

10th Class

Guidelines for the preparation of BIOLOGICAL SCIENCE Question Papers for 9th and 10th Classes

- ❖ In Biological Science 40 marks are allotted for Summative Assessment Question paper.
- ❖ In Summative Assessment Question paper there will be Two parts, i.e. Part-A; and Part-B.
- ❖ Part-A and Part-B contains different types of questions as shown below:

	Types of Questions	No. Of Questions	Questions to be Answered	Allotted Marks for each Questions	Total Marks	Allotted Time
Part-A	Very Short Answer Question [VSAQ]	03	03	02	06	ONE HOUR FIFTEEN MINUTES
	Short Answer Question [SAQ]	03	03	04	12	
	Essay type Questions[Essay]	03	02	06	12	1 hr. 15 Min.
Part-B	Multiple Choice Questions [MCQ]	10	10	01	10	15 Minutes
Total		9+ 10 (MCQ)	8 + 10 (MCQ)	-	40	1 hr. 30 Min

Important Note

- ❖ Prepare question paper for 40 marks.
- ❖ The total marks allotted for Part-A is **30**.
- ❖ The allotted time for Part-A is **ONE HOUR FIFTEEN MINUTES**.
- ❖ The total marks allotted for Part-B is **10**.
- ❖ The allotted time for Part-B is **FIFTEEN MINUTES**.
- ❖ Question paper should be prepared based on the **Academic Standards**.

- ❖ The Academic Standards weightage is shown in the following table:

AS No.	Academic Standards.	Percent age	Marks	VSAQ	SAQ	Essay	MCQ	TOTAL Marks
				2M	4M	6M	1M	
AS-1	Conceptual Understanding	40%	18					18
AS-2	Asking questions and making hypothesis	05%	02					02
AS-3	Experimentation and field investigation	18%	09					09
AS-4	Information skills and Projects	8%	04					04
AS-5	Communication through drawing, Flow charts	15%	07					07
AS-6	Appreciation, Concern to bio-diversity, Application to daily life.	14%	06					06
TOTAL		100%	40 M (+6M choice)	3 Q (6 marks)	3 Q (12 marks)	3 Q (12 marks) (+6M choice)	10 Q (10 marks)	40 M (+6M choice)

- ❖ The weightage for each academic standard should not be changed.
- ❖ Question paper should be prepared as per the marks allotted to each academic standard. There shall be NO deviation in this regard.
For Example in the entire question paper for **Academic Standard-I** i.e. Conceptual Understanding 18 marks are allotted for all types of questions. While preparing questions there shall be **NO deviation** in the allotted marks.

PART- A:

- ❖ The **Part-A** question Paper contains **THREE** sections. The **First section** contains **3 very short answer type questions**, answer all the questions. Each question carries **2 marks** and the total **marks allotted to this section is 6**. Answer for these questions should be limited to **3-4 sentences**.

- ❖ The **Second section** contains **3 short answer type questions**, answer all the questions. Each question carries **4 marks** and the total **marks** allotted to this section are **12**. Answer for these questions should be limited to **5-6 sentences**. The **Third section** contains **Three Essay type questions** and write any **TWO** questions. Each question carries **6 marks** and the total **marks** allotted to this section are **12**. Answer for these questions should be limited to **8-10 sentences**.

PART- B:

- ❖ The **Part-B** Paper contains **TEN Multiple Choice Questions**, each question carries **1 mark** and the total marks allotted to this part are **10**. **Marks will not be awarded for OVERWRITING, CORRECTED and ERASED answers.**
- ❖ Under Part-B the MCQ must be given with different patterns such as, Identifying the Correct Sentence, Incorrect Sentence, Incorrect Pair, Correct Pair, Odd-one, Match the Following, Arranging in sequential order, Flow-Charts, Missing label etc.,
- ❖ In MCQ questions options such as “All of the above”, “None of the above” and both “A” and “B” should not be given.

General Instructions:

- ❖ Care should be taken while preparing question paper in such way that questions must be given from **ALL allotted Units/Lessons/Chapters**, but **there is NO need to give unit/lesson-wise weightage in the question paper.**
- ❖ Questions given in the question paper should be thought provoking, open ended, analytical. **Rote memory question should be avoided in the question paper. Questions should test the understanding level of the student.**
- ❖ All questions must not be ambiguity and they should be clear with objectivity.
- ❖ Sub-questions should not be given in the question paper **except information skill (AS-IV) Questions.**
- ❖ The length of the answer must be kept in mind while preparing different types of questions.
- ❖ While preparing question paper avoid “Improve your learning” questions from the text book as it is, Can take those questions by changing their nature of questioning.
- ❖ The entire question papers should be prepared in such way that 50% questions easy, 30% questions are average and the remaining 20% questions are of higher order thinking.

Biological Science – X E/M
Blue Print for this Model Paper

AS No.	Academic Standards.	Percentage	Marks	VSAQ	SAQ	Essay	MCQ	TOTAL Marks
AS-1	Conceptual Understanding	40%	18	-	1 (4M)	1 (6M)	8 (1M)	18
AS-2	Asking questions and making hypothesis	05%	02	1 (2M)	-	-	-	02
AS-3	Experimentation and field investigation	18%	09	1 (2M)	-	1 (6M)	1 (1M)	09
AS-4	Information skills and Projects	8%	04	-	1 (4M)	-	-	04
AS-5	Communication through drawing, Flow charts	15%	07	-	-	1 (6M)	1 (1M)	07
AS-6	Appreciation, Concern to bio-diversity, Application to daily life.	14%	06	1 (2M)	1 (4M)	-	-	06
TOTAL		100%	40 M (+6M choice)	3Q (6 Marks)	3Q (12 Marks)	3Q (12+6M choice)	10Q (10Marks)	40 M (+6M choice)

20 E (A)

MODEL QUESTION PAPER
General Science
Part-II-(Biological
Science) (English
Version)
CLASS – X
Parts A & B

Time:1.30Hours]

[Max. Marks:40

Instructions:

1. Read the question paper carefully and understand.
2. Answer the questions under **Part A** in the answer sheet provided.
3. Part–A contains three sections: section-I, II and III.
4. **Part B** Answers should be written in the given bracket sand attach to the part A answer sheet.
5. Write the answers following the instructions given in each section.

Part-A

Time:1 Hour 15 min]

Marks:30

SECTION - I

Instructions:

**[3 x
2 = 06]**

- i. This section contains **3** very short answer questions.
 - ii. Answer **ALL the questions**.
 - iii. Write the answer in **3-4** sentences.
 - iv. Each question carries **2** marks.
-
- 1) What happens if transpiration doesn't take place in tall trees?
 - 2) Write the materials required to observe internal structure of mammalian kidney.
 - 3) Write the biological principles to be followed in daily life to avoid pesticides.

SECTION- II

[3 x 4 = 12]

Instructions:

- i. This section contains **3** short answer questions.
- ii. Answer **ALL** questions.
- iii. Write the answer in **5-6** sentences.
- iv. Each question carries **4** marks.

4) Write any four evidences to prove the Darwin's Theory of Evolution.

5) Observe the following table and answer the questions given below:

Endocrine Glands	Hormones	Effect of hormones
Adrenal	Adrenaline	Emotions
Pituitary	Somatotrophin	Growth
Ovary	Estrogen	Secondary Sexual Characters
Testes	Testosterone	Secondary Sexual Characters

- i. Which hormone is exclusively present only in females?
 - ii. Which hormone is responsible for the development of secondary sexual characters in males?
 - iii. Identify the endocrine glands present in both males and females?
 - iv. Which hormone is exclusively present only in males?
- 6) Write any four measures to be followed to conserve natural resources in your daily life.

SECTION - III

[2 x 6 = 12]

Instructions:

- i. This section contains **3** essay type of questions.
- ii. Answer **ANY TWO** questions.
- iii. Write the answer in **8-10** sentences.
- iv. Each question carries **6** marks.

- 7) What is double circulation? Explain the cardiac cycle.

- 8) Explain the procedure and precautions of an experiment which proves the presence of starch in leaves.

- 9) Draw the labelled diagram of Datura flower and explain the floral parts.

20 E (B)

**General Science
Part-II - Biological
Science (English
Version)
CLASS – X
Part B**

Time:20 Minutes]

[Max. Marks:10

Instructions:

1. Write the answers to the questions under **Part B** on the question paper itself and attach it to the answer book of Part A
 2. Each question carries **1** mark
 3. Marks will not be awarded in any case of overwriting, rewritten or erased answers.
 4. Write the capital letter (**A,B,C,D**) showing the correct answer for the following questions in the brackets provided against them.
-
1. Identify the function of kidney from the following. ()
(A) Respiration
(B) Circulation
(C) Reproduction
(D) Excretion
 2. Identify the material used in the experiment to prove anaerobic respiration ()
(A) Ethanol
(B) Potassium Hydroxide (KOH)
(C) Iodine
(D) Yeast
 3. Match the following: ()
a) Nematoda () i) Flame cells
b) Echinodermata () ii) Renette cells
c) Platyhelmenthes () iii) Metanephridia
d) Mollusca () vi) Water vascular system

- (A) a-ii;b-iv;c-iii;d-i
- (B) a-iii;b-ii;c-i;d-iv
- (C) a-ii;b-iv;c-i;d-iii
- (D) a-i;b-ii;c-iv;d-iii

4. Identify the blood vessel which carries deoxygenated blood ()

- (A) Systemic artery
- (B) Coronary artery
- (C) Pulmonary vein
- (D) Pulmonary artery

5. Identify the pair of hormones secreted by Pituitary gland ()

- (A) Follicle stimulating hormone; Estrogen
- (B) Progesterone; Adrenaline
- (C) Adrenaline; Gonadotropin
- (D) Follicle stimulating hormone; Vasopressin

6. Identify the **CORRECT** sentence from the following ()

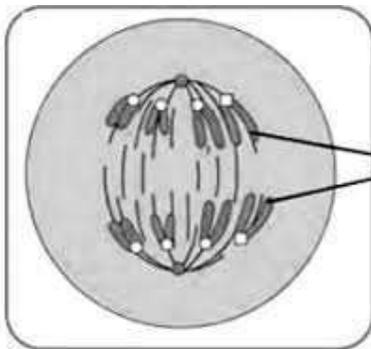
- (A) Canine teeth helps in grinding the food.
- (B) Ghrelin hormone stimulates the hunger pangs.
- (C) There is no relation between smell and taste.
- (D) Leptin hormone stimulates the hunger pangs.

7. Nostrils → → Pharynx → Larynx → → Bronchus → Bronchioles → Alveolus → Blood

Identify and fill the words in sequence that should be in the above boxes ()

- (A) Trachea, nasal cavity
- (B) Nasal cavity, epiglottis
- (C) Nasal cavity, Trachea
- (D) Epiglottis, alveoli

8. Identify the pair of water soluble vitamins from the following. ()
- (A) Calciferol –Niacin
 - (B) Retinol –Thiamin
 - (C) Biotin – Ascorbicacid
 - (D) Pantothenic acid –Tocoferol
9. Identify the secondary metabolites of the plants used in the preparation of varnishes. ()
- (A) Resins
 - (B) Tannins
 - (C) Latex
 - (D) Alkaloids
10. Identify the stage of Mitotic cell division shown in the following figure. ()



- (A) Prophase
- (B) Metaphase
- (C) Anaphase
- (D) Telophase

-X-X-X-X-