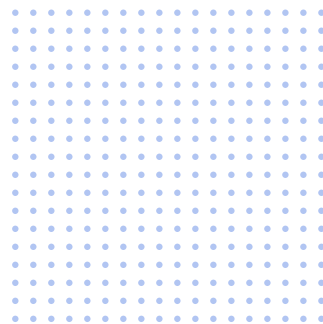




FOR JNU EE EXAM PREPARATION

JNU EE 2022 Question Paper · Ph.D Nanoscience - Biological Sciences

EXAM

JNU EE

YEAR

2022

TYPE

Question Paper

SUBJECT

Ph.D Nanoscience - Biological Sciences

Test Date : 09 Dec 2022**Test Slot : Slot 2****Subject : PBBS-Nanoscience Biological Sciences****Sl. No.1****QBID:1062201**

Identify the enzyme that catalyses the following reaction.



1. Glutamate synthetase
2. Glutamate oxoglutarate aminotransferase
3. Glutamate dehydrogenase
4. α -Ketoglutarate deaminase

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14801]

2[Option ID=14802]

3[Option ID=14803]

4[Option ID=14804]

Sl. No.2**QBID:1062202**

The disease sickle cell anemia is caused by the substitution of _____ by _____

1. Valine; glutamic acid
2. Glutamic acid; valine
3. Tyrosine; phenylalanine
4. Phenylalanine; glutamic acid

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14805]

2[Option ID=14806]

3[Option ID=14807]

4[Option ID=14808]

Sl. No.3**QBID:1062203**

Match Column I with Column II.

	Column 1		Column 2
A.	Autopolyploidy	(i)	$2n+1$
B.	Trisomy	(ii)	AAAA
C.	Allopolyploidy	(iii)	AABB
D.	Nullisomy	(iv)	$2n-2$

Select the correct option.

1. A-ii, B-i, C-iii, D-iv
2. A-iv, B-i, C-ii, D-iii
3. A-ii, B-iv, C-iii, D-i
4. A-ii, B-i, C-iv, D-iii

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14809]

2[Option ID=14810]

3[Option ID=14811]

4[Option ID=14812]

Sl. No.4

QBID:1062204

If the sequence of bases in DNA is GCTTAGGCAA, then the sequence of bases in its transcript will be,

1. GCTTAGGCAA
2. CGAATCCGTT
3. AACGGAUUCG
4. CGAAUCCGUU

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14813]

2[Option ID=14814]

3[Option ID=14815]

4[Option ID=14816]

Sl. No.5

QBID:1062205

Fluorescence microscopy is based on the ability of certain molecules to

1. Continuously emit light of a constant wavelength
2. Absorb light of many different wavelengths
3. Absorb light of a given wavelength and then emit light of a longer wavelength
4. Absorb light of a given wavelength and then emit light of a shorter wavelength

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14817]

2[Option ID=14818]

3[Option ID=14819]

4[Option ID=14820]

Sl. No.6

QBID:1062206

Which one of the following would contribute to intrinsic fluorescence of a protein?

1. Aromatic amino acids
2. Disulfide bonds
3. Charged amino acids
4. Branched chain amino acids

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14821]

2[Option ID=14822]

3[Option ID=14823]

4[Option ID=14824]

Sl. No.7

QBID:1062207

Type-I diabetes mellitus is caused by

1. Destruction of pancreatic beta cells
2. Glucose intolerance
3. Defects in insulin secretion
4. Decreased synthesis of insulin receptors

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14825]

2[Option ID=14826]

3[Option ID=14827]

4[Option ID=14828]

Sl. No.8

QBID:1062208

Which of the following statements correctly applies to proteins which are translated on the rough endoplasmic reticulum?

1. Cytoplasmic proteins which are targeted to the nucleus in response to hormone stimuli.
2. Proteins targeted to liposomes, plasma membrane and cell exterior.
3. Proteins which are targeted to the nucleus through endoplasmic reticulum lumen as the lumen is in direct connection with the inner space of the nucleus.
4. All proteins which are targeted to peroxisomes.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14829]

2[Option ID=14830]

3[Option ID=14831]

4[Option ID=14832]

Sl. No.9

QBID:1062209

Co-localization of two fluorescently labeled proteins in an organelle in cells is usually visualized by

1. Interference-Contrast Microscopy
2. Scanning Electron Microscopy
3. Confocal Microscopy
4. Atomic Force Microscopy

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14833]

2[Option ID=14834]

3[Option ID=14835]

4[Option ID=14836]

Sl. No.10

QBID:1062210

2-Aminopurine induce mutation by:

1. Duplication
2. Frameshift
3. Base pair change
4. Insertion

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14837]

2[Option ID=14838]

3[Option ID=14839]
4[Option ID=14840]

Sl. No.11
QBID:1062211

A humanized antibody is one in which the

1. Heavy and light chains are from human
2. Heavy chain is from human and light chain is from mouse
3. Light chain is from human and heavy chain is from mouse
4. CDRs are from mouse and rest are from human

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14841]
2[Option ID=14842]
3[Option ID=14843]
4[Option ID=14844]

Sl. No.12
QBID:1062212

Pick the correctly matched pairs.

- A. Immature B cells ——— Terminal deoxynucleotidyl transferase
B. Activated B cells ——— Class switching
C. Pre B cells ——— Surrogate light chain
D. Mature B cells ——— Recombinant activating gene 1

Select the correct option.

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

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14845]
2[Option ID=14846]
3[Option ID=14847]
4[Option ID=14848]

Sl. No.13
QBID:1062213

Match the antibiotics in Column I with their modes of action in Column 2.

	Column 1		Column 2
A.	Chloramphenicol	(i)	Inhibits protein synthesis by acting on 30S ribosomal subunit
B.	Rifampicin	(ii)	Interferes with DNA replication by inhibiting DNA gyrase
C.	Tetracycline	(iii)	Inhibits protein synthesis by acting on 50S ribosomal subunit
D.	Quinolone	(iv)	Interferes with RNA polymerase activity
		(v)	Inhibits β -lactamase activity

Select the correct option.

1. A-i, B-ii, C-iii, D-v
2. A-iii, B-iv, C-i, D-ii
3. A-iii, B-ii, C-i, D-iv
4. A-i, B-iv, C-iii, D-ii

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14849]

2[Option ID=14850]

3[Option ID=14851]

4[Option ID=14852]

Sl. No.14

QBID:1062214

Cytochrome c is normally found in the inner mitochondrial membrane. It is released into the cytoplasm during

1. Apoptosis
2. Necrosis
3. Cell differentiation
4. Cell proliferation

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14853]

2[Option ID=14854]

3[Option ID=14855]

4[Option ID=14856]

Sl. No.15

QBID:1062215

Membranes with unsaturated fatty acids are more flexible and fluid because:

1. Unsaturated fatty acids closely packed together to form ordered arrays.
2. Unsaturated fatty acids bend at the double bond (*cis*) preventing close packing.
3. Unsaturated fatty acids have *cis* double bonds that prevent formation of stable bilayers.
4. Saturated fatty acids have a "kink" that produces more fluid aggregates.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14857]

2[Option ID=14858]

3[Option ID=14859]

4[Option ID=14860]

Sl. No.16

QBID:1062216

The Shine-Dalgarno sequence facilitates binding of eubacterial mRNA to the

1. 30S ribosomal subunit via the 16S rRNA
2. 50S ribosomal subunit via the 23S rRNA
3. 30S ribosomal subunit via the 5S rRNA
4. 55S ribosomal subunit via the 5S rRNA

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14861]

2[Option ID=14862]

3[Option ID=14863]

4[Option ID=14864]

Sl. No.17

QBID:1062217

Ribulose-5-phosphate epimerase is involved in which one of the following processes?

1. Glycolysis
2. TCA cycle
3. Glycosylation
4. Pentose Phosphate Pathway

(1) 1

(2) 2

(3) 3

(4) 4

- 1[Option ID=14865]
 2[Option ID=14866]
 3[Option ID=14867]
 4[Option ID=14868]

Sl. No.18

QBID:1062218

Hydrolysis of ATP over ADP and AMP generates highest energy because

1. ATP on hydrolysis generates thermodynamically stable structure.
2. ATP is highly unstable.
3. Hydrolysis of ATP is pH dependent.
4. Hydrolysis of ADP and AMP do not generate thermodynamically stable structure.

(1) 1

(2) 2

(3) 3

(4) 4

- 1[Option ID=14869]
 2[Option ID=14870]
 3[Option ID=14871]
 4[Option ID=14872]

Sl. No.19

QBID:1062219

In competitive inhibition,

1. K_m increases and V_{max} is constant
2. K_m decreases and V_{max} is constant
3. K_m is constant and V_{max} increases
4. K_m decreases and V_{max} increases

(1) 1

(2) 2

(3) 3

(4) 4

- 1[Option ID=14873]
 2[Option ID=14874]
 3[Option ID=14875]
 4[Option ID=14876]

Sl. No.20

QBID:1062220

The physiological roles of bile salts include which of the following?

- A. They aid in the digestion of lipid.
- B. They facilitate in the absorption of sugars.
- C. They facilitate in the absorption of lipid.
- D. They provide a means of cholesterol digestion.

Select the correct option.

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

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14877]

2[Option ID=14878]

3[Option ID=14879]

4[Option ID=14880]

Sl. No.21

QBID:1062221

What is the INCORRECT statement for Gram staining?

- A. Gram positive bacteria have thin layer of protein sugar complex i.e. peptidoglycan and low lipid content.
B. Decolorizing the Gram positive bacterial cells dehydrates and shrinks the cell wall to close pores in cell walls and prevents crystal violet stain from exiting.
C. Gram negative bacteria have thin layer of protein sugar complex i.e. peptidoglycan and high lipid content.
D. Decolorizing agent in the Gram negative bacterial cells dissolves lipids in cell wall to leach out crystal violet stain.

Select the correct option.

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

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14881]

2[Option ID=14882]

3[Option ID=14883]

4[Option ID=14884]

Sl. No.22

QBID:1062222

Match column 1 with column 2 and select the correct option from codes given below.

	Column 1		Column 2
A.	<i>Leishmania donovani</i>	(i)	Malaria
B.	<i>Wuchereria bancrofti</i>	(ii)	Amoebiasis
C.	<i>Trypanosoma gambiense</i>	(iii)	Kala azar
D.	<i>Entamoeba histolytica</i>	(iv)	Sleeping sickness
E.	<i>Typhoid</i>	(v)	Filariasis
		(vi)	Widal Test

Select the correct option.

1. A-iv, B-iii, C-ii, D-i, E-v
2. A-iii B-iv, C-v, D-ii, E-vi
3. A-iii, B-v, C-iv, D-ii, E-vi
4. A-iii, B-v, C-ii, D-i, E-vi

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14885]
2[Option ID=14886]
3[Option ID=14887]
4[Option ID=14888]

Sl. No.23
QBID:1062223

Which of the following statements are incorrect?

- A. Leucocytes disintegrate in spleen and liver.
- B. RBCs, WBCs and blood platelets are produced by bone marrow.
- C. Neutrophils bring about destruction and detoxification of toxins of protein origin.
- D. Important function of lymphocytes is to produce antibodies.

Select the correct option.

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

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14889]
2[Option ID=14890]
3[Option ID=14891]
4[Option ID=14892]

Sl. No.24
QBID:1062224

Which of the following statements are true of water and /or hydrogen bonds?

- A. The oxygen atom in water has a partial positive charge.
- B. The hydrogen atoms of water each bear a partial positive charge.
- C. H-bonds can form only between water molecules.
- D. H-bonds can form between different parts of polypeptide chains.
- E. H-bonds are weaker in strength than vander Waals forces.
- F. H-bonds are relatively weak compared to covalent bonds.
- G. H-bonds in water contribute to its cohesiveness.

Select the correct option.

- 1. C, D, E, G
- 2. A, C, D, F
- 3. B, D, F, G
- 4. A, E, F, G

- (1) 1
(2) 2

(3) 3

(4) 4

1[Option ID=14893]

2[Option ID=14894]

3[Option ID=14895]

4[Option ID=14896]

Sl. No.25

QBID:1062225

Match the items in Column 1 and Column 2.

	Column 1		Column 2
A.	Amoebiasis	(i)	<i>Treponema pallidum</i>
B.	Diphtheria	(ii)	Housefly as mechanical carriers
C.	Cholera	(iii)	DPT vaccine
D.	Syphilis	(iv)	Oral rehydration therapy

Select the correct option from the codes given below.

1. A-ii, B-i, C-iii, D-iv

2. A-ii, B-iii, C-iv, D-i

3. A-i, B-ii, C-iii, D-iv

4. A-ii, B-iv, C-i, D-iii

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14897]

2[Option ID=14898]

3[Option ID=14899]

4[Option ID=14900]

Sl. No.26

QBID:1062226

Which of the following statements regarding different barriers of innate immunity is not correct?

1. Acid present in the stomach, saliva in the mouth, tears from the eyes prevent the growth of microorganisms and constitute physiological barriers of our body.

2. Mucous membrane lining the respiratory, gastrointestinal and urinogenital tracts help in trapping the microbes and constitute physiological barriers of our body.

3. Certain types of leucocytes such as polymorphonuclear leucocytes (PMNL-neutrophils) and lymphocytes such as natural killer cells, constitute cellular barriers of our body.

4. Virus infected cells secrete proteins called interferons which protect non-infected cells from further viral infection and constitute cytokine barriers of our body.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14901]
 2[Option ID=14902]
 3[Option ID=14903]
 4[Option ID=14904]

Sl. No.27
 QBID:1062227

Below are given enzymes with its related function.

- | | | | |
|----|----------------|---|-----------------------------------|
| A. | DNA polymerase | - | Synthesis of DNA strands |
| B. | Helicase | - | Unwinding of DNA helix |
| C. | Ligase | - | Joins together short DNA segments |
| D. | Topoisomerase | - | Transcribes tRNA |

Select the correct option.

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

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14905]
 2[Option ID=14906]
 3[Option ID=14907]
 4[Option ID=14908]

Sl. No.28
 QBID:1062228

The generalizations in Chargaff's rules about DNA structure includes which of the following?

- A. The purines and pyrimidines are always in equal amounts, i.e. $A+G = T+C$
- B. The purines and pyrimidines are not in equal amounts, i.e. $A+G \neq T+C$
- C. The amount of adenine is always equal to that of guanine and the amount of thiamine is equal to that of cytosine, i.e. $A=G$ and $T=C$.
- D. The basic ratio of $A+T/G+C$ may vary from one species to another but is always constant for a given species.

Select the correct option.

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

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14909]
 2[Option ID=14910]

3[Option ID=14911]
4[Option ID=14912]

Sl. No.29
QBID:1062229

Genetic Code has the following characteristics.

- A. Degeneracy of codon i.e. For a particular amino acid, more than one codon can be used.
- B. Non-overlapping i.e. One letter cannot be used for two different codons.
- C. Universal i.e. found in all living organisms.
- D. Ambiguous i.e. a particular codon can also be used to code for different amino acid.

Select the correct option.

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

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14913]
2[Option ID=14914]
3[Option ID=14915]
4[Option ID=14916]

Sl. No.30
QBID:1062230

Ultraviolet radiation causes DNA damage by formation of

- 1. Cytidine dimer
- 2. Thymidine dimer
- 3. Adenine dimer
- 4. Guanine dimer

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14917]
2[Option ID=14918]
3[Option ID=14919]
4[Option ID=14920]

Sl. No.31
QBID:1062231

The conformational variation between B and Z form of DNA is partly due to

- 1. loss of H-bond.
- 2. lack of hydrophobic interactions.
- 3. rotation of glycosidic bond.
- 4. increase in immunity.

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14921]
2[Option ID=14922]
3[Option ID=14923]
4[Option ID=14924]

Sl. No.32
QBID:1062232

The complete denaturation of a protein leads to a loss of the following structure(s)

1. primary
2. primary and tertiary
3. primary and secondary
4. secondary and tertiary

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14925]
2[Option ID=14926]
3[Option ID=14927]
4[Option ID=14928]

Sl. No.33
QBID:1062233

The Law of independent assortment of genes is violated in many instances due to

1. Linkage
2. Incomplete dominance
3. Presence of multiple alleles
4. Imprinting

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14929]
2[Option ID=14930]
3[Option ID=14931]
4[Option ID=14932]

Sl. No.34
QBID:1062234

For anaphase to begin, which of the following must occur?

1. Chromatids must lose their kinetochores.
2. Cohesin must attach the sister chromatids to each other.
3. Cohesin must be cleaved enzymatically.
4. Kinetochores must attach to the metaphase plate.

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14933]
2[Option ID=14934]
3[Option ID=14935]
4[Option ID=14936]

Sl. No.35
QBID:1062235

Live vaccine is _____.

1. low dose of infectious bacteria administrated as prophylactic.
2. a dose of bacterium strain in a modified form which retains immunogenicity but is not pathogenic.
3. a low dose of toxin produced by bacterium.
4. drug against specific pathogen.

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14937]
2[Option ID=14938]
3[Option ID=14939]
4[Option ID=14940]

Sl. No.36
QBID:1062236

Aneuploidy females with only one X chromosome is a characteristic of individuals with

1. Cri du chat syndrome
2. Klinefelter syndrome
3. Down syndrome
4. Turner syndrome

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14941]
2[Option ID=14942]
3[Option ID=14943]
4[Option ID=14944]

Sl. No.37
QBID:1062237

Read the following statements regarding the various techniques used in cancer detection.

- A. Cancer detection is based on biopsy and histopathological studies of the tissue, blood and bone marrow tests for increased cell counts in case of leukaemia.
- B. In biopsy, a piece of suspected tissue cut into thin sections, is stained and examined under microscope by a pathologist.
- C. Techniques like radiography (use of X-rays), CT (computed tomography) and MRI (magnetic resonance imaging) are very useful to detect cancers of the internal organs.
- D. Computed tomography uses strong magnetic field and non-ionizing radiations to detect physiological changes in living tissues.
- E. MRI uses X-rays and ionizing radiation to generate a 3-D image of the internal structure of an object.

Which of the following statements are incorrect?

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

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14945]

2[Option ID=14946]

3[Option ID=14947]

4[Option ID=14948]

Sl. No.38

QBID:1062238

Retroviruses like influenza virus, escape the detection of pre-existing antibodies in the host by generating surface antigen variants. They do so,

- 1. by editing the surface antigen post-translationally.
- 2. because RNA polymerase of these viruses display high mutation rate during RNA synthesis.
- 3. because the surface antigens are attacked by proteases present in the host cell.
- 4. because DNA polymerase of the host mutates the viral genome in the infected cell.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14949]

2[Option ID=14950]

3[Option ID=14951]

4[Option ID=14952]

Sl. No.39

QBID:1062239

RNAi methodology uses double-stranded pieces of RNA to trigger a breakdown or blocking of mRNA. This is often used to,

1. increase the rate of production of an enzyme of pharmacological significance.
2. decrease the production from a harmful gain-of-function of mutated gene.
3. mutate an unwanted allele in a homozygous individual.
4. form a knockout organism that will not pass the deleted sequence to its progeny.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14953]

2[Option ID=14954]

3[Option ID=14955]

4[Option ID=14956]

Sl. No.40

QBID:1062240

Angiogenesis contribute to cancer development by,

1. Providing nutrients and oxygen to tumors and by facilitating metastasis.
2. Initiating a mutation in a gene that causes uncontrolled cell growth.
3. Inhibiting apoptosis (programmed cell death).
4. Preventing the normal inhibition of growth that occurs between cells upon contact.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14957]

2[Option ID=14958]

3[Option ID=14959]

4[Option ID=14960]

Sl. No.41

QBID:1062241

Which of the following is a characteristic of antigen recognized by T-cells?

1. Interaction with antigen results in formation of binary complex between membrane IgM and Ag.
2. It can bind to soluble antigen which chemically may be protein, polysaccharide or lipid.
3. Epitope is linear peptide produced by processing of antigen and bound to MHC molecules.
4. Antigen must be B-dependent to be recognized by T-cells.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14961]

2[Option ID=14962]

3[Option ID=14963]

4[Option ID=14964]

Sl. No.42

QBID:1062242

Protein phosphorylation is part of most pathways of intracellular signal transduction. Select the INCORRECT statement about phosphorylation from the following:

1. Phosphorylation can be on a serine or threonine.
2. Tyrosine kinases are always part of the receptor protein.
3. Phosphorylation changes the structure and function of the protein.
4. Protein kinase cascades result in amplification of the signal.

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14965]

2[Option ID=14966]

3[Option ID=14967]

4[Option ID=14968]

Sl. No.43

QBID:1062243

The ABO blood group is based on two glycolipid antigens called A and B. Read the following statements.

- A. Individuals with A blood group have anti-A antibody in plasma and compatible donor blood types for these individuals are A and O.
- B. Individuals with B blood group have anti-B antibody in plasma and compatible donor blood types for these individuals are B and O.
- C. Individuals with AB blood group have neither anti-A nor anti-B antibody in plasma and compatible donor blood types for these individuals are A, B, AB and O.
- D. Individuals with O blood group have both anti-A and anti-B antibodies in plasma and compatible donor blood type for these individuals is only O.

Which of the statements are correct?

Select the CORRECT option.

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

(1) 1

(2) 2

(3) 3

(4) 4

- 1[Option ID=14969]
 2[Option ID=14970]
 3[Option ID=14971]
 4[Option ID=14972]

Sl. No.44

QBID:1062244

In which of the following options, hormone is correctly matching with its source and function?

	<u>Hormone</u>	<u>Source</u>	<u>Function</u>
1.	Vasopressin	Posterior pituitary	Increases loss of water through urine
2.	Norepinehrine	Adrenal medulla	Increases heartbeat, rate of respiration and alertness
3.	Glucagon	Beta-cells of islets of Langerhans	Stimulates glycogenolysis
4.	Prolactin	Posterior pituitary	Regulates growth of mammary glands and milk formation in females

- (1) 1
 (2) 2
 (3) 3
 (4) 4

- 1[Option ID=14973]
 2[Option ID=14974]
 3[Option ID=14975]
 4[Option ID=14976]

Sl. No.45

QBID:1062245

Which one of the following is not the function of insulin?

- Increases the permeability of cell membrane to glucose.
- Increases the oxidation of glucose in the cells.
- Initiates the conversion of glycogen to glucose.
- Initiates the formation of hepatic glycogen from excess of glucose.

- (1) 1
 (2) 2
 (3) 3
 (4) 4

- 1[Option ID=14977]
 2[Option ID=14978]
 3[Option ID=14979]
 4[Option ID=14980]

Sl. No.46

QBID:1062246

Read the following statements about Biofilms.

- A. Biofilm is a complex structure of different microbial colonies or single type of microbial cells in a group, which adhere to biotic or abiotic surfaces.
- B. Microbial cells in biofilms are embedded in a matrix of extracellular polymeric substances (EPS).
- C. Microbial communities in biofilms have easy access to host immune cells and antibiotics.
- D. Biofilms are one of the major causes of persistence of infection in nosocomial settings through indwelling devices.
- E. Biofilms are unable to provide protection to microorganisms from altered pH, osmolarity, nutrient deficiency, mechanical and shear forces.

Select the INCORRECT option.

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

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14981]

2[Option ID=14982]

3[Option ID=14983]

4[Option ID=14984]

Sl. No.47

QBID:1062247

Match the different immunoglobulin classes in Column 1 with their respective roles in Column 2.

	Column 1		Column 2
A.	IgG	(i)	Recognition molecule on the surface of B lymphocytes
B.	IgA	(ii)	mediates reaginic hypersensitivity
C.	IgD	(iii)	Protects the body fluids
D.	IgE	(iv)	Protects the body surfaces

Select the correct option.

- 1. A-iii, B-iv, C-i, D-ii
- 2. A-ii, B-iii, C-iv, D-i
- 3. A-i, B-ii, C-iii, D-iv
- 4. A-ii, B-iv, C-i, D-iii

(1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14985]

2[Option ID=14986]

3[Option ID=14987]
4[Option ID=14988]

Sl. No.48
QBID:1062248

Which one of the following is an incorrect association?

1. Lysosome :: Synthesizes molecules for extracellular protein degradation
2. Mitochondria :: Cellular respiration
3. Endoplasmic reticulum :: Synthesizes proteins and sends them into Golgi apparatus
4. Polysomes :: Make large quantity of a particular protein

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14989]
2[Option ID=14990]
3[Option ID=14991]
4[Option ID=14992]

Sl. No.49
QBID:1062249

Which of the following is not a function of molecular chaperone in protein folding?

1. Molecular chaperones assist in protein folding into their correct structure.
2. Molecular chaperones specify the tertiary structure of a protein.
3. Molecular chaperones can stabilize partially folded proteins and prevent them from aggregating with other proteins.
4. Molecular chaperones can shield and protect exposed hydrophobic regions of proteins

- (1) 1
(2) 2
(3) 3
(4) 4

1[Option ID=14993]
2[Option ID=14994]
3[Option ID=14995]
4[Option ID=14996]

Sl. No.50
QBID:1062250

Vitamin D is derived from which of the following precursors by the action of UV light?

1. 7-Dehydrocholesterol
2. Lanosterol
3. Glyoxalate
4. Squalene epoxide

- (1) 1

(2) 2

(3) 3

(4) 4

1[Option ID=14997]

2[Option ID=14998]

3[Option ID=14999]

4[Option ID=15000]