# Sample Question Papers

**Biology**

### Highlights
- Ten sample question papers (1-5 Solved & 6-10 Self Assessment*)
- Strictly based on the latest CBSE pattern.
- Answers follow the word limit specified by the CBSE board.
- Answers with step wise marking as per the Board Marking Scheme.
- Valuable Examination Preparation Tips from experts.

### Design of the Question Paper:

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Typology of Questions</th>
<th>Very Short Ans (VSA)</th>
<th>Short Ans-I (SA-I)</th>
<th>Short Ans-II (SA-II)</th>
<th>Value Based Question</th>
<th>Long Ans Question</th>
<th>Total Marks</th>
<th>Percentage (%) Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Remembering</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>7</td>
<td>10%</td>
</tr>
<tr>
<td>02</td>
<td>Understanding</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>03</td>
<td>Application</td>
<td>-</td>
<td>2</td>
<td>4</td>
<td>-</td>
<td>1</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>04</td>
<td>High Order Thinking Skills</td>
<td>2</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>10</td>
<td>14%</td>
</tr>
<tr>
<td>05</td>
<td>Evaluation &amp; Multi-Disciplinary</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>11</td>
<td>16%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>5x1=5</td>
<td>5x2=10</td>
<td>12x3=36</td>
<td>1x4=4</td>
<td>3x5=15</td>
<td>70(26)</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Solutions for SQP 6-10 can be downloaded from www.oswaalbooks.com*
Strictly Based on Latest Syllabus Issued by CBSE for 2015 Examination

SAMPLE QUESTION PAPERS

Biology

*Solutions for SQP 6-10 can be downloaded from www.oswaalbooks.com
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</tr>
<tr>
<td>Sample Question Paper (Issued by CBSE)</td>
<td>11 - 18</td>
</tr>
<tr>
<td>Kindly ignore the pattern of the SQP as it has been revised now.</td>
<td></td>
</tr>
<tr>
<td>The SQP’s in the following pages follow the revised latest CBSE syllabus for March 2015 Examination.</td>
<td></td>
</tr>
<tr>
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<td>19 - 44</td>
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</tbody>
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* **SOLUTIONS for Sample Question Paper 6 to 10** can be downloaded from www.OswaalBooks.com
Believe in Yourself
This is the foremost barrier to be crossed for scoring high marks in exams. One needs to believe in his/her ability to learn, memorize and reproduce what has been learnt. Exams are nothing but the test of our faith, confidence and knowledge.

Follow a Time – Table
A well set time table allotting specific durations for studying, sleeping, playing/surfing the net and eating can help every student a lot. Every above quoted thing has to be done every day. A proper schedule can help a student beat examination stress.

Set Every Day Goals
Preparations should be done every day to excel at the day of exams without depending upon any miracle capsule to bail you out at the last moment. By setting everyday targets and goals, one can achieve incredible results in terms of efficiency and performance.

Take care of your Health
Health is wealth. This adage never fails. Only a sound body and sound mind can work effectively towards achieving any objective. Thus to sum up, healthy body is a mandate for rigorous mental exercise that comes up during examinations.

Practice Daily
We eat daily, we sleep daily, so why not study daily? Regular practice in every subject will keep students close to a subject. If one avoids any subject for more than three days in a go, he/she is bound to lose interest in it.

How to get
The 'OSWAAL' Advantage?

OSWAAL
OSWAAL - Your Elixir of Positivity & Confidence
Positivity and confidence can do wonders to your grades, far more than you can think. By studying from Oswaal Sample Question papers, you develop confidence in yourself which makes you positive and hence gives you the winners advantage!! A bunch of important questions along with their systematic presentation helps you tremendously in studying effectively.

OSWAAL - Your Planner
OSWAAL - Your Planner
For Examination Preparations
You must make a schedule for your studies followed by strict implementation of that schedule. Oswaal SQPs give you questions on the important topics or topics which need more practice or time. Oswaal SQPs include last year exam questions as well as sample papers for the proper schedule of your study. You may also study with your friends and make the entire learning process fun!!

OSWAAL - Your Confidence Booster
OSWAAL - Your Confidence Booster
Just before the Exam
One should never try to read, study or cram anything new just before the beginning of your exam. You can just open your Oswaal SQPs and read through the answers highlighted by you a night before for the last time and then put away all your books. This gives you a new wave of confidence just before the commencement of your exam!

1. Believe in Yourself
2. Follow a Time – Table
3. Set Every Day Goals
4. Take care of your Health
5. Practice Daily
6. Play Games
7. Presentation
8. Time Management
9. Sleep Well
10. Relax Yourself
Unit 1: Reproduction

Reproduction in organisms: Reproduction, a characteristic feature of all organisms for continuation of species; modes of reproduction - asexual and sexual reproduction; asexual reproduction - binary fission, sporulation, budding, gemmule, fragmentation; vegetative propagation in plants.

Sexual reproduction in flowering plants: Flower structure; development of male and female gametophytes; pollination- types, agencies and examples; outbreeding devices; pollen-pistil interaction; double fertilization; post fertilization events-development of endosperm and embryo, development of seed and formation of fruit; special modes-apomixis, parthenocarpy, polyembryony; Significance of seed dispersal and fruit formation.

Human Reproduction: Male and female reproductive systems; microscopic anatomy of testis and ovary; gametogenesis spermatogenesis and oogenesis; menstrual cycle; fertilisation, embryo development upto blastocyst formation, implantation; pregnancy and placenta formation (elementary idea); parturition (elementary idea); lactation (elementary idea).

Reproductive health: Need for reproductive health and prevention of sexually transmitted diseases (STDs); birth control-need and methods, contraception and medical termination of pregnancy (MTP); amniocentesis; infertility and assisted reproductive technologies- IVF, ZIFT, GIFT (elementary idea for general awareness).

Unit 2: Genetics and Evolution

Heredity and variation: Mendelian inheritance; deviations from Mendelism - incomplete dominance, codominance, multiple alleles and inheritance of blood groups, pleiotropy; elementary idea of polygenic inheritance; chromosome theory of inheritance; chromosomes and genes; Sex determination- in humans, birds and honey bee; linkage and crossing over; sex linked inheritance haemophilia, colour blindness; Mendelian disorders in humans thalassemia; chromosomal disorders in humans; Down's syndrome, Turner's and Klinefelter's syndromes.

Molecular basis of inheritance: Search for genetic material and DNA as genetic material; Structure of DNA and RNA; DNA packaging; DNA replication; Central dogma; transcription, genetic code, translation; gene expression and regulation lac operon; genome and human and rice genome projects; DNA fingerprinting.

Evolution: Origin of life; biological evolution and evidences for biological evolution (paleontology, comparative anatomy, and molecular evidences); Darwin's contribution, modern synthetic theory of evolution; mechanism of evolution-variation (mutation and recombination) and natural selection with examples, types of natural selection, Gene flow and genetic drift; Hardy-Weinberg's principle; adaptive radiation; human evolution.
Unit 3: Biology and Human Welfare 30 periods

Health and disease: Pathogens; parasites causing human diseases (malaria, dengue, chickengunia, filariasis, ascariasis, typhoid, pneumonia, common cold, amoebiasis, ring worm) and their control; Basic concepts of immunology - vaccines; cancer; HIV and AIDS; Adolescence, drug and alcohol abuse.

Improvement in food production: Plant breeding, tissue culture, single cell protein, Biofortification, Apiculture and Animal husbandry.

Microbes in human welfare: In household food processing, industrial production, sewage treatment, energy generation and as biocontrol agents and biofertilizers. Antibiotics; production and judicious use.

Unit 4: Biotechnology and Its Applications 30 periods

Principles and processes of biotechnology: Genetic Engineering (Recombinant DNA Technology).

Application of biotechnology in health and agriculture: Human insulin and vaccine production, stem cell technology, gene therapy; genetically modified organisms - Bt crops; transgenic animals; biosafety issues, bio piracy and patents.

Unit 5: Ecology and Environment 30 periods

Organisms and environment: Habitat and niche, population and ecological adaptations; population interactions-mutualism, competition, predation, parasitism; population attributes - growth, birth rate and death rate, age distribution.

Ecosystems: Patterns, components; productivity and decomposition; energy flow; pyramids of number, biomass, energy; nutrient cycles (carbon and phosphorous); ecological succession; ecological services - carbon fixation, pollination, seed dispersal, oxygen release (in brief).

Biodiversity and its conservation: Concept of biodiversity; patterns of biodiversity; importance of biodiversity; loss of biodiversity; biodiversity conservation; hotspots, endangered organisms, extinction, Red Data Book, biosphere reserves, national parks, sanctuaries and Ramsar sites.

Environmental issues: Air pollution and its control; water pollution and its control; agrochemicals and their effects; solid waste management; radioactive waste management; greenhouse effect and climate; ozone layer depletion; deforestation; any one case study as success story addressing environmental issue(s).

Practicals

<table>
<thead>
<tr>
<th>Evaluation Scheme</th>
<th>Maximum Marks : 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>One Major Experiment</td>
<td>5 marks</td>
</tr>
<tr>
<td>One Minor Experiment</td>
<td>4 marks</td>
</tr>
<tr>
<td>Slide Preparation</td>
<td>5 marks</td>
</tr>
<tr>
<td>Sporting</td>
<td>7 marks</td>
</tr>
<tr>
<td>Practical Record, Viva Voce</td>
<td>4 marks</td>
</tr>
<tr>
<td>Project Record + Viva Voce</td>
<td>5 marks</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>30 marks</strong></td>
</tr>
</tbody>
</table>

A. List of Experiments
1. Study pollen germination on a slide
2. Collect and study soil from at least two different sites and study them for texture, moisture content, pH and water holding capacity. Correlate with the kinds of plants found in them.
3. Collect water from two different water bodies around you and study them for pH, clarity and presence of any living organism.
4. Study the presence of suspended particulate matter in air at two widely different sites.
5. Study the plant population density by quadrat method.
6. Study the plant population frequency by quadrat method.
7. Prepare a temporary mount of onion root tip to study mitosis.
8. Study the effect of different temperatures and three different pH on the activity of salivary amylase on starch.

9. Isolation of DNA from available plant material such as spinach, green pea seeds, papaya, etc.

B. **Study/observation of the following (Spotting)**

1. Flowers adapted to pollination by different agencies (wind, insect, bird).
2. Pollen germination os stigma through a permanent slide.
3. Identification of stages of gamete development, i.e., T.S. of testis and T.S. of ovary through permanent slides (from grasshopper/mice).
4. Meiosis in onion bud cell or grasshopper testis through permanent slides.
5. T.S. of blastula through permanent slides.
6. Mendelian inheritance using seeds of different colour/sizes of any plant.
7. Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.
8. Controlled pollination- emasculation, tagging and bagging.
10. Two plants and two animals (models/virtual images) found in xeric conditions. Comment upon their morphological adaptations.
11. Two plants and two animals (models/virtual images) found in aquatic conditions. Comment upon their morphological adaptations.

**Practical Examination for Visually Impaired Students of Classes XI and XII**

**Evaluation Scheme**

<table>
<thead>
<tr>
<th>Time Allowed : Two hours</th>
<th>Max. Marks : 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification/Familiarity with the apparatus</td>
<td>5 marks</td>
</tr>
<tr>
<td>Written test (Based on given/prescribed practicals)</td>
<td>10 marks</td>
</tr>
<tr>
<td>Practical Records</td>
<td>5 marks</td>
</tr>
<tr>
<td>Viva</td>
<td>10 marks</td>
</tr>
<tr>
<td>Total</td>
<td>30 marks</td>
</tr>
</tbody>
</table>

**General Guidelines :**

- The practical examination will be of two hour duration.
- A separate list of ten experiments is included here.
- The written examination in practicals for these students will be conducted at the time of practical examination of all other students.
- The written test will be of 30 minutes duration.
- The question paper given to the students should be legibly typed. It should contain a total of 15 practical skill based very short answer type questions. A student would be required to answer any 10 questions.
- A writer may be allowed to such students as per CBSE examination rules.
- All questions included in the question papers should be related to the listed practicals. Every question should require about two minutes to be answered.
- These students are also required to maintain a practical file. A students to record at least five of the listed experiments as per the specific instructions for each subject. These practicals should be duly checked and signed by the internal examiner.
- The format of writing any experiment in the practical file should include aim, apparatus required, simple theory, procedure, related practical skills, precautions etc.
Questions may be generated jointly by the external/internal examiners and used for assessment.
The viva questions may include questions based on basic theory/principle/concept, apparatus/materials/chemicals required procedure, precautions, sources of error etc.

Class XII

A. Items for Identification/familiarity with the apparatus for assessment in practicals (All experiments)
   Beaker, flask, petridishes, soil from different sites-sandy, loamy, clayey, small potted plants, aluminium foil, paint brush, test tubes, starch, iodine, ice cubes, Bunsen burner/water bath, large colourful flowers, Maize inflorescence, model of development stages highlighting morula and blastula of frog, beads of different shapes (cubes, round)/size, smooth and rough, tags of different shapes, bags, Ascaris, Cacti (opuntia, mammalaria)

B. List of Practicals
   1. Study of the soil obtained from at least two different sites for their texture and water holding capacity.
   2. Study of presence of suspended particulate matter in air at two widely different sites.
   3. Study of the effect of different temperatures of the activity of salivary amylase.
   4. Study of flowers adapted to pollination by different agencies (wind, insects).
   5. Identification of TS of morula or blastula of frog.
   7. Preparation of pedigree charts of genetic traits such as rolling of tongue, colour blindness.
   8. Study of emasculation, tagging and bagging by trying out an exercise on controlled pollination.
   9. Identify common disease causing organisms like Ascaris and learn some common symptoms of the disease that they cause.
   10. Comment upon the morphological adaptations of plants found in xerophytic conditions.

   Note: The above practicals may be carried out in an experiential manner rather than recording observations.

Prescribed Books:
   1. Biology, Class-XII, Published by NCERT.
   2. The list of other related books and manuals brought out by NCERT (consider multimedia also)
### BIOLOGY (Code No. 044)
#### QUESTION PAPER DESIGN
Class - XII (2014-15)

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Typology of Questions</th>
<th>Very Short Answer (VSA)</th>
<th>Short Answer-I (SA-I)</th>
<th>Short Answer-II (SA-II)</th>
<th>Value based question</th>
<th>Long Answer (LA)</th>
<th>Total Marks</th>
<th>% Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Remembering : (Knowledge based Simple recall questions, to know specific focus, terms, concepts, principles, or theories, identify define, or recite information)</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>–</td>
<td>–</td>
<td>7</td>
<td>10%</td>
</tr>
<tr>
<td>2.</td>
<td>Understanding (Comprehension : To be familiar with meaning and to understand conceptually, interpret, compare, contrast, explain, paraphrase information)</td>
<td>–</td>
<td>2</td>
<td>4</td>
<td>–</td>
<td>1</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>3.</td>
<td>Application : (Use abstract information in concrete situation, to apply knowledge to new situations, use given content to interpret a situation, provide an example, or solve a problem)</td>
<td>–</td>
<td>2</td>
<td>4</td>
<td>–</td>
<td>1</td>
<td>21</td>
<td>30%</td>
</tr>
<tr>
<td>4.</td>
<td>High Order Thinking Skills (Analysis &amp; Synthesis : Classify, compare, contrast, or differentiate between different pieces of information, organize and/or integrate unique pieces of information from a variety of sources)</td>
<td>2</td>
<td>–</td>
<td>1</td>
<td>–</td>
<td>1</td>
<td>10</td>
<td>14%</td>
</tr>
<tr>
<td>5.</td>
<td>Evaluation and Multi-Disciplinary : (Appraise, judge, and/or justify the value or worth of a decision or outcome, or to predict outcomes based on values)</td>
<td>1</td>
<td>–</td>
<td>2</td>
<td>1</td>
<td>–</td>
<td>11</td>
<td>16%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td>5 × 1 = 5</td>
<td>5 × 2 = 10</td>
<td>12 × 3 = 36</td>
<td>4 × 1 = 4</td>
<td>5 × 3 = 15</td>
<td><strong>70(26)</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

#### QUESTION WISE BREAK UP

<table>
<thead>
<tr>
<th>Type of Questions</th>
<th>Marks (s) per Questions</th>
<th>Total No. of Questions</th>
<th>Total Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>VSA</td>
<td>1</td>
<td>5</td>
<td>05</td>
</tr>
<tr>
<td>SA-I</td>
<td>2</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>SA-II</td>
<td>3</td>
<td>12</td>
<td>36</td>
</tr>
<tr>
<td>VBQ</td>
<td>4</td>
<td>1</td>
<td>04</td>
</tr>
<tr>
<td>LA</td>
<td>5</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>26</strong></td>
<td><strong>70</strong></td>
</tr>
</tbody>
</table>

1. **Internal Choice**: There is no overall choice in the paper. However, there is an internal choice in one question of 2 marks weightage, one question of 3 marks weightage and all three question of 5 marks weightage.
2. The above template is only a sample. Suitable internal variations may be made for generating similar templates keeping the overall weightage to different form of questions and typology of questions same.
PRODUCT NOT FOUND!

Product not found!

continue

Products By Alphabet

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Oswaal Books
Class 10th Books
Class 12th Books

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Teaching Exams Books

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