

**Section 1 - Section 1**

**Question No.1**

4.00

Bookmark

Short lived immunity acquired by foetus from mother through placenta is

- Innate nonspecific immunity
- Passive immunity
- Active immunity
- Cellular immunity

**Question No.2**

4.00

Bookmark

**Statement:** Apart from it's entertainment value of Television, it's educational value cannot be ignored

**Assumptions:**

I. People take Television to be the means of entertainment only.

II. The educational value of Television is not realized properly

- If both I and II are implicit
- If neither I nor II is implicit
- If only assumption II is implicit
- If only assumption I is implicit

**Question No.3**

4.00

Bookmark

Correct the error in the italicized part of the sentence by choosing the most appropriate options

Job was a tiny man, barely five feet tall, with a *spright walk*

- a sprightly walking
- spright walk
- a sprightly walk
- spright walkingly

**Question No.4**

4.00

Bookmark

What process is used to identify possible ribosome substrates?

- RNA SELEX
- DNA SELEX
- DNA BLAST
- RISC

**Question No.5**

4.00

Bookmark

Crumb : Bread ::

- Flower : Vase
- Splinter : Wood
- Tea : Cup
- Water : Bucket

**Question No.6**

4.00

**Bookmark** 

Based on the information given answer the following question.

1. In a family of six persons, there are people from three generations. Each has separate professions and they like different colours. There are two couples.
2. Shyam is an Engineer and his wife is not a doctor and she does not like Red colour.
3. Chartered Accountant likes green colour and his wife is a teacher.
4. Manisha is the mother-in-law of Sunita and she likes orange colour.
5. Vimal is the grand father of Tarun and tarun is the Principal and likes black colour.
6. Nyna is the grand daughter of Manisha and she likes blue colour. Nyna's Mother likes white colour.

What is the profession of Sunita?

- Chartered Accountant
- Principal
- Teacher
- Cannot be determined

**Question No.7**

4.00

**Bookmark** 

She studies very hard for the exams, \_\_\_\_\_?

- isn't it?
- does she?
- doesn't she?
- is it?

**Question No.8**

4.00

**Bookmark** 

Sleeping sickness is caused by the vector

- Phlebotomus
- Simulium
- Xenopsylla
- Glossina

**Question No.9**

4.00

**Bookmark** 

The most important function of loop of Henle is

- secretion of a variety of substances from the urine
- creation of the glomerular filtrate
- reabsorption of a variety of substances from the urine
- creation of a strong osmotic gradient in the medulla

**Question No.10**

4.00

**Bookmark** 

Disorder of adrenal cortex cause

- Addison's disease and Cushing syndrome
- Hashimoto's disease, gull's disease
- Cretinism, addison's disease
- Simple goitre, cretinism

**Question No.11**

4.00

Bookmark 

Unfolding of regular secondary protein structure causes

- No change in the entropy of the protein
- Large decrease in the entropy of the protein
- Little increase in the entropy of protein
- Large increase in the entropy of the protein

**Question No.12**

4.00

Bookmark 

FASTA identifies identical matching words using the

- Substitution matrix
- Hashing procedure
- Blocks
- Motifs

**Question No.13**

4.00

Bookmark 

Examples for egg laying mammals

- Thecodonts, pelycosaurs
- Echidna, thecodonts
- Duck billed platypus, echidna
- Therapsid, thecodonts

**Question No.14**

4.00

Bookmark 

Which of the following functions is NOT served by the plasma proteins ?

- O<sub>2</sub> transport
- Buffering capacity of blood
- Blood clotting
- Hormone binding and transport

**Question No.15**

4.00

Bookmark 

If A+B means A is daughter of B,  
A-B means A is husband of B  
A × B means A is brother of B

From the statement A × B × C × D, which of the following statement is not necessarily true?

- B is the brother of A
- C is the brother of A
- A, B, C are male
- D is brother of C

**Question No.16**

4.00

Bookmark 

The Great Barrier Reef is constructed by animals belonging to the phylum

- Chordata
- Echinodermata
- Crustacea
- Cnidaria

**Question No.17**

4.00

**Bookmark** 

The Animal that is considered as “amplifier host” of the virus, in Japanese encephalitis is

- Man
- Cattle
- Horse
- Pig

**Question No.18**

4.00

**Bookmark** 

Study the following information carefully and answer the question below it

Lakshman passes through seven lanes to reach his school. He finds that ‘Truth lane’ is between his house and ‘Lie lane’. The third lane from his school is ‘Karma lane’. ‘Dharma lane’ is immediately before the ‘Yog lane’. He passes ‘Salvation lane’ at the end, ‘Lie lane’ is between ‘Truth lane’ and ‘Dharma lane’, the sixth lane from his house is ‘Devotion lane’.

If Lakshman’s house, each lane and his school are equidistant and he takes 2 minutes to pass one lane, then how long will he take to reach school from his house?

- 15 minutes
- 16 minutes
- 14 minutes
- 13 minutes

**Question No.19**

4.00

**Bookmark** 

Basic criteria used to determine the evolutionary branch of vertebrates?

- Presence of mandibles, presence of limbs, presence of osseous skeleton, presence of waterproof skin, presence of warm blood, presence of mammary glands
- Presence of mandibles, absence of limbs, absence of osseous skeleton, Presence of waterproof skin, absence of warm blood, Presence of mammary glands
- Absence of mandibles, presence of limbs, presence of osseous skeleton, absence of waterproof skin, presence of warm blood, absence of mammary glands
- Absence of mandibles, absence of limbs, absence of osseous skeleton, absence of waterproof skin, absence of warm blood, absence of mammary glands

**Question No.20**

4.00

**Bookmark** 

Water vascular system of Echinodermata consists of

- Pedicellaria calyx  
S-shaped stone canals
- Pedicellaria calyx  
Medreporite
- Teidmann’s bodies  
S-shaped stone canals
- Teidmann’s bodies  
Pedicellaria calyx

**Question No.21**

4.00

**Bookmark** 

Choose the best synonym of the italicized word.

Dr. Elango is in the habit of using *obsolete* words.

- outdated
- simple
- difficult
- wrong

**Question No.22**

4.00

Bookmark 

Which is wrong about nucleic acids?

- DNA is single stranded in some viruses
- RNA is double stranded occasionally
- Length of one helix is  $45\text{\AA}$  in B-DNA
- One turn of Z-DNA has 12 bases

**Question No.23**

4.00

Bookmark 

Being awarded the Best Singer in 2010 marked a \_\_\_\_\_ in her life.

- milestone
- memorial
- sign-post
- yardstick

**Question No.24**

4.00

Bookmark 

Which type of molecule forms the double layer of the plasma membrane?

- Phospholipids
- Ribosomes
- Deoxyribonucleic acid
- Ion channels

**Question No.25**

4.00

Bookmark 

Nidhi walks 10 metres in front and 10 metres to the right. Then every time turning to her left, she walks 5, 15 and 15 metres respectively. How far is Nidhi now from her starting point?

- 10 metres
- 5 metres
- 15 metres
- None of the above

**Question No.26**

4.00

Bookmark 

Hypophysation is done in major carps

- To increase their palatability
- To increase size
- To increase breeding in fisheries
- To increase their growth

**Question No.27**

4.00

Bookmark 

During which geological period was there an explosive increase in the number of many marine invertebrates phyla?

- Devonian
- Ordovician
- Permian
- Cambrian

**Question No.28**

4.00

Bookmark 

Find the odd one out?

- Deduction
- Withdrawal
- Deposit
- Debit

**Question No.29**

4.00

Bookmark 

This is the school where I studied till class 5.  
The underlined word is a

- adverb
- preposition
- pronoun
- adjective

**Question No.30**

4.00

Bookmark 

To distinguish Chikungunya from dengue fever, During an outbreak following test is used

- Hemagglutination Neutralization Test
- Hemagglutination Inhibition test
- Nucleic acid detection by PCR
- IgM capture ELISA

**Question No.31**

4.00

Bookmark 

Coral reefs are of three types

- Holozoic reefs Barrier reefs Atoll
- Fringing reefs Barrier reefs Atoll
- Fringing reefs Barrier reefs Rhizopoda reefs
- Fringing reefs Development reefs Atoll

**Question No.32**

4.00

Bookmark 

What three structures present among all chordates?

- Vertebrate, notochord and regulatory network
- Dorsal neural tube, gangial system, receptor efferent
- Regulatory network, receptor efferent, dorsal neural tube
- Branchial clefts, notochord and dorsal neural tube

**Question No.33**

4.00

Bookmark 

What is the key question in the field of statistical estimation?

- There is no key question in statistical estimation
- Based on my random sample, what is my estimate of normal distribution?
- Based on my random sample, what is my estimate of the population parameter?
- Is the value of my sample statistic unlikely enough for me to reject the null hypothesis?

**Question No.34**

4.00

Bookmark 

Margaret Dayhoff developed the first protein sequence database called

- Atlas of protein sequence and structure
- Protein sequence databank
- SWISS PROT
- PDB

**Question No.35**

4.00

Bookmark 

Adaptive immunity is mediated by B cells and T cells. B cells lack a typical receptor of its own. B cell receptor is often

- An IgE molecule
- An IgA molecule
- An IgM molecule
- An IgG molecule

**Question No.36**

4.00

Bookmark 

A post hoc test is

- A test to determine regression to the mean
- A follow up test to the independent t-test
- A follow-up test to the analysis of variance when there are three or more groups
- A test to compare two or more means in one overall test

**Question No.37**

4.00

Bookmark 

A toxin that blocked the voltage –gated sodium channels of neurons would

- slow down the depolarization phase of the action potential
- prevent depolarization after an action potential was triggered
- prevent action potentials by keeping the cell from depolarizing
- slow down the repolarization phase of the action potential

**Question No.38**

4.00

Bookmark 

The gene responsible for initiating male development in a fetus is

- MIF* gene
- STD* gene
- XY* gene
- SRY* gene

**Question No.39**

4.00

Bookmark 

Hormone most directly associated with stress response is

- Thyroxine ( T4)
- Tri iodothyronine (T3)
- Cortisol
- Growth hormone

**Question No.40**

4.00

**Bookmark** 

Genes between related organism exhibits high variation. The variations would maximally occur in

- Polyadenylation site
- Intron
- Exons
- Promoters

**Question No.41**

4.00

**Bookmark** 

Fat cells release fatty acids in response to

- low insulin levels
- high glucagon levels
- low glucagon levels
- high insulin levels

**Question No.42**

4.00

**Bookmark** 

Which of the following DNA binding domain contains leucine zipper?

- Thyroid hormone receptor
- Lac repressor*
- CRE
- $\lambda$  Cro

**Question No.43**

4.00

**Bookmark** 

A heterologous protein for its expression in the milk of a transgenic animal should be under the control of the promoter of the gene coding for

- B globin
- Preproinsulin
- B lactoglobulin
- Lac Z

**Question No.44**

4.00

**Bookmark** 

List out the subphyla of chordata

- Vertebrate, protochordata
- Protochordata, notochordata, cephalochordata
- Urochordata, cephalochordate, vertebrate
- Vertebrate, notochordata

**Question No.45**

4.00

**Bookmark** 

Which of the following statement is true regarding migration of bio molecules?

- The rate of migration is directly proportional to the resistance of the medium
- The rate of migration is inversely proportional to the current
- Low voltage is used for the separation of high molecular weight compounds
- The rate of migration is directly proportional to the current



**Question No.46**

4.00

**Bookmark** 

Which technique is most likely to be used by a molecular geneticist?

- Establishing crosses between genetic variants.
- Analysis of the amount of genetic variation in a population of individuals
- Production of a new mutant allele of an interesting gene.
- Identification of a previously unknown species

**Question No.47**

4.00

**Bookmark** 

What component is not involved in mRNA splicing

- 28S rRNA
- Consensus sequences at the 5' and 3' ends of the intron
- Spliceosome
- 2'OH group of the ribose sugar at splice site

**Question No.48**

4.00

**Bookmark** 

Classification of porifera on the basis of endoskeleton

- Oligochaeta  
Calcarea  
Demospongia
- Calcarea  
Demospongia  
Hexetinellida
- Demospongia  
Hexetinellida  
Hirudina
- Hirudina  
Polychaeta  
Archiannelida

**Question No.49**

4.00

**Bookmark** 

Paul Berg's gene splicing experiment created the first rDNA molecule which was a

- A T4 phage fragment incorporated into SV40 vector
- A lambda phage fragment incorporated into pSC 101 vector
- A lambda phage fragment incorporated into SV40 vector
- A T4 phage fragment incorporated into pSC 101 vector

**Question No.50**

4.00

**Bookmark** 

Early embryo are enclosed with

- Vitellin membrane
- Fertilization membrane
- Placenta
- Plasma membrane

**Question No.51**

4.00

**Bookmark** 

The N atoms at positions 3 and 9 of purine base are derived from the amide nitrogen of

- Asparagine
- Aspartate
- Glutamate
- Glutamine

**Question No.52**

4.00

**Bookmark** 

Number of species of Osteichthyes are

- 10, 000
- 15, 000
- 25,000
- 20,000

**Question No.53**

4.00

**Bookmark** 

Excretion organ and glands of mollusc are

- Coxal gland, renal gland, Keber's gland, organ of bajonus
- Metanephridia, velliger, trocophore
- Coxal gland, renal gland, trocophore, glochidium
- Coelomoduct, trocophore, glochidium

**Question No.54**

4.00

**Bookmark** 

Mineral associated with cytochrome is

- Ca
- Mg
- Cu
- Fe

**Question No.55**

4.00

**Bookmark** 

The recent development in the field of proteomics is

- MALDI– TOF mass spectroscopy
- Protein chip
- Metabonomics
- Bioinformatics

**Question No.56**

4.00

**Bookmark** 

The form of DNA that closely corresponds to average structure of DNA is

- C-form
- Z-form
- A-form
- B-form

**Question No.57**

4.00

Bookmark 

Messenger RNAs were not visible as discrete bands in your RNA gel because

- The molecular weight of mRNA varies tremendously
- The concentration of RNAs were too high
- mRNAs are much less stable than rRNAs
- mRNAs were not extracted

**Question No.58**

4.00

Bookmark 

Choose the best synonym of the italicized word.

Children of excessively indulgent parents often become very *recalcitrant*.

- indolent
- insolent
- disobedient
- dependent

**Question No.59**

4.00

Bookmark 

Which of the following membrane protein is involved in Hedgehog signaling?

- Frizzled
- Integrin
- RTK
- Patched

**Question No.60**

4.00

Bookmark 

Where are branchial clefts found in humans?

- Branchial clefts located in the anterior region of nostrils, present only during the embryonic stage and disappear later
- Branchial clefts located in the anterior region of spinal cord, present only during the embryonic stage and disappear later
- Branchial clefts located in the anterior region of cerebrum, present only during the embryonic stage and disappear later
- Branchial clefts located in the anterior region of pharynx, present only during the embryonic stage and disappear later

**Question No.61**

4.00

Bookmark 

Many of sensory stimuli of nervous system are converted into hormonal response

- Cerebrum
- Thalamus
- Hypothalamus
- Pons

**Question No.62**

4.00

Bookmark 

Protein containing PDZ domain play fundamental role in

- Protein phosphorylation
- Organizing the plasma membrane of the post synaptic cell
- Dimer formation
- Apoptosis

**Question No.63**

4.00

**Bookmark** 

Many biomolecules are transported from nucleus to cytoplasm through nuclear pores. Which molecule is continuously transported from nucleus to cytoplasm?

- Ribosomes
- DNA
- RNA
- Protein

**Question No.64**

4.00

**Bookmark** 

Endostatin

- Agonist of VEGF receptor
- Antagonist of VEGF receptor
- Inhibits angiogenesis
- Promotes angiogenesis

**Question No.65**

4.00

**Bookmark** 

Which of the following is not the objective to perform sequence comparison?

- To observe patterns of conservation
- To study the physical properties of molecules
- To study evolutionary relationships
- To find the common motifs present in both sequences

**Question No.66**

4.00

**Bookmark** 

Which of the following types of tissue cannot utilize fats as an energy source?

- Adipose tissue
- Muscle
- Neural tissue
- Liver

**Question No.67**

4.00

**Bookmark** 

Choose the best antonym of the italicized word.

The deliberate *suavity* of Olaf's behavior made the emotions of the audience volatile.

- stupidity
- impetuosity
- politeness
- pleasantness

**Question No.68**

4.00

**Bookmark** 

Blood Alcohol Concentration is a measurement of

- the number of alcohol deaths in the state
- the concentration of alcohol in the blood
- how long a person has been drinking alcohol
- how fast a person reacts after drinking alcohol

**Question No.69**

4.00

Bookmark 

The particular set of cells that drives the respiratory rhythm is the

- medullary inflammatory neurons
- medullary inspiratory neurons
- medullary respiratory neurons
- medullary expiratory neurons

**Question No.70**

4.00

Bookmark 

Pressor effect functions

- Involuntary muscles in the walls of the intestine, gall bladder, urinary bladder and blood vessels are stimulated to contract by ADH.
- Reabsorption of water from the glomerular filtrate is increased
- It promotes contraction of uterine muscle and contraction of the myoepithelial cells of the lactating breast.
- It stimulates the corpus luteum of the ovary to secrete progesterone hormone

**Question No.71**

4.00

Bookmark 

There is no coding sequence ( CDS) for the 16S rRNA gene in *E. coli* because it is

- rapidly degraded by RNAses
- found only in eukaryotes
- not translated
- not transcribed

**Question No.72**

4.00

Bookmark 





- 3
- 2
- 4
- 1

**Question No.73**

4.00

Bookmark 

A can finish a work in 18 days and B can do the same work in half the time taken by A. Then, working together, what part of the same work they can finish in a day?

- 0 1/6
- 0 1/8
- 0 1/4
- 0 1/2

**Question No.74**

4.00

Bookmark 

Crop farming and milk production is an example of

- Complementary enterprises
- Equitable enterprises
- Supplementary enterprises
- Competitive enterprises

**Question No.75**

4.00

**Bookmark** 

In mammalian females, two X chromosomes are present. Expression of genes on both chromosomes may lead to gene dosage imbalance. This problem is solved by a process called dosage compensation. Dosage compensation is achieved by

- Elimination of one X chromosome
- Hyperactivation of one X chromosome
- Methylation of one X chromosome
- Hypoactivation of both X chromosome

**Question No.76**

4.00

**Bookmark** 

Select the Pair that best represents the relationship that is given in the question:

Explore : Discover

- Books : Knowledge
- Think : Relate
- Tree : Wood
- Research : Learn

**Question No.77**

4.00

**Bookmark** 

BLAST uses a

- Substitution matrix
- Hashing procedure
- Ktups
- Scored matrix

**Question No.78**

4.00

**Bookmark** 

A segment of DNA has 120 adenine and 120 cytosine bases. The total number of nucleotides present in the segment is

- 240
- 480
- 60
- 120

**Question No.79**

4.00

**Bookmark** 

Basic characters of non- chordata

- Notochord - Absent in every stage of life cycle  
Gill slits – absent in every stage of life cycle  
Nervous system – ventral, double and solid  
Body wall- diploblastic  
Position of alimentary canal – ventral to dorsal
- Notochord - Present in any stage of life cycle  
Gill slits – Present in any stage of life cycle  
Nervous system – cord dorsal, single and hollow nerve  
Body wall- triploblastic  
Position of alimentary canal – ventral to dorsal
- Notochord - Absent in every stage of life cycle  
Gill slits – absent in every stage of life cycle  
Nervous system – ventral, double and solid  
Body wall- diploblastic  
Position of alimentary canal – dorsal to nerve cord
- Notochord - Absent in every stage of life cycle  
Gill slits – present in any stage of life cycle  
Nervous system – ventral, double and solid  
Body wall- diploblastic  
Position of alimentary canal – dorsal to nerve cord

**Question No.80**

4.00

**Bookmark** 

Eunuchoidism

- Excess of oestrogens secreted by tumours of ovaries and adrenal glands.
- Early maturation of ovaries and testes with production of ova
- Failure of testosterone secretion causes eunuchoidism
- Excessive development of male mammary glands

**Question No.81**

4.00

**Bookmark** 

A statistical test used to compare 2 or more group means is known as

- One-way analysis of variance
- t-test for correlation coefficients
- Post hoc test
- Simple regression

**Question No.82**

4.00

**Bookmark** 

Which one of the following is a uricotelic organism

- Reptiles
- Aquatic amphibians
- Mammals
- Bony fishes

**Question No.83**

4.00

**Bookmark** 

Species that occur in different geographical regions separated by special barrier are

- Sympatric
- Allopatric
- Alepatric
- Sibling

**Question No.84**

4.00

**Bookmark** 

When does bone start to replace cartilage?

- fifth week
- fourth month
- third month
- second month

**Question No.85**

4.00

**Bookmark** 

Which of the following is most useful in amplifying small stimuli in sensory neurons?

- Channel proteins
- Epinephrine
- G-protein complex
- Biogenic amines

**Question No.86**

4.00

**Bookmark** 

An application of the accounting principles to the business of farming

- Farm planning
- Farm accounting
- Farm budgeting
- Marketing

**Question No.87**

4.00

**Bookmark** 

If a diploid cell is treated with colchicines, then it becomes

- Diploid
- Tetraploid
- Monoploid
- Triploid

**Question No.88**

4.00

**Bookmark** 

Chlorofluorocarbon (CFC) remains in atmosphere for

- 10 to 20 years
- 80 to 90 years
- 22 to 111 years
- 30 to 50 years



**Question No.89**

4.00

**Bookmark** 

Examples for Arachnida

- Limulus, Palameneus, Lycosa, Collumbella, Ixodes, Chorioptes*
- Limulus, Glassina, Lepisma, Archaeranea, Ixodes, Cicadas*
- Xenopsella, Palameneus, Lycosa, Collumbella, Photinus, Cicadas*
- Limulus, Palameneus, Lycosa, Archaeranea, Ixodes, Chorioptes*

**Question No.90**

4.00

**Bookmark** 

Fluid mosaic model was proposed by

- Schleiden and Schwann
- Singer and Nicolsan
- Watson and Crick
- Robert Brown

**Question No.91**

4.00

**Bookmark** 

Of every 100 secondary oocytes that are exposed to sperm, how many infants are actually born live?

- About 95
- About 31
- Around 75
- Approximately 50

**Question No.92**

4.00

**Bookmark** 

The first step in colon carcinogenesis involves

- Loss of functional APC gene
- Loss of functional c-myc gene
- Loss of functional ras gene
- Both a and c

**Question No.93**

4.00

**Bookmark** 

Which one of the following genetic diseases is sex-linked?

- Hypertension
- Cystic fibrosis
- Tay-Sachs disease
- Royal haemophilia

**Question No.94**

4.00

**Bookmark** 

The production of complete animals from somatic cells of an animal is called

- Animal cloning
- Gene cloning
- Cell cloning
- Embryo cloning

**Question No.95**

4.00

**Bookmark** 

Sodium Antimony Stibogluconate is drug of choice in

- Dengue
- Japanese encephalitis
- Filariasis
- Kala azar

**Question No.96**

4.00

**Bookmark** 

Telomerase is active in

- E. coli* cells
- All somatic cells ( regardless of their location in the body)
- S. pneumoniae* cells
- Mouse testicular tissue

**Question No.97**

4.00

**Bookmark** 

**Statement:** Ten Candidates, who were on the waiting list could finally be admitted to the course.

**Assumptions:**

I. A large of number of candidates were on the waiting list.

II. Wait listed candidates do not ordinarily get admission.

- If only assumption II is implicit
- If only assumption I is implicit
- If both I and II are implicit
- If neither I nor II is implicit

**Question No.98**

4.00

**Bookmark** 

When their father died, their elder brother sold the old house and \_\_\_\_\_ in a small flat in a far-off suburb

- put them up
- set them down
- set them up
- put them down

**Question No.99**

4.00

**Bookmark** 

Study the following information carefully and answer the question below it

The Director of an MBA college has decided that six guest lectures on the topics of Motivation, Decision Making, Quality Circle, Assessment Centre, Leadership and Group Discussion are to be organised on each day from Monday to Sunday.

- (i) One day there will be no lecture (Saturday is not that day), just before that day Group Discussion will be organised.
- (ii) Motivation should be organised immediately after Assessment Centre.
- (iii) Quality Circle should be organised on Wednesday and should not be followed by Group Discussion
- (iv) Decision Making should be organised on Friday and there should be a gap of two days between Leadership and Group Discussion

Which of the following information is not required for the above lecture arrangements?

- Only (iii)
- All are required
- Only (ii)
- Only (i)

**Question No.100**

4.00

**Bookmark** 

The plasmid used by Cohen and Boyer for their transformation experiment was

- pSC 101
- PUC 17
- pBR 322
- E. coli* plasmid