### Flag question

During the initiation of protein synthesis in eukaryotic cells eIF4E, eIF4A and eIF4B associate with which of the following?

### Select one:

- a. Shine-Delgarno sequence
- b. The 5' cap on the mRNA
- O c. The poly-A tall on the mRNA
- d. The formylated-met-initiator tRNA molecule
- e. The 16S rRNA molecule in the small ribosomal subunit

Question 79

Not yet answered

Marked out of 1.00

F Flag question

The short sequence of non-coding DNA at which RNA polymerase can bind to start transcription is called?

### Select one:

- O a. Enhancer
- O b. Activator
- c. Promotor
- O d. Silencer
- e. Effector

#### F Flag question

Thymine dimer is a type of	
damage due to and it is	i.
possible to be repaired in HUMAN by	ĺ

#### Select one:

- a. Endogenous, exposure to UV light, NER enzymes
- b. Exogenous, exposure to X-ray,
   BER enzymes
- c. Spontaneous, exposure to alkylating agents, BER enzymes
- d. Induced, exposure to UV light,
   NER enzymes
- e. Induced, exposure to UV light,
   Photolyases

Not yet answered Marked out of 1.00

Flag question

Viruses can cause direct oncogenetic changes by all of the followings except?

### Select one:

- a. Inhibiting apoptosis of damaged cells
- b. Enhancing tumour-suppressor gene function
- c. Resisting host organism
   immune effector mechanisms
- d. Interfering with DNA repair mechanisms
- e. Providing oncogenes to a normal cell

Guestion 76

Not yet answered

Marked out of 1.00

Flag question

Cancer cells characteristics, choose the wrong statement?

### Select one:

- a. Tumor cells are unable to grow in suspension
- b. Nuclear size in tumor cells is much larger than that in normal cells
- c. Tumor cells are either abnormally large or abnormally small
- d. Cancer cells has irregular chromatin distribution
- e. Cancer cells are less

# Spliceosome is all of the following EXCEPT?

#### Select one:

- a. It is a large RNA-protein complex
- b. It enhances two sequential transesterification reactions
- c. It removes the intronic sequences in the form of lariat structure
- d. It consists of 5 different tRNA (U1,U2,U4,U5 and U6)
- e. It consists of different 150 polypeptide chains

Question 74

Not yet answered

Marked out of 1.00

P Flag question

The probe used in blotting techniques is?

### Select one:

- a. Labeled DNA segment complementary to DNA to be tested
- b. Protein for detection of specific DNA or RNA
- C. All the statements are false
- d. Antibody for detection of DNA
- e. Labeled DNA segment complementary to DNA or RNA to be tested

Question 73

Not yet answered

Marked out of 1.00

F Flag question

Paclitaxel inhibit the cell division through?

### Select one:

- a. It stabilizes microtubule assembly
- b. Inhibiting transcription
- C. Binding with DNA
- d. Binding to both strands of DNA
- e. It mimic some crucial compounds needed by cells

# Flag question

An antibiotic used against prokaryotic infection, it would target which of the following?

### Select one:

- a. DNA polymerase
- b. 50S large ribosomal subunit
- O c. Mitochondria.
- O d. 40S small ribosomal subunit
- e. RNA polymerase II.

Clear my choice

Question 70

# The sterold hormones?

## Select one:

- a. they bind to cell surface receptors to trigger chemical cascades
- b. are hydrophobic and so cannot penetrate the plasma membrane
- c. are made in one location of the body but have their effects some distance away
- d. never enter the blood of humans
- e. are hydrophilic and so cannot penetrate the plasma membrane

Which one of the following descriptions of DNA replication is not common to the synthesis of both leading and lagging strands?

### Select one:

- a. Hellcase continuously
  unwinds duplex DNA at the
  replication fork during synthesis
- b. Nucleotides monophosphates are added in 5' to 3' direction along the growing DNA chain
- c. DNA polymerase III synthesizes DNA
- d. RNA primer is synthesized
- e. DNA ligase repeatedly joins the ends of DNA along the growing strand

Question 72

Not yet answered

Marked out of 1.00

F Flag question

The direct deamination product of guanine is?

## Select one:

- O a. Thymine
- b. Adenine
- c. Xanthine
- O d. Uracil
- e. Hypoxanthine

The Zinc Finger Motif, choose the wrong statement?

### Select one:

- a. Commonly found in the DNA binding domain of some hormone receptors
- b. The zinc is required to maintain the tertiary structure of zinc finger domain
- c. Zinc fingers forms an alpha helix and beta sheet containing a nucleotide recognition signal
- d. Each zinc finger contacts
   about 5 bp of DNA
- e. In proteins with the zinc finger motif, the binding site is repeated two to nine times

The following general transcription factor binds firstly to the promotor sequence?

# Select one:

- O a. TFIIH
  - O b. TFIIB
  - O c. TFIIE
  - d. TFIID
  - O e. TFIIA





The DNA double helix is a stable structure because, choose the wrong statement?

### Select one:

- a. Stacking interaction between phosphate, sugar, and the nitrogen bases
- b. The two strands of DNA are held together by H-bonds
- c. Hydrophobic Interactions and van der waals forces in the core of the helix between the base pairs
- d. Polar atoms in the sugarphosphate backbone form external H bonds with surrounding water molecules.
- e. The negatively charged phosphate groups are all situated on the exterior

Question **68**Not yet answered
Marked out of 1.00
P. Flag question

Three-parents baby technology, choose the wrong statement?

### Select one:

- a. It is used to avoid transmission of mitochondrial disease.
- b. It involve taking the nucleus of mother egg
- c. It is a milochondrial replacement IVF
- d. It involve inserting the donor nucleus into mother egg
- e. It involves fertilizing the hybrid egg with father sperm.

Little dramation.

The following event occurs during transcription initiation?

### Select one:

- a. Formation of transcription bubbles
- b. Recruitment of different RNA processing factors to CTD tall due to its gradual phosphorylation
- c. Unzipping of the helical DNA with average size of 10-20 nucleotides at a time
- O d. Lariat formation
- e. Assembly of the general transcription factors and RNA polymerase at the promotor site

Scanned with CamScanner

Not yet answered

Marked out of 1.00

F Flag question

Chromosome karyotyping is normally done in?

# Select one:

- a. Telophase
- O b. Prometaphase
- c. Metaphase
- O d. Anaphase
- O e. Prophase

# Transition mutation is replacement of?

# Select one:

- O a. A > T
- O b. T > G
- C. A > G
- O d. T > A
- O e. A > C

Question 64

Not yet answered

Marked out of 1.00

P Flag question

# RNA polymerase binds to the?

### Select one:

- a. Promoter
- O b. Enhancer
- O c. Shine-Dalgarno sequence
- O d. Operator
- O e. Silencer

F Flag question

3' → 5' Exonuclease activity of DNA polymerase !?

### Select one:

- a. Hydrolyses DNA into mononucleotides
- b. Cleaves DNA molecule into short fragments
- O c. Removes ribonucleotides
- d. Corrects errors in replication
- e. Adds deoxyribonucleotides

Clear my choice

Question 58

Not vet intropered

Which of the following is true of histories?

### Select one:

- a. All histones form part of the nucleosome core particles in chromatin
- O b. Histones are acidic proteins.
- c. Histones are found in animal chromatin but in not in plant cells.
- d. The amino acid sequences of histone proteins are very similar in different organisms.
- e. Histones are widely found in prokaryotes

What is the first immune system deficiency disorder treated by gene therapy?

### Select one:

- a. Lactase deficiency
- b. Duchenne muscle dystrophy
- c. Adenosine deaminase deficiency
- O d. Sickle cell anemia
- e. Homogentisate oxidase deficiency

# The technique used in detection of DNA is?

# Select one:

- a. DNA sequencing
- b. Southern blotting
- c. Northern blotting
- d. Western blotting
- e. Sanger method



Z-DNA, choose the wrong statement?

### Select one:

- a. Exist when particular base sequences are present
- b. May play a role in regulating gene transcription
- c. Has 12 base pairs per turn
- d. Is left handed
- e. Its major groove is extremely narrow but very deep

The activation of TNFa receptor on cell surface leads to?

### Select one:

- a. Burkitt's lymphoma
- O b. Hepatomas
- O c. Angiogenesis
- O d. Metastasis
- e. Cell death

Clear my choice

Next page

Question 54

Not yet answered

Marked out of 1.00

F Flag question

# All of the followings are DNA regulatory REGIONS except?

### Select one:

- a. Repressors
- O b. Operators
- C. Enhancers
- O d. Silencers
- e. Promoters

For cell surface receptors, choose the incorrect statement?

#### Select one:

- a. The extracellular figand-cell surface receptor binding initiates a chemical change on the intracellular side of the membrane
- b. Cell surface receptors take part in communication between cell and the outside world
- c. Cell surface receptors are specialized integral membrane proteins.
- d. The catecholamine hormones are hydrophobic and thus interact with cell surface receptors and transmit their signals through second messanges
- m. Extracellular ligands attach to the receptor, trappeting changes. In the function of the cell

Not yet answered

Marked out of 1.00

F Fing question

Mutation in DNA sequence can result only if the damage?

### Select one:

- O a. Was huge to be repaired
- O b. Was spontaneous
- c. Was not recognized and repaired before cell division
- d. Was induced by exposure to sunlight
- e. Was repaired early and before cell division

Proto-oncogene and oncogenes, choose the wrong statement?

### Select one:

- a. When cell growth is completed proto-oncogenes are turned off
- b. The most common inducers of mutation of proto-oncogene are viral infections and chemicals
- c. Proto-oncogenes promotes cellular growth and differentiation
- d. Oncogenes regulate the activity of cyclins and cyclindependent kinases
- e. Oncogenes promote overproduction of growth factors or increase their activity

Question 49

Not yet answered

Marked out of 1.00

F Flag question

Acetylcholine receptor ion channel is an example of?

### Select one:

- a. Receptor enzymes
- b. Gated ion channel
- c. G-protein coupled receptor
- d. Nuclear protein
- e. Membrane protein

Outestion 48

Not yet answered

Marked out of 1.00

F Flag question

Which of these DNA fragments will have a higher melting temperature?

#### Select one:

- a. CCGGAGG
   GGCCTCC
- O b. ATTTCAA
  TAAAGTT
- C. TTACTTA

  AATGAAT
- d. GGACTGA
   CCTGACT
- O e. GCATTGA
  CGTAACT

The most efficient point for eukaryotic gene expression regulation is at?

### Select one:

- O a. RNA processing
- b. Translation initiation
- c. Transcription initiation
- O d. Protein activity
- e. mRNA transportation and localization

### F Flag question

Xeroderma pigmentosum is all of the followings EXCEPT?

#### Select one:

- a. Is a kind of recessive genetic disorder
- b. Is an inherited disease
- c. Caused by deficiency of MMR enzymes
- d. Victims are extremely sensitive to sunlight
- e. Is a type of skin cancer

# The correct statement concerning RNA and DNA polymerases is?

### Select one:

- a. DNA polymerase use nucleoside diphosphates
- b. All RNA and DNA polymerases can add nucleotides only at the 3' end of the growing polynucleotide chain
- c. DNA polymerases can add nucleotides at both ends of the chain
- d. RNA polymerase require primers and add bases at 5' end of the growing polynucleotide chain
  - e. RNA polymerase use

Not yet answered

Marked out of 1.00

F Flag question

In nerve cells, which one of the following vectors is preferred to transfer genes?

### Select one:

- a. Herpes simplex virus
- b. Retroviral vector
- C. Influenza virus
- d. Herpes zoster virus
- e. Vaccinia vector

Which of the following is a posttranslational modification of a polypeptide?

#### Select one:

- a. The growing polypeptide signals the ribosome to attach to the ER.
- b. Complementary base pairing of mRNA and tRNA in the ribosome
- c. Polysome formation for simultaneous many polypeptides production from one mRNA transcript
- d. Cleavage of a polypeptide into two or more chains
- e. Removal of introns and splicing of exons

Not yet answered

Marked out of 1.00

F Flag question

Genetic tests for mutations that affect all cells in the body, and have been there since conception is termed?

# Select one:

- a. Karyotyping
- O b. Molecular
- c. Biochemical genetic testing
- d. Acquired genetic testing
- e. Constitutional

Not yet answered

Marked out of 1.00

F Flag question

Weak transcription of Lac operon occurs in the following condition?

#### Select one:

- a. Presence of glucose only
- b. Absence of lactose and glucose
- c. Presence of lactose and absence of glucose
- d. Presence of lactose and glucose
- e. Presence of glucose and absence of lactose

# Choose the wrong statement?

## Select one:

- a. In regulatory proteins the nucleotide recognition signal is contained within the alpha-helix
- b. Zinc finger motifs consist of an alpha-helix and a beta- sheet
  - c. Leucine zippers contains a leucine every seven amino acids
  - d. Each zinc finger contacts
     about 5 bp of DNA
  - e. Leucine zippers binds to the minor groove of DNA.

The main difference between embryonic stem cells and adult stem cells is?

#### Select one:

- a. Adult stem cells are pluripotent, just like embryonic stem cells
- b. Embryonic stem cells can differentiate into more cell types than adult stem cells
- c. Adult stem cells grow bigger than embryonic stem cells
- d. There is no difference between both types of cells
- e. Adult stem cells can differentiate into more cell types than embryonic stem cells

The genetic test used to individuals who do not have symptoms at the time of testing but have a family history of a genetic disorder is known as?

### Select one:

- a. Carrier Testing
- b. Predictive testing
- c. Diagnostic Testing
- O d. Cytogenetic Test
- e. Prenatal genetic testing

For G-protein and G-protein coupled receptor, choose the incorrect statement?

#### Select one:

- a. G proteins bind GTP and they control and amplify intracellular signalling pathways
- b. When the Ga subunit is bound to GDP it is "ON"; and when it is bound to GTP it is "OFF"
- c. The intracellular domain is coupled to a heterotrimeric Gprotein
- d. The conformational change relayed to the intracellular domain causes the Ga subunit to release GDP and bind to GTP
- e. The extracellular domain connects to the intracellular domain through seven

Litting decourage

Choose the wrong statement of the following?

#### Select one:

- a. Alkali may be used to purify
   DNA to remove RNA from DNA
- b. The presence of OH- in ribose may cause the breakage of phosphodiester bonds
- c. Heat cause the two strands of the DNA helix to separate
- d. In RNA and DNA, alkali causes the cleavage of the phosphodiester bonds
- e. Alkali cause the two strands of the DNA helix to separate

Not yet answered

Marked out of 1.00

F Flag question

Which cell type would not be a direct target for gene therapy?

#### Select one:

- O a. Enterocytes
- O b. Hepatocytes
- O c. Muscle cells
- O d. Cardiomyocytes
- e. Red blood corpuscies

All the following criteria suggest that the cancer occurs due to mutations in somatic cells except?

#### Select one:

- a. Multiple tumors
- b. Unilateral
- O c. Acquired
- O d. Single tumors
- O e. Late-onset

Clear my choice

Question 35

Not yet answered

Marked out of 1.00

The following is COMMON point of regulation of gene expression both in eukaryotes and prokaryotes?

# Select one:

- a. mRNA transportation and localization
- b. Post transcriptional modification
- c. Translation elongation
- d. Transcription initiation
- e. RNA splicing

# One of the following does not interact with cell surface receptors?

# Select one:

- a. Testosterone
- O b. Glucagon
- O c. Insulin
- O d. Gastrin
- e. hydrophilic hormones

Which one of the following is true of the pentoses found in nucleic acids?

#### Select one:

- a. The pentoses are always in the β-furanose forms.
- b. C-5 of the pentose is joined to a nitrogenous base and C-1 to a phosphate group.
- c. C-5 and C-1 of the pentose are joined to phosphate groups.
- d. The straight-chain and ring forms undergo constant interconversion.
- e. The bond that joins nitrogenous bases to pentoses is an O-glycosidic bond.

Proto Oncogene, choose the wrong statement?

#### Select one:

- a. Oncogenes causes
   uncontrolled cell division of the
   mutated cells
- b. MYC genes amplification is always found in breast and ovarian cancers
- c. Oncogenes are the mutated forms of proto-oncogenes
- d. They normally promote cellular growth and differentiation
- e. Proto-oncogenes are turned off when cell growth is completed

Both nerve cell and muscle cell have DNA as somatic cells, but their genome is different in the following way?

### Select one:

- a. The DNA is different, but each cell contains the same genes
- b. The DNA is shorter or longer according to the type cell
- O c. Each cell has its own unique DNA
  - d. The DNA is the same but each cell contains different genes
  - e. The DNA is the same but different genes are turned on in each cell

A male with multiple congenital malformation of many organs, malformed ears, small mouth and nose with general elfin appearance. characteristics for?

# Select one:

- a. Turner syndrome
- b. Patau syndrome
- C. Down Syndrome
- d. Klinefelter syndrome
- e. Edward syndrome

The muscle cells and the nerve cells can develop from the same fertilized egg according to which process of the following?

# Select one:

- a. Differentiation
- b. Survival of the fittest
- c. Selective fertilization
- d. Genetic engineering
- e. Genetic mutations

to hind documen

Which of the following is true when a G-protein interacts with a receptor?

### Select one:

- a. The G-protein is split into a delta-subunit and an α, β-dimer
- b. The G-protein is split into an α-subunit and a β, γ-dimer
- c. The G-protein is split into a γsubunit and an α, β-dimer
- d. The G-protein is split into a βsubunit and an α, γ-dimer
- e. The G-protein is split into its component protein subunits

The antibiotic tetracycline is acting as an inhibitor of the protein synthesis in prokaryotes, How?

### Select one:

- a. By inhibiting peptidyl transferase enzyme
- b. By inhibiting the initiation stage of protein synthesis
- C. By inhibiting eEF2
- d. By inhibiting binding of aminoacyl tRNA to ribosomes
- e. By inhibiting IF3

# A replacement of proline codon with stop codon is called?

# Select one:

- a. Transition point mutation
- b. Silent mutation
- c. Nonsense mutation
- d. Non-conservative point mutation
- e. Insertion frameshift mutation

The direction of amino acid transfer to the growing polypeptide chain is?

#### Select one:

- a. From the aminoacyl tRNA site to the exit tRNA site on the ribosome
- b. From the aminoacyl tRNA site to the peptidyl tRNA site on the ribosome
- c. From the peptidyl tRNA site to the aminoacyl tRNA site on the ribosome
- O d. From the peptidyl tRNA site to the exit tRNA site on the ribosome
- e. From the peptidyl tRNA site to the aminoacyl tRNA site on the 30S ribosomal subunit

If receptor molecules are removed from target organs, then the target organ will?

#### Select one:

- a. not responds to the hormone
- b. continues to respond to the hormone but in the opposite way.
- c. continues to respond to the hormone but in a random way.
- d. continue to respond to the hormone without any difference
- e. continues to respond to the hormone but will require higher concentration

Not yet answered

Marked out of 1,00

P Flag question

One of the followings are general components of any operon?

## Select one:

- a. Structural genes, RNA polymerase, repressors
- b. Operator, promoter, repressor
- c. Promoter, structural genes, histone modifying enzymes
- d. Operator, structural genes,
   promoter
- e. Operator, structural genes, mediators

All the following are characteristics for the eukaryotes chromosomes except?

### Select one:

- a. Copies chromosomes, then
  the cell grows, then goes through
  mitosls to organise
  chromosomes in two equal
  groups
- b. Made of chromatin, a nucleoprotein (DNA coiled around histone proteins)
- c. Eukaryotes chromosomes are circular
- d. Usually there are many chromosomes in eukaryotes
- e. Are found in a nucleus

# F Flag question

Which one of the following is not a secondary messenger in hormone action?

## Select one:

- O a. DAG
- O b. calcium
- O c. cAMP
- od. sodium
- O e. cGMP

RNA polymerase II enzyme is used in the transcription of?

# Select one:

- O a. All tRNA
- O b. All rRNA
- O c. some mRNA
- O d. siRNA
- e. All mRNA

Clear my choice

Question 20

Not wat an arrange

In cancer, mutations in cadherins helps in?

# Select one:

- a. Angiogenesis
- b. Metastasis and invasiveness
- c. Resistance to growth inhibition
- d. Uncontrolled proliferation
- e. Ability to escape apoptosis



One of the following statements is untrue about G-proteins?

## Select one:

- a. G-Proteins act as signal proteins.
- b. G-Proteins are activated by GTP
- c. G-Proteins bind GDP in the resting state.
- d. G-proteins consist of four protein subunits.
- e. G-Proteins interact with receptors

+ Fluid delegation

A virus infects a cell and randomly inserts many short segments of DNA containing a stop codon throughout the organism's chromosomes. This will probably cause?

#### Select one:

- a. The DNA to break up into thousands of short segments
- b. The produced proteins to be short and defective
- c. Incorrect pairing between mRNA codons and amino acids
- d. The first stage of gene expression will never happen.
- e. Nothing, as long as the stop codons are not also inserted into tRNA

Not yet answered

Marked out of 1.00

F Flag question

p53, choose the wrong statement?

### Select one:

- a. Is not important for cell growth or development
- b. Is the most mutated gene in human cancer
- C. Is made up of 393 base pairs
- d. Is a transcription factor
- e. It regulate the cellular response to internal and external stress signals

In DNA sequencing, Dideoxynucleotides differ from deoxynucleotides in having?

# Select one:

- a. OH instead of H in 5 position of dNTP
- O b. H in place of OH in 5 position
- c. H instead of OH in 3 position of dNTP
- d. CH2 instead of OH in position
   3 of dNTP
- e. OH instead of H in 3 position

Not yet answered

Marked out of 1.00

P Flag question

In base pairing between A=T, atom number 1 of A bind with atom number ... of T?

# Select one:

- O a. 4
- b. 3
- O c. 2
- O d. 1
- O e. 6

Metastasis and invasiveness of a tumor, choose the wrong statement?

#### Select one:

- a. Facilitated by cadherins mutation
- b. Is the main cause of human cancer death
- c. Activation of extracellular protease facilitates the invasion of cancer cells
- d. Refers to the ability of the cancer cells to spread away and invade other body parts
- e. Is the first stage in the development of cancer

Not yet answered

Marked out of 1.00

F Fing question

The conversion of a signal binding to a specific receptor into a cellular response is called?

## Select one:

- a. Signal transduction
- b. Signal transversion
- c. Signal integration
- O d. Signal adaptation
- O e. Signal amplification

Tumor suppressor genes, choose the wrong statement?

## Select one:

- a. The most known and studied tumor suppressor gene is p53
- b. 50-60% of all human cancers
   have mutated p53
- c. If only one allele of the gene pair is mutated they lose their function
- d. They recognize DNA damage and regulate its repair and protein degradation
- e. Mutations of tumor suppressor gene lead to survival of cells with damaged DNA

Not yet answered

Marked out of 1.00

P Flag question

The technique that is used to detect gene product is?

## Select one:

- a. Northern blotting
- O b. DNA sequencing
- O c. Sanger method
- d. Western blotting
- e. Southern blotting

An addition or deletion of a base or bases but does not occur in a multiple of three is known as?

## Select one:

- a. Transition or transversion mutation
- b. Frameshift mutation
- O. c. Conservative mutation
- d. Nonsense mutation
- e. Silent mutation

Not yet answered

Marked out of 1.00

P Flag question

Morpholinos are synthetic molecules act in a mechanism similar to endogenous?

Select one:

- O a. mRNA
- b. miRNA
- C. snRNA
- O d. rRNA
- e trna

F\* Fing question

# Palliative therapy?

## Select one:

- a. Is the stimulation of cell death through apoptosis or necrosis
- b. Is associated with acute side effects
- c. Is applied to patients with incurable disease
- d. Is associated with Intensity Modulation Radiotherapy Technique
- e. It targets tumour cells while leaving normal cells largely unaffected

During translation in a eukaryotic cell?

#### Select one:

- a. Synthesis is taking place according to instructions carried by mRNA
- O b. Ribosomes move into the nucleus
- c. mRNA is synthesized by the bonding of free nucleotides to the bases on the template strand of DNA
- d. tRNAs carries amino acids to the nucleus, where they are added to a growing polypeptide chain

What statement about nucleosomes is false?

#### Select one:

- a. The nucleosome is clamped by histone H1
- b. A nucleosome produces a 3fold packing ratio of DNA.
- c. A nucleosome consists of DNA wrapped around 8 histone proteins, plus a short segment of linker DNA.
- d. Nucleosomes are found only in mitotic chromosomes.
- e. Nucleosome is a "bead" on a string of unfolded chromatin.

Not yet answered

Marked out of 1.00

P Fing question

# All of the followings are DNA regulatory PROTEINS except?

#### Select one:

- O a. CAP protein
- b. Lac repressor
- c. Enhancers
- O d. Activators
- e. Repressors