hybrid selection and embryo transfer, Option ID: 3030,
- In vitro fertilization and embryo transfer, Option ID: 3031,
- Nuclear injection of genetic material and embryo transfer, Option ID: 3032,

Answer Given:- Not Attempted

Question ID:- 719

In an ideal Continuous Stirred Tank Reactor (CSTR) at steady state: Options:-

- •All particles have the same residence time., Option ID: 2873,
- Particles which enter the reactor earlier have a higher probability of leaving than those that enter later., Option ID :- 2874,
- Particles which enter the reactor later have a higher probability of leaving than those that enter earlier., Option ID :- 2875,
- All the particles have equal probability of leaving, independent of their time of entry into the reactor., Option ID :- 2876,

Answer Given:- Not Attempted

Question ID:- 749

Which family of proteins has the greatest likelihood of containing a Leucine-zipper motif?

Options:-

- .Serine proteases, Option ID: 2993,
- Map kinases, Option ID: 2994,
- Transcription factors, Option ID: 2995,
- . Sugar binding proteins, Option ID: 2996,

Answer Given: - Transcription factors , Option ID : -2995

Question ID:- 646

When ice absorbs latent heat at a constant pressure to melt from solid to liquid state at constant temperature, which of the following changes are happening?

- A. Entropy of the system is increasing.
- B. C_p (heat capacity at constant pressure) of the system is infinite or undefined.
- C. Enthalpy of the system is increasing.
- D. C_p of the system is zero.

Choose the correct answer:

Options:-

- .A, B, C, Option ID: 2581,
- . A, C, D, Option ID: 2582,
- A, B, Option ID: 2583,
- . C, D, Option ID: 2584,

Answer Given:- Not Attempted

Question ID:- 697

VirA and VirG form a two component signaling system during Agrobacterium infection in plants. In an experiment, VirG was mutated resulting in nonfunctional VirG protein. Which one of the following consequences is most likely?

Options:-

- Signaling leading to successful Agrobacterium infection will not be affected, Option ID: 2785,
- Phenolic signal will be perceived but not transduced, Option ID: 2786,
- Phenolic signal will not be perceived, Option ID: 2787,
- VirD1 will take over the function of VirG, Option ID: 2788,

Answer Given:- Not Attempted

Question ID:- 656

DNA isolated from four unidentified species of bacteria – A, B, C and D has been estimated to have 38%, 26%, 24% and 12% thymine, respectively. One of these four species was isolated from a hot spring (64°C). Identify the candidate which is most likely to be a thermophilic bacterium. Options:-

- •A, Option ID :- 2621,
- B, Option ID :- 2622,
- C, Option ID :- 2623,
- . D, Option ID: 2624,

Answer Given:- Not Attempted

Question ID:- 710

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

Assertion A: Phosphomannose isomerase (PMI) from *E. coli* was used as selection marker to develop 'golden rice 2'.

Reason R: When mannose is added in the selection media, endogenous hexokinase converts mannose into mannose-6-phosphate which blocks glycolysis, ATP production, and represses transcription of photosynthetic genes, resulting in slower growth of non-transformed plants. PMI, on the other hand, converts mannose-6-phosphate to fructose-6-phosphate.

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

Options:-

- •Both A and R are true and R is the correct explanation of A, Option ID: 2837,
- Both A and R are true but R is not the correct explanation of A, Option ID: 2838,
- . A is true but R is false, Option ID: 2839,
- A is false but R is true, Option ID: 2840,

Answer Given:- Not Attempted

Question ID:- 665

Which one of the following properties of naturally occurring D-amino acids is INCORRECT:

Options:-

- •Peptides arising from them are more susceptible to attack by peptidases., Option ID: 2657,
- They are components of bacterial cell wall., Option ID: 2658,
- Peptides arising from them are not synthesized by ribosomal machinery., Option ID: 2659,
- They are components of many bacterially produced peptide antibiotics. , Option ID :- 2660,
 Answer Given:- Not Attempted

Question ID:- 648

Which one of the immunodeficiency is caused by a mutation in BTK gene:

Options:-

- X-linked SCID , Option ID :- 2589,
- X-linked agammaglobulinemia, Option ID: 2590,
- DiGeorge syndrome, Option ID: 2591,
- Chronic granulomatous disease, Option ID: 2592,

Answer Given:- Not Attempted

Ouestion ID:- 628

Which enzyme will digest RNA in a DNA-RNA Hybrid? Options:-

- .RNase A, Option ID: 2509,
- BamHI, Option ID :- 2510,
- Reverse transcriptase, Option ID: 2511,
- RNAse H, Option ID: 2512,

Answer Given:- RNAse H, Option ID: -2512

Question ID:- 759

In animal cloning protocol, while performing enucleation, which chemical is used for relaxing the cellular cytoskeleton?

Options:-

- •Phytohaemagglutinin, Option ID: 3033,
- Cytochalasin B, Option ID: 3034,
- Pronase, Option ID: 3035,
- . Heparin, Option ID: 3036,

Answer Given:- Not Attempted

Question ID:- 684

Short Chain variable fragments (ScFv) of antibody are composed of :

Options:-

- $_{\bullet}V_{H}$ and V_{L} domains with C_{H} domain , Option ID :- 2733,
- \bullet V_H and V_L domains along with Fc region , Option ID :- 2734,
- V_H and V_L domains , Option ID :- 2735,
- Only Complementarity Determining Regions, Option ID: 2736,

Answer Given:- Not Attempted

Question ID:- 715

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

Assertion A: In size exclusion chromatography, larger proteins elute earlier and smaller proteins elute later.

Reason R: When matrices like sephadex are used, the partitioning of protein molecules between liquid and solid phases is a function of protein size.

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

Options:-

- •Both A and R are true and R is the correct explanation of A, Option ID: 2857,
- Both A and R are true and R is not the correct explanation of A, Option ID: 2858,
- A is true but R is false, Option ID: 2859,
- . A is false but R is true, Option ID: 2860,

Answer Given:- A is false but R is true, Option ID: -2860

Question ID:- 661

Which one of the following CANNOT be used for progressive global multiple sequence alignment?

Options:-

- ClustalW, Option ID: 2641,
- LALIGN , Option ID :- 2642,
- PILEUP, Option ID: 2643,
- . T-COFFEE, Option ID: 2644,

Answer Given:- Not Attempted

Question ID:- 702

In plants, the overexpression of lectin genes confers resistance to: Options:-

Virus, Option ID :- 2805,

```
• Insects, Option ID :- 2806,
```

- Fungus, Option ID: 2807,
- Bacteria, Option ID :- 2808,

Answer Given:- Not Attempted

Question ID:- 743

Which one of the following lines of unix commands can tell you the number of lines in a file?

Options:-

```
    pc - f , Option ID :- 2969,
    ls - a , Option ID :- 2970,
    df - h , Option ID :- 2971,
    wc - I , Option ID :- 2972,
    Answer Given:- Not Attempted
```

Ouestion ID:- 761

Arrange these soluble cations (Na, Ca, K, Mg) in ascending order of abundance of soluble cations found in saline water bodies:

Options:-

```
Na > Mg > Ca > K , Option ID :- 3041,
Mg > Na > Ca > K , Option ID :- 3042,
K > Mg > Ca > Na , Option ID :- 3043,
Na > Mg > K > Ca , Option ID :- 3044,
Answer Given:- Not Attempted
```

Question ID:- 670

Which one of the following organisms is NOT an obligate intracellular parasite and, therefore, can grow on bacteriological media?

Options:-

```
Mycoplasma, Option ID: 2677,
```

- Chlamydia , Option ID :- 2678,
- . Rickettsia, Option ID: 2679,
- Adenovirus , Option ID :- 2680,

Answer Given:- Not Attempted

Question ID:- 728

The entropy of a growing cell does NOT keep increasing continuously because:

Options:-

- •The cell is a highly structured system, Option ID: 2909,
- The information content in the DNA is very high, Option ID: 2910,
- Various regulatory loops provide feedback to the system, Option ID: 2911,
- The cell is an open system allowing both matter and energy to be exchanged with surroundings , Option ID :- 2912,

Answer Given:- The cell is an open system allowing both matter and energy to be exchanged with

```
surroundings, Option ID: -2912
Question ID:- 650
TATA box involved in the initiation of transcription is located in the:
Options:-
Promoter region, Option ID: - 2597,

    Enhancer region, Option ID: - 2598,

• Exon region, Option ID: - 2599,
. Intron region, Option ID: - 2600,
Answer Given:- Promoter region, Option ID: -2597
Question ID:- 654
A specialized histone associated with the centromeric region of the chromosome is:
Options:-
CenH3, Option ID :- 2613,
• H2A.Z, Option ID :- 2614,
. H3.3, Option ID :- 2615,

    H2A.X, Option ID :- 2616,

Answer Given: - CenH3, Option ID: -2613
Question ID:- 673
Which form of the plasmodia is transmitted from mosquito to human?
Options:-
Sporozoite, Option ID: - 2689,
. Gametocyte, Option ID: - 2690,

    Merozoite, Option ID: - 2691,

    Hypnozoite, Option ID: - 2692,

Answer Given: - Sporozoite, Option ID: -2689
Ouestion ID:- 725
A diafiltration process is used to remove salts from a protein solution of 1L. After 1L of make-up
buffer (without salts) has been added to this system, the residual salt concentration would be
           of the original.
Options:-
•50%, Option ID :- 2897,
. 36%, Option ID: - 2898,
• 10%, Option ID: - 2899,
• 5%, Option ID: - 2900,
Answer Given:- Not Attempted
Ouestion ID:- 712
In an external recycle reactor (CSTR with external recycle), the outlet stream is concentrated 20
fold with respect to biomass and half of this concentrated cells is fed back into the reactor.
In such a situation, washout will take place when dilution rate (D) -
Options:-
•is equal to μ<sub>max</sub>, Option ID :- 2845,
• is around 2 \mu_{max}, Option ID :- 2846,
• is around 0.5 \mu_{max}, Option ID :- 2847,

    Washout will never take place, Option ID: - 2848,
```

Answer Given:- Not Attempted

Question ID:- 686

In a neuronal culture experiment, the effect of a chemical (under study) was prevented by pretreating the cells with prazosin, an alpha1 adrenoceptor antagonist but not by propranolol, a beta adrenoceptor antagonist. The chemical under study is likely to be:

Options:-

- .Acetylcholine or carbachol, Option ID: 2741,
- Orexin or serotonin, Option ID: 2742,
- GABA or glutamate, Option ID: 2743,
- Noradrenaline or methoxamine, Option ID: 2744,

Answer Given:- Not Attempted

Question ID:- 637

Proteins are glycosylated in the endoplasmic reticulum. In the final structures, the glycan moieties are typically present:

Options:-

- on the surface of these proteins., Option ID: 2545,
- in the core of these proteins., Option ID: 2546,
- on the surface as well as in the core of these proteins. , Option ID :- 2547,
- on the membrane inserted segments of these proteins., Option ID: 2548,

Answer Given:- on the membrane inserted segments of these proteins., Option ID: -2548

Print ResponseSheet

View Your Responses

Challenge of Questions

View Challenged Questions

Challenge of Questions

#	Post Name	Question Id	Correct Option	Option I	ld For Ch	allenge			Remarks
1	ВЕТ	571	2284	2281	2282	2283	2284	None of These	
2	ВЕТ	572	2287	2285	2286	2287	2288	None of These	
3	ВЕТ	573	2290	2289	 2290			None of These	
4	ВЕТ	574	2294	2293				None of These	
5	ВЕТ	575	2297	2297			2300	None of These	
6	ВЕТ	576	2302	2301	2302	2303	2304	None of These	
7	ВЕТ	577	2306	2305	 2306	 2307	2308	None of These	
8	BET	578	2309	2309	 2310			None of These	
9	BET	579	2316	2313				None of These	
10	BET	580	2318	2317	 2318	 2319	 2320	None of These	
11	ВЕТ	581	2322	2321	2322	2323	2324	None of These	
12	BET	582	2328	2325			2328	None of These	
13	ВЕТ	583	2331	2329	2330	2331	2332	None of These	
14	BET	584	2336	2333	2334	2335	2336	None of These	

586 ET 587 ET 588 ET 589 ET 590 ET 591	2346 2350 2354	2345 2 2349 2 2353 2	2342 2346 2350	2343 2347 2347 2351	2344 2348 2348	None of These None of These	
588 ET 589 ET 590	2350	2345 2 2349 2 2353 2	2350			These	
589 ET 590	2354	2349 2 2353 2		2351	2352		
ET 590			 2354			☐ None of These	2.
	2360			2355	 2356	None of These	2
ET 591		2357 2	 2358	2359	 2360	None of These	
1	2362	2361 2	 2362	2363		None of These	2
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ET 593	2371	2369 2	 2370	 2371		None of These	
ET 594	2374	2373 2	 2374	2375	 2376	None of These	
ET 595	2379	2377 2	 2378	 2379	2380	None of These	
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ET 597	2386	2385 2	 2386	2387	2388	None of These	
ET 598	2391	2389 2	 2390	2391	2392	None of These	
ET 599	2395	2393 2	 2394	2395	2396	None of These	
ET 600	2400	2397 2	 2398	2399	2400	None of These	
ET 601	2404	2401 2	 2402	2403	2404	None of These	
	2406	2405 2				None of	
	595 - 596 - 597 - 598 - 600	595 2379 596 2383 597 2386 598 2391 599 2395 600 2400 601 2404	2373 2 2373 2 2373 2 2377 2 2377 2 2377 2 2381 2 2381 2 2381 2 2385 2 2385 2 2389 2 2393 2 2393 2 2400 2397 2 2401 2	2373 2374 2373 2374 2373 2374 2377 2378 2387 2378 2381 2382 2381 2382 2381 2382 2381 2382 2385 2386 2389 2390 2393 2394 2400 2400 2397 2398 2401 2402	2373 2374 2375 595 2379 377 2378 2379 596 2383 3281 2382 2383 597 2386 2385 2386 2387 598 2391 3289 2390 2391 599 2395 32394 2395 600 2400 32397 2398 2399 601 2404 2401 2402 2403	2373 2374 2375 2376 595 2379 377 2378 2379 2380 596 2383 32381 2382 2383 2384 597 2386 2385 2386 2387 2388 598 2391 32389 2390 2391 2392 599 2395 32393 2394 2395 2396 600 2400 32397 2398 2399 2400 601 2404 2401 2402 2403 2404	2373 2374 2375 2376 These 595 2379

			2409	2410	2411	2412	None of These	
BET	604	2413	2413				None of These	
BET	605	2417	2417		 2419	 2420	None of These	
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BET	608	2431	2429	 2430	 2431		None of These	
BET	609	2434	2433		 2435	 2436	None of These	
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BET	613	2451	2449				None of These	
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BET	615	2457	2457			 2460	None of These	
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BET	617	2468	2465			2468	None of These	
BET	618	2469	2469				None of These	
BET	619	2473	2473				None of These	
BET	620	2480	2477		 2479	2480	None of These	
	BET BET BET BET BET BET BET BET	BET 605 BET 606 BET 607 BET 608 BET 610 BET 611 BET 612 BET 613 BET 614 BET 615 BET 616 BET 616 BET 617 BET 618	BET 605 2417 BET 606 2421 BET 607 2426 BET 608 2431 BET 609 2434 BET 610 2438 BET 611 2443 BET 612 2445 BET 613 2451 BET 614 2453 BET 615 2457 BET 616 2464 BET 617 2468 BET 618 2469 BET 619 2473	BET 605 2417 2417 BET 606 2421 2421 BET 607 2426 2425 BET 608 2431 2429 BET 609 2434 2433 BET 610 2438 2437 BET 611 2443 2441 BET 612 2445 2445 BET 613 2451 2449 BET 614 2453 2453 BET 615 2457 2457 BET 616 2464 2461 BET 617 2468 2465 BET 618 2469 2469 BET 619 2473 2473 BET 620 2480	BET 605 2417 2418 BET 606 2421 2421 2422 BET 607 2426 2425 2426 BET 608 2431 2429 2430 BET 609 2434 2433 2434 BET 610 2438 2437 2438 BET 611 2443 2441 2442 BET 612 2445 2445 2446 BET 613 2451 2499 2450 BET 614 2453 2453 2454 BET 615 2457 2458 BET 616 2464 2461 2462 BET 617 2468 2465 2466 BET 619 2473 2473 2474 BET 620 2480 0 0	BET 605 2417 2418 2419 BET 606 2421 2421 2422 2423 BET 607 2426 2425 2426 2427 BET 608 2431 2429 2430 2431 BET 609 2434 2433 2434 2435 BET 610 2438 2437 2438 2439 BET 611 2443 2441 2442 2443 BET 612 2445 2446 2447 BET 613 2451 245 2446 2447 BET 614 2453 2453 2454 2455 BET 615 2457 2458 2459 BET 616 2464 2461 2462 2463 BET 617 2468 2465 2466 2467 BET 618 2469 2470 2471 BET 619 2473 2473 2474 2475 BET 619 2473 2473 2474 2475	BET 605 2417 2418 2419 2420 BET 606 2421 2421 2422 2423 2424 BET 607 2426 2425 2426 2427 2428 BET 608 2431 2429 2430 2431 2432 BET 609 2434 2433 2434 2435 2436 BET 610 2438 2437 2438 2439 2440 BET 611 2443 2441 2442 2443 2444 BET 612 2445 2445 2446 2447 2448 BET 613 2451 2449 2450 2451 2452 BET 614 2453 2457 2458 2459 2460 BET 616 2464 2461 2462 2463 2464 BET 617 2468 2465 2466 2467 2468 BET 619 2473 2473 2474 2475 2476 BET 619 2473 2473 2474 2475 2476 BET 620 2480	BET 605 2417 2418 2419 2420 These BET 606 2421 2421 2422 2423 2424 These BET 607 2426 2425 2426 2427 2428 These BET 608 2431 2439 2430 2431 2432 These BET 609 2434 2433 2434 2435 2436 These BET 610 2438 2437 2438 2439 2440 These BET 611 2443 241 2442 243 2444 These BET 612 2445 2446 2447 2448 These BET 613 2451 2452 2466 2447 2448 These BET 614 2453 2450 2451 2452 These BET 615 2457 2458 2459 2460 These BET 616 2464 2461 2462 2463 2464 These BET 617 2468 2465 2466 2467 2468 These BET 618 2469 2470 2471 2472 These BET 619 2473 2473 2474 2475 2476 These BET 619 2473 2473 2474 2475 2476 These

51	BET	621	2484	2481	2482	2483	2484	None of These	
52	BET	622	2487	2485	 2486	 2487	2488	None of These	
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54	BET	624	2496	2493		 2495		None of These	
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57	BET	627	2506	2505	 2506	 2507	 2508	None of These	
58	BET	628	2512	2509	 2510	 2511	 2512	None of These	2.
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68	BET	638	2552	2549	 2550			None of These	

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BET	646	2583	2581	 2582	 2583	 2584	None of These	
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BET	651	2604	2601		 2603	 2604	None of These	
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BET	656	2624	2621		 2623	 2624	None of These	
	BET	BET 640 BET 641 BET 642 BET 643 BET 645 BET 646 BET 647 BET 648 BET 649 BET 650 BET 651 BET 652 BET 653 BET 654	BET 640 2558 BET 641 2561 BET 642 2567 BET 643 2570 BET 644 2574 BET 645 2577 BET 646 2583 BET 647 2588 BET 649 2595 BET 650 2597 BET 651 2604 BET 652 2607 BET 653 2610 BET 654 2613	BET 640 2558 2557 BET 641 2561 2561 BET 642 2567 2565 BET 643 2570 2569 BET 644 2574 2573 BET 645 2577 2577 BET 646 2583 2581 BET 647 2588 2585 BET 648 2590 2589 BET 649 2595 2593 BET 650 2597 2597 BET 651 2604 2601 BET 652 2607 2605 BET 653 2610 2609 BET 654 2613 2613 BET 655 2618 2617	BET 640 2558 2557 2558 BET 641 2561 2561 2562 BET 642 2567 2565 2566 BET 643 2570 2569 2570 BET 644 2574 2573 2574 BET 645 2577 2578 BET 646 2583 2581 2582 BET 647 2588 2585 2586 BET 648 2590 2589 2590 BET 649 2595 2593 2594 BET 650 2597 2598 BET 651 2604 2601 2602 BET 652 2607 2605 2606 BET 654 2613 2614 BET 655 2618 2617 2618	BET 640 2558 2557 2558 2559 BET 641 2561 2561 2562 2563 BET 642 2567 2565 2566 2567 BET 643 2570 2569 2570 2571 BET 644 2574 2573 2574 2575 BET 645 2577 2577 2578 2579 BET 646 2583 2581 2582 2583 BET 646 2583 2581 2582 2583 BET 647 2588 2585 2586 2587 BET 649 2595 2593 2590 2591 BET 650 2597 2597 2598 2599 BET 651 2604 2601 2602 2603 BET 652 2607 2605 2606 2607 BET 653 2610 2605 2606 2607 BET 654 2613 2613 2614 <td< td=""><td>BET 640 2558 2557 2558 2559 2560 BET 641 2561 2561 2562 2563 2564 BET 642 2567 2565 2566 2567 2568 BET 643 2570 2569 2570 2571 2572 BET 644 2574 2573 2574 2575 2576 BET 645 2577 2577 2578 2579 2580 BET 646 2583 2581 2582 2583 2584 BET 646 2583 2581 2582 2583 2584 BET 647 2588 2585 2586 2587 2588 BET 649 2595 2593 2590 2591 2592 BET 650 2597 2598 2599 2595 2596 BET 651 2604 2601 2602 2603 2604 BET 652 2607 2605 2606 2607 2608</td><td>BET 640 2558 2557 2558 2559 2560 These BET 641 2561 2561 2562 2563 2564 These BET 642 2567 2565 2566 2567 2568 These BET 643 2570 2569 2570 2571 2572 These BET 644 2574 2573 2574 2575 2576 These BET 645 2577 2577 2578 2579 2580 These BET 646 2583 2581 2582 2583 2584 These BET 646 2583 2581 2582 2583 2584 These BET 647 2588 2585 2586 2587 2588 These BET 648 2590 2593 2591 2592 These BET 649 2595 2593 2594 2595 2596 These BET 650 2597 2597 <td< td=""></td<></td></td<>	BET 640 2558 2557 2558 2559 2560 BET 641 2561 2561 2562 2563 2564 BET 642 2567 2565 2566 2567 2568 BET 643 2570 2569 2570 2571 2572 BET 644 2574 2573 2574 2575 2576 BET 645 2577 2577 2578 2579 2580 BET 646 2583 2581 2582 2583 2584 BET 646 2583 2581 2582 2583 2584 BET 647 2588 2585 2586 2587 2588 BET 649 2595 2593 2590 2591 2592 BET 650 2597 2598 2599 2595 2596 BET 651 2604 2601 2602 2603 2604 BET 652 2607 2605 2606 2607 2608	BET 640 2558 2557 2558 2559 2560 These BET 641 2561 2561 2562 2563 2564 These BET 642 2567 2565 2566 2567 2568 These BET 643 2570 2569 2570 2571 2572 These BET 644 2574 2573 2574 2575 2576 These BET 645 2577 2577 2578 2579 2580 These BET 646 2583 2581 2582 2583 2584 These BET 646 2583 2581 2582 2583 2584 These BET 647 2588 2585 2586 2587 2588 These BET 648 2590 2593 2591 2592 These BET 649 2595 2593 2594 2595 2596 These BET 650 2597 2597 <td< td=""></td<>

87	BET	657	2625	2625	 2626	 2627	 2628	None of These	
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89	BET	659	2633	2633				None of These	
90	BET	660	2638	2637		 2639		None of These	
91	BET	661	2642					None of These	
92	BET	662	2645	2645	 2646	 2647		None of These	
93	BET	663	2651	2649	 2650	 2651		None of These	
94	BET	664	2654	2653	 2654	 2655		None of These	
95	BET	665	2657	2657	 2658	 2659	 2660	None of These	
96	BET	666	2661	2661	 2662	 2663	 2664	None of These	
97	BET	667	2665	2665		 2667		None of These	
98	BET	668	2671	2669	 2670	 2671		None of These	
99	BET	669	2674	2673	 2674	 2675		None of These	
100	BET	670	2677	2677	 2678	 2679	 2680	None of These	
101	BET	671	2684	2681	 2682	 2683	 2684	None of These	
102	BET	672	2686	2685	 2686	 2687	2688	None of These	
103	BET	673	2689	2689	 2690	 2691		None of These	
104	BET	674	2695	2693	2694	2695	2696	None of These	

ВЕТ	676					2700	These	
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BET	681	2723	2721				None of These	
BET	682	2725	2725				None of These	
BET	683	2730	2729				None of These	
BET	684	2735	2733				None of These	
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BET	686	2744	2741				None of These	
BET	687	2747	2745				None of These	
BET	688	2751	2749	 2750	 2751		None of These	
BET	689	2756	2753				None of These	
BET	690	2757				 2760	None of These	
BET	691	2761			 2763		None of These	
BET	692	2765	2765		 2767		None of These	
	ET SET SET SET SET SET SET SET SET SET S	ET 689 ET 689 ET 689 ET 689 ET 690	ET 679 2714 ET 680 2719 ET 681 2723 ET 682 2725 ET 683 2730 ET 684 2735 ET 685 2737 ET 686 2744 ET 687 2747 ET 688 2751 ET 689 2756 ET 690 2757 ET 691 2761	SET 678 2710 2709 SET 679 2714 2713 SET 680 2719 2717 SET 681 2723 2721 SET 682 2725 2725 SET 683 2730 2729 SET 684 2735 2733 SET 685 2737 2737 SET 686 2744 2741 SET 688 2751 2745 SET 689 2756 2753 SET 690 2757 2757 SET 691 2761 2761 SET 692 2765 0	SET 678 2710 2709 2710 SET 679 2714 2713 2714 SET 680 2719 2717 2718 SET 681 2723 2721 2722 SET 682 2725 2725 2726 SET 683 2730 2729 2730 SET 684 2735 2733 2734 SET 685 2737 2737 2738 SET 686 2744 2741 2742 SET 688 2751 2745 2746 SET 689 2756 2753 2754 SET 690 2757 2758 2758 SET 691 2761 2761 2762 SET 692 2765 0 0	EET 678 2710 2709 2710 2711 SET 679 2714 2713 2714 2715 SET 680 2719 2717 2718 2719 SET 681 2723 2721 2722 2723 SET 682 2725 2725 2726 2727 SET 683 2730 2729 2730 2731 SET 684 2735 2733 2734 2735 SET 685 2737 2737 2738 2739 SET 686 2744 2741 2742 2743 SET 687 2747 2745 2746 2747 SET 688 2751 2749 2750 2751 SET 690 2757 2753 2754 2755 SET 691 2761 2761 2762 2763	EET 678 2710 2709 2710 2711 2712 EET 679 2714 2713 2714 2715 2716 EET 680 2719 2717 2718 2719 2720 EET 681 2723 2721 2722 2723 2724 EET 682 2725 2725 2726 2727 2728 EET 683 2730 2729 2730 2731 2732 EET 684 2735 2733 2734 2735 2736 EET 685 2737 2737 2738 2739 2740 EET 686 2744 2741 2742 2743 2744 EET 687 2747 2745 2746 2747 2748 EET 689 2756 2753 2754 2755 2756 EET 690 2757 2757 2758 2759 2760 EET 692 2765 2761 2762 2763 2764	EET 678 2710 2709 2710 2711 2712 These EET 679 2714 2713 2714 2715 2716 These EET 680 2719 2717 2718 2719 2720 These EET 681 2723 2721 2722 2723 2724 These EET 682 2725 2725 2726 2727 2728 These EET 683 2730 2729 2730 2731 2732 These EET 684 2735 2733 2734 2735 2736 These EET 684 2735 2737 2738 2739 2740 These EET 685 2737 2737 2738 2739 2740 These EET 686 2744 2741 2742 2743 2744 These EET 687 2747 2745 <

123	BET	693	2770	2769	 2770	 2771		None of These	
124	BET	694	2776	2773				None of These	
125	BET	695	2777	2777		 2779	 2780	None of These	
126	BET	696	2784	2781				None of These	
127	BET	697	2786	2785		 2787		None of These	
128	BET	698	2791	2789	 2790	 2791		None of These	
129	BET	699	2793	2793				None of These	
130	BET	700	2797	2797			2800	None of These	
131	BET	701	2804	2801	 2802	 2803	 2804	None of These	
132	BET	702	2806	2805	 2806	 2807	2808	None of These	
133	BET	703	2809	2809				None of These	
134	BET	704	2816	2813	 2814	 2815		None of These	
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136	BET	706	2823	2821	2822	2823	2824	None of These	
137	BET	707	2825	2825	2826	2827	2828	None of These	
138	BET	708	2829	2829	2830	2831	2832	None of These	
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140	BET	710	2837	2837	2838	 2839	 2840	None of These	

141	BET	711	2842	2841				None of These	
142	BET	712	2846	2845			2848	None of These	
143	BET	713	2851	2849				None of These	
144	BET	714	2854	2853				None of These	
145	BET	715	2857	2857	2858		 2860	None of These	
146	BET	716	2861	2861	2862	2863	2864	None of These	
147	BET	717	2867	2865				None of These	
148	BET	718	2872	2869				None of These	
149	BET	719	2876	2873				None of These	
150	BET	720	2880	2877			2880	None of These	
151	BET	721	2883	2881		2883	2884	None of These	
152	BET	722	2885	2885		2887	2888	None of These	
153	BET	723	2892	2889				None of These	
154	BET	724	2896	2893	 2894		 2896	None of These	
155	BET	725	2898	2897	2898	2899	 2900	None of These	
156	BET	726	2904	2901	2902	2903	2904	None of These	
157	BET	727	2907	2905			2908	None of These	
158	BET	728	2912	2909				None of These	

159	BET	729	2916	2913				None of These	
160	BET	730	2919	2917				None of These	
161	BET	731	2921	2921				None of These	
162	BET	732	2925	2925				None of These	
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164	BET	734	2933	2933				None of These	
165	BET	735	2937	2937		 2939		None of These	
166	BET	736	2941	2941				None of These	
167	BET	737	2945	2945				None of These	
168	BET	738	2949	2949	 2950	 2951		None of These	
169	BET	739	2954	2953				None of These	
170	BET	740	2960	2957		 2959		None of These	
171	BET	741	2962	2961				None of These	
172	BET	742	2965	2965	 2966	 2967		None of These	
173	BET	743	2972	2969				None of These	
174	BET	744	2976	2973				None of These	
175	BET	745	2977	2977				None of These	
176	BET	746	2984	2981	2982	2983	2984	None of These	

BET	747	2987	2985	 2986	 2987	 2988	None of These	
BET	748	2989	2989	 2990	 2991		None of These	
BET	749	2995	2993				None of These	
BET	750	2999	2997	 2998		3000	None of These	
BET	751	3003	3001	3002	3003	3004	None of These	
BET	752	3006	3005	3006	3007	3008	None of These	
BET	753	3011	3009	3010	3011	3012	None of These	
BET	754	3014	3013	3014	3015	3016	None of These	
BET	755	3018	3017	3018	3019	3020	None of These	
BET	756	3021	3021	3022	3023	3024	None of These	
BET	757	3028	3025	3026	3027	3028	None of These	
BET	758	3031	3029	3030	3031	3032	None of These	
BET	759	3034	3033	3034	3035	3036	None of These	
BET	760	3039	3037	3038	3039	3040	None of These	
BET	761	3041	3041	3042	3043	3044	None of These	
BET	762	3046	3045	3046	3047	3048	None of These	
BET	763	3049	3049	3050	3051	3052	None of These	
BET	764	3055	3053	3054	3055	3056	None of These	
	BET BET BET BET BET BET BET BET	BET 748 BET 749 BET 750 BET 751 BET 752 BET 753 BET 754 BET 755 BET 756 BET 757 BET 757 BET 758 BET 760 BET 761 BET 762 BET 763	BET 748 2989 BET 749 2995 BET 750 2999 BET 751 3003 BET 752 3006 BET 753 3014 BET 754 3018 BET 756 3021 BET 757 3028 BET 758 3031 BET 759 3034 BET 760 3039 BET 761 3046 BET 763 3049	BET 748 2989 2989 BET 749 2995 2993 BET 750 2999 2997 BET 751 3003 3001 BET 752 3006 3005 BET 753 3014 3013 BET 754 3014 3013 BET 755 3018 3017 BET 756 3021 3021 BET 757 3028 3025 BET 759 3034 3033 BET 760 3039 3037 BET 761 3041 3041 BET 762 3046 3045 BET 763 3049 3049	BET 748 2989 2989 2990 BET 749 2995 2993 2994 BET 750 2999 2997 2998 BET 751 3003 3001 3002 BET 752 3006 3005 3006 BET 753 3011 3009 3010 BET 754 3014 3013 3014 BET 755 3018 3017 3018 BET 756 3021 3021 3022 BET 757 3028 3025 3026 BET 758 3031 3029 3030 BET 759 3034 3033 3034 BET 760 3039 3037 3038 BET 761 3041 3041 3042 BET 762 3046 3045 3046 BET 763 3049 3049 3050 BET 764 3055 3050	BET 748 2989 2989 2990 2991 BET 749 2995 2993 2994 2995 BET 750 2999 2997 2998 2999 BET 751 3003 3001 3002 3003 BET 752 3006 3005 3006 3007 BET 753 3011 3009 3010 3011 BET 754 3014 3013 3014 3015 BET 755 3018 3017 3018 3019 BET 756 3021 3021 3022 3023 BET 757 3028 3025 3026 3027 BET 758 3031 3029 3030 3031 BET 759 3034 3033 3034 3035 BET 761 3041 3041 3042 3043 BET 762 3046 3045 3046 3047 BET 763 3049 3049 3050 <td< td=""><td>BET 748 2989 2989 2990 2991 2992 BET 749 2995 2993 2994 2995 2996 BET 750 2999 2997 2998 2999 3000 BET 751 3003 3001 3002 3003 3004 BET 752 3006 3005 3006 3007 3008 BET 753 3011 3009 3010 3011 3012 BET 754 3014 3013 3014 3015 3016 BET 755 3018 3017 3018 3019 3020 BET 756 3021 3021 3022 3023 3024 BET 758 3031 3029 3030 3031 3032 BET 759 3034 3033 3034 3035 3036 BET 760 3039 3037 3038 3039 3040 BET 761 3041 3041 3042 3043 3044</td><td>BET 748 2989 2989 2990 2991 2992 Those BET 749 2995 2993 2994 2995 2996 These BET 750 2999 2997 2998 2999 3000 These BET 751 3003 3001 3002 3003 3004 Those BET 752 3006 3005 3006 3007 3008 These BET 753 3011 3009 3010 3011 3012 None of BET 753 3011 3009 3010 3011 3012 None of BET 754 3014 3013 3014 3015 3016 These BET 755 3018 3017 3018 3019 3020 These BET 756 3021 3021 3022 3023 3024 These BET 758 3031 3029</td></td<>	BET 748 2989 2989 2990 2991 2992 BET 749 2995 2993 2994 2995 2996 BET 750 2999 2997 2998 2999 3000 BET 751 3003 3001 3002 3003 3004 BET 752 3006 3005 3006 3007 3008 BET 753 3011 3009 3010 3011 3012 BET 754 3014 3013 3014 3015 3016 BET 755 3018 3017 3018 3019 3020 BET 756 3021 3021 3022 3023 3024 BET 758 3031 3029 3030 3031 3032 BET 759 3034 3033 3034 3035 3036 BET 760 3039 3037 3038 3039 3040 BET 761 3041 3041 3042 3043 3044	BET 748 2989 2989 2990 2991 2992 Those BET 749 2995 2993 2994 2995 2996 These BET 750 2999 2997 2998 2999 3000 These BET 751 3003 3001 3002 3003 3004 Those BET 752 3006 3005 3006 3007 3008 These BET 753 3011 3009 3010 3011 3012 None of BET 753 3011 3009 3010 3011 3012 None of BET 754 3014 3013 3014 3015 3016 These BET 755 3018 3017 3018 3019 3020 These BET 756 3021 3021 3022 3023 3024 These BET 758 3031 3029

195	BET	765	3058	3057	3058	3059	3060	None of These				
196	ВЕТ	766	3064	3061	3062	3063	3064	None of These				
197	BET	767	3068	3065	3066	3067	3068	None of These	1.2			
198	BET	768	3069	3069	3070	3071	3072	None of These				
199	BET	769	3075	3073	3074	3075	3076	None of These				
200	BET	770	3080	3077	3078	3079	3080	None of These				
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