MS-CIT
World-class Comprehensive Computer Course

Question Paper - I
Subject-Biology, Std. – 12th

MKCL KLiC Courses
Gateway to Knowledge Lit Careers

Marks : 70 **Time : 3 Hrs**

General Instructions:

1. **Sections A:** Q. No. 1 contains **10** multiple choice questions carrying **one mark** each
   Q. No. 2 contains **8** very short answer type questions carrying **one mark** each
2. **Section B:** Q. No. 3 to Q. No. 14 are **12** short answer-I type questions **carrying two marks** each. Attempt any **eight** questions.
3. **Section C:** Q. No. 15 to Q. No. 26 are **12** short answer-II type questions carrying **three marks** each. Attempt any **eight** questions.
4. **Section D**: Q. No 27 to Q. No. 31 are **5** long answer type questions carrying **four marks.**

Attempt any three questions.

SECTION A

Q.1. Select and write correct answer:

1. Which of the following shows post fertilization changes incorrectly? **1**
A) Ovary – fruit B) Ovule – seed C) Integuments – Perisperm D) Zygote - Embryo

2. Which of the following is/are the properties of nerve fibers? **1**
A) Irritability B) Conductivity C) Synaptic fatigue D) All of these

3. In Drosophila,_____ wing is wild type while vestigial wing is recessive type. **1**
A) Vg^{ni} B) Vg^{+} C) Vg^{no} D) Vg

4. _____ center is antagonistic to the pneumotaxic center. **1**
A) Inspiratory B) Apneustic C) Inspiratory and expiratory D) Expiratory

5. A person with blood group B has which antibodies in their plasma? **1**
A) ~~'a'~~ B) 'b' C) both 'a' and 'b' D) no antibodies

6. Directly or indirectly, all organisms are dependent for their food on **1**
A) consumers B) herbivores C) carnivores D) producers

7. Human RBCs are **1**
A) nucleated B) rounded and nucleated
C) oval and nucleated D) circular, biconcave and non-nucleated

8. The male accessory gland is **1**
A) seminal vesicles B) prostate gland
C) Cowper's gland D) All of these

9. How many codons actually code for 20 amino acids? **1**
A) 60 B)61 C)62 D)64

10. _____ connects the middle ear to the pharynx. **1**
A) Cochlea B) Ear ossicles C) Eustachian tube D) Tympanic membrane

Q.2 Answer the following:

1. What are the key abiotic factors which influence any habitat? **1**

2. What is genome? **1**

3. What ia allosome? **1**

4. Enlist the different factors that the are responsible for changing gene frequency. **1**

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5. What is the partial pressure of oxygen of blood entering the pulmonary capillaries and in alveolar air? **1**

6. Why urethra is called the urinogenital duct? **1**

7. What is synapse? **1**

8. What is denitrification? **1**

SECTION B **1**

Attempt Any Eight :

Q.3 Give two differences between blastula and gastrula.

Q.4 Test cross is a back cross but back cross is not necessarily a test cross. Explain. **2**

Q.5 What is histone? **2**

Q.6 **Match the following.** **2**

Column- I	Column-II
1. August	a. Mutation theory Weismann
2. Hugo de vries	b. Germ plasm theory
3. Charles	c. Theory of acquired characters
4. Lamark	d. Theory of natural selection

Q.7 Why water is known as elixir of life**?** **2**

Q.8 What is artificial insemination? State its advantages. **2**

Q.9 What happens if a Rh-ve mother conceives with a Rh+ve foetus? **2**

Q.10 **Fill in the blank and complete** **2**

GMO	Purpose
Bt cotton	_____
_____	Delay the softening of tomato during ripening
Golden rice	_____
Holstein cow	_____

Q.11. Name important defence mechanisms in plants against herbivores. **2**

Q.12. Give some control measures to reduce noise pollution. **2**

Q.13. Write a note on Human Lungs. **2**

Q.14. Name the ovarian hormone and give their functions. **2**

SECTION C **2**

Attempt Any Eight

Q.15. Describe the entry of pollen tube into the ovule. **3**

Q.16. Write a note on Human Genome Project (HGP). **3**

Q.17. By talking industrial melanism as one example. Explain the concept of natural selection. **3**

Q.18. With the help of a detailed diagram, explain the structure of sperm **3**

Q.19. With labelled diagram describe the structure of stomata. **3**

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Q.20.	Law of dominance is not universal. Explain.	**3**
Q.21.	What are the major causes of biodiversity losses?	**3**
Q.22.	Explain: ABO blood group.	**3**
Q.23.	Write principles of farm management.	**3**
Q.24	Write short note on Lymphatic system	**3**
Q.25	Describe the endocrine role of islets of Langerhans. (OR) Name the secretion of alpha, beta and delta boobon cells of islets of langerhans. Explain their role.	**3**
Q.26	Explain the process of physical nitrogen fixation.	**3**

SECTION D **3**

Attempt Any Three :

Q.27 Write the names of hormones and the glands secreting them for the regulation of following functions. **4**

a) Growth of thyroid and secretion of thyroxine.

b) Helps in relaxing pubic ligaments to facilitate easy birth of young ones.

c) Stimulate intestinal glands to secrete intestinal juice.

d) Controls calcium level in the blood

e) Controls tubular absorption of water in kidneys.

f) Urinary elimination of water.

g) Sodium and potassium ion metabolism.

h) Basal Metabolic rate.

I) Uterine contraction.

j) Heart beat and blood pressure.

k) Secretion of growth hormone.

I) Maturation of Graafian follicle.

Q.28.	Explain the development of dicot embryo.	**4**
Q.29.	Explain with suitable example an independent assortment.	**4**
Q.30.	Describe the structure of blastula. (OR) Write a note on: Blastulaion.	**4**
Q.31.	What is a cardiac cycle? Describe the events occur during one complete cardiac cycle of the human heart. OR Describe the working of heart.	**4**