

# Biology Sample Paper - 2

**Total Question : 40**

**Q.No. 1** If the diploid number of a flowering plant is 36. What would be the chromosome number in its endosperm?

- (A) 36
- (B) 18
- (C) 54
- (D) 72

**Q.No. 2** Mitochondria are called powerhouses of the cell. Which of the following observations support this statement?

- (A) Mitochondria synthesise ATP
- (B) Mitochondria have a double membrane.
- (C) The enzymes of the Krebs cycle and the cytochromes are found in mitochondria.
- (D) Mitochondria are found in almost all plants and animal cells.

**Q.No. 3**

The fragments of DNA separate on agarose gel, based on the

- (A)  
Size of fragments
- (B)  
Charge of each fragment
- (C)  
Colour of fragment
- (D)  
Type of DNA

**Q.No. 4** Which of the following is a defining characteristic of living organisms ?

- (A) Growth
- (B) Ability to make sound
- (C) Reproduction
- (D) Response to external stimuli



**Q.No. 5** Botanical garden and Zoological parks have:

- (A) Collection of endemic living species only
- (B) Collection of exotic living species only
- (C) Collection of endemic and exotic living species
- (D) Collection of only local plants and animals

**Q.No. 6** Cyanobacteria are classified under:

- (A) Protista
- (B) Plantae
- (C) Monera
- (D) Algae

**Q.No. 7** Organisms living in salty areas are called as:

- (A) Methanogens
- (B) Halophiles
- (C) Heliophytes
- (D) Thermoacidophiles

**Q.No. 8**

Vertical distribution of different species occupying different level is called :

- (A)  
Fragmentation
- (B)  
Stratification
- (C)  
Humification
- (D)  
Primary production

**Q.No. 9**

Types of cells in 2 celled pollen grains are

- (A)  
Central cell and Synergies
- (B)  
Antipodal and Megaspore

(C)

Micropylar and Filliform

(D)

Vegetative and Generative

**Q.No. 10**

What is elution ?

(A)

It is movement of negatively charged DNA fragments through agarose gel

(B)

Extraction of DNA from the host

(C)

Extraction of DNA and treatment with restriction endonuclease

(D)

Cutting of separated DNA fragments from agarose gel and extraction of DNAG fragment

**Q.No. 11**

To prove theory of mutation, Hugo de Vries used plant

(A)

Snap dragon or Antirrhinum

(B)

Evening primrose

(C)

Dog flower

(D)

Pisum Satioum

**Q.No. 12** Which one of the following is also known as anti diuretic hormone?

(A) Oxytocin

(B) Vasopressin

(C) Adrenaline

(D) Calcitonin

**Q.No. 13**

Which of the following hormone is not produced by placenta ?



(A)

hCG

(B)

APL

(C)

estrogen

(D)

androgens

**Q.No. 14**

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 :

(A)

(B) and (D) only

(B)

(A) and (D) only

(C)

(B) and (C) only

(D)

(D) and (E) only

**Q.No. 15**

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 :

(A)

(C) only

(B)

(B) only

(C)

(A) only

(D)

(B) and (D) only

**Q.No. 16** A piece of wood having no vessels(trachea) must belong to :

(A) Teak

(B) Mango

(C) pine

(D) Palm

**Q.No. 17** Which of the following is not involved in Knee-jerk reflex?

(A) Muscle spindle

(B) Motor neuron

(C) Brain

(D) Inter neurons

**Q.No. 18** Difference between Virus and Viroid is :

(A) Absence of protein coat in viroid but present in virus

(B) Presence of low molecular weight RNA in virus but absent in viroid

(C) Both (a) and (b)

(D) None of the above

**Q.No. 19**

Among the animal on the planet, the species rich group making more than 70% is

(A)

Fishes

(B)

Mammals

(C)

Insects

(D)

Reptiles

**Q.No. 20** Cells of this tissue are living and show angular wall thickening. They also provide mechanical support. The tissue is :

(A) Xylem

(B) Sclerenchyma

(C) Collenchyma

(D) Epidermis

**Q.No. 21**

In the technology called MOET, which one of the following hormones is used ?

(A)

LH

(B)

ACTH

(C)

FSH

(D)

TSH

**Q.No. 22** Which one of the following plants is used to extract the blue dye?

(A) Trifolium

(B) Indigofera

(C) Lupin

(D) Cassia

**Q.No. 23**

New breed of sheep is developed by .

(A)

Cross breeding

(B)

Inbreeding

(C)



Outcrossing

(D)

Interspecific hybridization

**Q.No. 24**

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 :

(A)

(A) and (E) only

(B)

(A), (C), (B) only

(C)

(A), (C) only

(D)

(B), (D) only

**Q.No. 25** Naked cytoplasm , multinucleated and saprophytic are the characteristics of

- (A) Monera
- (B) Protista
- (C) Fungi
- (D) Slime moulds

**Q.No. 26** Select what is not true of intestinal villi among followings :

- (A) They possess microvilli
- (B) They increase the surface area
- (C) They are supplied with capillaries and the lacteal vessels
- (D) They only participate in digestion of fats

**Q.No. 27**

Vegetative propagation in Eicchomia and Pistoia occurs by



(A)

Sucker

(B)

Offset

(C)

Runner

(D)

Stolon

**Q.No. 28** Hormones are called chemical signals that stimulate specific target tissues. Their specificity is due to the presence of signal receiving 'receptors' only in the respective target tissues. Where are these receptors present in case of hormones of protein nature?

(A) Extra cellular matrix

(B) Blood

(C) Plasma membrane

(D) Nucleus

**Q.No. 29** Hepato-pancreatic duct opens into the duodenum and carries :

(A) Bile

(B) Pancreatic juice

(C) Both bile and pancreatic juice

(D) Saliva

**Q.No. 30** The embryo sac of an **Angiosperm** is made up of:

(A) 8 cells

(B) 7 cells and 8 nuclei

(C) 8 nuclei

(D) 7 cells and 7 nuclei

**Q.No. 31**

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 :

(A)



(1) Both Statement I and Statement II are correct

(B)

Both Statement I and Statement II are incorrect

(C)

Statement I is correct but Statement II is incorrect

(D)

Statement I is incorrect but Statement II is correct

**Q.No. 32** Which one of the following sets of animals share a four chambered heart?

(A) Amphibian, Reptiles, Birds

(B) Crocodiles, Birds, Mammals

(C) Crocodiles, Lizards, Turtles

(D) Lizards, Mammals, Birds

**Q.No. 33** Deficiency symptoms of an element tend to appear first in young leaves. It indicates that the element is relatively immobile. Which one of the following elemental deficiency would show such symptoms?

(A) sulphur

(B) magnesium

(C) nitrogen

(D) potassium

**Q.No. 34** Which of the following exhibits the highest rate of respiration?

(A) Growing shoot apex

(B) Germinating seed

(C) Root tip

(D) Leaf bud

**Q.No. 35**

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 :



(A)

B-->C--->E---->A--->D

(B)

D-->C-->B--->E--->A

(C)

D--->B--->C--->E-->A

(D)

E--->D--->B--->C--->A

**Q.No. 36**

Individuals with karyotype of 44+XXY having overall masculine development with few feminine development like Gynecomastia has chromosomal disorder ;

(A)

Klinefelter's Syndrome

(B)

Turner's Syndrome

(C)

Down's Syndrome

(D)

Acquired Immuno Deficiency Syndrome

**Q.No. 37** Epiblast of root is equivalent to:

(A) Pericycle

(B) Endodermis

(C) Epidermis

(D) Stele

**Q.No. 38** ATPase of the muscle is located in:

(A) Actinin

(B) Troponin

(C) Myosin

(D) Actin

**Q.No. 39**

Flowers are a fascinating organ of Angiosperms. Flowers are considered the object of aesthetic, ornamental, social and cultural value. Biologically flower is a



(A)

Modified root

(B)

Modified shoot

(C)

Modified leaf

(D)

Modified tuber

**Q.No. 40** New cells generate from:

(A) Bacterial fermentation

(B) Regeneration of old cells

(C) Pre-existing cells

(D) Abiotic materials

## Answer Sheet

Q.No	Answer
Q.No. 1	(C)
Q.No. 2	(A)
Q.No. 3	(A)
Q.No. 4	(D)
Q.No. 5	(C)
Q.No. 6	(C)
Q.No. 7	(B)
Q.No. 8	(B)
Q.No. 9	(D)
Q.No. 10	(D)
Q.No. 11	(B)
Q.No. 12	(B)
Q.No. 13	(D)
Q.No. 14	(A)
Q.No. 15	(A)
Q.No. 16	(C)
Q.No. 17	(C)
Q.No. 18	(A)



Q.No. 19	(C)
Q.No. 20	(C)
Q.No. 21	(C)
Q.No. 22	(B)
Q.No. 23	(A)
Q.No. 24	(A)
Q.No. 25	(D)
Q.No. 26	(D)
Q.No. 27	(B)
Q.No. 28	(C)
Q.No. 29	(C)
Q.No. 30	(B)
Q.No. 31	(A)
Q.No. 32	(B)
Q.No. 33	(A)
Q.No. 34	(B)
Q.No. 35	(B)
Q.No. 36	(A)
Q.No. 37	(C)
Q.No. 38	(C)
Q.No. 39	(B)
Q.No. 40	(C)