



Higher Secondary School Certificate (HSSC)

Examination Syllabus

Elementary Anatomy and Micro Techniques XI

Based on National Curriculum of Pakistan

| S.No. | Table of Contents | Page No. |
|-------|--|-------------|
| 1 | Preface | 3 |
| 2 | Rationale for the Reviewed Provincial Curriculum | 4 |
| 3 | Student Learning Outcomes Categorization Detailed Syllabus | 5-14 |
| 4 | Table of Specification | 15 |
| 5 | Scheme of Assessment | 16 |
| 6 | Definitions of Cognitive Levels | 17-19 |
| 7 | Bloom's Taxonomy with Examples | 20-21 |
| 8 | Higher Secondary School Certificate XI Marks Breakup Grid | 22-24 |

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PREFACE

The Ziauddin University Examination Board (ZUEB) was established under Sindh ACT XLI 2018, with the primary objective of enhancing the quality of education in Sindh. ZUEB is responsible for administering examinations for the Secondary School Certificate (SSC) and Higher Secondary School Certificate (HSSC) in alignment with the most recent revisions to the National Curriculum, as outlined by the Ministry of Federal Education and Professional Training, Government of Pakistan. Through its ordinance, ZUEB is mandated to provide examination services for both English, Urdu, and Sindhi medium candidates from private schools across Sindh. This examination syllabus reflects ZUEB's dedication to achieving the educational goals set by the provincial authorities.

In collaboration with subject professors, ZUEB has developed a comprehensive syllabus for each subject. It is important to distinguish between the syllabus and the curriculum. The syllabus serves as a guide for both teachers and students, outlining the key areas of focus within the subject. It provides students with a clear understanding of what is expected of them in their studies and helps them prepare effectively for their exams.

This examination syllabus incorporates all cognitive outcomes derived from the **Provincial Curriculum Statement**, ensuring that assessments are both valid and reliable. While the focus is primarily on the cognitive domain, significant emphasis is placed on the application of knowledge and understanding.

The syllabus is made available to all stakeholders via the ZUEB website to assist affiliated schools in planning their teaching. It is crucial to note that the syllabus, rather than the prescribed textbook, forms the foundation of ZUEB examinations. Additionally, this syllabus supports the development of learning materials for both students and teachers. ZUEB remains committed to supporting students undertaking the SSC and HSSC courses by facilitating their learning outcomes through this detailed syllabus document.

To further assist in the learning process, ZUEB plans to provide a dedicated **e-resource tab** on its website, offering both text-based and video content on various subjects. These 15-20 minute instructional videos, created around key subject concepts, allow students to learn at their own pace and convenience. The videos can be used as a reinforcement tool to revisit lessons already taught or as pre-lesson material. This initiative is an ongoing effort, and new videos will continue to be uploaded.

We encourage all students and educators to make the most of these resources for a more enriched and flexible learning experience.

Sincerely,
Shahbaz Nasim
Head – Measurement & Testing
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July 2025

Rationale For The Reviewed Provincial Curriculum

The process of revising the National Curriculum 2006 began in August 2004, when the newly elected government of Pakistan initiated education reforms across the country. These reforms included the introduction of a new National Education Policy, a National Education Census, and a revision of curricula (Ministry of Education, 2009).

In practice, the overhaul of the secondary school curriculum began in 2006, leading to a review of the scheme of studies for classes I to XII and the revision of curricula for 25 compulsory subjects.

The 18th Amendment to the Constitution of Pakistan, enacted in 2010, significantly altered the federal-provincial relationship by abolishing the "concurrent legislative list." This amendment granted provinces greater legislative and financial autonomy in sectors such as education and health. The most notable implication of the 18th Amendment for education was the transfer of responsibility for curriculum development, syllabus planning, policy formation, and educational standards to the provinces, marking a significant step forward for education.

The School Education Department tasked a Curriculum Review Team with revising the National Curriculum 2006 for all subjects. The goal was to create a curriculum better suited to the needs of students and teachers while aligning with the principles of the 18th Amendment. Subject-specific curriculum review committees were established to critically examine and align the curriculum's content, both contextually and textually, ensuring coherence across various subjects. The Bureau of Curriculum (BoC) played a crucial role in organizing workshops and meetings in Hyderabad to facilitate the completion of this task. The support of numerous educationists, researchers, and teachers was invaluable in successfully revising the curriculum.

The revised National Curriculum, along with the original version, is available on the **ncc.gov.pk** website at https://ncc.gov.pk/SiteImage/Misc/files/53-Medical%20Lab%20Technology.pdf for easy access.

The Ziauddin University Examination Board (ZUEB) SSC and HSSC syllabi are developed in accordance with the Revised Curriculum. To date, textbooks for various subjects have been developed based on the revised curriculum.

ZIAUDDIN UNIVERSITY EXAMINATION BOARD

SLOs CATEGORIZATION XI- Elementary Anatomy & Micro Techniques Detailed Syllabus

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|----|---|---------|---|---|---|----------|
| A: | A: Introduction/Fundamentals to Anatomy | | | | | |
| А | Students will develop the knowledge and skills to explore the complex structure and function of living organisms. | A-01 | Define anatomical terms used to describe body directions, regions, and structures. | ✓ | | |
| | | A-02 | Identify the nine abdominal regions and their corresponding main organs. | ✓ | | |
| | | A-03 | List the primary divisions of the body systems along with their functions. | ✓ | | |
| | | A-04 | Describe the fundamental cellular components and their respective functions. | | ✓ | |
| | | A-05 | Define and differentiate between mitosis and meiosis, recognizing their distinct phases and purposes in cellular reproduction. | | ✓ | |
| | | A-06 | Apply knowledge of anatomical terms to describe body directions, regions, and structures. (LAB). | | | ✓ |
| | | A-07 | Label the nine abdominal regions on a diagram or model (LAB). | | | ~ |
| | | A-08 | Label major cellular organelles such as the nucleus, mitochondria, endoplasmic reticulum, golgi apparatus, on diagrams or models (LAB). | | | ✓ |
| | | A-09 | Describe the changes occurring in the nucleus, chromosomes, and | | | ✓ |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|----|---|---------|--|---|----------|----------|
| | | | cytoplasm during both mitosis and meiosis using diagrams or models (LAB). | | | |
| B: | Respiratory System | | | | | |
| В | B Students will be acquiring knowledge and skills to explore the intricate aspects of the structure and function of the respiratory system. | B-01 | Describe the anatomical organs of the respiratory system. | | ✓ | |
| | | B-02 | Identify the location, structure, and function of respiratory organs such as the trachea, bronchi, alveoli, and diaphragm. | | ✓ | |
| | | B-03 | Compare the anatomical difference between right and left lungs with their lobes and segments. | | ✓ | |
| | | B-04 | Describe the pathway of air from the nose to the lungs. | | ✓ | |
| | | B-05 | Describe the process of gas exchange occurring in the alveoli, focusing on the diffusion of oxygen and carbon dioxide across the alveolar membranes. | | ✓ | |
| | | B-06 | Illustrate the anatomy and function of the diaphragm as the primary muscle responsible for respiration. | | | ✓ |
| | | B-07 | Explain the role of the diaphragm, intercostal muscles, and accessory respiratory muscles in chest expansion and contractions. | | ✓ | |
| | | B-08 | Identify and label organs of the respiratory system on diagrams or models (LAB). | | | ~ |
| | | B-09 | Measure and record an individual's respiratory rate (LAB). | | | ✓ |
| | | B-10 | Explain the mechanism of gas exchange in the alveoli on flowcharts and diagrams (LAB). | | | ✓ |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|----|---|---------|---|---|---|---|
| | | B-11 | Apply the skill of clinical assessment to evaluate respiratory status including respiratory rate and chest movements) (LAB). | | | ✓ |
| C: | Digestive system | | | | | |
| С | Students will be acquiring knowledge and skills to explore the intricate aspects of the structure and function of the digestive | C-01 | Identify the main and accessory organs of the digestive system along with their respective functions. | ✓ | | |
| | system. | C-02 | Describe the histological layers of the digestive tract, such as mucosa, sub mucosa, muscularis externa, and serosa, explaining their roles in digestion. | | ✓ | |
| | | C-03 | Describe the locations and basic structures of digestive organs. | | ✓ | |
| | | C-04 | Describe the anatomy and distribution of the peritoneum, including its layers and connections within the abdominal cavity. | | ✓ | |
| | | C-05 | Explain the various activities of the digestive system (ingestion, digestion, absorption, assimilation and egestion). | | ✓ | |
| | | C-06 | Identify and label the main and accessory organs of the digestive system using diagrams or models (LAB). | | ✓ | |
| | | C-07 | Apply knowledge of enzymatic action and chemical breakdown by explaining the process of digestion using models/diagrams/flow charts (LAB). | | ✓ | |
| | | C-08 | Demonstrate practical skills related to digestive health, (such as proper food hygiene and chewing | | ✓ | |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | A |
|---|---|---------|--|----------|----------|----------|
| | | | techniques), and explain how these practices affect digestion and overall health (LAB). | | | |
| D | : Circulatory system | | | | | |
| D | Students will be acquiring knowledge and skills to explore the intricate aspects of the structure and function of the circulatory | D-01 | Identify the major components of the circulatory system, including the heart, blood vessels (arteries, veins, and capillaries), and blood. | ✓ | | |
| | system. | D-02 | Explain the functions and relationships of arteries, veins, and capillaries in the circulatory system, highlighting their distinct roles in transporting blood throughout the body. | | > | |
| | | D-03 | Describe the anatomical position and structural features of the heart, including its chambers (atria and ventricles), valves, major blood vessels connected to the heart, and its location in the thoracic cavity. | | ✓ | |
| | | D-04 | Illustrate the pathway of blood circulation by describing the sequential flow of blood through the heart, lungs, and systemic circulation. | | | ✓ |
| | | D-05 | Describe the conduction system of the heart and explain its role in coordinating rhythmic contractions. | | > | |
| | | D-06 | Identify and label structures of the heart on diagrams or models, including the atria, ventricles, valves (tricuspid, bicuspid/mitral, pulmonary, and aortic), and major blood vessels (superior vena cava, inferior vena cava, pulmonary veins, and aorta) (LAB). | | | ✓ |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|---|---|---------|---|----------|----------|----------|
| | | D-07 | Identify and label structures of the heart's conduction system using diagrams or models (LAB). | | | ✓ |
| | | D-08 | Explain how the structure of the heart relates to its function in pumping blood, maintaining blood pressure, and circulating oxygenated and deoxygenated blood (LAB). | | | √ |
| | | D-09 | Demonstrate the pathway of blood circulation using flowcharts, diagrams, or models to show the sequential movement through the heart, lungs, and systemic circulation. (LAB). | | | ✓ |
| | | D-10 | Apply the skill of measuring pulse (LAB). | | | ✓ |
| E | : Nervous system | | | | | |
| E | Students will be acquiring knowledge and skills to explore the intricate aspects of the structure and function of the nervous system. | E-01 | Identify the main components of the nervous system, including the central nervous system (CNS) and peripheral nervous system (PNS). | ✓ | | |
| | | E-02 | Describe the structure of the meninges, highlighting their layers and protective functions surrounding the brain and spinal cord. | | √ | |
| | | E-03 | Describe the function of cerebrospinal fluid (CSF) in the brain, explaining its circulation and flow within the brain's ventricles and around the CNS. | | √ | |
| | | E-04 | Identify the major regions of the brain and their respective functions. | √ | | |
| | | E-05 | Describe the basic anatomy and functions of the autonomic nervous | | ✓ | |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|---|---|---------|---|---|-------------|---|
| | | | system. | | | |
| | | E-06 | Describe the structure of a synapse and the role of neurotransmitters in nerve impulse transmission. | | ✓ | |
| | | E-07 | Identify and differentiate between the main components of the nervous system using diagrams or models (LAB). | | | ✓ |
| | | E-08 | Demonstrate the protective role of the meninges using diagrams and explain their significance in maintaining CNS health (LAB). | | | ✓ |
| F | : Musculoskeletal system | | | | | |
| F | Students will be acquiring knowledge and skills to explore the intricate aspects of the structure and function of the musculoskeletal system. | F-01 | Identify and define the components of the musculoskeletal system (bones, muscles, joints, tendons, and ligaments), and their roles in bodily movement and support. | ✓ | | |
| | | F-02 | Describe the bones of the upper and lower limbs, as well as the skull and sternum, detailing the location, shape, and functions of each bone in relation to movement and protection. | | √ | |
| | | F-03 | Describe the different types of muscles - skeletal, smooth, and cardiac- including their characteristics, locations, and functions in the body. | | ✓ | |
| | | F-04 | Explain the movements of ball and socket, hinge, pivot, and condyloid joints. | | ✓ | |
| | | F-05 | Explain practically the function of main body muscles (LAB). | | > | |
| | | F-06 | Explain the movements of ball and | | √ | |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|---|--|---------|---|---|-------------|-------------|
| | | | socket, hinge, pivot, and condyloid joints in anatomical models or diagrams (LAB). | | | |
| | | F-07 | Demonstrate the ability to identify and locate bones in the upper and lower limbs, skull, and sternum on anatomical models or images (LAB). | | √ | |
| G | : Endocrine system | | | | | |
| G | Students will acquire knowledge and skills to explore the intricate aspects of the endocrine system. | G-01 | Explain the basic concept of endocrine glands and hormones, and differentiate between endocrine and exocrine glands. | | ✓ | |
| | | G-02 | Explain what hormones are and how they function as chemical messengers. | | √ | |
| | | G-03 | Describe the locations and primary functions of the pituitary, thyroid, pancreas, and adrenal glands. | | > | |
| | | G-04 | Describe the roles of specific hormones (growth hormone, thyroid hormones, insulin, glucagon, adrenaline, and cortisol) and their effects on the body's physiology. | | √ | |
| | | G-05 | Demonstrate the anatomical locations and primary functions of the pituitary, thyroid, pancreas, and adrenal gland using diagrams or models of the human body. | | ✓ | |
| | | G-06 | Analyze how hormonal imbalances or dysfunctions in the endocrine system can result in various health conditions, using knowledge of endocrine system and hormones. | | | > |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | A |
|---------|--|---------|--|----------|----------|---|
| H | : Reproductive system | | | | | |
| Н | Students will be acquiring knowledge and skills to explore the intricate aspects of the reproductive | H-01 | List and label the major components of the male reproductive system. | √ | | |
| system. | system. | H-02 | Describe the functions of each component of the male reproductive system. | | ✓ | |
| | | H-03 | Identify and outline the main components of the female reproductive system, including the uterus, ovaries, fallopian tubes, cervix, and vagina. | ✓ | | |
| | | H-04 | Describe functions of each component of the female reproductive system. | | > | |
| | | H-05 | Describe the process of fertilization. | | > | |
| | | H-06 | Explain the different phases of female reproductive cycle. | | ✓ | |
| | | H-07 | Explain the role of hormones in the male and female reproductive system. | | √ | |
| | | H-08 | Demonstrate the roles of each component of the male reproductive system by explaining how each structure contributes to sperm production, storage, and delivery using diagrams or models. (LAB). | | ✓ | |
| | | H-09 | Identify and outline the components of the female reproductive system using diagrams or models (LAB). | | √ | |
| | | H-10 | Demonstrate the process of fertilization using diagrams and flowcharts (LAB). | | ✓ | |

| | Aims | SLO No. | SLOs Student Learning Outcomes | K | U | Α |
|----|---|---------|--|---|----------|---|
| l: | Introduction to Micro techniques | | | | | |
| I | Students will be acquiring knowledge and skills to explore the intricate aspects of introduction to micro | I-01 | Describe various fixation methods used to preserve the structure and integrity of biological specimens. | | ✓ | |
| | techniques. | I-02 | Evaluate the importance of sectioning in examining the internal structure of biological specimens. | | | ✓ |
| | | I-03 | Identify different types of tissues under a microscope. | ✓ | | |
| | | I-04 | Apply the skills of using a microscope (proper handling, adjustment, and focusing,) to observe tissue samples at various magnifications (LAB). | | √ | |
| | | I-05 | Demonstrate the ability to compare various fixation methods used to preserve the structure and integrity of biological specimens (LAB). | | | ✓ |
| | | I-06 | Demonstrate the steps involved in various sectioning techniques (LAB). | | ✓ | |
| J | : Identification of tissues and Staini | ng | | | | |
| J | Students will be acquiring knowledge and skills to explore the intricate | J-01 | Define histopathology and its role in medicine. | ✓ | | |
| | aspects of identification of tissues and staining. | J-02 | Describe routine histological techniques. | | ✓ | |
| | | J-03 | List the steps involved in tissue processing, sectioning, staining, and mounting. | 1 | | |
| | | J-04 | Describe the significance of staining in visualizing cellular and tissue structures. | | √ | |
| | | J-05 | Explain the purpose of Staining. | | √ | |

| Aims | SLO No. | SLOs Student Learning Outcomes | K | U | A |
|------|---------|--|---|---|----------|
| | J-06 | Apply knowledge of histopathology to explain its role in disease diagnosis (LAB). | | | ✓ |
| | J-07 | Demonstrate tissue processing techniques such as fixation, dehydration, and embedding for specimen preservation (LAB). | | | ✓ |
| | J-08 | Identify unstained and stained cellular and tissue structures under a microscope (LAB). | | | √ |

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XI- Elementary Anatomy & Micro Techniques Table of Specification (TOS)

| S.No | Domains | Weightage in assessment 100% | MCQs 1 mark each | PBAs 1 mark each | CRQs 4 marks each | ERQs 8 marks each |
|--------------------------|--|------------------------------|------------------------|------------------------|-------------------------|-------------------------|
| 1 | Introduction-Fundamentals to Anatomy | 2% | 2 | _ | _ | _ |
| 2 | Respiratory system | 11% | 1 | 1 | 1 | 1 |
| 3 | Digestive system | 16% | 2 | 2 | 2 | 1 |
| 4 | Circulatory system | 16% | 2 | 2 | 2 | 1 |
| 5 | Nervous system | 11% | 2 | _ | 1 | 1 |
| 6 | Musculoskeletal system | 10% | 2 | 3 | 2 | _ |
| 7 | Endocrine system | 4% | 1 | _ | 1 | _ |
| 8 | Reproductive system | 12% | 2 | 2 | 1 | 1 |
| 9 | Introduction to Micro techniques | 12% | 2 | 2 | 1 | 1 |
| 10 | Identification of tissues and Staining | 6% | 1 | 3 | 1 | _ |
| | Total # of Questions asked | | 17 | 15 | 12 | 6 |
| | Total # of Questions to be attempted | | 17 | 15 | 9 | 4 |
| Maximum marks attainable | | | 17 marks | 15 marks | 36 marks | 32 marks |

Ziauddin University Examination Board Grade XI Elementary Anatomy & Micro Techniques Scheme of Assessment

Maximum marks: 100

Section "A"

Multiple Choice Questions (MCQs)

 $(17 \times 1 = 17)$

> Attempt 17 MCQs: Each carries equal marks.

Practical based assessments (PBAs)

 $(15 \times 1 = 15)$

Attempt 15 MCQs: Each carries equal marks.

Section "B" (Constructed Response Questions)

Constructed Response Questions (CRQs)

 $(9 \times 4 = 36)$

Attempt any 9 questions out of 12. Each carries equal marks.

Section "C" (Extended Response Questions)

Extended Response Questions (ERQs)

 $(4 \times 8 = 32)$

- Attempt any 2 questions with its both sub parts (a and b) out of three questions.
- Each sub part consists of eight (08) marks.

DEFINITIONS OF COGNITIVE LEVELS

Remember / Knowledge

Remembering is the act of retrieving knowledge and can be used to produce things like definitions or lists. The student must be able to recall or recognise information and concepts. The teacher must present information about a subject to the student, ask questions that require the student to recall that information and provide written or verbal assessment that can be answered by remembering the information learnt.

Question Stems

- Can you name all the ...?
- Describe what happens when ...?
- How is (are) ...?
- How would you define ...?
- How would you identify ...?
- How would you outline ...?
- How would you recognise...?
- List the ... in order.
- What do you remember about ...?
- What does it mean?
- What happened after?
- What is (are) ...?
- What is the best one?
- What would you choose ...?
- When did ...?
- Where is (are) ...?
- Which one ...?
- Who spoke to ...?
- Who was ...?
- Why did ...?

Understand

The next level in the taxonomic structure is Understanding, which is defined as the construction of meaning and relationships. Here the student must understand the main idea of material heard, viewed, or read and interpret or summarise the ideas in their own words. The teacher must ask questions that the student can answer in their own words by identifying the main idea.

Question Stems

- Can you clarify...?
- Can you illustrate ...?
- Condense this paragraph.
- Contrast ...
- Does everyone think in the way that ... does?
- Elaborate on ...
- Explain why ...
- Give an example
- How can you describe...?
- How would you clarify the meaning...?
- How would you compare ...?
- How would you differentiate between.....?
- How would you describe...?
- How would you generalise...?
- How would you identify ...?
- Is it valid that ...?
- Is this the same as ...?
- Outline ...
- Select the best definition...
- State in your own words...
- This represents ...
- What are they saying?
- What can you infer from ...?
- What can you say about ...?
- What could have happened next?
- What did you observe?

- What does this mean?
- What expectations are there?
- What information can you infer from...?
- What is the main idea of ...?
- What restrictions would you add?
- What seems likely?
- What seems to be ...?
- What would happen if ...?
- What might happen if ...?
- Which are the facts?
- Which statements support ...?

Apply

The third level in Bloom's taxonomy, Applying, marks a fundamental shift from the pre-Bloom's learning era because it involves remembering what has been learnt, having a good understanding of the knowledge, and applying it to real-world exercises, challenges or situations. Students must apply an abstract idea in a concrete case to solve a problem or relate it to prior experience. The teacher must provide opportunities for students to use theories and problem-solving techniques in new situations and review and check their work. Assessment questions should be provided that allow students to define and solve problems.

Question Stems

- Can you group by characteristics such as ...?
- Choose the best statements that apply...
- Clarify why ...
- Do you know of another instance where ...?
- Draw a story map...
- Explain why a character acted in the way that he did...
- From the information given, can you develop a set of instructions about ...?
- How would you develop ...?
- How would you change ...?
- How would you demonstrate...?

Analyse

Analysing is the cognitive level where students can take the knowledge they have remembered, understood and applied, then delve into that knowledge to make associations, discernments or comparisons. Students should break down a concept or idea into parts and show relationships between these parts. Teachers must give students time to examine concepts and their requisite elements. Students are required to explain why they chose a solution.

Question Stems

- Can you distinguish between ...?
- Can you explain what must have happened when ...?
- Determine the point of view, bias, values, or intent underlying the presented material...
- Discuss the pros and cons of ...
- How can you classify ... according to ...?
- How can you compare the different parts?
- How can you sort the different parts...?
- How is ... connected to ...?
- How is ... similar to ...?
- How would you categorise...?
- How would you explain...?

- How would you develop?
- How would you explain ...?
- How would you modify ...?
- How would you present...?
- How would you solve ...?
- Identify the results of ...
- Illustrate the ...
- Judge the effects of ... What would result ...?
- Predict what would happen if ...
- Tell how much change there would be if ...
- Tell what would happen if ...
- What actions would you take to perform ...?
- What do you think could have happened next?
- What examples can you find that?
- What other way would you choose to ...?
- What questions would you ask of ...?
- What was the main idea ...?
- What would the result be if ...?
- Which factors would you change if ...?
- Who do you think…?
- Why does this work?
- Write a brief outline ...
- Write in your own words ...

- What could the ending have been if ... had taken place?
- State the point of view of ...
- What are some of the problems of ...?
- What assumptions ...?
- What can you infer about...?
- What can you point out about....?
- What conclusions ...?
- What do you see as other possible outcomes?
- What does the author assume?
- What explanation do you have for ...?
- What ideas justify the conclusion?
- What ideas validate...?
- What is the analysis of ...?
- What is the function of ...?
- What is the problem with ...?
- What motive is there?
- What persuasive technique is used?
- What statement is relevant?
- What was the turning point?
- What were some of the motives behind ...?
- What's fact? Opinion?
- What's the main idea?
- What's the relationship between?
- Which events could not have happened?
- Why did ... changes occur?
- Why do you think?

BLOOM'S TAXONOMY WITH EXAMPLES

If you are a teacher looking for ways to engage your students in learning, this LIST of questions might be interesting for your classroom practice. Bloom's Taxonomy question stems can help elicit higher-order thinking skills and promote critical thinking among learners at different taxonomy levels. These question stems can also encourage students to think about their knowledge through reflection before answering questions.

ACTION WORDS FOR COGNITIVE LEVELS

| Knowledge | Understand | Apply | Analyze | Evaluate | Create |
|-----------|---------------|-------------|--------------|---------------|-------------|
| - | UNDERSTAND | | | | |
| define | explain | solve | analyze | reframe | design |
| identify | describe | apply | appraise | criticize | compose |
| describe | interpret | illustrate | judge | evaluate | create |
| label | paraphrase | modify | support | order | plan |
| list | summarize | use | compare | compare | combine |
| name | classify | calculate | decide | classify | formulate |
| state | compare | change | discriminate | contrast | invent |
| match | differentiate | choose | recommend | distinguish | hypothesize |
| recognize | discuss | demonstrate | summarize | infer | substitute |
| select | distinguish | discover | assess | separate | write |
| examine | extend | experiment | choose | explain | compile |
| locate | predict | relate | convince | select | construct |
| memorize | associate | show | defend | categorize | develop |
| quote | contrast | sketch | estimate | connect | generalize |
| recall | convert | complete | grade | differentiate | integrate |
| reproduce | demonstrate | construct | measure | divide | modify |
| tabulate | estimate | dramatize | predict | order | organize |
| tell | express | interpret | rank | prioritize | prepare |
| Сору | identify | manipulate | score | survey | produce |

| discover | indicate | paint | select | calculate | rearrange |
|-----------|------------|----------|--------------|------------|-------------|
| duplicate | infer | prepare | test | conclude | rewrite |
| enumerate | relate | teach | argue | correlate | adapt |
| listen | restate | act | conclude | deduce | anticipate |
| observe | select | collect | consider | devise | arrange |
| omit | translate | compute | critique | diagram | assemble |
| read | ask | explain | debate | dissect | choose |
| recite | cite | list | distinguish | estimate | collaborate |
| record | discover | operate | editorialize | evaluate | facilitate |
| repeat | generalize | practice | justify | experiment | imagine |
| retell | group | simulate | persuade | focus | intervene |
| visualize | illustrate | transfer | rate | illustrate | make |
| | judge | write | weigh | organize | manage |
| | observe | | | outline | originate |
| | order | | | plan | propose |
| | report | | | question | simulate |
| | represent | | | test | solve |
| | research | | | | support |
| | review | | | | test |
| | rewrite | | | | validate |
| | show | | | | |

HSSC PART I EXAMINATION MARKS BREAKUP GRID FOR EXAMINATION 2026

GROUP: PRE-MEDICAL

| SUBJECT | THEORY | РВА | TOTAL |
|----------------------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / URDU EASY | 100 | - | 100 |
| ISLAMIYAT / RELIGIOUS STUDIES | 50 | - | 50 |
| PHYSICS | 85 | 15 | 100 |
| CHEMISTRY | 85 | 15 | 100 |
| BIOLOGY | 85 | 15 | 100 |
| TOTAL | 505 | 45 | 550 |

GROUP: PRE-ENGINEERING

| SUBJECT | THEORY | PBA | TOTAL |
|-------------------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / URDU EASY | 100 | - | 100 |
| ISLAMIYAT / RELIGIOUS STUDIES | 50 | - | 50 |
| PHYSICS | 85 | 15 | 100 |
| CHEMISTRY | 85 | 15 | 100 |
| MATHEMATICS | 100 | | 100 |
| TOTAL | 520 | 30 | 550 |

GROUP: GENERAL SCIENCE

| SUBJECT | THEORY | PBA | TOTAL |
|----------------------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / URDU EASY | 100 | - | 100 |
| ISLAMIYAT / RELIGIOUS STUDIES | 50 | - | 50 |
| PHYSICS | 85 | 15 | 100 |
| COMPUTER SCIENCE | 75 | 25 | 100 |
| MATHEMATICS | 100 | | 100 |
| TOTAL | 510 | 40 | 550 |

GROUP: COMMERCE

| SUBJECT | THEORY | РВА | TOTAL |
|----------------------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / URDU EASY | 100 | - | 100 |
| ISLAMIYAT / RELIGIOUS STUDIES | 50 | - | 50 |
| ECONOMICS | 75 | - | 75 |
| P.O.C | 75 | - | 75 |
| ACCOUNTING | 100 | | 100 |
| BUSINESS MATHEMATICS | 50 | | 50 |
| TOTAL | 550 | | 550 |

GROUP: HUMANITIES

(Any Three Electives)

| SUBJECT | THEORY | РВА | TOTAL |
|------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / | 100 | - | 100 |
| URDU EASY | | | |
| ISLAMIYAT / | 50 | - | 50 |
| RELIGIOUS | | | |
| STUDIES | | | |
| COMPUTER SCIENCE | 75 | 25 | 100 |
| ISLAMIC STUDIES | 100 | | 100 |
| MATHEMATICS | 100 | - | 100 |
| SOCIOLOGY | 100 | | 100 |
| ECONOMICS | 100 | | 100 |
| EDUCATION | 100 | | 100 |
| CIVICS | 100 | | 100 |
| NURSING | 85 | 15 | 100 |
| TOTAL | 550 | | 550 |

GROUP: MEDICAL TECHNOLOGY

| SUBJECT | THEORY | РВА | TOTAL |
|-------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / | 100 | - | 100 |
| URDU EASY | | | |
| ISLAMIYAT / | 50 | - | 50 |
| RELIGIOUS STUDIES | | | |
| MICROBIOLOGY | 85 | 15 | 100 |
| HEMATOLOGY & | 85 | 15 | 100 |
| BLOOD BANKING | 05 | 13 | 100 |
| ANATOMY & | 85 | 15 | 100 |
| PHYSIOLOGY | | | |
| TOTAL | 505 | 45 | 550 |

GROUP: PRE-NURSING

| SUBJECT | THEORY | PBA | TOTAL |
|--------------------------------------|--------|-----|-------|
| ENGLISH | 100 | - | 100 |
| URDU NORMAL / URDU EASY | 100 | - | 100 |
| ISLAMIYAT / RELIGIOUS STUDIES | 50 | - | 50 |
| BIO-CHEMISTRY | 85 | 15 | 100 |
| FUNDAMENTALS OF NURSING | 85 | 15 | 100 |
| ELEMENTARY ANATOMY & MICRO TECHNIQUE | 85 | 15 | 100 |
| TOTAL | 505 | 45 | 550 |