

Directorate of Education
Govt. of NCT of Delhi

Practice Test Material

2015-2016

Subject : Biology
Class : XII

Under the guidance of :
Addl. DE (School/Exam)

PRACTICE TEST-1

CLASS: XII

SUBJECT: BIOLOGY

REPRODUCTION IN ORGANISMS (CHAPTER-1)

Time : 50 min.

M.M. 25

1. What are hermaphrodites? Give one example. 1
2. Rhizomes of banana and ginger act as vegetative propagates. Name the structure of these stems from which the new plantlets arise. 1
3. How do progenies of sexual reproduction differ from those of asexual reproduction? 1
4. All organisms have to reach a certain stage of growth and maturity before they can reproduce sexually. What is this stage called in
(a) animals (b) plants? 1
5. List two factors whose interaction regulates the reproductive processes and associated behavioural expressions in sexually reproducing organisms. 1
6. What type of cell division is involved in gamete formation in the bryophytes and the pteridophytes? 1
7. Some hilly areas of Kerala, Karnataka and Tamil Nadu attracted a large number of tourists during September-October 2006. This was due to flowering of a specific plant in these tracts.
a) Write the scientific name of this plant
b) When do we expect the repetition of this phenomenon? 2
8. In angiosperms, after fertilization, which part of a flower develops into
(a) embryo (b) seed (c) fruit (d) the protective of the fruit 2
9. Differentiae between : 2
a) oestrus and menstrual cycles
b) oviparous and viviparous animals
10. Some lizards show production of individuals from female gametes without fertilization. Name this phenomenon. Name two more animals which show this phenomenon. 2
11. "Synchrony between sexes, and release of a large number of gametes is essential in organisms exhibiting external fertilization." Justify this statements with two reasons. 2
12. a) Give the term used for specialized cells that undergo meiosis in diploid organisms during sexual reproduction. What do we call the end product of meiosis in these cells? Why is meiosis, and not mitosis, involved here?

- b) Usually the number of male gametes produced in an organism is several times the female gametes produced. Give two reasons for this. 3
13. Differentiate between monoecious and dioecious conditions in plants. Give one example of each type. Write the terms which can be used for these two conditions in fungi. 3
14. a) Name two groups of organism which shift to sexual mode of reproduction from asexual just before the onset of adverse conditions.
- b) Give one example each of an organism which reproduce through the following asexual reproductive structures :
- (i) conidia (ii) bulbil (iii) gemmule (iv) offset 3

PRACTICE TEST-2

CLASS: XII

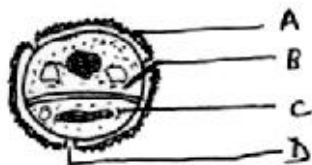
SUBJECT: BIOLOGY

SEXUAL REPRODUCTION FLOWERING PLANTS (CHAPTER-2)

Time : 50 min.

M.M. 25

1. List two changes which lead to the differentiation and further development of the floral primordium. 1
2. All of us enjoy the water of tender coconuts. Which tissue does this water represent? What should be the ploidy of cells present in it? 1
3. How are cleistogamous flowers different from chasmogamous flowers? 1
4. What does floriculture refer to? 1
5. Name the innermost wall layer of a typical microsporangium of a flowering plant. Also write its function. 1
6. Give reason as to why geitonogamy is considered similar to autogamy genetically. 1
7. In the given diagram, label A, B, C and D. 2



8. List four devices that are adopted by plants to discourage self-pollination. 2
9. Name and explain the process that results in the formation of a diploid and a triploid cell in angiosperms. 2
10. Draw a V.S. of maize grain, and label: 2
(a) pericarp (b) scutellum (c) coleoptile (d) radicle
11. A single seed or orange shows the presence of more than one embryo
a) Name this phenomenon
b) Which cells of the ovule, besides the zygote, are involved in this? 2
12. Draw the diagram of a typical anatropous megasporangium of an angiosperm and label any 6 of its parts. 3
13. Fertilisation is essential for production of seeds in flowering plants, but sometimes the seeds develop without fertilization.
a) Name the phenomenon involved. State how it is useful in agriculture
b) Explain 2 ways by which such seeds can be developed 3
14. Give four characteristics of flowers pollinated by insects. Also give any two examples of such plants. 3

PRACTICE TEST-3

CLASS: XII

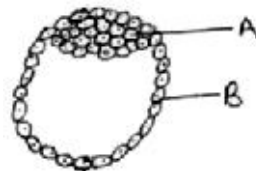
SUBJECT: BIOLOGY

HUMAN REPRODUCTION (CHAPTER-3)

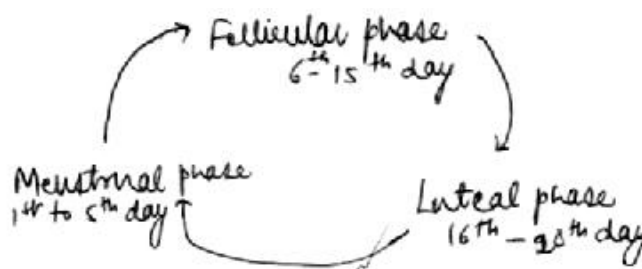
Time : 50 min.

M.M. 25

1. If human spermatogonium has 46 chromosomes, write the number of chromosomes (a) primary spermatocyte (b) spermatid 1
2. Write one function each of these structures of a sperm :
(a) aciosome (b) middle piece 1
3. A zygote undergoes mitoses to form a 8-16 celled embryo. What is this stage known as? What are the individual cells of this stage called? 1
4. Write the function of umbilical cord in humans. 1
5. Fill the boxes 'A' and 'B' with suitable words: 1
Seminiferous tubule → Rete testis → [A] → Epididymis → [B] → Urethra 1
6. Why does each and every coitus not result in fertilization? 1
7. In the figure given below, write the names and one function each of the parts labelled 'A' & 'B' 1



8. Mention the fate of corpus luteum and its effect on the uterus in the absence of fertilization of the ovum in a human female. 2
9. Which hormone is responsible for secretion of milk in human females? What is the significance of colostrums for newborn babies? 2
10. Why is it that fertilization in humans takes place in the fallopian tube and not the uterus, even though implantation has to occur in the later? 2
11. Write the names of any two wall layers of uterus in humans. Write one function of each of these two layers. 2
12. The events of menstrual cycle in humans are represented below. Answer the following questions: 2



- a) During which of the above three phases does the egg travel to fallopian tube from ovary?
 - b) Mention whether the levels of FSH and progesterone are low or high
 - (i) around 13th – 14th day
 - (ii) around 21st and 23rd day of the cycle.
 - c) What are the follicular phase and the luteal phase also referred to as? 3
13. List any three functions of placenta. 3
14. Name the pregnancy hormone. Why is it so called? List two sources of this hormone in a pregnant human female. 3

PRACTICE TEST-4

CLASS: XII

SUBJECT: BIOLOGY

REPRODUCTIVE HEALTH (CHAPTER-4)

Time : 50 min.

M.M. 25

1. Saheli is an OC developed by the scientists of CDRI, Lucknow. Write any one advantage of using it as compared to other OCs (Oral Contraceptive) 1
2. Name the prenatal diagnostic technique aimed to detect congenital disorders. How is this technique being misused? 1
3. Name any 1 STD caused by bacteria and fungi each. 1
4. How can responsible sexual behaviour of a person decrease his/her chance of infection of HIV? 1
5. Why do intensely lactating mothers generally not conceive? 1
6. How can awareness about menstrual cycle in human females help a couple in natural contraception? 1
7. Explain why should the introduction of sex education in schools be encouraged? 2
8. List any two measures that government has introduced to encourage adoption of the small family norm. 2
9. A couple, who had unprotected intercourse but did not want conception, was advised to have an emergency contraceptive
 - a) What is the composition of these pills? 2
 - b) Within what time-frame would taking this pill be effective? 2
10. Even though both are IUDs, how does the mechanism of action of Lippes Loop differ from that of a Cu-T? 2
11. List any four of the probable causes of infertility in humans. 2
12. A female is unable to produce eggs but can provide suitable environment for fertilization and further development. Which ART should the doctor advise her? Describe this technique. 3
13. How does ZIFT differ from IUT? How are both similar? 3
14. List any 3 features of an ideal contraceptive. Evaluate vasectomy on those features. 3

PRACTICE TEST-5

CLASS: XII

SUBJECT: BIOLOGY

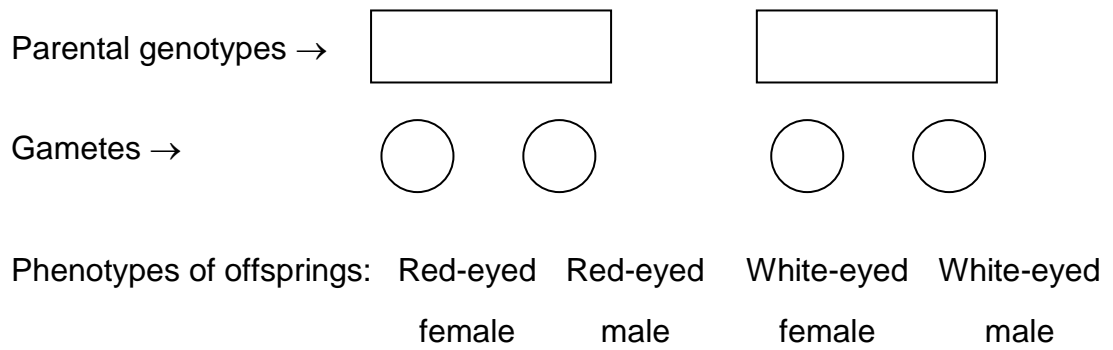
PRINCIPLES OF INHERITANCE AND VARIATION (CHAPTER-5)

Time : 50 min.

M.M. 25

1. Name the cross which is used to determine the genotype of an organism with the dominant phenotype for a character? 1
2. Name the scientists who proposed the 'Chromosomal theory of Inheritance'. 1
3. Why is it that colour blindness affects males much more than females? 1
4. Name the genetic disorder caused in an individual resulting from fusion of an egg with 2 sex chromosomes with a sperm carrying a Y chromosome. List any one symptoms of this disorder. 1
5. Why can phenylketonuria be considered an example of pleiotropy? 1
6. Write the contrasting traits for pod shape in a pea plant. 1
7. The ploidy level of somatic cells of males in a population of honey bees is different from that of females. How and why? 2
8. Skin colour in humans show a large spread across a gradient.
 - a) Which type of inheritance is responsible for such a phenotypic distribution?
 - b) What will be the genotype of a person with the
(i) darkest skin colour (ii) lightest skin colour 2
9. A diploid organism is heterozygous for 3 loci. How many types of gametes can be produced by it? Define the term 'heterozygous'. 2
10. How does the method of sex-determination in grasshopper differ from that in a fowl? 2
11. If a female with blood group A is married to a male with blood group B, is it possible for them to have a child with blood group A? Show with the help of a cross. 2
12. Haemophilia, sickle cell anaemia and thalassemia are all human genetic disorders related to blood. How are these three different from each other in their causes? 3
13. A maize plant produced a total of 381 grains : 216 purple and smooth, 79 purple and shrunken, 21 yellow and shrunken with 65 yellow and shrunken.
 - a) Name the type of cross which resulted in such a progeny
 - b) Using appropriate symbols, show this cross diagrammatically. 3

14. Complete the following figure depicting a cross between a red-eyed female with a white – eyed male in *Drosophila* if the phenotypes of offsprings are as given: 3



PRACTICE TEST-6

CLASS: XII

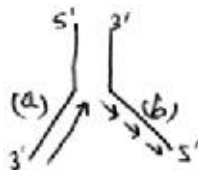
SUBJECT: BIOLOGY

MOLECULAR BASIS OF INHERITANCE (CHAPTER-6)

Time : 50 min.

M.M. 25

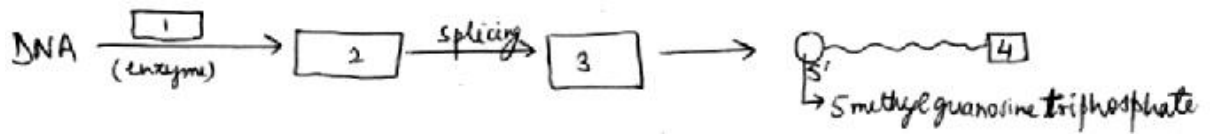
1. Write the chemical name of thymine. 1
2. Why is euchromatin active transcriptionally but heterochromatin is not? 1
3. How many amino acids will be present in a polypeptide translated from an mRNA with 5 bases? 1
4. Name the amino acid residues which impart positive charge to histones. 1
5. Name the types of synthesis occurring during DNA replication as represented below: 1



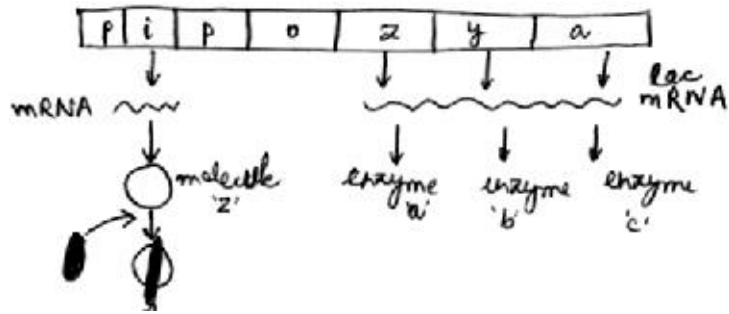
6. Which human chromosome has : 1
 - a) the maximum number of genes?
 - b) the minimum number of genes?
7. Calculate the number of basepairs in the DNA of *E.coli* if its length is 1.36mm. 2
8. Draw the adapter molecules for the amino acids coded by :
(a) CAG (b) UAG
9. Name the parts labelled a, b, c and d in the figure shown: 2



10. How did Frederick Griffith show the presence of 'Transforming Principle' in 1928? 2
11. Write the two additional complexities associated with transcription in eukaryotes as compared to that in prokaryotes. 2
12. Draw a double stranded polynucleotide chains with all 4 possible nucleotides being a part of it. 3
13. Given below is a sequence of steps of transcription in a eukaryotic cell. Fill up boxes 1,2,3 & 4. Define capping and tailing. 3



14. Study the figure given below and answer the questions that follow:



- What term is used for the molecule 'z'? How is it inactivated?
- Write the names of enzymes 'a' and 'c'?
- When does transcription of lac RNA stop?

PRACTICE TEST-7

CLASS: XII

SUBJECT: BIOLOGY

EVOLUTION

Time : 50 min.

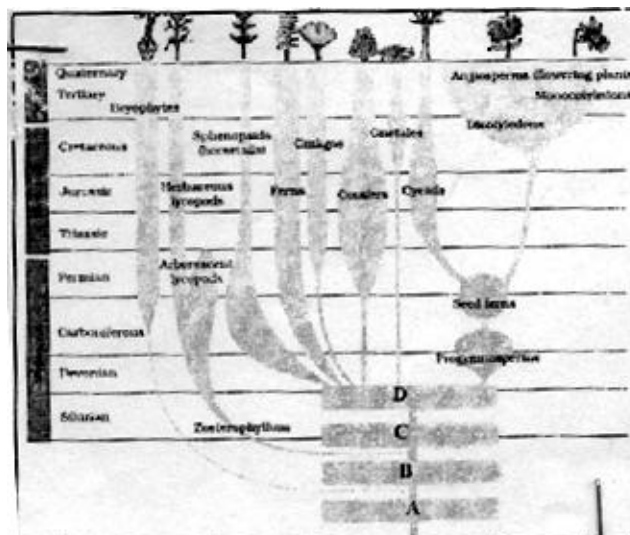
M.M. 25

1. Coelocanth was caught in 1938 in South Africa. What is its significance in the evolutionary history of vertebrates?
2. Name the common ancestor of the great apes and man.
3. List any two factors that can disturb generic equilibrium.
4. How did brain capacities of *Homo habilis* and *Homo erectus* differ?
5. Rearrange the following in order of their appearance during evolution
Reptiles, Salamander, lobefins and frogs
6. Give an example to show that rate of appearance of new forms is linked to the life span of an organism.
7. Adaptive radiation can lead to convergent evolution. Support this statement with an example.
- 8.



Identify each pair as Homologous / Analogous organs, specifying the reasons.

9. Label A, B, C, D in the figure below:



10. Compare the theories of evolution given by Darwin and Hugo de-Vries.

11. Explain how industrial melanism supports Darwin's theory of Natural Selection.
12. Explain evolution by anthropogenic action with two examples.
13. Diagrammatically represent the three different ways by which natural selection can affect the frequency of a heritable trait in a population. Also name these three types of selections.
14. a) State in what ways Stanley Miller simulated the conditions of :
 - i) Primitive atmosphere on earth
 - ii) Energy source at the time of origin of life
- b) Name the biomolecule that was formed during this experiment.

PRACTICE TEST-8

CLASS: XII

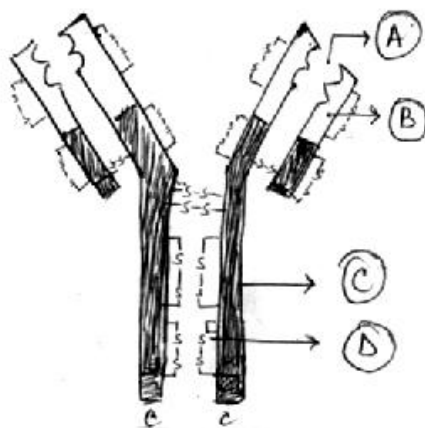
SUBJECT: BIOLOGY

HUMAN HEALTH AND DISEASES

Time : 50 min.

M.M. 25

1. Name any two diseases where female mosquitoes act as vectors. 1
2. The yellowish fluid secreted by the mother in the initial days of lactation is beneficial for infants. 1
 - a) Name this fluid
 - b) State its importance
3. Why is a person suffering from HIV/AIDS more susceptible to infection by *Toxoplasma* as compared to a healthy person? 1
4. Name any two plants which produce drugs with hallucinating properties. 1
5. Name the type of human cell that HIV attacks on its entry into the human body. 1
6. List two effects of chronic use of alcohol. 1
7. Elaborate the four barriers which constitute innate immunity. 2
8. Differentiate between active and passive immunity. 2
9. Explain the following terms in relation to cancer : 2
 - (a) metastasis
 - (b) contact inhibition
10. Children in metro cities of India suffer from exaggerated response of immune system due to certain environmental factors 2
 - a) Which type of antibodies are produced here?
 - b) Which cells release the chemicals secreted during this during response?
 - c) List any two drugs which can be used to reduce the associated symptoms.
11. Label the parts A, B, C and D in the given diagram: 2



12. Explain the three factors which affect human health. 3
13. Diagrammatically represent the stages in the life cycle of *Plasmodium*.

OR

- a) Why is prevention better than cure with regard to alcohol and drug abuse?
- b) Write any five measures that can be particularly useful for prevention and control of such abuse. 3
14. Fill in the blanks : 3

	Disease	Causative organism	Symptom
1.	Typhoid	___ a ___	___ b ___
2.	___ c ___	<i>Haemophilus influenzae</i>	___ d ___
3.	Common cold	___ e ___	nasal congestion And discharge

PRACTICE TEST-9

CLASS: XII

SUBJECT: BIOLOGY

STRATEGIES FOR ENHANCEMENT IN FOOD PRODUCTION (CHAPTER-9)

Time : 50 min.

M.M. 25

1. Bees are the pollinators of many of our crop species. Name two such fruit crops. 1
2. Hisardale, a new breed of sheep was developed in Punjab. Name its male parent and the methodology used for its production. 1
3. Name two diseases against which resistance was introduced in Nung bean by mutational breeding. 1
4. The Parbhani Kranti variety of a crop plant, shows resistance to yellow mosaic virus.
 - a) Write the scientific name of this plant
 - b) What is the source of this resistance. 1
5. Differentiae between inbreeding and out breeding. 1
6. Green revolution is associated with crop plants. What is blue revolution associated with? 1
7. Inbreeding increases homozygosity and helps in accumulation of superior genes with elimination of less desirable genes by selection. However, it has its drawbacks. Write two such drawbacks and how they can be overcome? 2
8. List two benefits of production of *Spirulina* on industrial scale. 2
9. There was a many fold increase in wheat and rice production during the period 1960 to 2000 due to development of semi-dwarf varieties:
 - a) Name the scientist who developed semi-dwarf varieties of wheat.
 - b) Name two high yielding and disease resistant varieties of wheat introduced in India during that period. 2
10. i) Fill in the missing steps a, b and c in the following program of herd improvement

Cow is administered hormones, with FSH like activity



a



The animal is mated with elite bull



b



c



Genetic mother is available for another round of super ovulation

ii) Name this program of herd improvement. 2

11. Some crop varieties bred from resistance to insect pests are given below. Complete the table: 2

Crop	Variety	Insect pest
Brassica	_____a_____	_____b_____
_____c_____	Pusa Sem 2 Pusa Sem 3	_____d_____

12. More than 3 billion people in the world suffer from 'hidden hunger'.

- a) What does the term 'hidden hunger' mean?
- b) Name the term used for breeding crops with improved nutrition quality.
- c) Give examples of two crop plants developed through this technique. 3

13. Tomato Cell Potato Cell



a..

Naked Protoplasts



b

- a) Fill a and b
- b) Name the technique 3

14. Thousands of plants can be grown in labs from some tissue of a single plant.

- a) What is this method of tissue culture known as?
- b) Why are these plants called semicolons?
- c) Mention the nutrient medium required for this method. 3

PRACTICE TEST-10

CLASS: XII

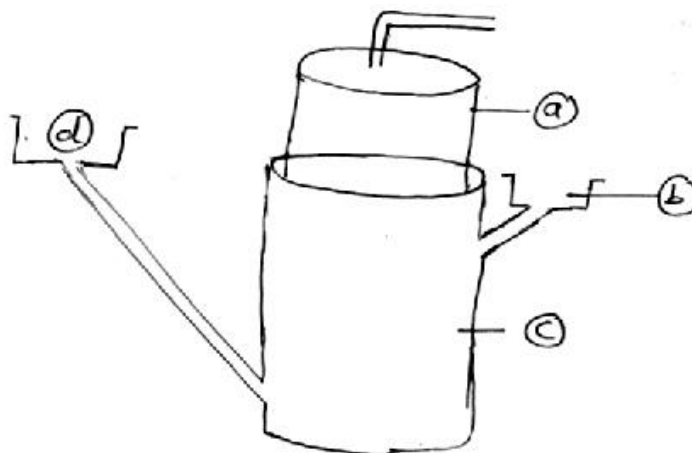
SUBJECT: BIOLOGY

MICROBES IN HUMAN WELFARE (CHAPTER-10)

Time : 50 min.

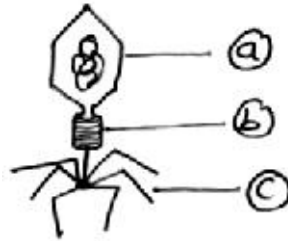
M.M. 25

1. Name the traditional drink of South India made by fermentation of Palm sap. 1
2. Sonu questions his mother about large holes in Swiss cheese. His mother is unable to answer and asks you to help. How will you explain this to Sonu and his mother? 1
3. Name the scientists who established full potential of Penicillin as an antibiotic. 1
4. In IPM, Baculoviruses are used as biocontrol agents which attack insects and other arthropods. Name the genus to which they belong and mention their one advantage. 1
5. Pests are known to harm to crops but even then they should not be completely eradicated. Give one reason. 1
6. Currently in India a number of biofertilizers are available commercially in the market. Name one such biofertilizer used in paddy fields and its importance in paddy field. 1
7. Fill up :
 - i. Lady bird : Aphids :: Bacillus thuringensis :
 - ii. Azotobactor : :: Nartoc : Cyanobacteria 2
8. Milk + a → curd
It increases the quantity of b
Identify (a) and (b) and explain the process. 2
9. It is advised not to take antibiotics without the prescription of the doctor. Give two reasons. 2
10. Identify a, b, c and d in the given diagram: 2



Biogas Plant

11. Identify the organism given in diagram and identify a, b and c in it: 2

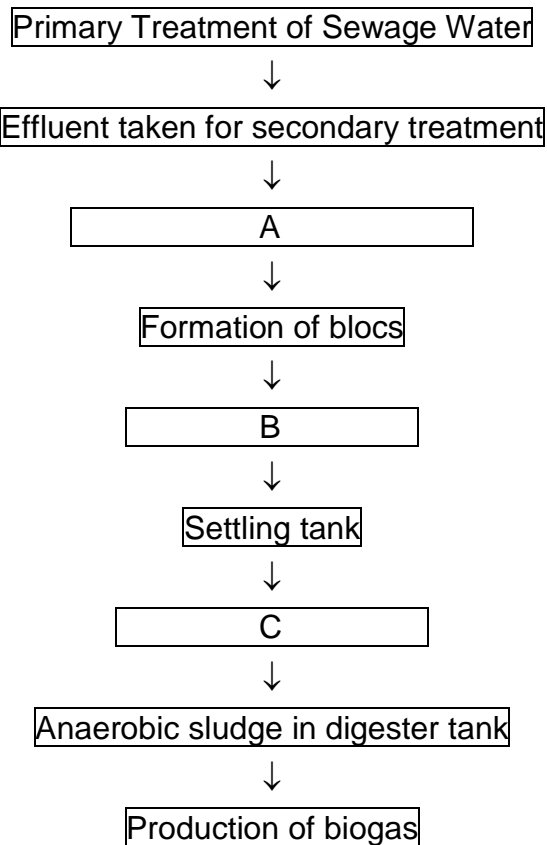


12. Complete the table : 3

Name of Microbe	Bioactive molecule	Application
Streptococcus
.....	Cyclosporin A
.....	Lowers blood cholesterol

13. Name the microbes used in the production of Penicillin, acetic acid and citric acid. Identify the category of microbes to which they belongs. 3

14. Complete the flow chart given below: 3



PRACTICE TEST-11

CLASS: XII

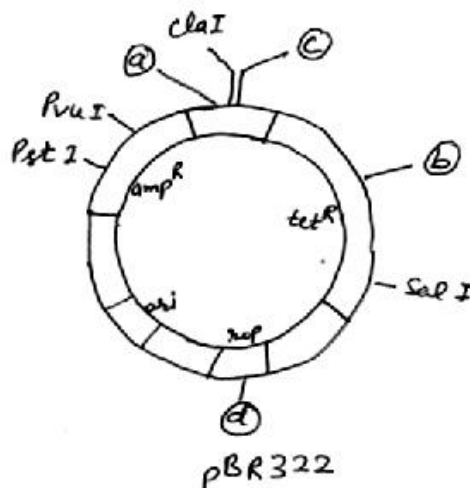
SUBJECT: BIOLOGY

BIOTECHNOLOGY : PRINCIPLES AND PROCESSES (CHAPTER-11)

Time : 50 min.

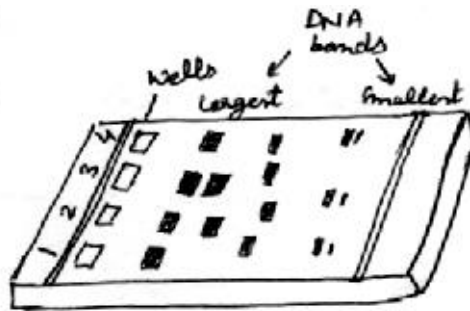
M.M. 25

1. Which limitation of traditional hybridization process is overcome by using r-DNA technology, gene cloning and gene transfer. 1
2. With reference to isolation of genetic material during genetic engineering. Complete the following analogy:
_____ : bacteria :: Chitinase : Fungi 1
3. Which property of DNA helps in getting DNA fragments separated by Gel electrophoresis? 1
4. Restriction enzymes should not have more than one site of action in the cloning site of a vector. Comment. 1
5. Name the enzymes involved in isolation of DNA, to remove
(a) Protein (b) RNA 1
6. How has *Agrobacterium tumifaciens* been disarmed for the production of GMO's. 1
7. Identify a, b, c and d from the diagram given below: 1



8. Explain the nomenclature of the enzyme ECORI. 2
9. The enzyme B-galactosidase is used to identify the recombinants during genetic engineering :
 - a) Name the phenomenon involved
 - b) Explain the procedure in brief 2
10. A set of small chemically synthesized oligonucleotides are essential for initiating DNA multiplication by PCR.
 - a) What is the term used for these oligonucleotides?
 - b) Which enzyme extends these by using the genomic DNA as template? 2

11. a) Name the matrix most commonly used diagram. Also name the source of this matrix.
 b) Name the compound used for staining such DNA fragments.
 c) Name the process for extracting DNA from such bands. 2



12. The first instance of construction of an artificial r-DNA molecules was accomplished in 1972.
 a) Which type of gene was linked to the plasmid of this organism?
 b) Name the organism used for this purpose
 c) Name the enzymes used for cutting and joining the polynucleatides during this process.

13. Complete the steps of recombinant DNA technology: 3

Isolation of DNA



A



Isolation and amplification of gene of interest



B



C

Culturing the host cells on a suitable medium at large scale



Extraction of desired products

14. Draw labelled diagram of simple stirred-tank biosector and label any six parts in it. 3

PRACTICE TEST-12

CLASS: XII

SUBJECT: BIOLOGY

BIOTECHNOLOGY AND ITS (CHAPTER-12)

Time : 50 min.

M.M. 25

1. List any two purposes for which crops are modified genetically. 1
2. How is 'Cry' different from 'cry' in biotechnology? 1
3. Why was the second amendment of the Indian Patent Bill cleared by the Indian Parliament? 1
4. "Most Bt-toxins are insect group specific". Justify the statement by giving examples. 1
5. Name the mobile genetic elements involved in some instances of RNAi. 1
6. The use of GM crops is being promoted by the government to tackle issues of agricultural products and use of agrochemicals therein. Which organisation is responsible for validating the research and safety of such products and procedures? 1
7. Discuss the role of probe to detect the mutated gene in cancer patients during molecular diagnosis? 2
8. How can transgenic animals be used in toxicity or safety testing? List one advantage of using these organisms. 2
9. Name one coleopteran and one dipteran that can be killed by the Bt toxins. Why do these proteins not kill the bacterium itself? 2
10. What important role do monkeys play in the production of polio vaccine? Which organisms can play this role in future? 2
11. List two advantages of using r-DNA technology over traditional approaches in healthcare. 2
12. Adenosine deaminase enzyme is crucial for the immune system to function. ADA deficiency is caused due to deletion of gene for Adenosine deaminase.
 - a) Write the traditional approaches of treating this deficiency.
 - b) How are genetically engineered lymphocytes used for the treatment of this disorder?
 - c) What could be the permanent cure for this disease? 3
13. Complete the following flow chart by filling (a), (b) and (c).

Nematode specific genes

↓ (a) _____ vector

Tobacco (Host Plant)

↓

Both sense and antisense produced in host cells

↓

Formation of (b) _____

↓

RNAi initiated

↓

(c) _____ silenced

14. Explain the structure of proinsulin in human beings. How is mature insulin produced by using r-DNA technology? 3

PRACTICE TEST-13

CLASS: XII

SUBJECT: BIOLOGY

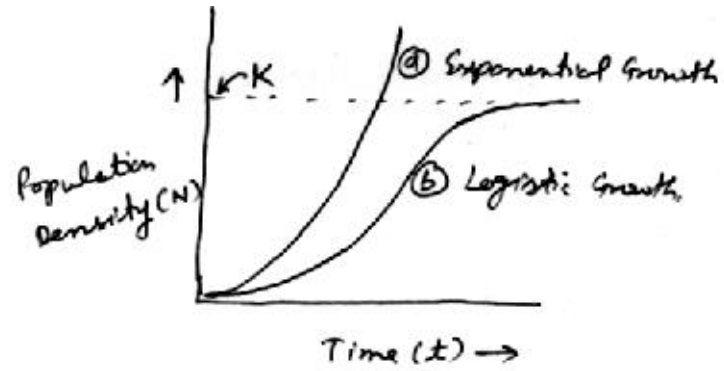
ORGANISMS AND POPULATIONS (CHAPTER-13)

Time : 50 min.

M.M. 25

1. Which biome show annual precipitation of about 60-220 cm and mean annual temperature of about 10-23°C? 1
2. Name two activities for which many animals use photoperiods and seasonal variations in light intensity as cues for timing these activities. 1
3. Name two animals which go into aestivation to avoid summer related problems. 1
4. State and explain Aelen's rule. 1
5. Give two bases on which tiger census is being conducted. 1
6. Which growth model will be observed when resources are limited? 1
7. In a pond the population of lotus plants is 200. During two years 40 new lotus plants were added to this population. Find the birth rate of lotus in this pond for this period. 2
8. In broad parasitism. What are two adaptations developed by the parasitic bird (Koel)? 2
9. 'Cardiacglycosides' are the chemical substances produced by plants as defence against grazers and browsers. Some of the chemicals produced by plants as a defence against grazers and browsers are used by us for commercial purposes. Name four such chemical substances. 2
10. Adaptation is any attribute of the organism that enables the organism to survive and reproduce in its habitats. List any four adaptations developed by endoparasites to counteract and neutralize host evaluation? 2
11. Name the type of population interaction shown by following pair of organisms:
 - a) sea anemone and clown fish
 - b) Cycas Plant and cyanobacteria
 - c) Monarch butterfly and birds
 - d) Barnacles *Balanus* and barnacles *chathamalus* 2
12. What are the adaptations of orchid Ophrys to attract the pollinators? Name the pollinators insect which cause pollination in this plant. 3
13. State Gauses 'Competitive Exclusion Principle'. Explain it with the help of an example. 3

14.



- Write equation for (a) and (b)
- What does K stand for?
- Which growth curve is considered more realistic and why?

3

PRACTICE TEST-14

CLASS: XII

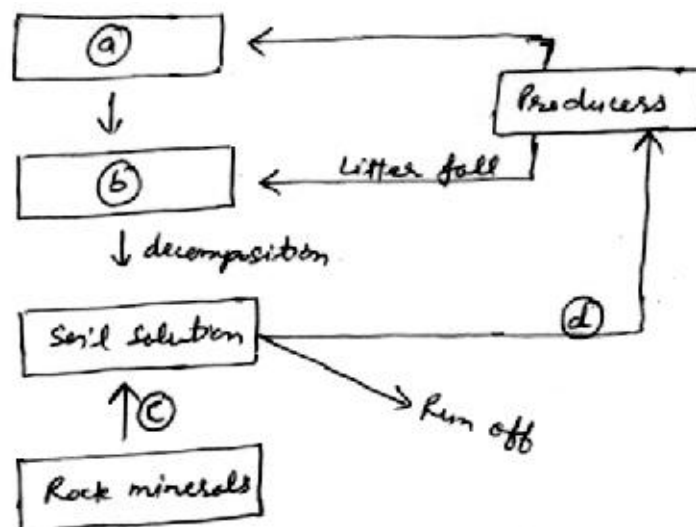
SUBJECT: BIOLOGY

ECOSYSTEMS (CHAPTER-14)

Time : 50 min.

M.M. 25

1. What is the annual net primary productivity of whole biosphere (approximately) excluding oceans? 1
2. Mention two climatic factors that regulate decomposition through their effects on the activities of soil microbes. 1
3. What does standing state refers to? 1
4. In aquatic ecosystem, which type of food chain is the major conduit for energy flow? 1
5. Name the pioneer species of Xerarch succession. 1
6. Which type of food chain does not follow the 10% law of energy flow in an ecosystem? 1
7. In an ecosystem biomass production in 10 years is 20000 tonnes in 200m² area. Find the Gross Primary Productivity in this area. 2
8. Write the chemical composition of detritus in which rate of decomposition is comparatively quicker. How is it different from the detritus in which decomposition is slower? 2
- 9.



Identify (a), (b), (c) and (d) in the flow chart of phosphorus cycle. 2

10. Name the researcher who along with his colleagues has very recently tried to put price tags on nature's life – support services. Mention any three ecosystem services, we get. 2

11. Write two points of differences between carbon cycle and phosphorous cycle. 2
12. Enlist three limitations of use of ecological pyramids for study of ecosystem. 3
13. Mention the three features of climax community in ecological succession? 3
14. Define the following : 3
 - a) Sere(s)
 - b) Standing crop
 - c) Trophic level

PRACTICE TEST-15

CLASS: XII

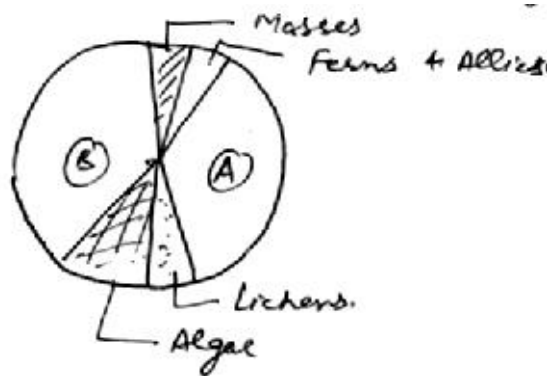
SUBJECT: BIOLOGY

BIODIVERSITY AND CONSERVATION (CHAPTER-15)

Time : 50 min.

M.M. 25

1. The below given pie chart represents the global biodiversity of plants. Name the missing (A) and (B) labellings : 1



2. The genetic variation shown by the medicinal plant *Rauwolfia vomitoria* growing in different Himalayan ranges might be in terms of the potency and concentration of the active chemicals that the plant produces. Name the active chemical that the plant produces. 1
3. a) Write the term for fruit eating birds
b) Who are the amphibians of plant kingdom
4. Name the technique of preserving live sperms, eggs, embryos and tissues etc. at very low temperature. 1
5. Which forests on earth are called the "lungs of the planet"? 1
6. A forest in a tropical region like Equator has upto 10 times as many species of vascular plants as a forest of equal area in a temperate region like the Midwest of the USA. Give one possible reason. 1
7. Biodiversity knows no political boundaries and its conservation is therefore a collective responsibility of all nations. In which city and when was the historic convention on biological diversity (The Earth Summit) held? What was its main objective? 2
8. On a global basis eminent conservationists have identified certain 'Biodiversity Hot Spots'. Write two specific features of these hot spots and their location in India. 2
9. Fill in the blanks :
a) Among animals, _____ are the most species rich taxonomic group, making up more than 70% of the total (invertebrates)

- b) The number of _____ species in the world is more than the combined total of the species of fishes, amphibians, reptiles and mammals. 2

10. Match the items of column A with that of column B

Column A

Column B

- | | | |
|-------------------------|---------------------------|---|
| i. Western Ghats | a. higher productivity | |
| ii. Increased diversity | b. Mauritius | |
| iii. Lantana | c. more amphibian species | |
| iv. Dodo | d. Invasive weed | 2 |

11. If one species is lost, it may sometimes lead to the extinction of another species. Explain with the help of one example and what is the phenomenon known as? 2

12. a) The accelerated rates of species extinction that the world is facing now are largely due to human activities. There are four major causes called as 'The Evil Quartet'. Mention these causes.

b) The environmental damage caused by invasive weeds like carrot grass and water hyacinth is related to which of 'The Evil Quarter'. 3

13. Within a region species richness increases with increasing explored area, but only upto a limit.

a) Name the scientist who made these observations

b) Write the equation to describe the relationship

c) Draw a graph for the equation on a logarithmic scale 3

14. Mention three general effects of loss of biodiversity in a given region. 3

PRACTICE TEST-16

CLASS: XII

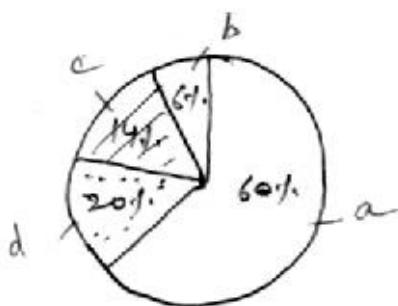
SUBJECT: BIOLOGY

ENVIRONMENTAL ISSUES (CHAPTER-16)

Time : 50 min.

M.M. 25

1. Jhum cultivation has been a practice from earlier time but it is considered more problematic these days. Why? 1
2. A specific radiation causes ageing of skin, skin cancer and inflammation of cornea called snowblindness. It also damages DNA. Name the radiation. 1
3. List any two adverse effects of particulate matter on human health. 1
4. Eutrophication is the natural ageing of a lake by nutrient enrichment of its water. How does cultural or accelerated eutrophication does occur? 1
5. Ahmad Khan solved the problem of accumulated plastic wastes or polythene to lay roads. List the problems associated with plastic use and disposal. 1
6. Use of lead free petrol or diesel is recommended these days for the automobiles. Explain why? 1
7. Deforestation is crating a lot of problems in the environment. List the consequences of deforestation, especially in NCR. 2
8. Relative contribution of various green house gases to total global warming with percentage is given below in the pie chart. Identify the gases.



9. Human waste disposal is becoming a big problem in the rapidly growing downship and cities. Suggest a practical, hygienic, efficient and cost effective solution to human waste disposal. Where is this method used and what are such toilets known as? 2
10. "Nuclear waste is an extremely potent pollutant". Justify. 2
11. Govt. of India introduced a concept in 1980 to promote people's participation in conservation of forests. Name the concept and its aim. 2
12. Electronic gadgets are populating rapidly in our daily life. Name the kind of waste generated by them and problem associated with its disposal. 3

13. "Waste water including sewage can be treated in an integrated manner utilizing a mix of artificial and natural process."
- Name the citizen group which has taken up the above project in its town.
 - Name the town and where is it located
 - What are two stages in which cleaning of waste water is done?
14. See the following chart and answer the questions given :

Zooplankton DDT 0.04 ppm	Large fish DDT 2ppm	Water DDT (a)	Fish eating Birds DDT(b)	Small Fish DDT (c)
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- Write the concentration of DDT for a, b, c
- Arrange the above organisms in an aquatic food chain
- Name the biological phenomenon associated in it.