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Enzymology

Group Number :	1
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Enzymology-1

Section Id :	864351590
Section Number :	1
Section type :	Online
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Number of Questions :	100

Number of Questions to be attempted :	100
Section Marks :	100
Mark As Answered Required? :	Yes
Sub-Section Number :	1
Sub-Section Id :	864351711
Question Shuffling Allowed :	Yes

Question Number : 1 Question Id : 86435112989 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

E.C: 1.1.1.27 is a code language for:

1. Lactate dehydrogenase
2. Alcohol dehyrogenase
3. Succinate dehyrogenase
4. Cytochrome P_{450}

Options :
86435143265. 1
86435143266. 2
86435143267. 3
86435143268. 4

Question Number : 2 Question Id : 86435112990 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

All the following enzymes are protein in nature with the exception of:

1. Lysozyme
2. Ribozyme
3. Pepsin
4. Trypsin

Options :
86435143269. 1
86435143270. 2
86435143271. 3
86435143272. 4

Question Number : 3 Question Id : 86435112991 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Aldolase is classified as:

1. Oxidoreductase
2. Transferase
3. Hydrolase
4. Lyase

Options :
86435143273. 1
86435143274. 2
86435143275. 3
86435143276. 4

Question Number : 4 Question Id : 86435112992 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

An enzyme that rearranges a molecule into its isomer is:

1. Isomerase
2. Catalase
3. Oxidase
4. Ligase

Options :
86435143277. 1

86435143278. 2
86435143279. 3
86435143280. 4

Question Number : 5 Question Id : 86435112993 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Co-enzymes combine loosely with apo-enzyme and are released easily by:

1. Dialysis
2. Centrifugation
3. Electrophoresis
4. Chromatography

Options :
86435143281. 1
86435143282. 2
86435143283. 3
86435143284. 4

Question Number : 6 Question Id : 86435112994 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enzyme activity refers to:

1. moles of substrate converted in to product per unit area
2. moles of substrate converted in to product per unit time
3. moles of substrate converted in to product per unit volume
4. None of the above

Options :
86435143285. 1
86435143286. 2
86435143287. 3

86435143288. 4

Question Number : 7 Question Id : 86435112995 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Factors which effect catalytic efficiency are:

1. Orientation
2. Proximity
3. Distortion of strain
4. All of the above

Options :

86435143289. 1
86435143290. 2
86435143291. 3
86435143292. 4

Question Number : 8 Question Id : 86435112996 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Higher kinetic energy of reacting molecules results in:

1. More random collisions per unit time
2. Less random collisions per unit time
3. Does not affect the number of random collisions
4. First increases the number of random collisions per unit time and then decreases the number of random collisions per unit time

Options :

86435143293. 1
86435143294. 2
86435143295. 3
86435143296. 4

Question Number : 9 Question Id : 86435112997 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The change in pH causes change in enzyme action, because:

1. It alters the charge of the enzyme
2. It decreases the chance of enzyme and substrate collision
3. Both (1) and (2) are true
4. Neither (1) nor (2) is true

Options :

86435143297. 1
86435143298. 2
86435143299. 3
86435143300. 4

Question Number : 10 Question Id : 86435112998 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is not a type of specificity?

1. Substrate specificity
2. Reaction specificity
3. Koshland specificity
4. Stereo specificity

Options :

86435143301. 1
86435143302. 2
86435143303. 3
86435143304. 4

Question Number : 11 Question Id : 86435112999 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

FAD is:

1. Flavin adenine nucleotide
2. Flavin adenine nucleoside
3. Flavin adenine dinucleotide
4. Flavin adenine Deoxy nucleotide

Options :
86435143305. 1
86435143306. 2
86435143307. 3
86435143308. 4

Question Number : 12 Question Id : 86435113000 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Coenyzmes are biomolecules which provide chemical groups that help in catalysis:

1. The above statement is true
2. The above statement is false
3. Coenzymes do not play any role in catalysis
4. Coenzymes are not biomolecules

Options :
86435143309. 1
86435143310. 2
86435143311. 3
86435143312. 4

Question Number : 13 Question Id : 86435113001 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Biotin acts as a coenzyme for:

1. Formation of TMP(Thymidine monophosphate)
2. Carboxylation of pyruvate to oxaloacetate
3. Oxido –reduction reactions
4. All of the above

Options :
86435143313. 1
86435143314. 2
86435143315. 3
86435143316. 4

Question Number : 14 Question Id : 86435113002 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Folate has a great role in:

1. Formation of TMP(Thymidine monophosphate)
2. Carboxylation of pyruvate to oxaloacetate
3. Oxidation –reduction reactions
4. None of the above

Options :
86435143317. 1
86435143318. 2
86435143319. 3
86435143320. 4

Question Number : 15 Question Id : 86435113003 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Retinal is reduced to retinol in intestinal mucosa by a specific retinaldehyde reductase utilizing:

1. $NADPH + H^+$
2. FAD
3. NAD
4. $NADH + H^+$

Options :
86435143321. 1
86435143322. 2
86435143323. 3
86435143324. 4

Question Number : 16 Question Id : 86435113004 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Magenta tongue is found in the deficiency of the vitamin:

1. Riboflavin
2. Thiamin
3. Nicotinic acid
4. Pyridoxine

Options :
86435143325. 1
86435143326. 2
86435143327. 3
86435143328. 4

Question Number : 17 Question Id : 86435113005 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following is the cofactor of cytochrome oxidase?

1. Cu^{+2} only
2. Fe^{+2} only
3. Both (1) and (2)
4. Neither (1) nor (2)

Options :
86435143329. 1
86435143330. 2
86435143331. 3
86435143332. 4

Question Number : 18 Question Id : 86435113006 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Adaptive species producing enzymes capable working at lower temperatures are called as:

1. Thermophiles
2. Physchrophiles
3. Physchrotropic
4. Halophiles

Options :
86435143333. 1
86435143334. 2
86435143335. 3
86435143336. 4

Question Number : 19 Question Id : 86435113007 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The biocatalysts, called thermozymes, are produced by:

1. Extreme thermophiles
2. Hyperthermophiles
3. Both (1) & (2)
4. Neither (1) nor (2)

Options :
86435143337. 1
86435143338. 2
86435143339. 3
86435143340. 4

Question Number : 20 Question Id : 86435113008 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Thermus aquaticus is the source of:

1. Taq polymerase
2. Pfu
3. Both (1) & (2)
4. Primase enzyme

Options :
86435143341. 1
86435143342. 2
86435143343. 3
86435143344. 4

Question Number : 21 Question Id : 86435113009 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The rate determining step of Michaelis-Menten kinetics is:

1. The product formation step
2. The complex formation step
3. The complex dissociation step to produce products
4. None of the above

Options :
86435143345. 1
86435143346. 2
86435143347. 3
86435143348. 4

Question Number : 22 Question Id : 86435113010 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Michaelis-Menten equation was given in the year:

1. 1813
2. 1913
3. 1914
4. 1978

Options :
86435143349. 1
86435143350. 2
86435143351. 3
86435143352. 4

Question Number : 23 Question Id : 86435113011 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Ping-pong mechanism is also called:

1. First order reaction
2. Displacement reaction
3. Single-displacement reaction
4. Double-displacement reaction

Options :
86435143353. 1
86435143354. 2
86435143355. 3
86435143356. 4

Question Number : 24 Question Id : 86435113012 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is transition state theory related to?

1. Free energy
2. Activated complex
3. Transition state
4. All of the above

Options :
86435143357. 1
86435143358. 2
86435143359. 3
86435143360. 4

Question Number : 25 Question Id : 86435113013 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

ki indicates:

1. Reaction velocity
2. Competition inhibition
3. Denaturation of enzymes
4. All of the above

Options :
86435143361. 1
86435143362. 2
86435143363. 3
86435143364. 4

Question Number : 26 Question Id : 86435113014 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

An inhibitor binds to a site other than the active site of the enzyme. Which statement below correlates with this observation?

1. It must be a competitive inhibitor
2. The inhibition must be irreversible
3. It could be noncompetitive or uncompetitive inhibition
4. It could be irreversible, classical competitive, noncompetitive or nonclassical competitive or mixed inhibition

Options :
86435143365. 1
86435143366. 2
86435143367. 3
86435143368. 4

Question Number : 27 Question Id : 86435113015 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is true about Competitive inhibition?

1. K_M increases and V_{max} decreases
2. K_M decreases and V_{max} increases
3. K_M increases and V_{max} remains constant
4. K_M decreases and V_{max} remains constant

Options :
86435143369. 1
86435143370. 2
86435143371. 3
86435143372. 4

Question Number : 28 Question Id : 86435113016 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enzymes showing substrate specificity are specific to only:

1. Two substrates
2. Four substrates
3. One substrate
4. Three substrates

Options :
86435143373. 1
86435143374. 2
86435143375. 3
86435143376. 4

Question Number : 29 Question Id : 86435113017 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When the velocity of enzyme activity is plotted against substrate concentration, what type of curve is obtained?

1. Hyperbolic curve
2. Parabola
3. Straight line with positive slope
4. Straight line with negative slope

Options :
86435143377. 1
86435143378. 2
86435143379. 3
86435143380. 4

Question Number : 30 Question Id : 86435113018 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The initial velocity, v_o of an enzyme catalyzed reaction reaches1/2 V_{max} at:

1. [S] = K_M
2. [S] = 10x K_M
3. [S] = 1/10 xK_M
4. [S] = 1/K_M

Options :
86435143381. 1
86435143382. 2
86435143383. 3
86435143384. 4

Question Number : 31 Question Id : 86435113019 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Cooperativity is a phenomenon displayed by enzymes having:

1. Single polypeptide chain
2. Double polypeptide chain
3. Multiple polypeptide chain
4. None of the above

Options :
86435143385. 1
86435143386. 2
86435143387. 3
86435143388. 4

Question Number : 32 Question Id : 86435113020 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Who discovered cooperativity?

1. Koshland
2. Wyman
3. C. Bohr
4. None of the above

Options :
86435143389. 1
86435143390. 2
86435143391. 3
86435143392. 4

Question Number : 33 Question Id : 86435113021 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The regulatory enzymes for which substrate and effector (or modulator) are identical are called

1. Homotropic
2. Heterotropic
3. Both (1) and (2)
4. None of the above

Options :
86435143393. 1
86435143394. 2
86435143395. 3
86435143396. 4

Question Number : 34 Question Id : 86435113022 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Binding of oxygen to haemoglobin is an example of:

1. Positive cooperativity
2. Negative cooperativity
3. Both (1) and (2)
4. None of the above

Options :
86435143397. 1
86435143398. 2
86435143399. 3
86435143400. 4

Question Number : 35 Question Id : 86435113023 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Half site reactivity is an extreme example of:

1. Positive cooperativity
2. Negative cooperativity
3. Both (1) and (2)
4. None of the above

Options :
86435143401. 1
86435143402. 2
86435143403. 3
86435143404. 4

Question Number : 36 Question Id : 86435113024 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Half site reactivity is explained by:

1. Sequential model
2. Concerted model
3. Induced fit hypothesis
4. All of the above

Options :
86435143405. 1
86435143406. 2
86435143407. 3
86435143408. 4

Question Number : 37 Question Id : 86435113025 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Covalent modifications can be:

1. Methylation
2. Adenylation
3. Phosphorylation
4. All of the above

Options :
86435143409. 1
86435143410. 2
86435143411. 3
86435143412. 4

Question Number : 38 Question Id : 86435113026 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Phosphorylation of enzyme occurs by addition of phosphate group to the enzyme at the hydroxyl group of:

1. Serine
2. Threonine
3. Tyrosine
4. All of the above

Options :
86435143413. 1
86435143414. 2
86435143415. 3
86435143416. 4

Question Number : 39 Question Id : 86435113027 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Daniel Koshland's proposal of induced fit was based on kinetic experiments with:

1. Hexokinase
2. Glucokinase
3. Pyruvate kinase
4. Hexokinase and pyruvate kinase

Options :
86435143417. 1
86435143418. 2
86435143419. 3
86435143420. 4

Question Number : 40 Question Id : 86435113028 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is false about allosteric feedback inhibition?

1. Bacterial enzyme system is the first known example
2. Conversion of L-leucine to L-isoleucine
3. Threonine dehydratase is inhibited by isoleucine
4. If the isoleucine concentration decreases, the rate of threonine dehydration increases

Options :
86435143421. 1
86435143422. 2
86435143423. 3
86435143424. 4

Question Number : 41 Question Id : 86435113029 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Ligands are mostly

1. Proteins
2. Carbohydrates
3. Both (1) & (2)
4. None of the above

Options :
86435143425. 1
86435143426. 2
86435143427. 3
86435143428. 4

Question Number : 42 Question Id : 86435113030 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Aspartate carbamoyltransferase catalyses the:

1. First step in the pyrimidine biosynthetic pathway
2. Second step in the pyrimidine biosynthetic pathway
3. Third step in the pyrimidine biosynthetic pathway
4. Fourth step in the pyrimidine biosynthetic pathway

Options :
86435143429. 1
86435143430. 2
86435143431. 3
86435143432. 4

Question Number : 43 Question Id : 86435113031 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

How many different models have been proposed to explain the protein–ligand binding mechanisms?

1. One
2. Two
3. Three
4. Four

Options :
86435143433. 1
86435143434. 2
86435143435. 3
86435143436. 4

Question Number : 44 Question Id : 86435113032 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following methods has the advantage of characterizing the protein–ligand dynamics over a wide range of timescales from picoseconds to seconds?

1. Nuclear Magnetic Resonance (NMR)
2. Laue X-ray diffraction
3. Small-angle X-ray scattering
4. Cryo-electron microscopy

Options :
86435143437. 1
86435143438. 2
86435143439. 3
86435143440. 4

Question Number : 45 Question Id : 86435113033 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Fluorescence correlation spectroscopy (FCS) was first introduced in:

1. 1950s
2. 1960s
3. 1970s
4. None of the above

Options :
86435143441. 1
86435143442. 2
86435143443. 3
86435143444. 4

Question Number : 46 Question Id : 86435113034 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Protein-membrane interactions have been investigated in how many basic geometries?

1. Two
2. Three
3. Four
4. Five

Options :
86435143445. 1
86435143446. 2
86435143447. 3
86435143448. 4

Question Number : 47 Question Id : 86435113035 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following plots is used to determine the number of ligand-binding sites on a receptor, whether these sites show cooperative interactions?

1. Hill plot
2. Scatchard plot
3. Hill and Scatchard plot
4. None of the above

Options :
86435143449. 1
86435143450. 2
86435143451. 3
86435143452. 4

Question Number : 48 Question Id : 86435113036 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The major aspects determining a biomolecular recognition event are:

1. The structural and energetic complementarity between the ligand and the receptor
2. The conformational rearrangements that both structures undergo upon complexation
3. Both (1) and (2)
4. None of the above

Options :
86435143453. 1
86435143454. 2
86435143455. 3
86435143456. 4

Question Number : 49 Question Id : 86435113037 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No

Correct Marks : 1 Wrong Marks : 0

Allostery is a central theme in which biological process?

1. Enzymology
2. Gene regulation
3. Cell signaling
4. All of the above

Options :
86435143457. 1
86435143458. 2
86435143459. 3
86435143460. 4

Question Number : 50 Question Id : 86435113038 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Hexokinase is inhibited in an allosteric manner by:

1. Glucose-6-Phosphate
2. Glucose-1-Phosphate
3. Fructose-6-phosphate
4. Fructose-1, 6-biphosphate

Options :
86435143461. 1
86435143462. 2
86435143463. 3
86435143464. 4

Question Number : 51 Question Id : 86435113039 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The first enzymes to be crystallized was:

1. Trypsin
2. Pepsin
3. Ribonuclease
4. Urease

Options :
86435143465. 1
86435143466. 2
86435143467. 3
86435143468. 4

Question Number : 52 Question Id : 86435113040 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Lysozyme is active only when:

1. Glu^{35} is ionized and Asp^{52} is unionized
2. Glu^{35} is unionized and Asp^{52} is ionized
3. Both Glu^{35} and Asp^{52} are ionized
4. Both Glu^{35} and Asp^{52} are unionized

Options :
86435143469. 1
86435143470. 2
86435143471. 3
86435143472. 4

Question Number : 53 Question Id : 86435113041 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Proximity effect is also known as:

1. Enthalpy effect
2. Thermodynamic effect
3. Stabilization effect
4. Entropy effect

Options :
86435143473. 1
86435143474. 2
86435143475. 3
86435143476. 4

Question Number : 54 Question Id : 86435113042 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The active site binds the substrate in a geometry that resembles the:

1. Transition state of the substrate
2. Transition state of enzyme
3. None of the above
4. Both (1) & (2)

Options :
86435143477. 1
86435143478. 2
86435143479. 3
86435143480. 4

Question Number : 55 Question Id : 86435113043 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The stages of covalent catalysis are:

1. Nucleophilic reaction between enzyme and substrate
2. Electrophilic withdrawal of electrons from substrate
3. Elimination reaction
4. All of the above

Options :
86435143481. 1
86435143482. 2
86435143483. 3
86435143484. 4

Question Number : 56 Question Id : 86435113044 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The reduction of activation energy (E_a) :

1. Increases the fraction of reactant molecules
2. Decreases the fraction of reactant molecules
3. Either increases or decreases
4. Neither increases nor decreases.

Options :
86435143485. 1
86435143486. 2
86435143487. 3
86435143488. 4

Question Number : 57 Question Id : 86435113045 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The shapes of active sites are determined by:

1. Nature of enzyme
2. Specificity of enzymes
3. Viscosity of enzyme
4. Saturation of enzyme

Options :
86435143489. 1
86435143490. 2
86435143491. 3
86435143492. 4

Question Number : 58 Question Id : 86435113046 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which technique/s are useful in studying mechanism of Enzyme action:

1. Inhibition studies
2. X ray diffractions
3. NMR
4. All of the above

Options :
86435143493. 1
86435143494. 2
86435143495. 3
86435143496. 4

Question Number : 59 Question Id : 86435113047 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is NOT a catalytic mechanism in enzymatic catalysis?

1. Acid-Base catalysis
2. Covalent catalysis
3. Preferential binding to the product
4. Metal ion catalysis.

Options :
86435143497. 1
86435143498. 2
86435143499. 3
86435143500. 4

Question Number : 60 Question Id : 86435113048 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following amino acid residues would not provide a side chain for acid-base catalysis?

1. Leucine
2. Serine
3. Aspartic acid
4. Lysine

Options :
86435143501. 1
86435143502. 2
86435143503. 3
86435143504. 4

Question Number : 61 Question Id : 86435113049 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The distances between active sites in oligomeric dehydrogenases are:

1. 20 to 30 A^0
2. 40 to 60 A^0
3. 20 to 40 A^0
4. 10 to 30 A^0

Options :
86435143505. 1
86435143506. 2
86435143507. 3
86435143508. 4

Question Number : 62 Question Id : 86435113050 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Initial steps for solubilisation/isolation of Enzymes include:

1. Hypotonic lysis
2. Homogenization
3. Centrifugation
4. All of the above

Options :
86435143509. 1
86435143510. 2
86435143511. 3
86435143512. 4

Question Number : 63 Question Id : 86435113051 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enzymes can be visualized directly in gels by:

1. Staining them with the dye
2. Using electron microscope only
3. Measuring their molecular weight
4. None of the above

Options :
86435143513. 1
86435143514. 2
86435143515. 3
86435143516. 4

Question Number : 64 Question Id : 86435113052 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Molecular weight estimation of polypeptide chains by electrophoresis in SDS polyacrylamide gels was first tried by:

1. Laemmli
2. Weber and Osborn
3. Shapiro *et al*
4. Davis and Ornstein

Options :
86435143517. 1
86435143518. 2
86435143519. 3
86435143520. 4

Question Number : 65 Question Id : 86435113053 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Conversion of 1 micromole of substrate in to product per min., is called as:

1. 1 I.U
2. 1 Katal
3. 1 n Katal
4. All of the above

Options :
86435143521. 1
86435143522. 2
86435143523. 3
86435143524. 4

Question Number : 66 Question Id : 86435113054 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

All are used for measuring enzyme activity, except :

1. Colorimetric analysis
2. Spectrophotometric analysis
3. X-Ray diffaraction
4. Spectroflurometric analysis

Options :
86435143525. 1
86435143526. 2
86435143527. 3
86435143528. 4

Question Number : 67 Question Id : 86435113055 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Specific activity of an enzyme reflects:

1. Purity
2. Homogeneity
3. Fold purification
4. Subunit structure.

Options :
86435143529. 1
86435143530. 2
86435143531. 3
86435143532. 4

Question Number : 68 Question Id : 86435113056 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Salting out process of Enzyme purification is mostly done by using:

1. Potassium sulphate
2. Ammonium sulphate
3. Ammonium chloride
4. None of the above

Options :
86435143533. 1
86435143534. 2
86435143535. 3
86435143536. 4

Question Number : 69 Question Id : 86435113057 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Radiometric assays are usually used for:

1. Coupled assay
2. Simple continuous assay
3. Discontinuous assay
4. None of the above

Options :
86435143537. 1
86435143538. 2
86435143539. 3
86435143540. 4

Question Number : 70 Question Id : 86435113058 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

DIPF modifies only one of the how many serine residues in the proteolytic enzyme chymotrypsin, implying that this serine residue is especially reactive?

1. 1
2. 12
3. 28
4. 32

Options :
86435143541. 1
86435143542. 2
86435143543. 3
86435143544. 4

Question Number : 71 Question Id : 86435113059 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Enzymes having slightly different structure but performing identical activity are:

1. Apoenzymes
2. Holoenzymes
3. Isoenzymes
4. Abzymes

Options :
86435143545. 1
86435143546. 2
86435143547. 3
86435143548. 4

Question Number : 72 Question Id : 86435113060 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Tick the odd one out:

1. Pepsinogen
2. Trypsinogen
3. Chymotrypsinogen
4. Pepsin

Options :
86435143549. 1
86435143550. 2
86435143551. 3
86435143552. 4

Question Number : 73 Question Id : 86435113061 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Type II fatty acid synthase is found in:

1. Animals
2. Bacteria
3. Fungi
4. Plants

Options :
86435143553. 1
86435143554. 2
86435143555. 3
86435143556. 4

Question Number : 74 Question Id : 86435113062 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Lactate dehydrogenase is used for diagnosis of:

1. Myocardial infarction
2. Kidney disorders
3. Erythrocyte disorders
4. All of the above

Options :
86435143557. 1
86435143558. 2
86435143559. 3
86435143560. 4

Question Number : 75 Question Id : 86435113063 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Lactate dehydrogenase is composed of how many subunits?

1. One
2. Two
3. Four
4. Five

Options :
86435143561. 1
86435143562. 2
86435143563. 3
86435143564. 4

Question Number : 76 Question Id : 86435113064 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The predominant isozyme of LDH in cardiac muscle is:

1. LD-1
2. LD-2
3. LD-3
4. LD-5

Options :
86435143565. 1
86435143566. 2
86435143567. 3
86435143568. 4

Question Number : 77 Question Id : 86435113065 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following properties is not shown by isoenzymes?

1. Sigmoidal shaped curve
2. Electrophoretic mobility
3. Kinetic properties
4. Aminoacid composition

Options :
86435143569. 1
86435143570. 2
86435143571. 3
86435143572. 4

Question Number : 78 Question Id : 86435113066 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Thomas Cech studied the excision of introns in a ribosomal RNA gene in:

1. *Triturus vulgaris*
2. *Ambystoma typhoideum*
3. *Amphiuma tridactylum*
4. *Tetrahymena thermophila*

Options :
86435143573. 1
86435143574. 2
86435143575. 3
86435143576. 4

Question Number : 79 Question Id : 86435113067 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Catalytic RNA/RNAzymes are also called as

1. Ribosomes
2. Ribozymes
3. Zymogens
4. Abzymes

Options :
86435143577. 1
86435143578. 2
86435143579. 3
86435143580. 4

Question Number : 80 Question Id : 86435113068 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

--------- is a mitochondrial matrix multienzyme complex that provides the link between glycolysis and the TCA cycle by catalyzing the conversion of pyruvate into acetyl-CoA

1. Citrate Synthase
2. Pyruvate dehydrogenase
3. Succinate dehydrogenase
4. None of the above

Options :
86435143581. 1
86435143582. 2
86435143583. 3
86435143584. 4

Question Number : 81 Question Id : 86435113069 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Downstream processing involves:

1. Purification
2. Extraction
3. Production
4. Extraction and purification

Options :
86435143585. 1
86435143586. 2
86435143587. 3
86435143588. 4

Question Number : 82 Question Id : 86435113070 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The first industrial use of immobilized enzymes was reported in:

1. 1967
2. 1968
3. 1966
4. 1960

Options :
86435143589. 1
86435143590. 2
86435143591. 3
86435143592. 4

Question Number : 83 Question Id : 86435113071 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The large scale production of enzymes involves culturing microorganisms in chambers called:

1. Biocells
2. Biofuels
3. Laminar hood
4. Fermenters or Bioreactors

Options :
86435143593. 1
86435143594. 2
86435143595. 3
86435143596. 4

Question Number : 84 Question Id : 86435113072 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Support material used for immobilization of enzymes by the adsorption method is:

1. Cellulose
2. Gelatin
3. Alginate
4. Glutaraldehyde

Options :
86435143597. 1
86435143598. 2
86435143599. 3
86435143600. 4

Question Number : 85 Question Id : 86435113073 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Advantage of immobilization of enzyme is:

1. High rate of reaction
2. Less stable
3. Continuous use
4. Low rate of reaction

Options :
86435143601. 1
86435143602. 2
86435143603. 3
86435143604. 4

Question Number : 86 Question Id : 86435113074 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The immobilized technique involving chemical method is:

1. Covalent bond formation dependent
2. Non-covalent bond formation dependent
3. Both (1) & (2)
4. Ionic bond formation dependent

Options :
86435143605. 1
86435143606. 2
86435143607. 3
86435143608. 4

Question Number : 87 Question Id : 86435113075 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

When was the first method of site-directed mutagenesis developed?

1. 1980
2. 1970
3. 1960
4. 1950

Options :
86435143609. 1
86435143610. 2
86435143611. 3
86435143612. 4

Question Number : 88 Question Id : 86435113076 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The role of Enzyme engineering lies in:

1. To develop efficient enzymes
2. To develop thermal stable enzymes
3. Both (1) and (2) are true
4. Neither (1) nor (2) is true

Options :
86435143613. 1
86435143614. 2
86435143615. 3
86435143616. 4

Question Number : 89 Question Id : 86435113077 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

In glucose electrode, glucose oxidase has been coupled to an electrode by which of the following materials:

1. Ferrocene derivatives
2. Urease
3. Polyacrylamide
4. Biochips

Options :
86435143617. 1
86435143618. 2
86435143619. 3
86435143620. 4

Question Number : 90 Question Id : 86435113078 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

An important enzyme for the production of high fructose corn syrup is:

1. Fructose isomerase
2. Glucose isomerase
3. Amylase isomerase
4. Pentoses isomerase

Options :
86435143621. 1
86435143622. 2
86435143623. 3
86435143624. 4

Question Number : 91 Question Id : 86435113079 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Gly and Pro residues often occur in:

1. β turns
2. α turns
3. Both (1) & (2)
4. None of the above

Options :
86435143625. 1
86435143626. 2
86435143627. 3
86435143628. 4

Question Number : 92 Question Id : 86435113080 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which among the following is used for obtaining information about primary structure of proteins?

1. SPSS
2. PROWL
3. VAST
4. DALI

Options :
86435143629. 1
86435143630. 2
86435143631. 3
86435143632. 4

Question Number : 93 Question Id : 86435113081 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which one of the following is NOT a non-parenteral route of drug administration?

1. Pulmonary
2. Nasal
3. Subcutaneous
4. Buccal

Options :
86435143633. 1
86435143634. 2
86435143635. 3
86435143636. 4

Question Number : 94 Question Id : 86435113082 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following characteristics is suitable for transdermal drug?

1. Large drug dose
2. Drugs with narrow therapeutic indices
3. Large molecular size
4. Drugs which are metabolized in the skin

Options :
86435143637. 1
86435143638. 2
86435143639. 3
86435143640. 4

Question Number : 95 Question Id : 86435113083 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which process would be best to separate a protein that binds strongly to its substrate?

1. Gel filtration
2. Affinity chromatography
3. Cation exchange
4. Anion exchange

Options :
86435143641. 1
86435143642. 2
86435143643. 3
86435143644. 4

Question Number : 96 Question Id : 86435113084 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following forces is favorable for protein folding?

1. Hydrophobic interactions
2. Hydrogen bonding
3. Van der Waals forces
4. Ionic bonding

Options :
86435143645. 1
86435143646. 2
86435143647. 3
86435143648. 4

Question Number : 97 Question Id : 86435113085 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

The first protein sequenced by Frederick Sanger was

1. Haemoglobin
2. Myoglobin
3. Insulin
4. Myosin

Options :
86435143649. 1
86435143650. 2
86435143651. 3
86435143652. 4

Question Number : 98 Question Id : 86435113086 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Which of the following is not known to be involved in the process of assisted folding of proteins?

1. Chaperonins
2. Disulphide interchange
3. Heat shock proteins
4. Peptide bond hydrolysis

Options :
86435143653. 1
86435143654. 2
86435143655. 3
86435143656. 4

Question Number : 99 Question Id : 86435113087 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

What is the count of genes that determine the synthesis of one enzyme?

1. One
2. Four
3. Eight
4. Sixteen

Options :
86435143657. 1
86435143658. 2
86435143659. 3
86435143660. 4

Question Number : 100 Question Id : 86435113088 Question Type : MCQ Option Shuffling : No Is Question Mandatory : No Correct Marks : 1 Wrong Marks : 0

Zinc finger motifs are a particular characteristic of proteins with which one of the following functions?

1. Biochemical catalysis
2. Formation of cytoskeleton
3. Gene regulation
4. Signal transduction

Options :
86435143661. 1
86435143662. 2
86435143663. 3
86435143664. 4