CUET UG

Paper:	BIOLOGY
Set Name:	BOI23
Exam Date:	23 Aug 2022
Exam Shift:	2
Langauge:	English

Previous Year Paper
(Biology) 23 Aug, 2022
Shift 2

Section:	BIOLOGY
Item No:	1
Question ID:	**1103501**
Question Type:	MCQ
Question:	Select the statements that are CORRECT regarding patterns of biodiversity. (A) Species diversity increases as we move away from the equator towards the poles (B) The tropical Amazon rain forest in South America has the greatest biodiversity on earth. (C) There is more solar energy available in the temperate region than tropics. (D) Tropical environments are less seasonal relatively more constant and predictable (E) A. Humboldt observed that within a region, species richness decreases with increasing explored area, up to a limit. Choose the **correct** answer from the options given below : (1) (A) and (E) only (2) (B) and (C) only (3) (B) and (D) only (4) (C), (D) and (E) only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	2
Question ID:	**1103502**
Question Type:	MCQ
Question:	Flowers are a fascinating organ of Angiosperms. Flowers are considered the object of aesthetic, ornamental, social and cultural value. Biologically flower is a _____. (1) Modified root (2) Modified shoot (3) Modified leaf (4) Modified tuber
A:	1
B:	2

C:	3
D:	4

Section:	BIOLOGY
Item No:	3
Question ID:	**1103503**
Question Type:	MCQ
Question:	Which of the following hormone is not produced by placenta ? (1) hCG (2) hPL (3) estrogen (4) androgens
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	4
Question ID:	**1103504**
Question Type:	MCQ
Question:	Individuals with karyotype of 44+XXY having overall masculine development with few feminine development like Gynaecomastia has _____ chromosomal disorder. (1) Klinefelter's Syndrome (2) Turner's Syndrome (3) Down's Syndrome (4) Acquired Immuno Deficiency Syndrome
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	5
Question ID:	**1103505**
Question Type:	MCQ
Question:	Which one of the following enzyme brings about hydrolysis of lactose to glucose and galactose ? (1) Transacetylase (2) Amylase

	(2) Amylase (3) Permease (4) β-galactosidase
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	6
Question ID:	**1103506**
Question Type:	MCQ
Question:	Match **List - I** with **List - II**. **List - I** **List - II** (A) Streptokinase (I) Blood-Cholestrol lowering agents (B) Cyclosporin A (II) Clot Buster (C) Statins (III) *Propionibacterium sharmanii* (D) Swiss Cheese (IV) Immuno suppressive agent Choose the **correct** answer from the options given below : (1) (A) - (II), (B) - (IV), (C) - (III), (D) - (I) (2) (A) - (II), (B) - (IV), (C) - (I), (D) - (III) (3) (A) - (IV), (B) - (I), (C) - (II), (D) - (III) (4) (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	7
Question ID:	**1103507**
Question Type:	MCQ
Question:	Which of the following option determines percolation and water holding capacity of soils ? (1) Climate (2) Grain size, soil composition and aggregation (3) Weathering process (4) Soil development
A:	1
B:	2
C:	3

D:	4

Section:	BIOLOGY
Item No:	8
Question ID:	**1103508**
Question Type:	MCQ
Question:	Which of the following is not a barrier method of birth control. (1) Voults (2) Diaphragms (3) Sterilization (4) Cervical caps
A:	1
B:	2
C:	3
D:	4

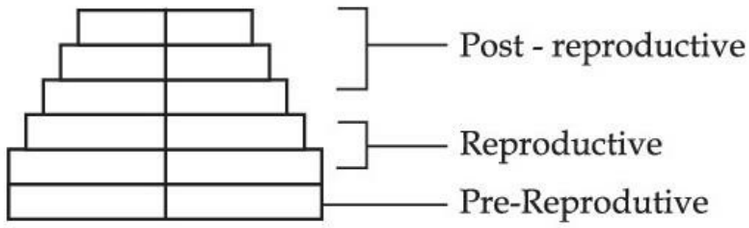
Section:	BIOLOGY
Item No:	9
Question ID:	**1103509**
Question Type:	MCQ
Question:	'Golden rice' variety of rice shows : (1) enhanced nutritional value of food (2) less post harvest loss (3) tolerence to abiotic stress (4) pest resistance
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	10
Question ID:	**1103510**
Question Type:	MCQ
Question:	Arrange the stages of bio magnification of DDT. (A) Fish eating birds (PPT 25 PPm) (B) Small fish (DDT 0.5 PPm) (C) Zooplankton (DDT 0.04 PPm) (D) Water (DDT 0.003 PPb) (E) Large fish (DDT 2 PPm) Choose the **correct** answer from the options given below : (1) (B) → (C) → (E) → (A) → (D)

	(2) (D) → (C) → (B) → (E) → (A) (3) (D) → (B) → (C) → (E) → (A) (4) (E) → (D) → (B) → (C) → (A)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	11
Question ID:	**1103511**
Question Type:	MCQ
Question:	Which of the following is not is not the cause of biodiversity loss ? (1) Co-Extinction (2) Over-exploitation (3) Endemism (4) Alien species invasions
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	12
Question ID:	**1103512**
Question Type:	MCQ
Question:	Which of the following statements are correct ? (A) Certain mass of living material at each trophic level is called as standing crop. (B) The crop that can withstand adverse conditions is called standing crop (C) The amount of nutrients in soil is called Biomass (D) Only Biotic components make an Ecosystem (E) Most of Phytoplanktons are member of algae Choose the **correct** answer from the options given below : (1) (A) and (E) only (2) (A), (C), (D) only (3) (A), (C) only (4) (B), (D) only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	13
Question ID:	**1103513**
Question Type:	MCQ
Question:	The shape of pyramids gives the reflection of growth status of a population. Identify the growth status depicted by the given pyramid.  (1) Expanding (2) Declining (3) Exploding (4) Stable
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	14
Question ID:	**1103514**
Question Type:	MCQ
Question:	Which of the following is NOT an application of PCR ? (1) Paternity testing (2) Detection of mutations of genes in suspected cancer patient (3) Powerful technique to identify genetic disorder (4) To cure ADA (adenosine diaminase) deficiency
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	15
Question ID:	**1103515**
Question Type:	MCQ
	Complementary ds RNA which prevents translation is formed in _____. (1) PCR

Question:	(2) RNA interference (3) Gene therapy (4) ELISA
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	16
Question ID:	**1103516**
Question Type:	MCQ
Question:	Which enzymes are used for clarification of bottled fruit juices ? (A) Amylases (B) Pectinases (C) Proteases (D) Lipases Choose the **correct** answer from the options given below : (1) (A) only (2) (A) and (B) only (3) (B) and (C) only (4) (C) and (D) only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	17
Question ID:	**1103517**
Question Type:	MCQ
Question:	New breed of sheep is developed by _____. (1) Cross breeding (2) Inbreeding (3) Outcrossing (4) Interspecific hybridisation
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY

Item No:	18
Question ID:	**1103518**
Question Type:	MCQ
Question:	Which of the following is incorrect about oral contraceptive pill '*Saheli*' ? (1) It is taken by females (2) It has very few side effects (3) It is a steroidal preparation. (4) It is 'Once a week' pill
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	19
Question ID:	**1103519**
Question Type:	MCQ
Question:	Vertical distribution of different species occupying different level is called : (1) Fragmentation (2) Stratification (3) Humification (4) Primary production
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	20
Question ID:	**1103520**
Question Type:	MCQ
Question:	Match **List - I** with **List - II**. **List - I** **List - II** (A) Initiation factor (I) Tailing (B) Introns (II) Rho(p) (C) Termination factor (III) Sigma(σ) (D) Adenylate residue (IV) Splicing Choose the **correct** answer from the options given below : (1) (A) - (IV), (B) - (III), (C) - (II), (D) - (I) (2) (A) - (III), (B) - (II), (C) - (IV), (D) - (I) (3) (A) - (IV), (B) - (III), (C) - (I), (D) - (II) (4) (A) - (III), (B) - (IV), (C) - (II), (D) - (I)

	(4) (A) - (iii), (B) - (iv), (C) - (ii), (D) - (i)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	21
Question ID:	**1103521**
Question Type:	MCQ
Question:	The reason for deviation from Mendel's dihybrid cross in T.H. Morgan's experiment is _____. (1) Pleiotropy (2) Linkage (3) Overlapping (4) Polygenic Inheritance
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	22
Question ID:	**1103522**
Question Type:	MCQ
Question:	Given below are two statements : **Statement I :** Phenylketonuria is an example of Pleiotropy **Statement II :** Affected individuals lack an enzyme which converts pheylalanine into tyrosine In the light of the above statements, choose the **most appropriate** answer from the options given below : (1) Both **Statement I** and **Statement II** are correct (2) Both **Statement I** and **Statement II** are incorrect (3) **Statement I** is correct but **Statement II** is incorrect (4) **Statement I** is incorrect but **Statement II** is correct
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	23
Question ID:	**1103523**
Question Type:	MCQ
Question:	Sequentially arrange the developmental stages of human spermatozoon : (A) Secondary Spermatocyte (B) Spermatid (C) Spermatozoa (D) Spermatogonia (E) Primary spermatocytes Choose the **correct** answer from the options given below : (1) (E), (A), (D), (B), (C) (2) (E), (A), (D), (C), (B) (3) (E), (A), (C), (D), (B) (4) (D), (E), (A), (B), (C)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	24
Question ID:	**1103524**
Question Type:	MCQ
Question:	Which part of the sperm help in its entry into the cytoplasm of the ovum ? (1) Plasma membrane (2) Nucleus (3) Neck (4) Acrosome
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	25
Question ID:	**1103525**
Question Type:	MCQ
Question:	Types of cells in 2 celled pollen grains are _____. (1) Central cell and Synergids (2) Antipodals and Megaspore (3) Micropylar and Filliform

	(4) Vegetative and Generative
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	26
Question ID:	**1103526**
Question Type:	MCQ
Question:	Among the animal on the planet, the species rich group making more than 70% is _____. (1) Fishes (2) Mammals (3) Insects (4) Reptiles
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	27
Question ID:	**1103527**
Question Type:	MCQ
Question:	Replication of DNA is characterised by : (A) The direction of replication is 5' → 3' (B) Only template with 5' → 3' polarity is replicated. (C) Replication is initiated at ori. (D) DNA polymerase catalyses the process. (E) The daughter molecule formed has one parental strand Choose the **correct** answer from the options given below : (1) (A), (B), (D), (E) (2) (A), (B), (C), (D) (3) (A), (C), (D), (E) (4) (B), (C), (D), (E)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	28
Question ID:	**1103528**
Question Type:	MCQ
Question:	Match **List - I** with **List - II**. **List - I** **List - II** (A) Detritus food chain (I) Available biomass for consumption (B) Standing state (II) Dead organic matter (C) Standing crop (III) Amount of nutrients in soil (D) Net Primary Productivity (IV) Mass of living material Choose the **correct** answer from the options given below : (1) (A) - (I), (B) - (II), (C) - (III), (D) - (IV) (2) (A) - (IV), (B) - (II), (C) - (III), (D) - (I) (3) (A) - (II), (B) - (III), (C) - (I), (D) - (IV) (4) (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	29
Question ID:	**1103529**
Question Type:	MCQ
Question:	In the technology called MOET, which one of the following hormones is used ? (1) LH (2) ACTH (3) FSH (4) TSH
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	30
Question ID:	**1103530**
Question Type:	MCQ
Question:	Vegetative propagation in *Eicchornia* and *Pistia* occurs by _____. (1) Sucker (2) Offset

	(3) Runner (4) Stolon
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	31
Question ID:	**1103531**
Question Type:	MCQ
Question:	The term "Clone" is used to describe the offspring that are : (1) Morphologically identical only (2) Morphologically and genetically identical (3) Morphologically identical but genetically different (4) Genetically identical only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	32
Question ID:	**1103532**
Question Type:	MCQ
Question:	Why was *Drosophila melanogaster* used for studies in Genetics ? (A) They could be cultured easily in the monastery (B) They showed many contrasting traits (C) The generation time was one year (D) There was clear differentiation of sexes (E) Very few progeny were produced in a single mating Choose the **correct** answer from the options given below : (1) (B) and (D) only (2) (A) and (D) only (3) (B) and (C) only (4) (D) and (E) only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY

Item No:	33
Question ID:	**1103533**
Question Type:	MCQ
Question:	Given below are two statements : **Statement I :** Ladybird and Dragonflies are useful to get rid of aphids and mosquitoes. *Trichoderma* fungus are effective bio control agents of several plant pathogens. **Statement II :** The biological control of plant diseases and pest can control increasing use of insecticides and pesticides, thus saving our environment from being getting polluted. In the light of the above statements, choose the **most appropriate** answer from the options given below : (1) Both **Statement I** and **Statement II** are correct (2) Both **Statement I** and **Statement II** are incorrect (3) **Statement I** is correct but **Statement II** is incorrect (4) **Statement I** is incorrect but **Statement II** is correct
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	34
Question ID:	**1103534**
Question Type:	MCQ
Question:	To prove theory of mutation, Hugo de Vries used _____ plant. (1) Snap dragon or *Antirrhinum* (2) Evening primrose (3) Dog flower (4) *Pisum Sativum*
A:	1
B:	2
C:	3
D:	4

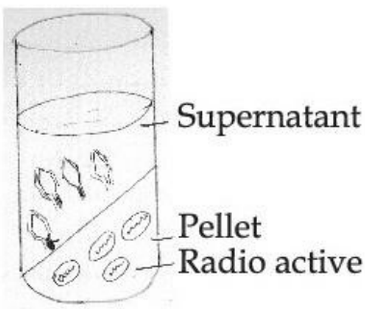
Section:	BIOLOGY
Item No:	35
Question ID:	**1103535**
Question Type:	MCQ
	Match **List - I** with **List - II**.

Question:	**List - I** **List - II** (A) ZIFT (I) Semen is artificially introduced into female (B) IUI (II) Couples are assisted to have children by corrective treatment (C) GIFT (III) Zygote can be transferred into Fallopian tube (D) ART (IV) Ovum can be transferred to Fallopian tube of another female Choose the **correct** answer from the options given below : (1) (A) - (IV), (B) - (I), (C) - (III), (D) - (II) (2) (A) - (III), (B) - (I), (C) - (IV), (D) - (II) (3) (A) - (I), (B) - (II), (C) - (III), (D) - (IV) (4) (A) - (II), (B) - (III), (C) - (IV), (D) - (I)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	36
Question ID:	**1103536**
Question Type:	MCQ
Question:	Human activities like over cultivation, unrestricted grazing, deforestation and poor irrigation practices result into _____. (1) Water Logging (2) Soil erosion and desertification (3) Biomagnification (4) Eutrophication
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	37
Question ID:	**1103537**
Question Type:	MCQ
	Match **List - I** with **List - II**. **List - I** **List - II** (A) Natality (I) Number of individuals coming into the habitat from elsewhere (B) Mortality (II) Number of births in the population

Question:	(B) Mortality (II) Number of birds in the population (C) Immigration (III) Number of individuals leaving the habitat (D) Emigration (IV) Number of deaths in the population Choose the **correct** answer from the options given below : (1) (A) - (II), (B) - (IV), (C) - (I), (D) - (III) (2) (A) - (IV), (B) - (II), (C) - (I), (D) - (III) (3) (A) - (I), (B) - (IV), (C) - (III), (D) - (II) (4) (A) - (III), (B) - (II), (C) - (I), (D) - (IV)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	38
Question ID:	**1103538**
Question Type:	MCQ
Question:	A students was repeating the experiments of Alfred Hershey and Maltha Chase (1952). Results obtained by him are shown in the given figure. Select the biomolecule that was radio actively labelled by the students for his experiment.  (1) DNA of bacteriophage with radio active Phosphorous (2) Plasmid DNA of E. coli with radio active Sulphur (3) Proteins of bacteriophage with radio active Sulphur (4) Chromosomal mol DNA of E. coli with radio active Sulphur
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	39
Question ID:	**1103539**
Question Type:	MCQ
	Match **List - I** with **List - II**. **List - I** **List - II**

Question:	(A) Prostate gland (I) Store and transport sperms (B) Leydig cells (II) Male external genitilia (C) Ejaculatory duct (III) Male accessory gland (D) Penis (IV) Testicular hormones Choose the **correct** answer from the options given below : (1) (A) - (III), (B) - (IV), (C) - (I), (D) - (II) (2) (A) - (IV), (B) - (III), (C) - (I), (D) - (II) (3) (A) - (I), (B) - (III), (C) - (IV), (D) - (II) (4) (A) - (IV), (B) - (II), (C) - (III), (D) - (I)
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	40
Question ID:	**1103540**
Question Type:	MCQ
Question:	Which one of the following is not an example of adaptive radiation ? (1) Australian Marsupials (2) Australian Placental Mammals (3) Moths in England (4) Darwins Finches
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	41
Question ID:	**1103541**
Question Type:	MCQ
Question:	Read the following passage and answer the question : The primary lymphoid organs are bone marrow and thymus, where immature lymphocytes differentiate into antigen sensitive lymphocytes. They migrate to secondary lymphoid organ like spleen, lymph nodes, tonsils, payer's patches of small intestine and appendix. All blood cells including lymphocytes are produced in bone marrow which is main lymphoid organ. Spleen is large reservoir of erythrocytes. It is large bean shaped organ mainly containing lymphocyte and phagocyte. It acts as filter of blood by trapping blood borne micro organism. Lymph nodes are small solid structures located at different points along lymphatic system. Antigens trapped in lymph node are responsible for activation of lymphocytes present there and cause the immune response. There is lymphoid tissue located within Lining of major tracts like respiratory digestive ad urinogenital tracts

	located within. Lining of major tracts like respiratory, digestive ad urinogenital tracts called mucous associated lymphoid tissue (MALT). The primary lymphoid organ is _____. (1) Lymph nodes (2) Bone marrow (3) Tonsils (4) Spleen
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	42
Question ID:	**1103542**
Question Type:	MCQ
Question:	Read the following passage and answer the question : The primary lymphoid organs are bone marrow and thymus, where immature lymphocytes differentiate into antigen sensitive lymphocytes. They migrate to secondary lymphoid organ like spleen, lymph nodes, tonsils, payer's patches of small intestine and appendix. All blood cells including lymphocytes are produced in bone marrow which is main lymphoid organ. Spleen is large reservoir of erythrocytes. It is large bean shaped organ mainly containing lymphocyte and phagocyte. It acts as filter of blood by trapping blood borne micro organism. Lymph nodes are small solid structures located at different points along lymphatic system. Antigens trapped in lymph node are responsible for activation of lymphocytes present there and cause the immune response. There is lymphoid tissue located within. Lining of major tracts like respiratory, digestive ad urinogenital tracts called mucous associated lymphoid tissue (MALT). Which of the following is not feature of spleen ? (1) It is large reservoir of erythrocyte. (2) It acts as filter of blood. (3) It shows reduction in size from birth to puberty (4) It is a bean shaped organ containing Lymphocyte and Phagocyte
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	43
Question ID:	**1103543**
Question Type:	MCQ

Question:	Read the following passage and answer the question : The primary lymphoid organs are bone marrow and thymus, where immature lymphocytes differentiate into antigen sensitive lymphocytes. They migrate to secondary lymphoid organ like spleen, lymph nodes, tonsils, payer's patches of small intestine and appendix. All blood cells including lymphocytes are produced in bone marrow which is main lymphoid organ. Spleen is large reservoir of erythrocytes. It is large bean shaped organ mainly containing lymphocyte and phagocyte. It acts as filter of blood by trapping blood borne micro organism. Lymph nodes are small solid structures located at different points along lymphatic system. Antigens trapped in lymph node are responsible for activation of lymphocytes present there and cause the immune response. There is lymphoid tissue located within. Lining of major tracts like respiratory, digestive ad urinogenital tracts called mucous associated lymphoid tissue (MALT). Which of the following is NOT secondary lymphoid organ ? (1) Tonsils (2) Thymus (3) Appendix (4) Payer's Patches
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	44
Question ID:	**1103544**
Question Type:	MCQ
Question:	Read the following passage and answer the question : The primary lymphoid organs are bone marrow and thymus, where immature lymphocytes differentiate into antigen sensitive lymphocytes. They migrate to secondary lymphoid organ like spleen, lymph nodes, tonsils, payer's patches of small intestine and appendix. All blood cells including lymphocytes are produced in bone marrow which is main lymphoid organ. Spleen is large reservoir of erythrocytes. It is large bean shaped organ mainly containing lymphocyte and phagocyte. It acts as filter of blood by trapping blood borne micro organism. Lymph nodes are small solid structures located at different points along lymphatic system. Antigens trapped in lymph node are responsible for activation of lymphocytes present there and cause the immune response. There is lymphoid tissue located within. Lining of major tracts like respiratory, digestive ad urinogenital tracts called mucous associated lymphoid tissue (MALT). Mucous associated lymphoid tissue (MALT) is NOT found in : (1) Urinogenital tract (2) Digestive tract (3) Tonsils (4) Respiratory tract
A:	1
B:	2

C:	3
D:	4

Section:	BIOLOGY
Item No:	45
Question ID:	**1103545**
Question Type:	MCQ
Question:	Read the following passage and answer the question : The primary lymphoid organs are bone marrow and thymus. Where immature lymphocytes differentiate into antigen sensitive lymphocytes. They migrate to secondary lymphoid organ like spleen, lymph nodes, tonsils, payer's patches of small intestine and appendix. All blood cells including lymphocytes are produced in bone marrow which is main lymphoid organ. Spleen is large reservoir of erythrocytes. It is large bean shaped organ mainly containing lymphocyte and phagocyte. It acts as filter of blood by trapping blood borne micro organism. Lymph nodes are small solid structures located at different points along lymphatic system. Antigens trapped in lymph node are responsible for activation of lymphocytes present there and cause the immune response. There is lymphoid tissue located within. Lining of major tracts like respiratory, digestive ad urinogenital tracts called mucous associated lymphoid tissue (MALT). Which of the following is incorrect statement. (A) All blood cells including lymphocytes are produced in bone marrow (B) Lymph nodes are small solid structures located at different points along lymphatic system (C) Payer's patches of small intestine is primary lymphoid organ. (D) Antigen trapped in lymph node are responsible for activation of lymphocytes present in lymph node and causes immune response Choose the **correct** answer from the options given below : (1) (C) only (2) (B) only (3) (A) only (4) (B) and (D) only
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	46
Question ID:	**1103546**
Question Type:	MCQ
	The cutting of DNA by restriction endonucleases results in the fragments of DNA. These fragments can be separated by a technique known as gel electrophoresis. Since DNA fragments are negatively charged molecules, they can be separated by forcing them to

Question:	fragments are negatively charged molecules, they can be separated by forcing them to move towards the anode under an electric field through a medium/matrix. The commonly used matrix is agarose which is a natural polymer extracted from sea weeds. The DNA fragments separate according to their size through sieving effect provided by the agarose gel. Hence, the smaller fragments move farther in the agarose gel. The separated DNA fragments can be visualised only after staining the DNA with ethidium bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA can be observed. The separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as elution. The DNA fragments purified in this way are used in constructing recombinant DNA by joining them with cloning vectors. Agarose is extracted from _____. (1) Bacteria (2) Marine animals (3) Sea weeds (4) Fungi
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	47
Question ID:	**1103547**
Question Type:	MCQ
Question:	The cutting of DNA by restriction endonucleases results in the fragments of DNA. These fragments can be separated by a technique known as gel electrophoresis. Since DNA fragments are negatively charged molecules, they can be separated by forcing them to move towards the anode under an electric field through a medium/matrix. The commonly used matrix is agarose which is a natural polymer extracted from sea weeds. The DNA fragments separate according to their size through sieving effect provided by the agarose gel. Hence, the smaller fragments move farther in the agarose gel. The separated DNA fragments can be visualised only after staining the DNA with ethidium bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA can be observed. The separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as elution. The DNA fragments purified in this way are used in constructing recombinant DNA by joining them with cloning vectors. What is elution ? (1) It is movement of negatively charged DNA fragments through agarose gel. (2) Extraction of DNA from the host (3) Extraction of DNA and treatment with restriction endonuclease (4) Cutting of separated DNA fragments from agarose gel and extraction of DNA fragment
A:	1

B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	48
Question ID:	**1103548**
Question Type:	MCQ
Question:	The cutting of DNA by restriction endonucleases results in the fragments of DNA. These fragments can be separated by a technique known as gel electrophoresis. Since DNA fragments are negatively charged molecules, they can be separated by forcing them to move towards the anode under an electric field through a medium/matrix. The commonly used matrix is agarose which is a natural polymer extracted from sea weeds. The DNA fragments separate according to their size through sieving effect provided by the agarose gel. Hence, the smaller fragments move farther in the agarose gel. The separated DNA fragments can be visualised only after staining the DNA with ethidium bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA can be observed. The separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as elution. The DNA fragments purified in this way are used in constructing recombinant DNA by joining them with cloning vectors. The DNA fragments formed by treatment with endonuclease are separated by _____. (1) PCR (2) Gel Electrophoresis (3) Cloning (4) Restriction digestion
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	49
Question ID:	**1103549**
Question Type:	MCQ
	The cutting of DNA by restriction endonucleases results in the fragments of DNA. These fragments can be separated by a technique known as gel electrophoresis. Since DNA fragments are negatively charged molecules, they can be separated by forcing them to move towards the anode under an electric field through a medium/matrix. The commonly used matrix is agarose which is a natural polymer extracted from sea weeds. The DNA fragments separate according to their size through sieving effect provided by the agarose gel. Hence, the smaller fragments move farther in the agarose gel. The separated DNA fragments can be visualised only after staining the DNA with ethidium bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA

Question:	bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA can be observed. The separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as elution. The DNA fragments purified in this way are used in constructing recombinant DNA by joining them with cloning vectors. The separated DNA fragments can be visualised after staining with _____, followed by exposure to _____. (1) β-galactosidase, UV radiation (2) β-galactosidase, Gamma radiation (3) Ethidium bromide, UV radiation (4) Ethidium bromide, Gamma radiation
A:	1
B:	2
C:	3
D:	4

Section:	BIOLOGY
Item No:	50
Question ID:	**1103550**
Question Type:	MCQ
Question:	The cutting of DNA by restriction endonucleases results in the fragments of DNA. These fragments can be separated by a technique known as gel electrophoresis. Since DNA fragments are negatively charged molecules, they can be separated by forcing them to move towards the anode under an electric field through a medium/matrix. The commonly used matrix is agarose which is a natural polymer extracted from sea weeds. The DNA fragments separate according to their size through sieving effect provided by the agarose gel. Hence, the smaller fragments move farther in the agarose gel. The separated DNA fragments can be visualised only after staining the DNA with ethidium bromide followed by exposure to UV radiation. Bright orange coloured bands of DNA can be observed. The separated bands of DNA are cut out from the agarose gel and extracted from the gel piece. This step is known as elution. The DNA fragments purified in this way are used in constructing recombinant DNA by joining them with cloning vectors. The fragments of DNA separate on agarose gel, based on the _____. (1) Size of fragments (2) Charge of each fragment (3) Colour of fragment (4) Type of DNA
A:	1
B:	2
C:	3
D:	4