

National Testing Agency

Question Paper Name: MOLECULAR MEDICINE 27th May 2019 Shift 2 SET 1
Subject Name: MOLECULAR MEDICINE
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Display Marks: Yes
Share Answer Key With Delivery Engine: Yes
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MOLECULAR MEDICINE

Group Number : 1
Group Id : 12820625
Group Maximum Duration : 0
Group Minimum Duration : 180
Revisit allowed for view? : No
Revisit allowed for edit? : No
Break time: 0
Group Marks: 100

PART A

Section Id : 12820641
Section Number : 1
Section type : Online
Mandatory or Optional: Mandatory
Number of Questions: 30
Number of Questions to be attempted: 30
Section Marks: 30
Display Number Panel: Yes
Group All Questions: No

Sub-Section Number: 1
Sub-Section Id: 12820663
Question Shuffling Allowed : Yes

Question Number : 1 Question Id : 1282061350 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which among the following statements is correct?

- a) Glycolysis takes place in the cytosol and TCA cycle takes place in the mitochondria
- b) Glycolysis takes place in the mitochondria and TCA cycle takes place in the cytosol
- c) Both glycolysis and TCA cycle take place in the cytosol
- d) Both glycolysis and TCA cycle take place in the mitochondria

Options :

1282065333. A

1282065334. B

1282065335. C

1282065336. D

Question Number : 2 Question Id : 1282061351 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Pyruvate is converted to which of the following in vigorously active muscle cells

- a) Lactic acid
- b) Acetyl CoA
- c) Glucose through gluconeogenesis
- d) Ethanol

Options :

1282065337. A

1282065338. B

1282065339. C

1282065340. D

Question Number : 3 Question Id : 1282061352 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The major outcome of Pentose Phosphate Pathway (PPP) is the formation of which of the following?

- a) NADPH and five carbon sugar
- b) NADH and five carbon sugar
- c) FADH₂ and five carbon sugar
- d) NADPH and FADH₂

Options :

- 1282065341. A
- 1282065342. B
- 1282065343. C
- 1282065344. D

Question Number : 4 Question Id : 1282061353 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In TCA cycle, one molecule of Acetyl CoA enters the cycle and it is released as which of the following?

- a) One Oxaloacetate molecule
- b) One CO₂ and one CO molecule
- c) One Succinate molecule
- d) Two CO₂ molecules

Options :

- 1282065345. A
- 1282065346. B
- 1282065347. C
- 1282065348. D

Question Number : 5 Question Id : 1282061354 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

TPP is a co-factor, the deficiency of which will lead what disease?

- a) Diabetes
- b) Beri beri
- c) Night blindness
- d) Scurvy

Options :

- 1282065349. A
- 1282065350. B
- 1282065351. C
- 1282065352. D

Question Number : 6 Question Id : 1282061355 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A bottle of drinking water contains 900 ml water. How many water molecules will be there (N-Avogadro number)?

- a) 50N
- b) 40N
- c) 60N
- d) 18N

Options :

- 1282065353. A
- 1282065354. B
- 1282065355. C
- 1282065356. D

Question Number : 7 Question Id : 1282061356 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

There are different types of plants depending on the photosynthetic mechanism. ~95% plants on earth are

- a) C3 plants
- b) C4 plants
- c) CAM plants
- d) C5 plants

Options :

- 1282065357. A
- 1282065358. B
- 1282065359. C
- 1282065360. D

Question Number : 8 Question Id : 1282061357 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A raft floats on water but a rock does not. This is due to:

- a) Buoyancy
- b) Density of water
- c) Gravity
- d) Higher density of Raft

Options :

- 1282065361. A
- 1282065362. B
- 1282065363. C

1282065364. D

Question Number : 9 Question Id : 1282061358 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Add the most logical term to the following sequence - Bird : Cage ::

Human : ?

- a) Home
- b) Motor Car
- c) Prison
- d) Forest

Options :

1282065365. A

1282065366. B

1282065367. C

1282065368. D

Question Number : 10 Question Id : 1282061359 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A missile can travel at speed more than Mach -1. Here Mach refers to which of the following?

- a) the ratio of the speed of a body to the speed of sound in the surrounding medium.
- b) the ratio of the frequency to the amplitude of the sound
- c) A speed which is one Log fold higher than speed of sound
- d) A speed which is one Log fold lower than speed of sound

Options :

1282065369. A

1282065370. B

1282065371. C

1282065372. D

Question Number : 11 Question Id : 1282061360 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Poikilothermy allows the following feature in an organism

- a) ability to function over a wide internal temperature range
- b) ability to function without oxygen
- c) ability to function only under ambient temperature
- d) ability to function only under extreme cold temperature

Options :

1282065373. A

1282065374. B

1282065375. C

1282065376. D

Question Number : 12 Question Id : 1282061361 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

During extended space travel the following feature may be useful for astronauts

- a) Bradymetabolism
- b) Ectothermy
- c) Hypoxia
- d) Hyperoxia

Options :

1282065377. A

1282065378. B

1282065379. C

1282065380. D

Question Number : 13 Question Id : 1282061362 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Primary colours are

- a) Red, Green and Blue
- b) Red, Yellow and Blue
- c) Red, Green and Yellow
- d) Green, Orange and Purple

Options :

1282065381. A

1282065382. B

1282065383. C

1282065384. D

Question Number : 14 Question Id : 1282061363 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

In a colour printer the term dpi stands for

- a) dots per inch
- b) disk perforated installation (system)
- c) digital photo integration (system)
- d) density per inch

Options :

1282065385. A

1282065386. B

1282065387. C

1282065388. D

Question Number : 15 Question Id : 1282061364 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

A room has a length of 15m and breadth of 12m. If the sum of the areas of the floor and the ceiling is equal to the sum of the areas of four walls, the volume of the hall is ----- m^3 .

- a) 720
- b) 900
- c) 1200
- d) 1800

Options :

1282065389. A

1282065390. B

1282065391. C

1282065392. D

Question Number : 16 Question Id : 1282061365 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which number comes next in the sequence below:

4, 7, 13, 25, 49, 97, ?

- a) 103
- b) 133
- c) 163
- d) 193

Options :

1282065393. A

1282065394. B

1282065395. C

1282065396. D

Question Number : 17 Question Id : 1282061366 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A man sells a plot of land for Rs. 18,700 per square yard incurring a loss of 15%. What should be the selling price of the plot, if he wants to make a profit of 15%?

- a) Rs. 21,000
- b) Rs. 22,500
- c) Rs. 25,300
- d) Rs. 26,100

Options :

1282065397. A

1282065398. B

1282065399. C

1282065400. D

Question Number : 18 Question Id : 1282061367 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which current does a transformer work with?

- a) Direct current
- b) Alternating current
- c) Both direct and alternating current
- d) Dielectric current

Options :

1282065401. A

1282065402. B
1282065403. C
1282065404. D

Question Number : 19 Question Id : 1282061368 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which of the following properties of a sound wave will determine how loud the sound will be?

- a) Amplitude
- b) Wavelength
- c) Frequency
- d) Pitch

Options :

1282065405. A
1282065406. B
1282065407. C
1282065408. D

Question Number : 20 Question Id : 1282061369 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Which type of mirror should be used in the headlights of cars?

- a) Convex mirror
- b) Concave mirror
- c) Plain mirror
- d) Polarised Mirror

Options :

1282065409. A
1282065410. B
1282065411. C
1282065412. D

Question Number : 21 Question Id : 1282061370 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The process of galvanization involves the

- a) Coating of zinc on iron
- b) Coating of copper on iron
- c) Coating of aluminium on iron
- d) Coating of tin on iron

Options :

1282065413. A

1282065414. B

1282065415. C

1282065416. D

Question Number : 22 Question Id : 1282061371 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Calculate the Molarity of a solution that has 2.3 moles dissolved in 4.6 litres.

- a) 0.5M
- b) 1M
- c) 0.25M
- d) 1.25M

Options :

1282065417. A

1282065418. B

1282065419. C

1282065420. D

Question Number : 23 Question Id : 1282061372 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Out of the following, which is not emitted by radioactive substance?

- a) Electrons
- b) Electromagnetic radiation
- c) Alpha particles
- d) Neutrons

Options :

1282065421. A

1282065422. B

1282065423. C

1282065424. D

Question Number : 24 Question Id : 1282061373 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Sound waves in air are

- a) Transverse
- b) Longitudinal
- c) Electromagnetic
- d) Polarised

Options :

1282065425. A

1282065426. B

1282065427. C

1282065428. D

Question Number : 25 Question Id : 1282061374 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Superconductors are substances which

- a) conduct electricity at low temperature
- b) offer high resistance to the flow of current
- c) conduct electricity with no resistance
- d) conduct electricity at high temperature

Options :

1282065429. A

1282065430. B

1282065431. C

1282065432. D

Question Number : 26 Question Id : 1282061375 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A predation series linking animals to ultimate plant food is called

- a) Food web
- b) Tropic level
- c) Food cycle
- d) Food chain

Options :

1282065433. A

1282065434. B

1282065435. C

1282065436. D

Question Number : 27 Question Id : 1282061376 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

House keeping genes are predominantly

- a) Inducible genes
- b) Expressed only in tumor cells
- c) Expressed in all cell types
- d) Repressable genes

Options :

1282065437. A

1282065438. B

1282065439. C

1282065440. D

Question Number : 28 Question Id : 1282061377 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Plant vacuoles are analogous to

- a) Spherosome
- b) Endoplasmic reticulum
- c) Mitochondria
- d) Lysosome

Options :

1282065441. A

1282065442. B

1282065443. C

1282065444. D

Question Number : 29 Question Id : 1282061378 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The plant hormone involved in determining root and shoot direction

- a) Indole acetic acid
- b) Auxin
- c) Gibberellin
- d) Abciscic Acid

Options :

1282065445. A

1282065446. B

1282065447. C

1282065448. D

Question Number : 30 Question Id : 1282061379 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

CH_3COONa is a salt of

- a) Weak acid & strong base
- b) Strong acid & weak base
- c) Strong acid & strong base
- d) Weak acid & weak base

Options :

1282065449. A

1282065450. B

1282065451. C

1282065452. D

PART B

Section Id :	12820642
Section Number :	2
Section type :	Online
Mandatory or Optional:	Mandatory
Number of Questions:	70
Number of Questions to be attempted:	70
Section Marks:	70
Display Number Panel:	Yes
Group All Questions:	No

Sub-Section Number:	1
Sub-Section Id:	12820664
Question Shuffling Allowed :	Yes

Question Number : 31 Question Id : 1282061380 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The human retina plays significant role in vision. This organ is unique since

- a) it is considered part of the central nervous system
- b) it is composed of corneal epithelial cells.
- c) it is connected with the vagus nerve
- d) it supplies the eye with macrophages during infection

Options :

1282065453. A

1282065454. B

1282065455. C

1282065456. D

Question Number : 32 Question Id : 1282061381 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Myelin is a

- a) conducting material in neurons
- b) sheath around vertebral cells
- c) 75% glycolipid and 25% protein
- d) 25% glycolipid and 75% protein

Options :

1282065457. A

1282065458. B

1282065459. C

1282065460. D

Question Number : 33 Question Id : 1282061382 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Following is an antigen presenting cell

- a) Red Blood cell
- b) T cell
- c) Dendritic cell
- d) Epithelial cell

Options :

1282065461. A

1282065462. B

1282065463. C

1282065464. D

Question Number : 34 Question Id : 1282061383 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Cyclic adenosine phosphate is a

- a) Glycosylated nucleotide
- b) Second messenger
- c) Adenosine 1',3'-(hydrogen phosphate)
- d) Extracellular signalling molecule

Options :

1282065465. A

1282065466. B
1282065467. C
1282065468. D

Question Number : 35 Question Id : 1282061384 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Serum glutamate oxaloacetate transaminase is an enzyme expressed majorly in

- a) Blood
- b) liver
- c) Kidneys
- d) Heart & Spleen

Options :

1282065469. A
1282065470. B
1282065471. C
1282065472. D

Question Number : 36 Question Id : 1282061385 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

The model proposed by Sanger and Nicholson favours that cell membrane contains proteins which are embedded in fashion of

- a) Zigzag
- b) criss-cross
- c) mosaic
- d) eclipse

Options :

1282065473. A
1282065474. B
1282065475. C
1282065476. D

Question Number : 37 Question Id : 1282061386 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Mycobacterium causes two major diseases in human

- a) TB and Leprosy
- b) Myonecrosis and TB
- c) Gas gangrene and AIDS
- d) TB and AIDS

Options :

1282065477. A

1282065478. B

1282065479. C

1282065480. D

Question Number : 38 Question Id : 1282061387 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Function of detoxifying harmful drugs from body is done by

- a) smooth endoplasmic reticulum
- b) rough endoplasmic reticulum
- c) Sarcoplasmic reticulum
- d) Both smooth and rough endoplasmic reticulum

Options :

1282065481. A

1282065482. B

1282065483. C

1282065484. D

Question Number : 39 Question Id : 1282061388 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Only partial breakdown of glucose molecule ($C_6H_{12}O_6$) takes place in

- a) aerobic respiration
- b) anaerobic respiration
- c) passive respiration
- d) active respiration

Options :

1282065485. A

1282065486. B

1282065487. C

1282065488. D

Question Number : 40 Question Id : 1282061389 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A solenoid is a coil of wound wire used as electromagnets. The Magnetic field outside a solenoid is

- a) Zero
- b) Strong
- c) Infinite
- d) Negligible

Options :

1282065489. A

1282065490. B

1282065491. C

1282065492. D

Question Number : 41 Question Id : 1282061390 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Density of water is equal to

- a) 900 kg m^{-3}
- b) 950 kg m^{-3}
- c) 1000 kg m^{-3}
- d) 1050 kg m^{-3}

Options :

1282065493. A

1282065494. B

1282065495. C

1282065496. D

Question Number : 42 Question Id : 1282061391 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A mutation that causes complete loss of gene function is called

- a) Amorphic
- b) Hypomorphic
- c) Hypermorphic
- d) Neomorphic

Options :

1282065497. A

1282065498. B

1282065499. C

1282065500. D

Question Number : 43 Question Id : 1282061392 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Mature mammalian red blood cell is incapable of further division because

- a) DNA sequences are redundant
- b) nuclei are lobed
- c) lacks nuclei
- d) mitotic apparatus is absent

Options :

1282065501. A

1282065502. B

1282065503. C

1282065504. D

Question Number : 44 Question Id : 1282061393 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following micro-nutrients plays an important role in nitrogen fixation in biology?

- a) Zinc
- b) Iron
- c) Magnesium
- d) Molybdenum

Options :

1282065505. A

1282065506. B

1282065507. C

1282065508. D

Question Number : 45 Question Id : 1282061394 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

In root nodules of legumes the presence of leg-hemoglobin is important because

- a) it transports oxygen to the root nodule
- b) it acts as an oxygen scavenger
- c) it provides ATP to the nitrogen fixing bacterium
- d) it promotes transamination

Options :

1282065509. A

1282065510. B

1282065511. C

1282065512. D

Question Number : 46 Question Id : 1282061395 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Erythropoiesis in embryos starts in

a) Kidney

b) Liver

c) Spleen

d) Bone marrow

Options :

1282065513. A

1282065514. B

1282065515. C

1282065516. D

Question Number : 47 Question Id : 1282061396 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of a disease attributed to mutation of a single nucleotide is

a) Thalassemia

b) Rickets

c) Sickle cell anemia

d) Turner's syndrome

Options :

1282065517. A

1282065518. B

1282065519. C

1282065520. D

Question Number : 48 Question Id : 1282061397 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Inadequate protein intake leads to Kwashiorkor. The subsequent edema is mostly correlated with inadequate synthesis of

- a) Albumin
- b) Gamma globulin
- c) Collagen
- d) Elastin

Options :

- 1282065521. A
- 1282065522. B
- 1282065523. C
- 1282065524. D

Question Number : 49 Question Id : 1282061398 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Simultaneous movement of two molecules across a membrane in the same direction is known as

- a) oneport
- b) uniport
- c) symport
- d) biport

Options :

- 1282065525. A
- 1282065526. B
- 1282065527. C
- 1282065528. D

Question Number : 50 Question Id : 1282061399 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A mixture of DNA fragments a, b, c and d, with molecular weights of $a + b = c$, $a > b$, and $d > c$, was subjected to agarose gel electrophoresis. The positions of these fragments from cathode to anode sides of the gel would be

- a) b, a, c, d
- b) d, c, a, b
- c) c, b, a, d
- d) d, b, c, a

Options :

- 1282065529. A
- 1282065530. B
- 1282065531. C
- 1282065532. D

Question Number : 51 Question Id : 1282061400 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Lactobacillus mediated conversion of milk to curd results because of

- a) coagulation of milk proteins
- b) coagulation and partial digestion of milk proteins
- c) coagulation of milk fats
- d) partial coagulation and digestion of both milk proteins and fats

Options :

- 1282065533. A
- 1282065534. B
- 1282065535. C
- 1282065536. D

Question Number : 52 Question Id : 1282061401 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The amino acid that acts as a carrier of ammonia from skeletal muscle to liver is

- a) alanine
- b) methionine
- c) arginine
- d) glutamine

Options :

- 1282065537. A
- 1282065538. B
- 1282065539. C
- 1282065540. D

Question Number : 53 Question Id : 1282061402 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Extent of lipid peroxidation is determined by estimating

- a) acetaldehyde
- b) malondialdehyde
- c) formaldehyde
- d) glutaraldehyde

Options :

1282065541. A

1282065542. B

1282065543. C

1282065544. D

Question Number : 54 Question Id : 1282061403 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fasting glucose level of diabetes type 2 patients is a measure of

- a) defect of glucose uptake in skeletal muscle cell
- b) uncontrolled hepatic glucose output
- c) uncontrolled glucose output of skeletal muscle cells
- d) defect of glucose uptake in hepatic cells

Options :

1282065545. A

1282065546. B

1282065547. C

1282065548. D

Question Number : 55 Question Id : 1282061404 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The resolving power of Scanning Electron Microscope is

- a) 0.001 nm
- b) 0.01nm
- c) 0.1 nm
- d) 10 nm

Options :

1282065549. A

1282065550. B

1282065551. C

1282065552. D

Question Number : 56 Question Id : 1282061405 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following enzymes is used in making detergents?

- a) Amylase
- b) Cellulase
- c) Peptidase
- d) Lipase

Options :

1282065553. A

1282065554. B

1282065555. C

1282065556. D

Question Number : 57 Question Id : 1282061406 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Synaptic vesicle is found in

- a) pre-synaptic neuron
- b) post-synaptic neuron
- c) synaptic cleft
- d) basal ganglia

Options :

1282065557. A

1282065558. B

1282065559. C

1282065560. D

Question Number : 58 Question Id : 1282061407 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Hematuria means

- a) hemoglobin in urine
- b) RBC in urine
- c) WBC in urine
- d) platelets in urine

Options :

1282065561. A

1282065562. B

1282065563. C

1282065564. D

Question Number : 59 Question Id : 1282061408 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following disaccharides has unique linkage than others?

- a) Maltose
- b) Starch
- c) Sucrose
- d) Lactose

Options :

1282065565. A

1282065566. B

1282065567. C

1282065568. D

Question Number : 60 Question Id : 1282061409 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

An example of a structural protein with enzymatic property is

- a) Actin
- b) Myosin
- c) Troponin
- d) Trypsin

Options :

1282065569. A

1282065570. B

1282065571. C

1282065572. D

Question Number : 61 Question Id : 1282061410 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is the end product of purine catabolism in humans?

- a) Creatinine
- b) Xanthine
- c) Uric acid
- d) Urea

Options :

1282065573. A

1282065574. B

1282065575. C

1282065576. D

Question Number : 62 Question Id : 1282061411 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Coenzyme involved in oxidative decarboxylation is

- a) Biotin
- b) FAD
- c) Pyridoxal phosphate
- d) Thiamine pyrophosphate

Options :

1282065577. A

1282065578. B

1282065579. C

1282065580. D

Question Number : 63 Question Id : 1282061412 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Human chorionic gonadotropin, a hormone mainly responsible for maintenance of pregnancy in females is secreted from

- a) Ovary
- b) Uterus
- c) Pituitary
- d) Placenta

Options :

1282065581. A

1282065582. B

1282065583. C

1282065584. D

Question Number : 64 Question Id : 1282061413 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Glucose gives positive silver mirror test with ammoniacal silver nitrate due to the presence of chemical group

- a) Hydroxyl
- b) Aldehyde
- c) Ether
- d) Hemiketal

Options :

1282065585. A

1282065586. B

1282065587. C

1282065588. D

Question Number : 65 Question Id : 1282061414 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Humans can not digest cellulose because they lack the enzyme that hydrolyzes

a) Long chain polysaccharides

b) α -1,6 glycosidic bonds

c) α -1,4 glycosidic bonds

d) β -1,4 glycosidic bonds

Options :

1282065589. A

1282065590. B

1282065591. C

1282065592. D

Question Number : 66 Question Id : 1282061415 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Growth hormone follows one of which following signaling pathway?

a) JAK-STAT pathway

b) RTK signalling

c) GPCR signaling

d) Through ion channels

Options :

1282065593. A

1282065594. B

1282065595. C

1282065596. D

Question Number : 67 Question Id : 1282061416 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

. A plant alkaloid Colchicine

- a) prevents microtubule depolymerization
- b) prevents microtubule polymerization
- c) prevents f-actin formation
- d) prevents centriole function

Options :

1282065597. A

1282065598. B

1282065599. C

1282065600. D

Question Number : 68 Question Id : 1282061417 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Meiotic Recombination is caused by

- a) only Crossing-over
- b) crossing-over and independent assortment
- c) only Independent assortment
- d) only Chiasma formation

Options :

1282065601. A

1282065602. B

1282065603. C

1282065604. D

Question Number : 69 Question Id : 1282061418 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Group of bacteria that don't have cell walls are

- a) Mycobacteria
- b) Archaeobacteria
- c) Mycoplasma
- d) Both a and b are correct

Options :

1282065605. A

1282065606. B

1282065607. C

1282065608. D

Question Number : 70 Question Id : 1282061419 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Generalized transduction

- a) Is an example of vertical gene transfer
- b) Results in formation of merozygote
- c) Transfer specific genes from one bacterium to another
- d) Is carried out by temperate phage only

Options :

1282065609. A

1282065610. B

1282065611. C

1282065612. D

Question Number : 71 Question Id : 1282061420 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A virus with RNA- dependent RNA polymerase

- a) Synthesizes DNA from an RNA template
- b) Synthesizes mRNA from DNA template
- c) Synthesizes RNA from an RNA template
- d) Synthesizes ds RNA from DNA template

Options :

1282065613. A

1282065614. B

1282065615. C

1282065616. D

Question Number : 72 Question Id : 1282061421 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What is the target for an antibiotic Kanamycin in bacteria?

- a) Cell wall synthesis inhibition
- b) Blocking of transcription
- c) Blocking of 30S ribosomal subunit
- d) Inhibition of Peptidyl transferase activity

Options :

1282065617. A

1282065618. B

1282065619. C

1282065620. D

Question Number : 73 Question Id : 1282061422 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Restriction endonucleases cleave polynucleotide at

- a) 5' end
- b) 5' and 3' ends
- c) internal phosphodiester bond
- d) a phosphodiester bond within a specific sequence

Options :

1282065621. A

1282065622. B

1282065623. C

1282065624. D

Question Number : 74 Question Id : 1282061423 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Yeast artificial chromosome engineered to accommodate long DNA fragments does not comprise of

- a) cos site
- b) centromere
- c) telomere
- d) ori site

Options :

1282065625. A

1282065626. B

1282065627. C

1282065628. D

Question Number : 75 Question Id : 1282061424 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which one of the following can be true with respect to *Shigella* spp.?

- a) Gram positive, motile, spore forming, transmitted by contaminated food
- b) Gram negative, non-motile, non-spore forming, transmitted by fecal-oral route
- c) Gram positive, non-spore forming, transmitted by fecal-oral route
- d) Gram negative, motile, spore-forming, transmitted by contaminated food

Options :

1282065629. A

1282065630. B
1282065631. C
1282065632. D

Question Number : 76 Question Id : 1282061425 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Mode of action of Diphtheria toxin is

- a) to blocks G-protein signal transduction
- b) to induces fluid loss from intestinal cells
- c) to Causes haemolysis
- d) to inhibits protein synthesis

Options :

1282065633. A
1282065634. B
1282065635. C
1282065636. D

Question Number : 77 Question Id : 1282061426 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

In eukaryotic DNA replication, RNA primers are removed by

- a) DNA pol δ
- b) FEN I
- c) Helicase
- d) DNA pol α

Options :

1282065637. A
1282065638. B
1282065639. C
1282065640. D

Question Number : 78 Question Id : 1282061427 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical
Correct Marks : 1 Wrong Marks : 0

Residue at 5'cap of mature eukaryotic mRNA is

- a) 2-methyl guanosine
- b) 5-methyl guanosine
- c) 7-methyl guanosine
- d) 3-methyl guanosine

Options :

- 1282065641. A
- 1282065642. B
- 1282065643. C
- 1282065644. D

Question Number : 79 Question Id : 1282061428 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Promoter of β -galactosidase does not code for

- a) Lac Z
- b) Lac Y
- c) Lac A
- d) Lac I

Options :

- 1282065645. A
- 1282065646. B
- 1282065647. C
- 1282065648. D

Question Number : 80 Question Id : 1282061429 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following are involved in epigenetic control of gene expression?

- a) RNA pol II
- b) TFIID
- c) TFIIH
- d) DNA methyl transferase

Options :

- 1282065649. A
- 1282065650. B
- 1282065651. C
- 1282065652. D

Question Number : 81 Question Id : 1282061430 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

.si RNA functions by

- a) forming a complex in spliceosome
- b) recruiting histone acetyl transferases to the nucleus
- c) not transmitting to daughter cells after cell division
- d) forming a complex with RISC proteins to inhibit translation or cause degradation of complementary mRNA

Options :

1282065653. A

1282065654. B

1282065655. C

1282065656. D

Question Number : 82 Question Id : 1282061431 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Brachiolaria larvae is associated to

- a) Arthropoda
- b) Mollusca
- c) Annelida
- d) Echinodermata

Options :

1282065657. A

1282065658. B

1282065659. C

1282065660. D

Question Number : 83 Question Id : 1282061432 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Ketone bodies are synthesized in

- a) Adipose tissue
- b) Liver
- c) Muscles
- d) Brain

Options :

1282065661. A

1282065662. B

1282065663. C

1282065664. D

Question Number : 84 Question Id : 1282061433 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The first complete genome sequenced by Fredrick Sanger was

- a) M13 Phase
- b) T4 phage
- c) Lambda Phage
- d) Φ X174

Options :

1282065665. A

1282065666. B

1282065667. C

1282065668. D

Question Number : 85 Question Id : 1282061434 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Human genome project was officially started in

- a) 1984
- b) 1990
- c) 1995
- d) 1980

Options :

1282065669. A

1282065670. B

1282065671. C

1282065672. D

Question Number : 86 Question Id : 1282061435 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Alignment method for closely related sequence is

- a) Multiple sequence alignment
- b) Global alignment
- c) Local alignment
- d) Parallel Alignment

Options :

1282065673. A

1282065674. B

1282065675. C

1282065676. D

Question Number : 87 Question Id : 1282061436 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Golden rice is a variety of rice produced through genetic engineering to biosynthesize

- a) Beta-carotene
- b) Alpha-carotene
- c) Cinnamic Acid
- d) Vitamin D

Options :

1282065677. A

1282065678. B

1282065679. C

1282065680. D

Question Number : 88 Question Id : 1282061437 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Fluorescent proteins are now used in diverse biological research techniques / methods. Out of the following fluorescent proteins the one that is not derived from jelly fish green fluorescent protein is

- a) Blue fluorescent protein (BFP)
- b) Cyan fluorescent protein (CFP)
- c) Yellow fluorescent protein (YFP)
- d) Red fluorescent protein (RFP)

Options :

1282065681. A

1282065682. B

1282065683. C

1282065684. D

Question Number : 89 Question Id : 1282061438 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Endoscopy, a medical imaging technique is used in medicine to view the interior of the body. The procedure uses an endoscope to examine a hollow organ or cavity of the body by inserting the endoscope directly. This instrument works on the principle of

- a) Refraction
- b) Dispersion
- c) Reflection
- d) Total internal reflection

Options :

1282065685. A

1282065686. B

1282065687. C

1282065688. D

Question Number : 90 Question Id : 1282061439 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Identify the palindromic sequence from the following:

- a) 5'ACGTAC3'
3'CATGCA5'
- b) 5'CGTAGC3'
3'GCATCG5'
- c) 5'AGCTAA3'
3'TCGATT35'
- d) 5'GCATCA3'
3'CGTAGT5'

Options :

1282065689. A

1282065690. B

1282065691. C

1282065692. D

Question Number : 91 Question Id : 1282061440 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Radioactive iodine can be introduced in which of the following amino acids

- a) Phenyl Alanine
- b) Threonine
- c) Leucine
- d) Tyrosine

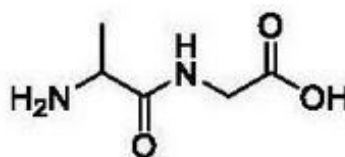
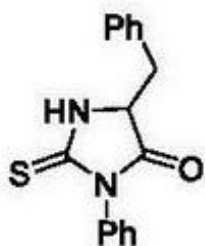
Options :

- 1282065693. A
- 1282065694. B
- 1282065695. C
- 1282065696. D

Question Number : 92 Question Id : 1282061441 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

A tripeptide gives the following products on Edman degradation.



- a) Phe-Ala-Gly
- b) Phe-Gly-Ala
- c) Ala-Gly-Phe
- d) Gly-Ala-Phe

Options :

- 1282065697. A
- 1282065698. B
- 1282065699. C
- 1282065700. D

Question Number : 93 Question Id : 1282061442 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

What's happen when pH of a DNA solution is made 11.0 or more?

- a) DNA will be nicked
- b) DNA will remain in same state as before
- c) DNA will be denatured
- d) DNA will be degraded

Options :

1282065701. A

1282065702. B

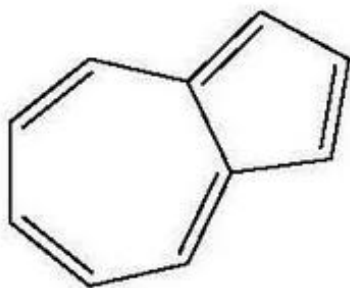
1282065703. C

1282065704. D

Question Number : 94 Question Id : 1282061443 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The compound is



- a) anti-aromatic and has no dipole moment
- b) non-aromatic and has high dipole moment
- c) aromatic and has high dipole moment
- d) aromatic and has less dipole moment

Options :

1282065705. A

1282065706. B

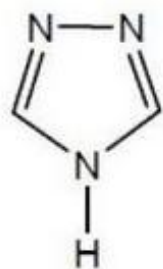
1282065707. C

1282065708. D

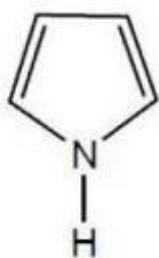
Question Number : 95 Question Id : 1282061444 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

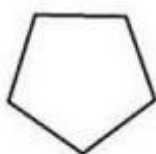
Correct decreasing order of pKa value of the following compounds is



(A)



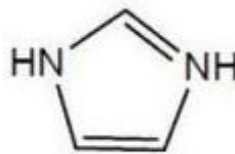
(B)



(C)



(D)



(E)

a) $A > B > C > D > E$

b) $C > B > D > A > E$

c) $E > A > D > B > C$

d) $C > B > E > D > A$

Options :

1282065709. A

1282065710. B

1282065711. C

1282065712. D

Question Number : 96 Question Id : 1282061445 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which is correct order of size of O^- , O^{2-} , F^- and F ?

a) $O^- > O^{2-} > F > F^-$

b) $O^{2-} > O^- > F > F^-$

c) $F > F^- > O^- > O^{2-}$

d) $F^- > F > O^- > O^{2-}$

Options :

1282065713. A

1282065714. B

1282065715. C

1282065716. D

Question Number : 97 Question Id : 1282061446 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following is genetic material of Dengue virus

- a) dsDNA
- b) sDNA
- c) RNA and DNA
- d) RNA

Options :

1282065717. A

1282065718. B

1282065719. C

1282065720. D

Question Number : 98 Question Id : 1282061447 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

Which of the following cell is polymorphonucleus

- a) eosinophil
- b) lymphocyte
- c) macrophage
- d) neutrophil

Options :

1282065721. A

1282065722. B

1282065723. C

1282065724. D

Question Number : 99 Question Id : 1282061448 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

When two alleles of the gene are present and both dominant, the situation is called

- a) incomplete dominance
- b) co-dominance
- c) epistasis
- d) none of this

Options :

1282065725. A

1282065726. B

1282065727. C

1282065728. D

Question Number : 100 Question Id : 1282061449 Question Type : MCQ Option Shuffling : No Display Question Number : Yes
Single Line Question Option : No Option Orientation : Vertical

Correct Marks : 1 Wrong Marks : 0

The absorption of intact protein from the gut in the fetal and newborn animals takes place by

- a) Pinocytosis
- b) Passive diffusion
- c) Simple diffusion
- d) Active transport

Options :

1282065729. A

1282065730. B

1282065731. C

1282065732. D