



**APSACS HSSC Syllabus Pack
Class XII
Cold & Warm Region
2020-21**

Army Public Schools & Colleges System Secretariat

Academic Calendar 2020-2021

| APSACS Syllabus Pack (5 Blocks- 29 Weeks Study Time) | | |
|---|------------------|-------------------------------|
| <ul style="list-style-type: none"> · 80% Course to be covered in Block 1-4 : <ul style="list-style-type: none"> ü HSSC I: 22 weeks (29 Jun-28 Nov 2020) ü HSSC II: 22 weeks (29 Jun-28th Nov 2020) · Remaining 20% course content to be covered in Block 5 (07 weeks) · Revision & Prep Test Series Block (5 weeks) <p>Note: Subject Teachers will take tests to ensure students' revision and preparation according to the board paper pattern for final exams</p> | | |
| Week No | Week dates | Events XII Wef Jun 29,2020 |
| Block I: | | |
| HSSC I : 05 study weeks | | |
| 1. | Jun 29- July 04 | Study weeks |
| 2. | 06– Jul 11 | - do- |
| 3. | Jul 13 – Jul 18 | - do- |
| 4. | Jul 20 – Jul 25 | - do- |
| 5. | Jul 27– Jul 30 | - do- |
| (4 working days) Eid- ul- Azha Holidays (31 July - 02 Aug) | | |
| Block 2 (06 study weeks) | | |
| 6. | Aug 03 - Aug 08 | Study weeks |
| 7. | Aug10 - Aug15 | - do- |
| Independence day Holiday(14 Aug) | | |
| 8. | Aug17 - Aug 22 | - do- |
| 9. | Aug 24 – Aug 29 | - do- |
| Ashura Holidays (28-29 Aug) | | |
| 10. | Aug 31 – Sep 05 | - do- |
| 11. | Sep 07 - Sep12 | - do- |
| Block 3 (06 study weeks) | | |
| 12. | Sep 14 – Sept 19 | Study weeks |
| 13. | Sep 21 - Sep 26 | - do- |
| 14. | Sep 28 - Oct 03 | - do- |
| 15. | Oct 05 - Oct 10 | - do- |
| 16. | Oct 12 – Oct 17 | - do- |
| 17. | Oct 19 – Oct 24 | - do- |

| Block 4 (06 weeks – 4 study weeks,01 Revision week,01 Assessment week) | | |
|---|---------------------------|---|
| 18. | Oct 26 – Oct 31 | Study weeks Eid- Milad -un- Nabi (Oct 29) |
| 19. | Nov 02 – Nov 07 | - do- |
| 20. | Nov 09 – Nov 14 | - do- |
| 21. | Nov 16 – Nov 21 | - do- |
| 22. | Nov 23 – Nov 28 | Revision week |
| 23. | Nov 30-Dec 05 (6 days) | Assessments before sending students names for admission in FBISE Exams |
| Block 5 (07 study Weeks) | | |
| 24 | Dec 07-Dec 12 | Study weeks |
| 25 | Dec 14-Dec 19 | - do- |
| 26. | Dec 21-Dec 24 | - do- |
| Dec 25 Holiday | | |
| Winter Break: 25 Dec – 03 Jan 2021 | | |
| 27. | Jan 6- Jan 2021 | - do- |
| 28. | Jan 11- Jan 16 | - do- |
| 29. | Jan 18- Jan 23 | - do- |
| 30. | Jan 25- Jan 30 | - do- |
| Revision & Prep Test Series (5 weeks) | | |
| 31. | 01Feb-06Feb | Prep Test Series Kashmir Day (Feb 05) |
| 32. | 08Feb-13Feb | - do- |
| 33. | 15Feb-20Feb | - do- |
| 34. | 22Feb-27Feb | - do- |
| 35. | 01Mar-06Mar | - do- |
| 36. | Mar 08 onwards | Students need based preparation for Board Exams (Students of HSSC II will also practice PETS for admission in professional colleges) |
| | Apr 12 onwards | Board Exams |

Note: Pre board exams on Schools discretion



APSACS HSSC Syllabus Pack

Class XII

Block 1 (Week1-5)

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

English

| Resources | Timeline for Session 2020 - 2021 | | | | | | | | | | | | | | | |
|--|--|--|--------------|-----------|-----------------------|--------------|-------------------|--------------|---------------------------|----------------|---------------------|----------------|---|--------------|----------------------------------|--|
| <p>Prescribed Textbook Intermediate English For Class XII (Khyber Pakhtunkhwa Textbook Board Peshawar)</p> <p>Resources:</p> <ul style="list-style-type: none"> · Complete Edition Intermediate (Part 1 and 2) English Simple Grammar and Composition by Prof Zia-ur-Rahman Khan (27th Edition , 2015) · High School English Grammar & Composition Multicolour Edition by Wren & Martin (2016) <p>Prescribed Notebook: Single-lined notebook (large)/ Register</p> | <table border="1"> <thead> <tr> <th style="text-align: center;">Weeks / Days</th> <th style="text-align: center;">Class XII</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Time available</td> <td style="text-align: center;">35wks</td> </tr> <tr> <td style="text-align: center;">Study Time</td> <td style="text-align: center;">29wks</td> </tr> <tr> <td style="text-align: center;">School Assessments</td> <td style="text-align: center;">06 days</td> </tr> <tr> <td style="text-align: center;">Winter Break</td> <td style="text-align: center;">10 days</td> </tr> <tr> <td style="text-align: center;">Syllabus completion + Revision + Test Series</td> <td style="text-align: center;">05wks</td> </tr> <tr> <td colspan="2" style="text-align: center;">Federal Board Examination</td> </tr> </tbody> </table> | | Weeks / Days | Class XII | Time available | 35wks | Study Time | 29wks | School Assessments | 06 days | Winter Break | 10 days | Syllabus completion + Revision + Test Series | 05wks | Federal Board Examination | |
| Weeks / Days | Class XII | | | | | | | | | | | | | | | |
| Time available | 35wks | | | | | | | | | | | | | | | |
| Study Time | 29wks | | | | | | | | | | | | | | | |
| School Assessments | 06 days | | | | | | | | | | | | | | | |
| Winter Break | 10 days | | | | | | | | | | | | | | | |
| Syllabus completion + Revision + Test Series | 05wks | | | | | | | | | | | | | | | |
| Federal Board Examination | | | | | | | | | | | | | | | | |

Instructions

- 1. All the work in this pack is syllabus oriented, focusing on comprehensive study of course content supported by suggested tutorials & written assignments.**
- 2. Calculated study time for first five weeks (Block 1) of English is 17 hours & 30 minutes. Students to make a timetable for the assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. The checklist for the Study Pack will be filled by the students every week by ticking off the checklist for finished task or maintaining a record of submission of assignments per subject / week. Parents to monitor their child's progress weekly.**
- 4. Written Practice of the assigned tasks will be done on loose sheets/ notebooks/registers. Maintain the completed work in a folder, using separators for weekly assignments.**
- 5. Assignments to be regularly submitted to schools using e medium or hard copies according to procedure & schedule issued by the School. The school teachers remain available online from 8.00 to 2.00 p.m to provide support to those who require assistance. After you get your checked assignments back from school, incorporate teacher's feedback & revise the work to get yourself prepared for school assessments.**
- 6. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**

Block 1: English Week 1

| # of wks / Study Hours | Week Dates | Course Content Unit /Chapter/Topics | Checklist Complete or Incomplete |
|--------------------------------|-------------------|---|-------------------------------------|
| Week 1 3 hrs 30 mins | June 29 – July 04 | <ul style="list-style-type: none"> • Orientation of FBISE Syllabus & Paper Pattern • Unit 1: Vision and Mission Reading Selection: 1.1 The Farewell Sermon (speech) • Unit 1: Continued.....Writing Skills Convert Paragraphs from Direct to Indirect Speech | |

Syllabus Pack Block 1 (week 1)

| Week / Study Hours | Topics / Objectives | Study Guidelines | Resources |
|---|---|--|---|
| Week 1 3 hrs 30 mins | <p>Orientation of FBISE Syllabus & Paper Pattern</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • download English Compulsory paper from the official website of FBISE • familiarize themselves with the prescribed textbooks/reference books/ exam syllabus/ paper pattern& marking scheme | <ul style="list-style-type: none"> • Tap the Federal Board official website to download the syllabus, Model Paper & revised marking scheme of 1100 marks& policy guidelines. Study the Model paper & see the number of sections it is divided into. https://www.fbise.edu.pk/syllabusHSSC-I.php • Get yourself apprise with the Syllabus content (genre) containing lessons, poems , grammar topics and plays <p>Note: 05 Phrasal Verbs will be practiced by the students on a daily basis.</p> | <ul style="list-style-type: none"> • Intermediate English For Class XII (KPTBP) • High School English Grammar& Composition Multicolour Edition by Wren & Martin (2016 Edition) • Complete Edition Intermediate (Part I and Part II) • English Simpleby Prof. Zia-ur-Rahman Khan • Model Paper FBISE • https://www.youtube.com/watch?v=VO-MpT1lynE |

| Week / Study Hours | Topics / Objectives | Study Guidelines | Resources |
|--------------------|---|--|--|
| | <p>Unit 1: Vision and Mission Reading Selection: 1.1 The Farewell Sermon (speech)</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> · read and comprehend the character of our role model Prophet Muhammad (SAW) · identify Prophet's (PBUH) message in the Last Sermon · find contextual meanings of newly learnt words · answer the inferential and analytical questions | <ul style="list-style-type: none"> · Look up the meanings of 'Vision' & 'Mission' from dictionary to understand the theme of three lessons under the main heading. · Reading and comprehension of the The Farewell Sermon (speech) · Identify the guiding principles laid down by Prophet Muhammad (SAW) in his last sermon. · Read Islamic books / newspaper articles to conduct research about the rights of women & gender equality at international level and how they are to be treated without any discrimination. · Highlight Prophet Muhammad's (SAW) instructions on usury and how people are to be treated equal in Islam; the rights of people over others. · Students to make a list of the main points highlighted in the Last Sermon · Make key notes for inferential and analytical questions and vocabulary <p>Written work: Answer all Qs in suitable length / word count as per FBISE marking criteria.</p> | <ul style="list-style-type: none"> · Intermediate English For Class XII (KPTBP)(Pgs3-7) · Islamic books / newspaper articles / Research |
| | <p>Unit 1: Continued..... Writing Skills Convert Paragraphs from Direct to Indirect Speech</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> · change the paragraphs to indirect speech by applying correct rules & using appropriate vocabulary | <ul style="list-style-type: none"> · Revise rules of Narration with examples · Practice how the rules are applied changing direct speech into indirect speech. Refer federal Board prescribed Grammar book. · Written work · Change four paragraphs from the Last Sermon into indirect speech (pgs 7-8) · Ref: Language Study 1.5 <i>Direct and Indirect Speech</i> (pg 31) | <ul style="list-style-type: none"> · Intermediate English For Class XII (KPTBP) (Pgs 7-8, & 31) · Complete Edition Intermediate (Part II) English Simple by Prof. Zia-ur-Rahman Khan (Pgs 651-670) |

- 1- اسٹیپیک میں دیکھا تھا کام نصب پر مبنی ہے افہام و تفہیم کے ساتھ وسیع مطالعہ پر توجہ دیں۔ اس مقصد کے لیے طلباء اپنے تصورات کی وضاحت کے لیے تجزیہ کرہ ٹیوٹوریل دیکھ سکتے ہیں۔
- 2- طلباء دیے گئے ہفتہ وار کام کے لیے ٹیم ٹیبل بنائیں جو کہ دیے گئے تدریسی گھنٹوں کے مطابق ہفتے کے 6 یا 5 دنوں پر مشتمل ہو۔
- 3- والدین ہفتے بچے کی جمع کر دی گئی اسائنمنٹس کا ریکارڈ رکھتے ہوئے اس کی کلا کرگی کی اوپیکسٹ میں طلباء کی طرف سے لگائے گئے ٹک کے نشان کی نگرانی کریں۔
- 4- دیکھا تحریری مشقی کام اضافی سیمس / رجسٹر انٹ بک پر کیا جائے۔ کام کی تکمیل کو یقینی بنایا جائے اور اس کام کو ڈونٹیر یا فولڈ میں رکھا جائے ہفتہ وار کام کے لیے جلا کار (Separators) کا استعمال کریں۔
- 5- اسائنمنٹس کی کاغذی دستاویز (ہارڈ کاپی) اسکول کے دیے گئے شیڈول کے مطابق اسکول کو ہاتھ آگے سے جمع کروائی جائیں۔ طلباء پڑھائی کے دوران نام سمجھ آنے والے نکات کے متعلق اپنی معلمہ / معلم سے آن لائن رہنمائی حاصل کریں۔ اساتذہ رہنمائی کے لیے 8 سے 2 بجے تک آن لائن موجود ہیں۔
- 6- جب اسکول ہاتھ آگے شروع ہو جائیں گے تو طلباء ان نکات کی نشان دہی کریں گے، جن کے لیے انہیں وضاحت کی ضرورت ہے۔ لہذا طلباء کے لیے یہ ضروری ہے کہ وہ گھر میں قیام کے دوران لکھنے، ہنسنے اور یاد کرنے کا کام جاری رکھیں تاکہ آنے والے امتحانات کے لیے خود کو تیار کر سکیں۔

| | | | |
|---------------------------|--|----------------|----------------------|
| چیک لسٹ مکمل / آہل کام | نصابی مواد موضوع: سبق / نظم / اغزل کا نام | ہفتے / دن | ہفتے کا مطالقی وقت |
| | مسلمانوں کا قدیم طرز تعلیم رموز اوقاف | 29 جن - 4 لائی | تہ نمبر 1 4 گھنٹے |

سلیبس میں ایک بلاک 1 (پہلا ہفتہ)

| ذبح | طریقہ تدوین | موضوعات / مقاصد | ہفتہ نمبر / وقت |
|---|--|---|------------------------|
| اردو (لازمی) بارہویں جماعت کے لیے صفحہ 1 تا 9 | ☆ طلبہ مولانا شبلی نعمانی کے تعارف کو بغور پھیس او جو نکت سمجھ نہ آئیں انہیں خط کشید کریں۔ ☆ اسکی کھلنے پر یلانی معلمہ معلم سے ان سے متعلق آئے لگا رہنمائی حاصل کریں۔ ☆ سبق کی پڑھائی کریں۔ ☆ مشکل الفاظ و ترکیب کے معنی کے لیے لغت کا استعمال کیا جائے۔ ☆ سبق پڑھ کر مشقی سوالات کے جوابات اپنے الفاظ میں تحریر کیے جائیں۔ ☆ طلبہ گزشتہ جماعت میں نثر پائے کی تشریح کر چکے ہیں ہی طریقے او اپنی جماعت کے معیار کو مد نظر رکھ کر طلبہ کسی ایک نثر پائے کی تشریح کریں۔ | مسلمانوں کا قدیم طرز تعلیم طلبہ اس قابل ہیں گے کہ: 1۔ مولانا شبلی نعمانی کے تعارف کو پڑھ کر سمجھ سکیں۔ 2۔ سبق کی پڑھائی کر سکیں۔ 3۔ مشقی سوالات کے جوابات لکھ سکیں۔ 4۔ نثر پائے کی تشریح کر سکیں۔ | ہفتہ نمبر 1 4 گھنٹے |
| اردو (لازمی) بارہویں جماعت کے لیے صفحہ نمبر 8 | ☆ طلبہ گزشتہ جماعت میں رموز اوقاف پڑھ چکے ہیں، ان کا اعادہ کریں او صفحہ نمبر 8 دیکھنے رموز اوقاف غوسے پڑھیں۔ ☆ طلبہ ی گئی علامت کی و و مثالیں تحریر کریں۔ | رموز اوقاف طلبہ اس قابل ہیں گے کہ: 1۔ رموز اوقاف کا اعادہ کر سکیں۔ 2۔ ان سے متعلقہ مثالیں تحریر کر سکیں۔ | |

APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021

Mathematics

| Resources | Available Time | | | | | | | | | | | | | | |
|---|---|--------------|-----------|------------------------|---------------|-------------------|---------------|---------------------------|----------------|---------------------|----------------|---|--------------|----------------------------------|--|
| <p>Prescribed Textbook Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore</p> <p>Authors:</p> <p>Prof. Muhammad Amin Chaudhry</p> <p>Prof. Muhammad Sharif Ghauri</p> <p>Prof. Muhammad Khalid Saleem</p> <p>Prof. Mazhar Hayat</p> <p>Resources: Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore</p> <p>Prescribed Notebook: Single Line Register Loose Sheets</p> | <table border="1"> <thead> <tr> <th>Weeks / Days</th> <th>Class XII</th> </tr> </thead> <tbody> <tr> <td>Total available</td> <td>35 wks</td> </tr> <tr> <td>Study Time</td> <td>29 wks</td> </tr> <tr> <td>School Assessments</td> <td>06 days</td> </tr> <tr> <td>Winter Break</td> <td>10 days</td> </tr> <tr> <td>Syllabus completion + Revision + Test Series</td> <td>5 wks</td> </tr> <tr> <td colspan="2">Federal Board Examination</td> </tr> </tbody> </table> | Weeks / Days | Class XII | Total available | 35 wks | Study Time | 29 wks | School Assessments | 06 days | Winter Break | 10 days | Syllabus completion + Revision + Test Series | 5 wks | Federal Board Examination | |
| Weeks / Days | Class XII | | | | | | | | | | | | | | |
| Total available | 35 wks | | | | | | | | | | | | | | |
| Study Time | 29 wks | | | | | | | | | | | | | | |
| School Assessments | 06 days | | | | | | | | | | | | | | |
| Winter Break | 10 days | | | | | | | | | | | | | | |
| Syllabus completion + Revision + Test Series | 5 wks | | | | | | | | | | | | | | |
| Federal Board Examination | | | | | | | | | | | | | | | |

Instructions

- 1. All the work in study pack is syllabus oriented, focusing on comprehensive study of course content supported by suggested tutorials & written assignments.**
- 2. Total study time for first five weeks (Block 1) of Mathematics is 26 hours & 30 minutes (approximately 5 hours and 30 minutes every week). Students to make a timetable for the assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. Written Practice of the assigned tasks will be done on loose sheets. Ensure it is filed in some folder/dossier.**
- 4. Assignments to be regularly submitted to schools according to procedure & schedule issued by the School.**
- 5. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**
- 6. The checklist in the Block Syllabus for the Study Pack will be filled by the students every week for monitoring self-study time.**

Block 1: Mathematics Week 1

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|---------------------------|----------------|---|----------------------------------|
| Week 1 5: 30Hrs | Jun 29- Jul 04 | <u>Unit – 1</u> Function and Limits 1.1 Introduction 1.1.1 Concept of Function. 1.1.2 Definition (Function-Domain- Range) 1.1.3 Notation and Value of a Function 1.1.4 Graphs of Algebraic functions 1.1.5 Graph of Functions defined Piece-wise. 1.2 Types of Functions 1.2.1 Algebraic Functions 1.2.2 Trigonometric Functions 1.2.3 Inverse Trigonometric Functions 1.2.4 Exponential Functions 1.2.5 Logarithmic Function 1.2.6 Hyperbolic Functions 1.2.7 Inverse Hyperbolic Functions. 1.2.8 Explicit Function 1.2.9 Implicit Function 1.2.10 Even Function 1.2.11 Odd Function 1.3 Composition of Functions and inverse of a function 1.3.1 Composition of functions 1.3.2 Inverse of a function 1.3.3 Algebraic method to find the inverse function | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|------------------------------------|--|--|--|
| Week 1 5 : 30 Hrs | <u>Unit – 1</u> Function and Limits 1. 4 Introduction 1.1.6 Concept of Function. 1.1.7 Definition (Function-Domain- Range) 1.1.8 Notation and Value of a Function 1.1.9 Graphs of Algebraic functions 1.1.10 Graph of Functions defined Piece-wise. 1. 5 Types of Functions 1.2.12 Algebraic Functions 1.2.13 Trigonometric Functions 1.2.14 Inverse Trigonometric Functions 1.2.15 Exponential Functions 1.2.16 Logarithmic Function 1.2.17 Hyperbolic Functions 1.2.18 Inverse Hyperbolic Functions. 1.2.19 Explicit Function 1.2.20 Implicit Function 1.2.21 Even Function 1.2.22 Odd Function 1. 6 Composition of Functions and inverse of a function | Read the textbook from Ex 1.1 (Page No 1 – 15) to cover the desired amount of content for the week: <ul style="list-style-type: none"> • Read the textbook that explains that function and history of its notation with reference to Newton and Leibniz. • Come up with examples of different functions for better understanding such as $A=\pi r^2$. • Do the Q No. 1, 2 & 3 of Ex 1.1 • Recall the concept of domain and range. • Study the domain and range of the functions. Do Q No. 4 of Ex 1.1 • Demonstrate the graphical representation of algebraic functions. • Read in detail the different types of functions e.g. polynomial functions linear functions etc. examples of different functions mentioned on page no 5 – 10. • Comprehend the concept of parametric functions and the difference between parametric function and others. • Do the Qs 5 – 8 of Ex 1.1 • Identify the difference between odd and even functions and how to determine whether the function is even or odd. • Do Q No. 9 of Ex. 1.1 • Read the composition of functions. Reiterate that: $(g \circ f)(x) = g(f(x))$ $(f \circ g)(x) = f(g(x))$ $(g \circ g)(x) = g(g(x))$ $(f \circ f)(x) = f(f(x))$ | <ul style="list-style-type: none"> • Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore (Page No 1 – 15) • Laptop / Tab / Smart Phone • Watch the relevant videos on sabaq.pk • Watch these additional videos; • https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-2/v/introduction-to-limits-hd • https://www.youtube.com/watch?v=h_Rf_2OeSJU • https://www.youtube.com/watch?v=trAmOJ8pHNc |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|-----------|
| | <p>1.3.4 Composition of functions 1.3.5 Inverse of a function 1.3.6 Algebraic method to find the inverse function</p> <p>After studying these topics the students should be able to:</p> <ul style="list-style-type: none"> · define the function · describe the domain and range of a function · describe the notation and value of the function · draw the graphs of algebraic functions · recognize the different types of the functions and calculate the domain and range of each one of them · find: <ul style="list-style-type: none"> $(g \circ f)(x) = g(f(x))$ $(f \circ g)(x) = f(g(x))$ $(g \circ g)(x) = g(g(x))$ $(f \circ f)(x) = f(f(x))$ · define the inverse of a function · define the function · describe the domain and range of a function · describe the notation and value of the function · draw the graphs of algebraic functions | <ul style="list-style-type: none"> · Equip and apply algebraic method to find the inverse of the function. · Study the method to find the domain and range without finding the inverse. · Comprehend Composition and usage of a function. · Demonstrate the proof of : $f^{-1}(y) = f^{-1}(f(x)) = x$ for any function $y=f(x)$. · Do relevant examples and Qs 1-3 of Ex 1.2 | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|------------------|-----------|
| | <ul style="list-style-type: none">• recognize the different types of the functions and calculate the domain and range of each one of them• find: $(g \circ f)(x) = g(f(x))$ $(f \circ g)(x) = f(g(x))$ $(g \circ g)(x) = g(g(x))$ $(f \circ f)(x) = f(f(x))$• define the inverse of a function• find the inverse functions using the algebraic method | | |

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

Physics

| Resources | Available Time | |
|--|---|------------------|
| <p>Prescribed Textbook Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar</p> <p>Authors: Prof. Shoukat Ali Taran</p> <p>Resources: Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar</p> <p>Prescribed Notebook:</p> <ul style="list-style-type: none"> · Single Line Register · Loose Sheets | Weeks / Days | Class XII |
| | Total available | 35 wks |
| | Study Time | 29 wks |
| | School Assessments | 06 days |
| | Winter Break | 10 days |
| | Syllabus completion + Revision + Test Series | 5wks |
| | Federal Board Examination | |

Instructions

- 1. All the work in study pack is syllabus oriented, focusing on comprehensive study of course content supported by suggested tutorials & written assignments.**
- 2. Total study time for first five weeks (Block 1) of Physics is 26 hours & 30 minutes (approximately 5 hours and 30 minutes every week). Students to make a timetable for the assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. Written Practice of the assigned tasks will be done on loose sheets. Ensure it is filed in some folder/dossier.**
- 4. Assignments to be regularly submitted to schools according to procedure & schedule issued by the School.**
- 5. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**
- 6. The checklist in the Block Syllabus for the Study Pack will be filled by the students every week for monitoring self-study time.**

Block 1: Physics Week 1

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------------|----------------|--|----------------------------------|
| Week 1 5 : 30 Hrs | Jun 29- Jul 04 | UNIT # 11: Electrostatics 11.1 Properties of charge 11.2 Coulomb's Law · Coulomb's Law in material media 11.3 Electric field and its intensity 11.3.1 Representation of electric field lines 11.4 Applications of electrostatics a) Photocopiers b) Laser printer c) Inkjet printers | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-----------------------------|--|--|---|
| Week 1 5 : 30 Hrs | UNIT # 11: Electrostatics 11.1 Properties of charge 11.2 Coulomb's Law · Coulomb's Law in material media 11.3 Electric field and its intensity 11.3.1 Representation of electric field lines 11.4 Applications of electrostatics a) Photocopiers | Read the textbook from pgs. 1-17 to fulfill the following objectives and enable yourself to: · Explain charge and its properties. Reiterate derivation of Coulomb's law in vacuum and material media. · State Coulomb's law and explain that force between two point charges is reduced in a medium other than free space using Coulomb's law · Derive the expression $E = \frac{1}{4\pi\epsilon_0} \frac{q}{r^2}$ for the magnitude of the electric field at a distance 'r' from a point charge 'q' · Solve examples 11.1 and 11.2. · Describe the concept of an electric field as an example of a field of force | · Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar · Laptop / Tab / Smart Phone · Watch the syllabus specific and relevant videos on sabaq.pk · Watch these additional videos; · https://www.youtube.com/watch?v=NXMqvrS8Gr8 |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | b) Laser printer c) Inkjet printers Learning objectives not shared here as were done in HSSC-I, plz check) | <ul style="list-style-type: none"> · define electric field strength as force per unit positive charge · Solve problems and analyze information using $\mathbf{E} = \mathbf{F}/q$ · Solve problems involving the use of the expression $\mathbf{E} = 1/4\pi\epsilon_0 q/r^2$ · Calculate the magnitude and direction of the electric field at a point due to two charges with the same or opposite signs · Sketch the electric field lines for two point charges of equal magnitude with same or opposite signs · Study applications of electrostatics. · Explanation of construction and working of: <ul style="list-style-type: none"> · Photocopiers · Laser printer · Inkjet printers · Solve example 11.3. | <ul style="list-style-type: none"> · https://www.youtube.com/watch?v=F1z5UaX96j8 · https://www.youtube.com/watch?v=dUBXXYN6pBQ |

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

Chemistry

| Resources | Available Time | |
|---|---|------------------|
| Prescribed Textbook · Textbook of Chemistry Grade 12 National Book Foundation Islamabad As Federal Textbook Board- Islamabad · Practical Notebook Chemistry Class 12 Prescribed Notebook: · Single-lined Register | Weeks / Days | Class XII |
| | Time available | 35 wks |
| | Study Time | 29 wks |
| | School Assessments | 06 days |
| | Winter Break | 10 days |
| | Syllabus completion + Revision + Test Series | 05 wks |
| | Federal Board Examination | |

Instructions

- 1. All the work in study pack is syllabus oriented, focusing on comprehensive study of course contents supported by tutorials, written assignments & projects.**
- 2. Total study time for Chemistry XII Block 1 (5 weeks) is 26 hours 30 min. Students to make a timetable for assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. The Written Practice of the assigned tasks will be done on loose sheets. Ensure it is filed in some folder/dossier.**
- 4. Assignments to be regularly submitted to schools using e medium or hard copies according to procedure & schedule issued by the School. The school teachers remain available online from 8.00 to 2.00 to provide support to those who require assistance.**
- 5. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**
- 6. The checklist for the Study Pack will be filled by the students every week for monitoring self-study time.**

Block I: Chemistry Week 1

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------|-----------------|--|----------------------------------|
| Week 1 5hrs 30 min | June 29- July 4 | Chapter#15: <u>Organic Compounds</u> <ul style="list-style-type: none"> · Introduction · Modern Definition Of Organic Chemistry · Sources Of Organic Compounds · Fossil Remains · Plants And Natural Product Chemistry · Partial And Total Synthesis · Fermentation/Biotechnology · Coal (As A Source Of Organic Compound) · Destructive Distillation Of Coal · Characteristics Of Organic Compounds · Uses Of Organic Compounds · New Allotropes Of Carbons: Bucky Balls · Functional Group And Homologous Series · Functional Groups · Table 15.1 · Some Common Functional Groups · Homologous Series · Detection Of Elements In Organic Compounds: | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------|--|---|---|
| Week 1 5 hrs 30 min | Chapter#15: <u>Organic Compounds</u> <ul style="list-style-type: none"> · Introduction · Modern Definition Of Organic Chemistry | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be | <ul style="list-style-type: none"> – Textbook of Chemistry Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|---|
| | <p>15.1: Sources Of Organic Compounds</p> <p>15.1.1 : Fossil Remains</p> <p>15.1.2: Plants And Natural Product Chemistry</p> <p>15.1.3: Partial And Total Synthesis</p> <p>15.1.4 : Fermentation / Biotechnology</p> <p>15.2: Coal (As A Source Of Organic Compound)</p> <p>15.2.1: Destructive Distillation Of Coal</p> <p>15.3: Characteristics Of Organic Compounds</p> <p>15.4: Uses Of Organic Compounds</p> <p>15.5: New Allotropes Of Carbons: Bucky Balls</p> <p>15.6 : Functional Group And Homologous Series</p> <p>15.6.1 : Functional Groups Table 15.1 :</p> | <p>asked to explain it to student on helpline</p> <ul style="list-style-type: none"> • Study Table 15.1 very attentively and try a Self-Assessment test to understand it as required. • Study Society Technology And Science, Tables & Figures, Points to remember to understand the concepts • Study and answer Quick Quizzes given in referred pages with topics. <p><u>Written work</u></p> <ul style="list-style-type: none"> • Students to mark and solve all topic related questions and problems given in Exercise • All written work to be submitted and get checked by the Subject Teacher. <p><u>Let's Explore:</u></p> <p>The students to find out the answers by themselves using internet search and record their finding on registers/loose sheets</p> <ol style="list-style-type: none"> i. When did the organic chemistry was recognized as a separate branch of chemistry? ii. Identify the two factors on which the physical and chemical properties of organic compounds depend. iii. What makes carbon such a unique element? iv. How does organic chemistry relate to medicine? v. Who formulated the idea of the nature of the chemical bond in organic compounds? | <p>(pgs 102-117)</p> <ul style="list-style-type: none"> - Laptop / Tab / Smart Phone / internet - Self-Check Exercises - Reference Links: Watch the topic related videos on - sabaq.pk - elearn.gov.pk - https://www.sanfoundry.com/organic-chemistry-questions-answers-hydrocarbons/ - (www.thefreedictionary.com/destructive+distillation) - https://en.wikipedia.org/wiki/fullerene |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | <p>Some Common Functional Groups</p> <p>15.6.2: Homologous Series</p> <p>15.7 : Detection Of Elements In Organic Compounds:</p> <ul style="list-style-type: none"> · Detection Of Carbon And Hydrogen · Detection Of Nitrogen, Sulphur And Halogens · Detection Of Oxygen · Detection Of Phosphorus · Detection Of Metals · Society Technology And Science · Points to remember · Quick Quizzes · Tables & Figures · Exercise questions <p>Student will be able to:</p> <ul style="list-style-type: none"> · define organic chemistry · explain why there is such a diversity and magnitude of organic compounds · describe different characteristics of the organic compounds · explain different sources of organic compounds · classify the organic compounds on structural | | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | <p>basis</p> <ul style="list-style-type: none">• explain the uses of the Organic Compounds• explain the destructive distillation of Coal• identify the new allotropes of Carbon: Bucky Ball• define functional groups and homologous series• identify different elements in organic compounds on the basis of their functional groups• solve the topic related exercise questions of the chapter | | |

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

Biology

| Resources | Available Time | |
|---|---|------------------|
| Prescribed Textbook · Textbook of Biology Grade 12 National Book Foundation Islamabad As Federal Textbook Board- Islamabad · Practical Notebook Biology Class 12 Prescribed Notebook: · Single-lined Register | Weeks / Days | Class XII |
| | Time available | 35 wks |
| | Study Time | 29wks |
| | School Assessments | 06 days |
| | Winter Break | 10 days |
| | Syllabus completion + Revision + Test Series | 05 wks |
| | Federal Board Examination | |
| | | |

Instructions

- 1. All the work in study pack is syllabus oriented, focusing on comprehensive study of course contents supported by tutorials, written assignments & projects.**
- 2. Total study time for Biology XII Block 1 (5 weeks) is 26 hours 30 min. Students to make a timetable for assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. The Written Practice of the assigned tasks will be done on loose sheets. Ensure it is filed in some folder/dossier.**
- 4. Assignments to be regularly submitted to schools using e medium or hard copies according to procedure & schedule issued by the School. The school teachers remain available online from 8.00 to 2.00 to provide support to those who require assistance.**
- 5. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**
- 6. The checklist for the Study Pack will be filled by the students every week for monitoring self-study time.**

Subject: Biology– XII
Block I: Biology Week 1

Session (2020-2021)

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------|-----------------|---|----------------------------------|
| Week 1 5hrs 30 min | June 29- July 4 | Chapter 14: <u>RESPIRATION</u> Ø Respiratory System of Man Ø Transport of Gases Ø Respiratory Disorders Ø Exercise Questions | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------|--|--|--|
| Week 1 5 hrs 30 min | Chapter 14: <u>RESPIRATION</u> Ø Respiratory System of Man <ul style="list-style-type: none"> · Upper Respiratory Tract · Lower Respiratory Tract · The Mechanism of Breathing · Respiratory Volumes · Control of breathing Ø Transport of Gases <ul style="list-style-type: none"> · Transport of Oxygen in blood · Transport of Carbon dioxide in blood | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline · Study all the figures and tables given with topics to understand the concepts. · Think critically to answer questions asked in ‘Critical Thinking’ columns given with topics. · Read all interesting Extra information and ‘Science Tidbits’ boxes. · Read all the information given in ‘Skills: Analyzing, Interpreting and communication’ boxes. <p><u>Written work</u></p> <ul style="list-style-type: none"> · Students to mark and solve all topic related questions given in Exercise . | <ul style="list-style-type: none"> – Textbook of Biology Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad (pg. 6-21) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises – Reference Links: Watch the topic related videos on – sabaq.pk – elearn.gov.pk – https://www.youtube.com/watch?v=GD-HPx_ZG8I |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|--|
| | <ul style="list-style-type: none"> • Respiratory pigments Ø Respiratory Disorders • Upper Respiratory Tract Infection • Lower Respiratory Tract Infection • Disorders of Lungs • Effects of Smoking • Exercise <p><i>At the end of lesson students will be able to:</i></p> <ul style="list-style-type: none"> • explain respiration and respiratory system and list its properties • describe the main structural features and functions of the components of human respiratory system • describe the different parts of upper and lower respiratory system • explain the transportation of gases • explain the disorders of respiratory system • explain bad effects of smoking on lungs • perform the practical and demonstrate the evolution of CO₂ using | <ul style="list-style-type: none"> • Draw diagrams related with questions. • All written work to be submitted and get checked by the Subject Teacher. | <ul style="list-style-type: none"> – https://www.youtube.com/watch?v=-oHlcuS7AeU – https://www.youtube.com/watch?v=H7IYd1VWCqk |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|----------------------------------|--|-------------------------|------------------|
| | the indicator (hydrogen carbonate) · answer all topic related questions as required | | |

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

Computer Science

| Resources | Available Time | | | | | | | | | | | | | | |
|--|--|--------------|----------|------------------------|--------------|-------------------|--------------|---------------------------|----------------|---------------------|----------------|---|--------------|----------------------------------|--|
| <p>Prescribed Textbook</p> <ul style="list-style-type: none"> · Text book of Computer Science Grade-12 National Book Foundation as Federal Textbook Board Islamabad. <p>Authors: Muhammad SajjadHaider MS (Computer Science), , USA, BE(Mechanical Engineering), Korea Muhammad Khalid MS (Computer Science), B.Ed , University of Peshawar ,Pakistan</p> <p>Resources:</p> <ul style="list-style-type: none"> · Text book of Computer Science Grade-12 National Book Foundation as Federal Textbook Board Islamabad. · Star Computer Practical Notebook for Class XI & XII <p>Prescribed Notebook:</p> <ul style="list-style-type: none"> · Single-lined notebook (large) | <table border="1"> <thead> <tr> <th style="text-align: center;">Weeks / Days</th> <th style="text-align: center;">Class IX</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Total available</td> <td style="text-align: center;">35wks</td> </tr> <tr> <td style="text-align: center;">Study Time</td> <td style="text-align: center;">29wks</td> </tr> <tr> <td style="text-align: center;">School Assessments</td> <td style="text-align: center;">06 days</td> </tr> <tr> <td style="text-align: center;">Winter Break</td> <td style="text-align: center;">10 days</td> </tr> <tr> <td style="text-align: center;">Syllabus completion + Revision + Test Series</td> <td style="text-align: center;">05wks</td> </tr> <tr> <td colspan="2" style="text-align: center;">Federal Board Examination</td> </tr> </tbody> </table> | Weeks / Days | Class IX | Total available | 35wks | Study Time | 29wks | School Assessments | 06 days | Winter Break | 10 days | Syllabus completion + Revision + Test Series | 05wks | Federal Board Examination | |
| Weeks / Days | Class IX | | | | | | | | | | | | | | |
| Total available | 35wks | | | | | | | | | | | | | | |
| Study Time | 29wks | | | | | | | | | | | | | | |
| School Assessments | 06 days | | | | | | | | | | | | | | |
| Winter Break | 10 days | | | | | | | | | | | | | | |
| Syllabus completion + Revision + Test Series | 05wks | | | | | | | | | | | | | | |
| Federal Board Examination | | | | | | | | | | | | | | | |

Instructions

- 1. All the work in study pack is syllabus oriented, focusing on comprehensive study of course content supported by suggested tutorials & written assignments.**
- 2. Total study time for first five weeks (Block 1) of Computer Science is 25 hours. Students to make a timetable for the assigned weekly work, spreading over 5/6 days a week according to the given study hours.**
- 3. Written Practice of the assigned tasks will be done on loose sheets. Ensure it is filed in some folder/dossier.**
- 4. Assignments to be regularly submitted to schools according to procedure & schedule issued by the School.**
- 5. Once the regular school starts, students will identify the concepts for which they need extra reinforcement & explanation. Hence, it is mandatory for the students to complete the Study Packs during stay home period.**
- 6. The checklist in the Block Syllabus for the Study Pack will be filled by the students every week for monitoring self-study time.**

Block 1: Computer Science Week 1

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-----------------|---|----------------------------------|
| Week 1 5hrs | June 29- July 4 | Chapter#1:OPERATING SYSTEM <ul style="list-style-type: none"> · Operating system · Commonly used operating system · Types of operating system · Relevant Ex Questions at the end of Unit | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| Week 1 5hrs | Chapter#1: OPERATING SYSTEM Students will be able to <ul style="list-style-type: none"> · understand the concept of operating system. · define and explain different tasks of operating system. · describe the commonly used operating system. · describe the features of different operating system. · differentiate between Batch | Recall the previous knowledge about the concept taught in previous classes. <ul style="list-style-type: none"> · Read all important definitions and topics given in textbook · Use Computer, Laptop, Tabs /smart phone to go over the internet and search on Google about the Working of Operating system and commonly used Operating System. · Gather information about Types of operating System. https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-1 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-59 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-7 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-13 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-15 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-16 | <ul style="list-style-type: none"> – Textbook of Computer Science Grade 12 – National Book Foundation Islamabad As Federal Textbook Board- Islamabad pgs 8-14 – Exercise(MCQs Short Q/A,Long Q/A) Reference Links: <ul style="list-style-type: none"> – Watch the topic related videos on sabaq.pk |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|--|
| | <p>Processing operating system and Multiprogramming operating system.</p> <ul style="list-style-type: none"> • differentiate between multitasking and time sharing operating system. • differentiate between real time and multiprocessor operating system. • differentiate between distributed and embedded operating system. • differentiate between parallel and multiprocessor operating system | <p>https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-17 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-18 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-19 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-24 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-24a</p> <p>Visit the above given links to</p> <ul style="list-style-type: none"> • See the concept and importance of operating system. • Watch the different tasks performed by operating system. • See the features of following commonly used operating system. <ul style="list-style-type: none"> § DOS § Windows operating system § Mac os § Unix § ios AND Android • See in detail the following types of operating system. <ul style="list-style-type: none"> § Batch processing system § Multiprogramming operating system § Multitasking operating system § Time sharing operating system § Real time operating system § Multiprocessor operating system § Parallel processing operating system § distributed operating system § embedded operating system • Written work • Write the answers of Questions given at the end of chapter Q2(I &ii) Q3(I,ii& iii) | <p>Solve the practice test given with topics on sabaq.pk</p> |

**APSACS Syllabus Pack HSSC XII
Cold & Warm Region
2020-2021**

Pakistan Studies

| Resources | Available Time | | | | | | | | | | | | | | | | |
|--|---|-----------|--|----------|--------------|-----------------------------|-----------------|-------------------|-----------------|---------------------------|----------------|---------------------|----------------|---|----------------|----------------------------------|--|
| <p>Prescribed Textbook:</p> <ul style="list-style-type: none"> · Pakistan Studies: Grade 11 & 12 (National Book Foundation as Federal Textbook Board Islamabad) · Resources: Pakistan Studies :Publisher, Punjab Textbook Board Lahore | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Class XII</th> </tr> <tr> <th style="text-align: center;">Timeline</th> <th style="text-align: center;">Weeks / Days</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Total available time</td> <td style="text-align: center;">35 weeks</td> </tr> <tr> <td style="text-align: center;">Study Time</td> <td style="text-align: center;">29 weeks</td> </tr> <tr> <td style="text-align: center;">School Assessments</td> <td style="text-align: center;">01 week</td> </tr> <tr> <td style="text-align: center;">Winter Break</td> <td style="text-align: center;">10 days</td> </tr> <tr> <td style="text-align: center;">Syllabus completion + Revision + Test Series</td> <td style="text-align: center;">5 weeks</td> </tr> <tr> <td colspan="2" style="text-align: center;">Federal Board Examination</td> </tr> </tbody> </table> | Class XII | | Timeline | Weeks / Days | Total available time | 35 weeks | Study Time | 29 weeks | School Assessments | 01 week | Winter Break | 10 days | Syllabus completion + Revision + Test Series | 5 weeks | Federal Board Examination | |
| Class XII | | | | | | | | | | | | | | | | | |
| Timeline | Weeks / Days | | | | | | | | | | | | | | | | |
| Total available time | 35 weeks | | | | | | | | | | | | | | | | |
| Study Time | 29 weeks | | | | | | | | | | | | | | | | |
| School Assessments | 01 week | | | | | | | | | | | | | | | | |
| Winter Break | 10 days | | | | | | | | | | | | | | | | |
| Syllabus completion + Revision + Test Series | 5 weeks | | | | | | | | | | | | | | | | |
| Federal Board Examination | | | | | | | | | | | | | | | | | |

Instructions:


1. Familiarize yourself with textbooks /study guidelines / Board Paper Pattern in first week with the help of FBISE website
2. If textbook is not available download the soft copy of textbook from the website
3. Please read and understand the comprehensive study guidelines given in the Study Plan
4. The weekly work assigned will be spread over the week days according to the timetable set by students/parents.
5. Parents will monitor and supervise their ward's work in order to complete the syllabus work well before time.
6. Any videos/ research work suggested in the assignments will be strictly monitored by parents. The student can use any available and convenient Internet devices Laptop, tablet, smart phone
7. Most of the work in Pak Studies' Study Pack is reading and comprehension followed by the written assignments
8. Maintain a notebook to keep record of written work so that when school reopens the teachers are able to check them
9. Keep record of research work
10. The checklist in the Block Syllabus for the Study Pack will be filled by the students every week for monitoring self-study time.

Block 1: Pakistan Studies Week 1

| Block / # of wks | Time line | Course Content Unit /Chapter name | Check list Complete or incomplete |
|------------------|-----------------|--|--------------------------------------|
| Week 1 | June 29- July 4 | Chapter 1. Genesis of Islamic Republic of Pakistan Introduction <ul style="list-style-type: none"> · The Two Nation Theory: Defined and Explained · Components of the Pakistan Ideology · Pakistan : the Outcome of the Sustained Muslim Efforts · Evolution of the Muslim League's Constitutional Struggle · Other Important Events | |

Syllabus Pack Block 1 (week 1)

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|---|
| Week 1 1 hr. 40 mins | Chapter 1. Genesis of Islamic Republic of Pakistan Introduction <ul style="list-style-type: none"> · The Two Nation Theory: Defined and Explained · Components of the Pakistan Ideology · Pakistan : the Outcome of the Sustained Muslim Efforts · Evolution of the Muslim League's Constitutional Struggle · Other Important Events Objectives: By the end of the week | Familiarize yourself with textbooks/syllabus/Board Paper Pattern in first week. Reading and Understanding: Textbook Pages 1-7 <ul style="list-style-type: none"> · Read and understand the concept of ideology and its components and try to define the concept of Nationhood by virtue of the religion of Islam. · Elaborate the components of Ideology of Pakistan that is based on the basic principles of Islam. <ul style="list-style-type: none"> ➤ Democracy ➤ Social Justice ➤ Fundamental Human Rights · List down the Landmark Events from 1857 to 1947 on a sheet and try to understand the background of having a different ideology in spite of Muslims rule in the Subcontinent for about eight hundred years. · Briefly touch upon the collapse of the Mughal Empire and | <ul style="list-style-type: none"> · Textbook Page 1-7 · Photographs of the famous leaders · Map of the Subcontinent · Internet Written Work Q5 (1-4) pg. 27 Q6 (1) pg. 28 |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|-----------|
| | <p>/lessons Students will able to:</p> <ol style="list-style-type: none"> 1. define the basic components of Ideology of Pakistan 2. explain the sustained Muslim struggle to get a new country 3. highlight all the important events leading towards the independence of the Muslims / Subcontinent | <p>how the last emperor Bahdur Shah Zaffar was sent to exile in Myanmar (Burma).</p> <ul style="list-style-type: none"> • After the War of Independence in 1857 the subcontinent was under the direct control of the British Crown and was declared as a British Colony. •  Read the proclamation issued by Queen Victoria of England in 1858 with the help of internet • Try to understand the scenario that existed in the Subcontinent after the British rule was established and basic human rights of all the locals were curbed as they became subjects to the British Crown. • Try to find the reasons for the failure of all the resistance movements as these were not well directed. • List down all the important events that took place during this time, one by one. <p>Written Work: Give short answers: Q5 (1-4) page 27 Give detailed answers: Q6 (1) page 28</p> <p>Note for all Chapters: Objective type questions will be done on the textbook after completion of chapter</p> | |

Block 1: English Week 2

| # of wks / Study Hours | Week Dates | Course Content Unit /Chapter/Topics | Checklist Complete or Incomplete |
|------------------------|-------------------|--|-------------------------------------|
| Week 2 4hrs | July 06 – July 11 | 1. Unit 1: Vision and Mission Reading Selection: 1.2 Jinnah’s Vision of Pakistan (Speech) 2. Unit 1: Continued.... Writing skills 1. ‘The Great Leader, M.A. Jinnah’ And 2. What should we do to make Pakistan a stable and prosperous country? | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------|---|---|---|
| Week 2 4 hrs | Unit 1: Vision and Mission Reading Selection: 1.2 Jinnah’s Vision of Pakistan Students will be able to: <ul style="list-style-type: none"> read and comprehend theme of the lesson with focus on Quaid’s presidential address to the Constituent Assembly of Pakistan draw a graphic | <ul style="list-style-type: none"> Reading and comprehension of Mr. Jinnah’s presidential address to the Constituent Assembly of Pakistan. Analyze the life of Quaid-e-Azam as a renowned barrister and political figure Enlighten yourself with the fact that Pakistan’s creation was the result of many years of hard work& devotion. Discuss with elderly members of the family the ideology of Pakistan as envisioned by the Quaid in his famous speech. With the help of graphic organizer, present Quaid-e-Azam as a role model. Points may be added with supporting details Written work: (pg 27) Explain in your own words the mission of Quaid before and after the partition in 1947. | <ul style="list-style-type: none"> Intermediate English For Class XII (KPTBP)(Pgs. 21-30) <p>Graphic Organizer</p> <div style="text-align: center;"> <div style="border: 1px solid orange; border-radius: 15px; padding: 5px; width: fit-content; margin: 0 auto;">Introduction</div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="border: 1px solid orange; border-radius: 15px; padding: 5px; width: 30%; text-align: center;">Point1 + Details</div> <div style="border: 1px solid orange; border-radius: 15px; padding: 5px; width: 30%; text-align: center;">Point2 + Details</div> <div style="border: 1px solid orange; border-radius: 15px; padding: 5px; width: 30%; text-align: center;">Point 3 + Details</div> </div> <div style="border: 1px solid orange; border-radius: 15px; padding: 5px; width: fit-content; margin: 10px auto;">Conclusion</div> </div> |

| | | | |
|---------------------------|---|------------------|----------------------|
| چیک لسٹ مکمل / آہل کام | نصابی مواد موضوع: سبق / نظم / غزل کا نام | ہفتے / دن | ہفتے کا مطالقی وقت |
| | سقراط مضمون نویسی | 6 لائی – 11 لائی | تہ نمبر 2 4 گھنٹے |

سلیبس میں ایک بلاک 1 (دوسرا ہفتہ)

| ذبح | طریقہ تدریس | موضوعات / مقاصد | فترت نمبر / وقت |
|---|--|---|------------------------|
| ارو (لازمی) بارہویں جماعت کے لیے صفحات 10 تا 15 | <p>☆ طلبا مہدی افای کے تعاف کو بغو چھیں اور جو نکات سمجھ نہ آئیں انہیں خط کشید کریں۔</p> <p>☆ اسکی کھلنے پر یلانی معلمہ / معلم سے ان سے متعلق آن لائن رہنمائی حاصل کریں۔</p> <p>☆ سبق کی پڑھائی کریں۔</p> <p>☆ مشکل الفاظ و کتب کے معنی کے لیے لغت کا استعمال کیا جائے۔</p> <p>☆ طلبا سقراط کی مرید معلومات ٹر سیٹ سے حاصل کی جائیں۔</p> <p>☆ مشقی سوالات کے جوابات اپنے الفاظ میں تحریر کیے جائیں۔</p> <p>☆ طلبا رموز اوتھ کا اعادہ کریں اور صفحا 14، 15 دے گئے رموز اوتھ کو غوسے پڑھیں اور ہی گئی علامت کی و و مثالیں تحریر کریں۔</p> <p>☆ طلبا گزشتہ جماعت میں نثر پارسکی تشریح کر چکے ہیں، ہی طریقے اور اپنی جماعت کے معیار کو مد نظر رکھ کر طلبا کسی ایک نثر پارسے کی تشریح کریں۔</p> | <p>سقراط</p> <p>طلبا س قابل ہوں گے کہ:</p> <p>1۔ مہدی افای کے تعاف کو پڑھ کر سمجھ سکیں۔</p> <p>2۔ سبق کی پڑھائی کر سکیں۔</p> <p>3۔ مشقی سوالات کے جوابات لکھ سکیں اور رموز اوتھ کا اعادہ کر سکیں۔</p> <p>4۔ نثر پارسے کی تشریح کر سکیں۔</p> | ہفتہ نمبر 2 4 گھنٹے |

| ذبح | طریقہ تدریس | موضوعات / مقاصد | نقشہ نمبر / وقت |
|-------------|---|---|-----------------|
| توطد کی کتب | <p>طلبا کی فہم داریاں</p> <p>☆ طلبا گنتہ جماعت میں مضمون لہی کے اصل و ضوابط چکے ہیں ان مد نظر رکھتے ہوئے دیے گئے موضوع معلومات اٹھی کریں (اخبارات نظر سیت مختلف توطد کی کتب سے استفادہ کریں)</p> <p>☆ دیے گئے موضوع پر اسطے لفظی میں مضمون تحریر کریں۔ مضمون کو زیادہ چھا بنانے کے لیے ملی نغمے او اشعا بھی سل کر سکے ہیں اس سے امتحان میں نمبر زیادہ ملیں گے۔</p> <p>☆ ہم نکتہ (معنی و مفہوم آج کے بچے کل کے معمار وطن، تعلیم پر توجہ، اخلاق اقدار کی پاسداری، محنت کا جذبہ، اپنے ملک کے لیے مریح کی فرنی کے لیے تیار رہنا، دوسروں کی مدد)</p> | <p>مضمون نویسی</p> <p>طلبا اس قابل ہوں گے کہ:</p> <p>1- مضمون نویسی کے اصول و ضوابط کا اعادہ سکیں۔</p> <p>2- دیے گئے موضوع پر مضمون لکھ سکیں۔</p> | |

Block 1: Mathematics Week 2

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------------|-----------------|---|----------------------------------|
| Week 2 5 : 30 Hrs | 06 Jul – Jul 11 | <p>Unit – I Functions and limits</p> <p>1.1 Limit of a function and Theorems on limits</p> <p>1.4.1 Meaning of the phrase “x approaches zero”</p> <p>1.4.2 Meaning of the phrase “x approaches infinity”</p> <p>1.4.3 Meaning of the phrase “x approaches a”</p> <p>1.4.4 Concept of the limit of a function</p> <p>1.4.5 Limit of a function</p> <p>1.4.6 Theorems on limits of functions</p> <p>1.2 Limits of Important Functions</p> <p>1.5.1 $\lim_{\theta \rightarrow a} \frac{x^n - a^n}{x - a} = na^{n-1}$ $\lim_{x \rightarrow 0} \frac{\sqrt{x+a} - \sqrt{a}}{x} = \frac{1}{2\sqrt{a}} na^{n-1}$</p> <p>1.5.2 Limit at infinity</p> <p>1.5.3 Method for evaluating the limits at infinity</p> <p>1.5.4 $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n = e$ hence $\lim_{x \rightarrow 0} (1+x)^{\frac{1}{x}} = e$</p> <p>1.5.5 $\lim_{x \rightarrow 0} \frac{a^x - 1}{x} = \log_e a$ hence $\lim_{x \rightarrow 0} \left(\frac{e^x - 1}{x}\right) = \log_e e = 1$</p> <p>1.5.6 The Sandwich Theorem</p> <p>1.5.7</p> <p>1.5.8</p> <p>1.5.9 If θ is measured in radian, then $\lim_{\theta \rightarrow 0} \frac{\sin \theta}{\theta} = 1$</p> | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|------------------------------------|---|---|--|
| Week 2 5 : 30 Hrs | Unit – I Functions and limits 1.3 Limit of a function and Theorems on limits 1.4.7 Meaning of the phrase “ x approaches zero ” 1.4.8 Meaning of the phrase “ x approaches infinity ” 1.4.9 Meaning of the phrase “ x approaches a ” 1.4.10 Concept of the limit of a function 1.4.11 Limit of a function 1.4.12 Theorems on limits of functions 1.4 Limits of Important Functions 1.5.10 $\lim_{\theta \rightarrow a} \frac{x^n - a^n}{x - a} = na^{n-1}$ $\lim_{x \rightarrow 0} \frac{\sqrt{x+a} - \sqrt{a}}{x} = \frac{1}{2\sqrt{a}} na^{n-1}$ 1.5.11 $x \rightarrow 0$ 1.5.12 Limit at infinity 1.5.13 Method for evaluating the limits at infinity 1.5.14 $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n = e$ | Read the textbook from Ex 1. 3 (Page no 15 - 28) to cover the desired amount of content for the week: <ul style="list-style-type: none"> • The concept of limit of a function is the basis on which calculus is based. • It is essential to understand the meaning of the following phrases to the students: (Use textbook and online research) <ol style="list-style-type: none"> i. x approaches to 0: $x \rightarrow 0$ ii. x approaches to infinity: $x \rightarrow \infty$ iii. x approaches to a: $x \rightarrow a$ • Comprehend the concept of limit by using both geometrical and numerical approaches. • Comprehend the theorems on limits of functions with relevant examples. • Read in detail the proof of following formula and their deductions. <ol style="list-style-type: none"> i. $\lim_{\theta \rightarrow a} \frac{x^n - a^n}{x - a} = na^{n-1}$ ii. $\lim_{n \rightarrow \infty} \left(1 + \frac{1}{n}\right)^n = e$ iii. $\lim_{x \rightarrow 0} \frac{a^x - 1}{x} = \log_e a$ • Derive the Sandwich theorem and solve relevant examples. • Demonstrate how to evaluate the limit of the function of the type $\lim_{\theta \rightarrow 0} \frac{\sin \theta}{\theta}$ when $\theta \rightarrow 0$ and solve | Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore (Page no 15 - 28) <ul style="list-style-type: none"> • Laptop / Tab / Smart Phone • Watch the relevant videos on sabaq.pk • Watch these additional videos; <ul style="list-style-type: none"> • https://www.khanacademy.org/math/ap-calculus-ab/ab-limits-new/ab-1-2/v/introduction-to-limits-hd • https://www.youtube.com/watch?v=h_Rf_2OeSJu • https://www.youtube.com/watch?v=trAmOJ8pHNc |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|-----------|
| | <p>hence $\lim_{x \rightarrow 0} (1+x)^{\frac{1}{x}} = e$</p> <p>1.5.15 $\lim_{x \rightarrow 0} \frac{a^x - 1}{x} = \log_e a$ hence $\lim_{x \rightarrow 0} \left(\frac{e^x - 1}{x} \right) = \log_e e = 1$</p> <p>1.5.16 The Sandwich Theorem</p> <p>1.5.17</p> <p>1.5.18 If θ is measured in radian, then $\lim_{\theta \rightarrow 0} \frac{\sin \theta}{\theta} = 1$</p> <p>After studying these topics the students should be able to:</p> <ul style="list-style-type: none"> · recognize the limit of the function · apply the limit of the function · state the theorem on limits of the functions and demonstrate through examples · evaluate the limits of important functions · apply the limit at infinity · apply the method for evaluating the limits at infinity · prove the Sandwich | <p>relevant examples.</p> <ul style="list-style-type: none"> · Do Ex 1.3. | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | theorem · evaluate the limit of the function of the types $\lim_{\theta \rightarrow 0} \frac{\sin \theta}{\theta}; \theta \rightarrow 0$ | | |

Block 1: Physics Week 2

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------|-----------------|---|----------------------------------|
| Week 2 5hrs | 06 Jul – Jul 11 | UNIT # 11: Electrostatics 11.1 Electric flux <ul style="list-style-type: none"> · Flux at any angle · Maximum flux · Zero flux · Electric flux through closed surface Examples 11.1-11.3 Comprehensive Questions 1-3 Numerical Problems 1 -4 11.2 Gauss's Law 11.6.1 Applications of Gauss's law 11.6.1.1 Location of excess charge on a conductor 11.6.1.2 Electric field intensity due to an indefinite sheet of charge 11.6.1.3 Electric intensity between two oppositely charged parallel plates | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-----------------------|--|---|--|
| Week 2 5Hrs | UNIT # 11: Electrostatics <ul style="list-style-type: none"> · Electric flux · Flux at any angle · Maximum flux · Zero flux · Electric flux through closed surface | Read the textbook from pgs. 17-28 to fulfill the following objectives and enable yourself to: <ul style="list-style-type: none"> · describe the concept of electric dipole · define and explain electric flux · describe electric flux through a surface enclosing a charge · Solve example 11.3. · Explanation and derivation of electric flux: | <ul style="list-style-type: none"> · Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar · Laptop / Tab / Smart Phone · Watch the syllabus specific and relevant videos on sabaq.pk |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | Examples11.1-11.3 Comprehensive Questions 1-3 Numerical Problems1 -4 11.6 Gauss’s Law 13.6.1 Applications of Gauss’s law 11.6.2 Location of excess charge on a conductor 11.6.3 Electric field intensity due to an indefinite sheet of charge 11.6.4 Electric intensity between two oppositely charged parallel plates | <ul style="list-style-type: none"> · at any angle · is maximum · is zero · through the closed surface (positive, negative and zero) · state and explain Gauss’s law · describe and draw the electric field due to an infinite size conducting plate of positive or negative charge · sketch the electric field produced by a hollow spherical charged conductor · sketch the electric field due to an indefinite sheet of charge and between and near the edges of two oppositely charged parallel plates · define electric potential at a point in terms of the work done in bringing unit positive charge from infinity to that point <p>Solve the following questions and problems using guidance from attached online links:</p> <p>Written Work Examples11.1-11.3 Comprehensive Questions 1-3 Numerical Problems1 -4</p> | <ul style="list-style-type: none"> · Watch these additional videos; · https://www.youtube.com/watch?v=kqP1_EPfrow · https://www.youtube.com/watch?v=-ECP34xHA70 |

Block 1: Chemistry Week 2

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|------------------------|------------------|--|----------------------------------|
| Week 2 5 hrs 30 min | July 6 – July 11 | Chapter#16 : <u>Hydrocarbons</u> <ul style="list-style-type: none"> · Types Of Hydrocarbons · Nomenclature · Physical Properties · Structure · Relative Stability · Reactivity · Radical Substitution Reactions · Reaction Mechanism · Oxidation And Reduction Of Organic Compounds · Alkenes · Interesting Information · Quick Quizzes · Figures & Tables · Exercise questions related to the topics | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------|---|--|--|
| Week 2 5 hrs 30 min | Chapter#16 : <u>Hydrocarbons</u> 16.1: Types Of Hydrocarbons <ul style="list-style-type: none"> · Open Chain | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline | <ul style="list-style-type: none"> – Textbook of Chemistry Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad <u>(pgs118-135 &171-173)</u> |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|--|
| | <p>Hydrocarbons (Types)</p> <ul style="list-style-type: none"> · Closed Chain Hydrocarbons (Types) <p>16.2: Alkanes And Cycloalkanes</p> <p>16.2.1: Nomenclature</p> <p>16.2.2: Physical Properties</p> <p>16.2.3: Structure</p> <p>16.2.4 : Relative Stability</p> <p>16.2.5: Reactivity</p> <p>16.3: Radical Substitution Reactions</p> <p>16.3.1: Overview</p> <p>16.3.2: Reaction Mechanism</p> <p>16.4: Oxidation And Reduction Of Organic Compounds</p> <p>16.5 : Alkenes</p> | <ul style="list-style-type: none"> · Study the Tables and figures very attentively and try a Self-Assessment test to understand the concepts as required. · Study and answer Quick Quizzes given in referred pages with topics. <p><u>Written work</u></p> <ul style="list-style-type: none"> · Students to mark and solve all topic related questions and problems given in Exercise · All written work to be submitted and get checked by the Subject Teacher. <p><u>Let's Explore:</u></p> <p>The students to find out the answers by themselves using internet search and record their finding on registers/loose sheets</p> <ol style="list-style-type: none"> Can enzyme be a polymer? Why do alkanes have low reactivity? Why do double bonds make alkenes more reactive? Draw and name the possible products of the reaction between: <ol style="list-style-type: none"> propane and bromine butane and iodine pentane and chlorine methyl propane and bromine methyl butane and chlorine | <ul style="list-style-type: none"> – Laptop / Tab / Smart Phone / internet – Self-Check Exercises <p>Reference Links: Watch the topic related videos on</p> <ul style="list-style-type: none"> – sabaq.pk – elearn.gov.pk – www.wyzant.com/alkanes-and-alkenes – www.differencebetween.net/alkanes)http://www.differencebetweeen.net/science/chemistry-science/difference-between-alkanes-alkenes-and-alkynes/ |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | <p>16.5.1 : Nomenclature</p> <p>16.5.2: Relative Stability</p> <p>16.5.3 : Structure</p> <p>16.5.4: Preparation Of Alkenes</p> <p>16.5.5: Reactivity</p> <p>16.5.6: Reactions</p> <ul style="list-style-type: none"> · Interesting Information · Activities · Quick Quizzes · Figures & Tables · Exercise questions related to the topics <p>Student will be able to:</p> <ul style="list-style-type: none"> · define Hydrocarbons · classify hydrocarbons as Aliphatic and Aromatic · describe nomenclature of Alkanes and Cycloalkanes · describe the physical properties, structure and reactivity of Alkanes · describe the | | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | <p>mechanism of free radical substitution in alkanes with the help of an example of methane and ethane</p> <ul style="list-style-type: none">· describe the nomenclature, preparation and chemistry of alkenes· describe the reactivity of alkenes· explain the unreactive nature of alkanes towards polar reagents· identify the shape of alkenes in terms of sigma and pi bonds· solve & answer the quick quizzes and activities independently· solve the relevant questions of exercise chapter | | |

Block 1: Biology Week 2

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|------------------------|------------------|---|----------------------------------|
| Week 2 5 hrs 30 min | July 6 – July 11 | Chapter 15: <u>HOMEOSTASIS</u> Ø Mechanism of Homeostasis Ø Osmoregulation Ø Excretion Ø Excretory System of Man Ø Disorders of Urinary Tract Ø Exercise Questions | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------|--|---|---|
| Week 2 5 hrs 30 min | Chapter 15: <u>HOMEOSTASIS</u> <ul style="list-style-type: none"> · Introduction Ø Mechanism of Homeostasis · Concept of feedback mechanism in Homeostasis Ø Osmoregulation · Osmoregulators and Osmoconformers · Problems faced by Osmoregulators · Osmoregulatory Adaptations in Animals Ø Excretion | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline · Study all the figures and tables given with topics to understand the concepts. · Read all interesting Extra information and 'Science Tidbits' boxes. · Read all the information given in 'Skills: Analyzing, Interpreting and communication' boxes. | <ul style="list-style-type: none"> – Textbook of Biology Grade 12 National Book Foundation Islamabad as Federal Textbook Board-Islamabad (pg.22-35) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises <p>Reference Links: Watch the topic related videos on</p> |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|--|
| | <ul style="list-style-type: none"> · Relationship between Excretory Product and Habitats Ø Excretory System of Man · Structure and functions of Kidney Ø Disorders of Urinary Tract · Urinary Tract infection · Kidney Stones · Kidney Failure · Exercise · Student will be able to: · explain homeostasis and its importance · describe the mechanism of Homeostasis · differentiate between Osmoregulation and Osmoconformers · explain the different methods of osmoregulation found in fresh water, marine water and terrestrial animals · list various nitrogenous compounds excreted during the process of excretion and the nature of excretory products in relation to habitat · explain different organs of urinary system · describe the structure of kidney and nephron · explain the process of urine | <p><u>Written work</u></p> <ul style="list-style-type: none"> · Students to mark and solve all topic related questions given in Exercise . · Draw diagrams related with questions. · All written work to be submitted and get checked by the Subject Teacher. | <ul style="list-style-type: none"> – sabaq.pk – elearn.gov.pk – https://www.youtube.com/watch?v=bfuOljRU1nk – https://www.youtube.com/watch?v=ZvjRtmbTPCo – https://www.youtube.com/watch?v=82mW8bpcSyU – https://www.youtube.com/watch?v=wOG0mtbk1vA – https://www.merckmanuals.com/home/kidney-and-urinary-tract-disorders/stones-in-the-urinary-tract/stones-in-the-urinary-tract |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|------------------|-----------|
| | <p>formation</p> <ul style="list-style-type: none">· explain the regulation of concentration of urine by counter current and hormonal mechanism· justify the functioning of kidneys as both excretion and osmoregulation· explain the adaptations of different animals in their respective environment· answer all topic related questions | | |

Block 1: Computer Science Week 2

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|------------------|---|----------------------------------|
| Week 2 5hrs | July 6 – July 11 | Chapter#1:OPERATING SYSTEM <ul style="list-style-type: none"> · Single user and multiuser operating system · Operating system functions · Relevant Ex Questions at the end of Unit | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| Week 2 5 hrs | Chapter#1: OPERATING SYSTEM Students will be able to <ul style="list-style-type: none"> · differentiate between single-user and multi-user operating system · describe the different functions of operating system | Recall the previous knowledge about the concept taught in previous classes. <ul style="list-style-type: none"> · Read all important definitions and topics given in textbook · Use Computer, Laptop, Tabs /smart phone to go over the internet and search on Google about the Working of different functions of Operating system. · Gather information about Different functions of operating System. https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.1&v=cs-os-24b https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.2&v=cs-os-3 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.2&v=cs-os-3a https://www.youtube.com/watch?v=T3cnK8vK2IA https://www.cs.uic.edu/~jbell/CourseNotes/OperatingSystems/13_1_OSystems.html https://www.youtube.com/watch?v=ZQWwFtI0YN4 | <ul style="list-style-type: none"> – Textbook of Computer Science Grade 12 – National Book Foundation Islamabad As Federal Textbook Board- Islamabad pgs 14-17 – Exercise(MCQs Short Q/A, Long Q/A) Reference Links: <ul style="list-style-type: none"> – Watch the topic related videos on sabaq.pk Solve the practice test given with topics on sabaq.pk |


| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|-------------------|--|-----------|
| | | <p>https://www.youtube.com/watch?v=8Xh_laNvt4s</p> <p>Visit the above given links to</p> <ul style="list-style-type: none"> · See the examples of single and multiuser operating system. · See the Explanation of the following functions of operating system. <ul style="list-style-type: none"> § Process management § Memory management § File management § I/O management § Secondary Storage management § Network management § Protection management § Command Interpreter · Written work · After watching the videos Try to write 2-3 lines about the single user and multi user operating system by your own. · Write the answers of Questions given at the end of chapter Q2(vi) Q3(iv) | |

Block 1: Pakistan Studies Week 2

| Block / # of wks | Time line | Course Content Unit /Chapter name | Check list Complete or incomplete |
|------------------|-----------------|--|--------------------------------------|
| Week 2 | July 06-July 11 | Chapter 1. Genesis of Islamic Republic of Pakistan <ul style="list-style-type: none"> · The Aligarh Movement · Establishment of the All India Muslim League · The Khilafat Movement: Events and Outcomes | |

Syllabus Pack Block 1 (week 2)

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|--------------------------------|---|--|---|
| Week 2 1 hr. 40 mins | Chapter 1. Genesis of Islamic Republic of Pakistan <ul style="list-style-type: none"> · The Aligarh Movement · Establishment of the All India Muslim League · The Khilafat Movement: Events and Outcomes Objectives: By the end of the week /lessons Students will able to: <ol style="list-style-type: none"> 1. relate The Two Nation Theory with the innumerable efforts of Sir Sayed Ahmad Khan regarding education of the Muslims 2. identify the role of the | Reading and Understanding: Textbook Pages 8-15 <ul style="list-style-type: none"> · Recall previous knowledge and try to comprehend the social, economic, cultural and educational conditions of Muslims of India after 1857. · During this time some visionary leaders thought that that Muslims could get back their lost status only if they equip themselves with the modern education. · Highlight Sir Sayed Ahmad Khan's contributions in raising the standards of Muslim Education to make the Muslims aware of the fact that they should get the best and latest education to meet the coming challenges. · Try to understand why Sir Syed Ahmed Khan asked Muslims to get away from Politics when Indian National Congress was established in 1865. · Identify the event that lead to the establishment of the All India Muslim League in 1906 and understand the | <ul style="list-style-type: none"> · Textbook Page 8-15 · Photographs Aligarh University and Sir. Sayed Ahmed Khan · Map of the Subcontinent · Internet Written Work Q5 (7,8) page 27 Q6 (2,3,4,6,7) page 28 |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|-----------|
| | <p>Muslim League as the only Muslim representative party</p> <p>3. list down the important events of Khilafat movement</p> | <p>objectives of the Muslim League thoroughly.</p> <ul style="list-style-type: none"> • Explain the background of the Khilafat Movement and discuss about the Treaty of Sevres that was signed to decide the future of Ottoman Empire after World War II. • Relate the results and consequences of Khilafat Movement with this treaty and explain the role of Maulana Muhammad Ali Johar and Maulana Shaukat Ali, in activating the Khilafat Movement in India to support the Ottoman Empire or Khilafat in Turkey. •  Search internet and collect more information about the khilafat Movement and its link with the Ottomon Empire in Turkey. • Name the other important Muslim leaders who ran Non-Cooperation movement during that time to support the cause. <p>Written Work: Give short answers: Q5 (7,8) page 27 Give detailed answers: Q6 (2,3,4,6,7) page 28</p> | |

Subject: English– XII
Block 1: English Week 3

Session (2020-2021)

| # of wks / Study Hours | Week Dates | Course Content Unit /Chapter/Topics | Checklist Complete or Incomplete |
|--------------------------------|-------------------|---|-------------------------------------|
| Week 3 3 hrs 30 mins | July 13 - July 18 | <ul style="list-style-type: none"> Unit 1: Vision and Mission Reading Selection: 1.3 The Blades of Grass (poem) by Stephen Crane Applied Grammar: Parts of Speech / Types of Noun Applied Grammar Noun Phrases and Clauses | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|--|--|---|--|
| Week 3 3 hrs 30 min | Unit 1: Vision and Mission Reading Selection: 1.3 The Blades of Grass (poem) by Stephen Crane Students will be able to: <ul style="list-style-type: none"> analyze the poem critically and learn new vocabulary talk about the good deeds & paraphrase the poem scan the poem to find out the literary devices used answer the given questions | <ul style="list-style-type: none"> Recitation of the poem aloud. Learn new vocabulary & find their meanings. Study Questions: Understanding the Poem (pg 33) Connect title of the poem with the theme. Tap the given link for paraphrasing guidelines or consult FBISE prescribed grammar book for notes on paraphrasing & critical appreciation of the poem. Concentrate on indicating the symbols, poetic techniques, imagery and figurative Language used in the poem. Ref: Language Study, Q11 page 38 Written work Paraphrasing of the poem. End of Unit Exercise – answer the Qs | <ul style="list-style-type: none"> Intermediate English For Class XII (KPTBP) (pgs 32-33) Dictionary Complete Edition Part I Intermediate English Simple Grammar & Composition by Prof. Zia-ur-Rahman Khan Refer section 2.2 for paraphrasing guidelines https://sabaq.pk/video-page.php?sid=federal-english-11th-2.2&v=e-9-10-paraphrasing-2 |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|--|
| | <p>Unit 1: Continued..... Applied Grammar: Parts of Speech / Types of Noun</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> · revise parts of speech & their usage in sentences · define & identify types of Noun · do practice exercises correctly | <ul style="list-style-type: none"> · Revise all parts of speech with explanation & examples. Tap the links. · Study explanation of Noun & its kinds from the textbook. Common, Proper; Collective /Concrete, Abstract Masculine, Feminine; Singular and Plural Nouns (pgs 10-20) · Ref: Language Study 1.4: The Noun: Kinds of Nouns. <p>Written work:</p> <ul style="list-style-type: none"> · Practice of concepts through Ex 1 and 2 (pgs 10 and 12) · Online Practice test 1.1 & 1.2 | <ul style="list-style-type: none"> · Intermediate English For Class XII (KPTBP) (Pgs 8-20) · High School English Grammar & Composition Multicolour Edition by Wren & Martin (2016 Edition) (pgs 6-15) · https://sabaq.pk/chapter-page.php?vq=federal-english-11th&vsq=federal-english-11th-1 · 1.1: Parts of Speech (Introduction) (<u>Practice Test</u>) · 1.2: Types of Nouns (<u>Practice Test</u>) |
| | <p>Unit 1 Continued..... Applied Grammar Noun Phrases and Clauses</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> · identify noun phrases and clauses · practice the concept by solving the given exercise | <ul style="list-style-type: none"> · Watch you tube lesson on Noun Clause to get the concept with explanation & examples. · Ref: Language Study 1.5 (<i>Noun Phrases and Clauses</i>) (pgs 27-31) Practice of concept through: Language Study: Ex 1 and 2 · Ref: Language Study 1.6 <i>Noun Clauses</i> (pgs 33-38) Practice of concept through Language Study: Ex 1 , 2 3 and 4 (pgs 34-35; 37-38) · Solve online printable worksheets in register | <ul style="list-style-type: none"> · Intermediate English For Class XII (KPTBP) (pgs 27-31) (pgs 33-38) · Lesson on Noun Clause · https://www.youtube.com/watch?v=9SrEEPt4MQA · Practice Worksheet |

| | | | |
|---------------------------|---|-------------------|----------------------|
| چیک لسٹ مکمل / آہل کام | نصیبی مواد موضوع: سبق / نظم / غزل کا نام | ہفتے / دن | ہفتے کا مطالقی وقت |
| | جواب شکوہ (نظم) شعری اصطلاحات | 13 لائی - 18 لائی | تہ نمبر 3 4 گھنٹے |

سلیڈس پیک بلاک 1 (تیسرا ہفتہ)

| ذبح | طریقہ تدریس | موضوعات / مقاصد | فتہ نمبر / وقت |
|---|---|---|-----------------------|
| ارو (لازمی) ہارہویں جماعت کے لیے صفحات 187 تا 193 | ☆ طلباء علامہ اقبال کے تعاف کو بغو چھیں اور جو نکت سمجھ نہ آئیں انہیں خط کشید کریں۔ ☆ اسکل کھلنے پر یلانی معلمہ معلم سے ان سے متعلق آن لائن رہنمائی حاصل کریں۔ ☆ نظم کی پڑھائی کریں اور مشکل الفاظ و ترکیب کے لیے لغت کا استعمال کریں۔ ☆ نظم کے اشعار کو سمجھیں اور ان کا مفہوم سمجھ کر مرند کی تشریح دیے گئے خکے کی مد سے کریں۔ ☆ تشریح کرتے ہوئے اپنی آسانی کے لیے شعر بلند کو پیراگراف میں تقسیم کر لیں۔ ☆ طلباء گذشتہ جماعت میں نظم / غزل کی تشریح کرتے آئیں، ہی طریقے اور جماعت کے معیار کو مد نظر رکھ کر تشریح کی جائے۔ ☆ تشریح کرتے ہوئے آیت، احادیث اور اشعار کی مثالیں ہی جائیں۔ ☆ نظم کا نام _____ جواب شکوہ ☆ شعر کا نام _____ علامہ اقبال ☆ لغت ☆ تشریح | نظم: جواب شکوہ طلباء قابل ہوں گے کہ: 1 علامہ اقبال تعاف کو پڑھ کر سمجھ سکیں۔ 2 نظم کو پڑھ کر اس کا مفہوم سمجھ سکیں۔ 3 مشقی سوالات اور تشریح کر سکیں۔ 4 صنعت تفریق سے آگاہ ہو سکیں۔ | فتہ نمبر 3 4 گھنٹے |

| ذبح | طریقہ تدریس | موضوعات / مقاصد | نقشہ نمبر / وقت |
|-------------|--|---|-----------------|
| | <p>☆ نظم کی تشریح اور مشقی سوالات کے جوابات اپنے لفظ میں تحریر کریں۔</p> <p>☆ طلبہ صفحہ نمبر 92 صنعت تفریق کو غوسے پڑھیں اور فق کو مد نظر رکھتے ہوئے نظم میں تین ایسے اشعار تلاش کریں جن میں صنعت تفریق کا استعمال کی گیا ہو۔</p> <p>سرمی: طلبہ علامہ اقبال کی مشہور نظمیں شکوہ اور جواب شکوہ کا مطالعہ کریں اور دونوں میں سے اپنے پسندیدہ دو اشعار لکھیں۔</p> | | |
| قوعد کی کتب | <p>☆ طلبہ گذشتہ جماعت میں مختلف شعری اصطلاحات مصرع شعری، مطلع مقطوع قافیہ ردیف تلمیح وغیرہ پڑھ چکے ہیں ان شعری اصطلاحات کو مد نظر رکھتے ہوئے ایک ایک شعر لکھیں جن میں یہ اصطلاحات استعمال ہوئی ہیں۔</p> | <p>شعری اصطلاحات</p> <p>طلبہ اس قابل ہیں گے کہ:</p> <p>۱۔ شعری اصطلاحات کا اعادہ کر سکیں۔</p> | |

Block 1: Mathematics Week 3

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------------|-----------------|--|----------------------------------|
| Week 3 5 : 30 Hrs | Jul 13 – Jul 18 | Unit 1 1.1 Continuous and Discontinuous Functions 1.6.1 One-sided limits 1.6.2 Criterion for Existence of limit of a function 1.6.3 Continuity of a function at a number 1.2 Graphs 1.7.1 Graphs of the Exponential Function $f(x)=a^x$ 1.7.2 Graphs of the Exponential Function $f(x)=e^x$ 1.7.3 Graphs of Common Logarithmic Function $f(x)=lgx$ 1.7.4 Graphs of Natural Logarithmic Function $f(x)=lnx$ 1.7.5 Graphs of Implicit Functions a) Circle of the form $x^2 + y^2 = a^2$ b) Ellipse of the form $(x^2/a^2) + (y^2/b^2) = 1$ 1.7.6 Graphs of parametric equations 1.7.7 Graphs of Discontinuous Function 1.7.8 Graphical Solution of the Equations i) $\cos x = x$ ii) $\sin x = x$ $\tan x = x$ | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|--------------------------------|---|---|---|
| Week 3 5 : 30 Hrs | Unit 1 1.3 Continuous and Discontinuous Functions 1.6.4 One-sided limits 1.6.5 Criterion for | Read the textbook from Ex 1.4 & 1.5 (Pages 28 – 40) to cover the desired amount of content for the week: <ul style="list-style-type: none"> · Revise the Sandwich theorem. · Comprehend the difference of right hand and left hand limit. · Differentiate where left and right hand limit applied. · Study the criterion for the existence of limit of a | <ul style="list-style-type: none"> · Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore (Pages 28 – 40) · Laptop / Tab / Smart Phone |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|---|
| | <p>Existence of limit of a function</p> <p>1.6.6 Continuity of a function at a number</p> <p>1.4 Graphs</p> <p>1.7.9 Graphs of the Exponential Function $f(x)=a^x$</p> <p>1.7.10 Graphs of the Exponential Function $f(x)=e^x$</p> <p>1.7.11 Graphs of Common Logarithmic Function $f(x)=lgx$</p> <p>1.7.12 Graphs of Natural Logarithmic Function $f(x)=lnx$</p> <p>1.7.13 Graphs of Implicit Functions</p> <p>c) Circle of the form $x^2+y^2= a^2$</p> <p>d) Ellipse of the form $(x^2/a^2)+(y^2/b^2) = 1$</p> <p>1.7.14 Graphs of parametric equations</p> <p>1.7.15 Graphs of Discontinuous Function</p> <p>1.7.16 Graphical Solution of the Equations</p> <p>iii) $\cos x=x$</p> <p>iv) $\sin x=x$</p> <p>v) $\tan x=x$</p> | <p>function.</p> <ul style="list-style-type: none"> • Identify why the function is continuous and discontinuous. • Read the examples on pg. no. 29 for understanding whether the function is continuous and discontinuous. • Do the Qs 1 – 6 of Ex 1.4. • Comprehend the graphs and use of the following with relevant examples. <ul style="list-style-type: none"> Ø a^x Functions Ø e^x Functions Ø Common Logarithmic Functions: lgx Ø Natural Logarithmic Functions: lnx Ø Implicit Functions <ul style="list-style-type: none"> (a) Circle of the form $x^2+ y^2= a^2$ (b) Ellipse of the form $(x^2/ a^2)+ (y^2/b^2) = 1$ Ø Parametric equations Ø Discontinuous Function Ø Graphical Solution of the Equations <ul style="list-style-type: none"> (c) $\cos x=x$ (d) $\sin x=x$ (e) $\tan x=x$ • Do Qs 1 – 4 of Ex 1.5. | <ul style="list-style-type: none"> • Watch the relevant videos on sabaq.pk • Watch these additional videos; • https://www.youtube.com/watch?v=BIQrnv-vvx8 • https://www.youtube.com/watch?v=Fc4ZleQ57Hw • https://www.youtube.com/watch?v=xmjy-0Txql8 • https://www.youtube.com/watch?v=ZrfI6MkTWTY |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|------------------|-----------|
| | <p>After studying these topics the students should be able to:</p> <ul style="list-style-type: none">· recognize and determine the right and left hand limit· differentiate between continuous and discontinuous functions and their graphs· identify and draw the graphs of different functions | | |

Block 1: Physics Week 3

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------------|-----------------|---|----------------------------------|
| Week 3 5 : 30 hrs | Jul 13 – Jul 18 | UNIT # 11: Electrostatics 11.1 Electric potential <ul style="list-style-type: none"> · Electric potential energy and potential due to a point charge 11.2 Field and potential gradient 11.3 The Electron volt (eV) Examples 11.4-11.8 Comprehensive Questions 4-7 Conceptual Questions 1-9 Numerical Problems 5-11 11.4 Capacitor 11.10.1 Capacitance of a capacitor and its unit 11.10.2 Capacitance of a parallel plate capacitor 11.10.3 Combinations of Capacitors <ul style="list-style-type: none"> · Series Combination of Capacitor · Parallel Combination of Capacitor 11.5 Electric Polarization 11.6 Energy stored in a capacitor 11.7 Charging and discharging of capacitor <ul style="list-style-type: none"> · Time constant Examples 11.9-11.10 MCQs Comprehensive Questions 8-10 Conceptual Questions 10-14 Numerical Problems 12-18 | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------------|---|---|--|
| Week 3 5 : 30 Hrs | UNIT # 11: Electrostatics 11.6 Electric potential <ul style="list-style-type: none"> · Electric potential energy and potential due to a point charge 11.7 Field and potential gradient 11.8 The Electron volt (eV) Examples 11.4-11.8 Comprehensive Questions 4-7 Conceptual Questions 1-9 Numerical Problems 5-11 11.9 Capacitor 11.10.1 Capacitance of a capacitor and its unit 11.10.2 Capacitance of a parallel plate capacitor 11.10.3 Combinations of Capacitors <ul style="list-style-type: none"> · Series Combination of Capacitor · Parallel Combination of Capacitor 11.10 Electric Polarization 11.11 Energy stored in a capacitor | Read the textbook from pgs. 28-51 to fulfill the following objectives and enable yourself to: <ul style="list-style-type: none"> · define the unit of potential · solve problems by using the expression $V = W/q$ · describe that the electric field at a point is given by the negative of the potential gradient at that point · solve problems by using the expression $E = V/d$ · derive an expression for electric potential at a point due to a point charge · calculate the potential in the field of a point charge using the equation $V = 1/4\pi\epsilon_0 q/r$ · Define and become familiar with the use of electron volt. Solve the following questions and problems using guidance from attached online links: Written Work Examples 11.4-11.8 Comprehensive Questions 4-7 Conceptual Questions 1-9 <ul style="list-style-type: none"> · solve problems by using $C=Q/V$ · describe the functions of capacitors in simple circuits · solve problems using formula for capacitors in series and in parallel · explain the polarization of dielectric of a capacitor · prove that energy stored in a capacitor is $U=1/2QV$ | <ul style="list-style-type: none"> · Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar · Laptop / Tab / Smart Phone · Watch the syllabus specific and relevant videos on sabaq.pk · Watch these additional videos; · https://www.youtube.com/watch?v=5hFC9ugTGLs · https://www.youtube.com/watch?v=X4EUwTwZ110 |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|-----------|
| | 11.13 Charging and discharging of capacitor · Time constant Examples 11.9-11.10 MCQs Comprehensive Questions 8-10 Conceptual Questions 10-14 Numerical Problems 12-18 | and hence $U = \frac{1}{2}CV^2$ · Explanation and derivation of energy stored in a capacitor $U = \frac{1}{2}QV$ and hence $U = \frac{1}{2}CV^2 = \frac{1}{2}Q^2/C$ and energy density $u = \frac{1}{2}\epsilon_0\epsilon_r E^2$ · Explanation of charging and discharging of capacitor and illustration of and discussion on time constant. Solve the following questions and problems using guidance from attached online links: Written Work Examples 11.9-11.10 MCQs Comprehensive Questions 8-10 Conceptual Questions 10-14 Numerical Problems 12-18 | |

Block 1: Chemistry Week 3

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|------------------------|-------------------|--|----------------------------------|
| Week 3 5 hrs 30 min | July 13 – July 18 | Chapter#16 : <u>Hydrocarbons</u> <ul style="list-style-type: none"> · Conjugation · Isomerism · Chiral Center · Carbon Based Chiral Centers · Optical Activity · Optical Isomerism · Optical Isomerism Of Tartaric Acid · Stereoisomerism- Geometric Isomerism · Structural Isomerism · Chain Isomerism · Position Isomerism · Functional Group Isomerism · Metamerism · Tautomerism · Alkynes · Nomenclature IUPAC System · Relative Stability · Structure · Physical Properties · Preparation Of Alkynes · Reactivity · Acidity Of Terminal Alkynes · Addition Reactions Of Alkynes · Quick Quizzes · Exercise questions related to the topics | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|--------------------------------------|---|--|---|
| Week 3 5 hrs 30 min | Chapter#16 : <u>Hydrocarbons</u> 16.5.7: Conjugation 16.6: Isomerism 16.6.1: Chiral Center 16.6.2 : Carbon Based Chiral Centers 16.6.3 : Optical Activity 16.6.4 : Optical Isomerism <ul style="list-style-type: none"> · Optical Isomerism Of Tartaric Acid 16.6.5 : Stereoisomerism- Geometric Isomerism 16.6.6: Structural Isomerism <ul style="list-style-type: none"> · Chain Isomerism · Position Isomerism · Functional Group Isomerism · Metamerism · Tautomerism 16.7: Alkynes 16.7.1: Nomenclature IUPAC | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline · Study the Tables and figures very attentively and try a Self-Assessment test to understand the concepts.. · Study Society Technology And Science, Tables & figures, Points to remember to understand the concepts · Study and answer Quick Quizzes given in referred pages with topics. <p><u>Written work</u></p> <ul style="list-style-type: none"> · Students to mark and solve all topic related questions and problems given in Exercise · All written work to be submitted and get checked by the Subject Teacher. <p><u>Let's Explore:</u> The students to find out the answers by themselves using internet search and record their finding on registers/loose sheets</p> | <ul style="list-style-type: none"> – Textbook of Chemistry Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad (pgs135-151&171-173) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises <p>Reference Links: Watch the topic related videos on</p> <ul style="list-style-type: none"> – sabaq.pk – elearn.gov.pk – https://en.wikipedia.org/wiki/Conjugated_system – study.com/academy/lesson/isomers-definition-types-examples – https://study.com/academy/lesson/isomers-definition-types-examples.html – https://www.chem.fsu.edu/schwartz/.../Reactions/alkynes |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|-----------|
| | <p>System 16.7.2 : Relative Stability 16.7.3 : Structure 16.7.4 : Physical Properties 16.7.5: Preparation Of Alkynes By Elimination Reactions 16.7.6 : Reactivity 16.7.6 : Acidity Of Terminal Alkynes 16.7.7 : Addition Reactions Of Alkynes (Hydrogenation, Dissolving Metal Reduction, Hydro-halogenation, Rearrangement Of Alcohols, Bromination&Ozonolysis) • Activity • Quick Quizzes • Related Exercise Questions</p> <p>Student will be able to:</p> <ul style="list-style-type: none"> • define conjugation and explain conjugated system • define and explain with suitable example the terms isomerism, stereoisomerism, and structural isomerism • differentiate between structural and stereoisomerism • explain what is meant by | <ul style="list-style-type: none"> • Is Tautomerism a resonance? • What is the main difference between Tautomerism and Metamerism? • What is the relationship between keto and enol tautomer? • What is a tautomeric shift? • Why alkynes are called acetylenes? • What is the difference between alkenes and alkynes? • What are the most reactive alkanes, alkenes or alkynes? • Is a triple bond more stable? | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|------------------|-----------|
| | <p>chiral center and describe that such a center give rise to optical isomerism</p> <ul style="list-style-type: none">· describe the nomenclature and preparation of alkynes· describe the relative stability of Alkynes· explain the acidity of Alkynes· explain the reactions of Alkynes· do the quick quizzes and activity independently· solve the relevant questions of exercise chapter | | |

Block 1: Biology Week 3

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|------------------------|-------------------|---|----------------------------------|
| Week 3 5 hrs 30 min | July 13 – July 18 | Chapter 15: <u>HOMEOSTASIS</u> Ø Thermoregulation Ø Exercise Questions Chapter 16: <u>SUPPORT AND MOVEMENT</u> <u>/LOCOMOTION</u> Ø Human skeleton Ø Disorders of Skeleton Ø Exercise Questions | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------|---|---|---|
| Week 3 5 hrs 30 min | Chapter 15: <u>HOMEOSTASIS</u> · Dialysis · Kidney Transplant Process and problems Ø Thermoregulation · Exercise Chapter 16: <u>SUPPORT AND MOVEMENT</u> <u>/LOCOMOTION</u> | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline · Study all the figures and tables given with topics to understand the concepts. · Read all interesting Extra information and ‘Science Tidbits’ boxes. · Read all the information given in ‘Skills: Analyzing, Interpreting and communication’ boxes. | <ul style="list-style-type: none"> – Textbook of Biology Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad (pg.35-43) (44-55) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|---|
| | <p>Ø Human skeleton</p> <ul style="list-style-type: none"> • Structure of Bone • Structure of Cartilage • Divisions of Human Skeleton (Axial skeleton and Appendicular skeleton) • Joints <p>Ø Disorders of Skeleton</p> <ul style="list-style-type: none"> • Common disorders of skeleton • Bone fractures • Bone repair • Injuries to joints • First aid treatment for disorders of skeleton <p>• Student will be able to:</p> <ul style="list-style-type: none"> • explain the structure of bone and cartilage • identify the main divisions of human skeleton • list the bones of axial and appendicular skeleton in man • explain axial and Appendicular skeleton • describe joints and types of joints with examples • describe the disorders of skeleton • explain bone repairing process • explain the different causes | <p>Written work</p> <ul style="list-style-type: none"> • Students to mark and solve all topic related questions given in Exercise . • Draw diagrams related to questions where necessary • All written work to be submitted and get checked by the Subject Teacher. | <p>Reference Links:</p> <p>Watch the topic related videos on</p> <ul style="list-style-type: none"> - sabaq.pk - elearn.gov.pk - https://bio.libretexts.org/Bookshelves/Introductory_and_General_Biology/Book%3A_Introductory_Biology_(CK-12)/13%3A_Human_Biology/13.11%3A_Structure_of_Bones - https://www.khanacademy.org/science/high-school-biology/hs-human-body-systems/hs-the-musculoskeletal-system/v/cartilage - https://www.youtube.com/watch?v=9jZ27LtkEgs - https://study.com/academy/lesson/common-disorders-of-the-skeletal-system.html |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|----------------------------------|--|-------------------------|------------------|
| | <ul style="list-style-type: none">of injuries to joints· explain first aid treatment for bone fracture and dislocation of joints· Describe the disorders of skeletal system· Explain the steps of First aid treatment for disorders of skeleton | | |

Block 1: Computer Science Week 3

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-------------------|---|----------------------------------|
| Week 3 5hrs | July 13 – July 18 | Chapter#1:OPERATING SYSTEM Systems <ul style="list-style-type: none"> · Process · Various types of process · Thread and process · Multithreading · Multitasking · Multiprogramming · Multiprocessing · Relevant Ex Questions at the end of Unit. | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|--|
| Week 3 5 hrs | Chapter#1: OPERATING SYSTEM Students will be able to <ul style="list-style-type: none"> · understand the concept of process management · describe various states of a process. · differentiate between thread and process. | Recall the previous knowledge about the concept taught in previous classes. <ul style="list-style-type: none"> · Read all important definitions and topics given in textbook · Use Computer, Laptop, Tabs /smart phone to go over the internet and search on Google about the Process Management and Thread. · Gather information about the <ul style="list-style-type: none"> § Thread and process § Multithreading § Multitasking § Multiprogramming § Multiprocessing https://sabaq.pk/videopage.php?sid=federal-computer%20science- | <ul style="list-style-type: none"> – Textbook of Computer Science Grade 12 – National Book Foundation Islamabad As Federal Textbook Board- Islamabad pgs 17-20 – Exercise(MCQs Short Q/A,Long Q/A) Reference Links: <ul style="list-style-type: none"> – Watch the topic related videos on sabaq.pk |



| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|---|
| | <ul style="list-style-type: none"> · understand the concept and features of <ul style="list-style-type: none"> § Thread and process § Multithreading § Multitasking § Multiprogramming § Multiprocessing | <p>12th-1.3&v=cs-os-33 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.3&v=cs-os-34 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.3&v=cs-os-35 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.3&v=cs-os-36 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.3&v=cs-os-37 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-1.3&v=cs-os-38</p> <p>Visit the above given links to</p> <ul style="list-style-type: none"> · See the concept of process. · Observe the importance of process management by giving different examples. · See the various states of a process with the help of diagram. · See the difference between process and thread. · Observe the comparison of process and thread given on pg#19 · See the features and importance of multithreading, multitasking, multiprogramming and multiprocessing. <ul style="list-style-type: none"> · Activity · Find out which type of Operating system is installed on your home computer or laptop. · Observe the installation procedure of common types of operating system through animation/videos · Written work · Write the answers of Questions given at the end of chapter Q2(viii,ix& x) Q3(v) | Solve the practice test given with topics on sabaq.pk |

Block 1 : Pakistan Studies Week 3

| Block / # of wks | Time line | Course Content Unit /Chapter name | Check list Complete or incomplete |
|------------------|-----------------|--|--------------------------------------|
| Week 3 | July 13-July 18 | Chapter 1. Genesis of Islamic Republic of Pakistan <ul style="list-style-type: none"> · The Pakistan Resolution · The Cripps' Mission · Elections of 1945-46 · The Cabinet Mission Plan · The Simla Conference · Formation of Interim Government · The Third June Plan · Indian Independence Act · Emergence of Pakistan | |

Syllabus Pack Block 1 (week 3)

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|--|
| Week 3 1 hr. 40 mins | Chapter 1. Genesis of Islamic Republic of Pakistan <ul style="list-style-type: none"> · The Pakistan Resolution · The Cripps' Mission · Elections of 1945-46 · The Cabinet Mission Plan · The Simla Conference · Formation of Interim Government · The Third June Plan | Reading and Understanding: Textbook Pages 15-24 <ul style="list-style-type: none"> · Identify the Historical Background of the Pakistan Resolution in the light of the Two Nation Theory and list down its Salient Features. · Analyze the importance of this resolution as it gave a direction to the political struggle of the Muslims. · Explore the importance of the Cripps Mission and the proposals that were highlighted in it. · Elaborate the reaction of different political parties and note down the reasons why they rejected it. · Thoroughly read about the Elections of 1945 -46 and identify two major issues that were included in the | <ul style="list-style-type: none"> · Page (15-24) · Photographs Of famous leaders of the independence movement · Internet <p>Written Work Q5 (5,6,9,10) pg 27</p> |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|---|
| | <ul style="list-style-type: none"> • Indian Independence Act • Emergence of Pakistan <p>Objectives: By the end of the week /lessons Students will able to:</p> <ol style="list-style-type: none"> 1. identify the reference of Pakistan Resolution to Pakistan Movement 2. discuss the proposal of the Cripps Mission 1942 3. list the recommendations of the Cabinet Mission Plan 4. analyze the importance of Simla Conference in the struggle of independence 5. figure out the role of the Interim Government in the making of Pakistan 6. highlight the importance of the Third June Plan in the struggle for independence. 7. identify the role of Indian Independence act during the course of struggle for Independence | <p>manifesto.</p> <ul style="list-style-type: none"> • Comprehend the role of the Cabinet Mission Plan, and how the mission tried to make an effort to bring about the two major parties; All India Muslim League and Congress to a conciliatory formula acceptable to both parties. • Talk about the importance of the Simla Conference in the light of the struggle for independence and list down the names leaders from Muslim League who attended it. <p> Search on internet to find out how Lahore Resolution, 1940 got its name changed from 'Lahore Resolution' to 'Pakistan Resolution'. Record your finding in a folder.</p> <ul style="list-style-type: none"> • Read in detail the working of the Interim Government and how it was formed with the consent of the major political parties of the subcontinent. • Understand the concept that formation of the Interim Government was the first step towards the implementation of the Cabinet Mission Plan. • Try to understand the rationale behind the Third June plan presented in 1947 and highlight its importance in the struggle for independence. • Learn about the Indian Independence Act and how it announced that British rule would come to an end by August 15, 1947 in the subcontinent. • Elaborate on the emergence of a new state called, "Pakistan", after such a long struggle to get the independence. <p> Search on internet to watch a video in which Lord</p> | <p>Q6 (5,8,9,10,11,12,13,14,15) pg 28</p> |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|-------------------------------|--|-----------|
| | | Mountbatten is announcing the independence for India and Pakistan Written Work: Give short answers: Q5 (5,6,9,10) page 27 Give detailed answers: Q6 (5,8,9,10,11,12,13,14,15)pg 28 | |

Subject: English– XII
Block 1: English Week 4

Session (2020-2021)

| # of wks / Study Hours | Week Dates | Course Content Unit /Chapter/Topics | Checklist Complete or Incomplete |
|--------------------------------|-------------------|---|-------------------------------------|
| Week 4 3 hrs 30 mins | July 20 - July 25 | <ul style="list-style-type: none"> • Applied Grammar Correction of errors • Applied Grammar Kinds of Sentences (Declarative, imperative, interrogative, optative, exclamatory) • Writing Skill: Report Writing Write a report to the Editor of a local Newspaper on inflation during the month of Ramazan | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|---------------------------------------|--|---|---|
| Week 4 3 hrs 30 mins | <p>Applied Grammar Correction of errors</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • identify the errors in the given passage • correct the errors • rewrite the passage correctly | <ul style="list-style-type: none"> • Pick 2/3 passages from FBISE past papers & try to solve them. • Read the passage many times, identify the types of errors that can be found in sentences within a paragraph (syntax and grammatical) <p>Written work:</p> <ul style="list-style-type: none"> • Underline them and then rewrite the passage correctly. • Paragraph correction Worksheet are available on the internet for Beginning, Intermediate & advanced level | <ul style="list-style-type: none"> • Complete Edition Intermediate (Part II) English Simple by Prof. Zia-ur-Rahman Khan (Pgs 572-588) • FBISE Past Papers • Practice worksheets available on internet • https://www.englishforeveryone.org/Topics/Paragraph-Correction.html |
| | <p>Writing Skill: Report Writing</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • write according to | <ul style="list-style-type: none"> • Apprise yourself with the format of report writing. Refer suggested web link. • Read some sample reports from the internet and newspaper. • Note down salient features of report writing before | <ul style="list-style-type: none"> • Internet • https://grammar.yourdictionary.com/style-and-usage/report-writing-format.html • Newspaper |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | <p>the correct format of report writing .</p> <ul style="list-style-type: none"> use critical thinking & creativity to write a report on the assigned topic | <p>writing a report on the given topic.</p> <ul style="list-style-type: none"> Write a report to the Editor of a local Newspaper on inflation during the month of Ramazan. Students to critically analyze in the light of reality & their personal experience | |
| | <p>Applied Grammar Kinds of Sentences Students will be able to :</p> <ul style="list-style-type: none"> identify different kinds of Sentences: Declarative, Imperative, Interrogative, Optative & Exclamatory Sentences | <ul style="list-style-type: none"> Refer prescribed books by Federal Board to learn about 5 types of sentences, their structure, function & use with examples. 1. Declarative sentence (statement) 2. Interrogative sentence (question) 3. Imperative sentence (command) 4. Exclamatory sentence (exclamation) 5. Optative sentences (express hope, wish, keen desire or a prayer. Generally ends with an exclamation mark) Study examples for each type & compare different types of sentences. Written work: Make notes with 10 sentences for each type of sentences. Solve online quizzes & download prepared worksheets from the internet for practice test. | <ul style="list-style-type: none"> Internet to download Worksheets, Online quiz & practice test Complete Edition Intermediate (Part I) English Simple by Prof. Zia-ur-Rahman Khan Page 639 |

| | | | |
|---------------------------|---|-------------------|----------------------|
| چیک لسٹ مکمل / آہل کام | نصیبی مواد موضوع: سبق / نظم / غزل کا نام | ہفتے / دن | ہفتے کا مطالقی وقت |
| | غزل علامہ اقبال صنعتِ تفضا، صنعتِ تجنیس | 20 لائی - 25 لائی | تہ نمبر 4 4 گھنٹے |

سیکسٹھ ایک بلاک 1 (چوتھا ہفتہ)

| ذکر | طریقہ تدبیر | موضوعات / تقاصد | فتہ نمبر / وقت |
|---|---|---|-----------------------|
| ارو (لازمی) ہارہویں جماعت کے لیے صفحات 222 تا 224 | ☆ طلباء علامہ اقبال کے تعارف کو بغور چھیں اور جو نکات سمجھ نہ آئیں انہیں خط کشید کریں۔ ☆ اسکل کھلنے پر یلانی معلمہ / معلم سے ان سے متعلق آن لائن رہنمائی حاصل کریں۔ ☆ غزل کی پڑھائی کریں اور مشکل الفاظ و ترکیب کے لیے لغت کا استعمال کریں۔ ☆ غزل کے اشعار کو سمجھیں اور ان کا مفہوم سمجھ کر مرشعہ کی تشریح دیے گئے خکے کی مدد سے کریں۔ ☆ طلباء گذشتہ جماعت میں نظم / غزل کی تشریح کرتے آئیں، ہی طریقے اور جماعت کے معیار کو مد نظر رکھ کر تشریح کی جائے۔ تشریح کرتے ہوئے آیت، احادیث اور اشعار کی مثالیں ہی جائیں۔ ۔ غزل ----- ۔ شعر کا نام ----- علامہ اقبال ۔ لغت ۔ تشریح ۔ طلباء صفحہ نمبر 224 پر دی گئی غزل کی تعریف پڑھیں اور زبانی یاد کریں۔ ۔ طلباء گذشتہ جماعت میں صنعتِ تفضا پڑھ چکے ہیں۔ اس کا اعادہ کرتے ہوئے اس غزل میں سے صنعتِ تفضا کا کوئی شعر | غزل: علامہ اقبال طلباء اس قابل ہوں گے کہ: ۱۔ علامہ اقبال کے تعارف کو پڑھ کر سمجھ سکیں۔ ۲۔ غزل کو پڑھ کر اس کا مفہوم سمجھ سکیں۔ ۳۔ مشقی سوالات اور تشریح کر سکیں 4۔ غزل کی تعریف کر سکیں۔ | فتہ نمبر 4 4 گھنٹے |

| ذبح | طریقہ تدریس | موضوعات / مقاصد | نقشہ نمبر / وقت |
|-------------|--|--|-----------------|
| | تلاش کر کے لکھیں۔ | | |
| قوعد کی کتب | <p>☆ کلام میں ایسے الفاظ جو ملا کے لحاظ سے تو ایک جیسے ہوں مگر دونوں کا مطلب جدا ہو تجنیس کہلاتا ہے۔</p> <p>☆ جب کسی شعر میں ایسے الفاظ استعمال کیے جائیں جو ایک دوسرے کے متضاد ہوں تو اسے صنعت تضاد کہتے ہیں۔</p> <p>نہ گئی ہے یا کئی طوفا ہے</p> <p>ہم تو اس جینے کے ہاتھ مر چلے</p> <p>اس شعر میں جینا اور مرنا صنعت تضاد ہے۔</p> <p>☆ طلبا صنعت تضاد اور صنعت تجنیس کی و شعری مثالیں تحریر کریں۔</p> | <p>صنعت تضاد اور صنعت تجنیس</p> <p>طلبا اس قابل ہوں گے کہ:</p> <p>۱۔ تحریر میں اصلاً (تجنیس اور تضاد)</p> <p>کا مور استعمال کر سکیں۔</p> | |

Block 1: Mathematics Week 4

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-----------------|--|----------------------------------|
| Week 4 5Hrs | Jul 20 – Jul 25 | Unit – 2 Differentiation 2.1 Introduction 2.1.1 Average rate of change 2.1.2 Derivative of a function 2.2 Finding $f'(x)$ from definition of the derivative 2.2.1 Derivative of x^n , where $n \in \mathbf{Z}$ 2.2.2 Differentiation of expressions of the types: $(ax + b)^n$ and $\frac{1}{(ax + b)^n}$ where $n=1, 2, 3, \dots$ | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| Week 4 5 Hrs | Unit – 2 Differentiation 2.3 Introduction 2.1.3 Average rate of change 2.1.4 Derivative of a function 2.4 Finding $f'(x)$ from definition of the derivative 2.2.3 Derivative of x^n , where $n \in \mathbf{Z}$ 2.2.4 Differentiation of expressions of the types: | Read the textbook from Ex 2.1 – 2.2 (Page No 41 – 53) to cover the desired amount of content for the week: <ul style="list-style-type: none"> Read and comprehend the concept of differentiation and identify where its used in daily life. In differential calculus, we deal with the rate of change of a dependent variable with one or more independent variables so you are expected to define them both. Read the notation of the derivative and the mathematician name to the students regarding the notations. Comprehend the explained four steps of finding derivative by definition in the textbook Comprehend the procedure of finding derivative by the ab-initio method. Understand the power rule of derivation. | <ul style="list-style-type: none"> Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore (Page No 41 – 53) Laptop / Tab / Smart Phone Watch the relevant videos on sabaq.pk Watch these additional videos; https://www.youtube.com/watch?v=BcOPKQAZcn0 |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | <p>$(ax + b)^n$ and $\frac{1}{(ax + b)^n}$ where $n=1, 2, 3, \dots$</p> <p>After studying these topics the students should be able to:</p> <ul style="list-style-type: none"> · solve the equations differentiate between the dependent and independent variables · differentiate between average change and instantaneous change · define the derivative of a function and apply this concept to determine the derivatives of different functions using different methods | <ul style="list-style-type: none"> · Do the Qs 1 & 2 of Ex 2.1. · Comprehend the steps of taking derivative by the first Principle. · Do Q 1 of Ex 2.2. | <ul style="list-style-type: none"> · https://www.khanacademy.org/math/old-differential-calculus/basic-differentiation-dc/polynomial-functions-differentiation-dc/v/derivative-properties-and-polynomial-derivatives?modal=1 · https://www.youtube.com/watch?v=lvLpN1G1Ncg |

Block 1: Physics Week 4

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-----------------|---|----------------------------------|
| Week 4 5hrs | Jul 20 – Jul 25 | UNIT # 12: Current Electricity 12.1 Steady current 12.2 Drift velocity in a conductor · Electroencephalogram 12.3 Ohm's Law 12.4 Electrical resistance 12.4.1 Factors upon which resistance depends 12.5 Specific resistance or resistivity | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|--|
| Week 4 5Hrs | UNIT # 12: Current Electricity 12.1 Steady current 12.2 Drift velocity in a conductor · Electroencephalogram 12.3 Ohm's Law 12.4 Electrical resistance 12.4.2 Factors upon which resistance depends 12.5 Specific resistance or resistivity | Read the textbook from pgs. 61-72 to fulfill the following objectives and enable yourself to: · Explanation & illustration of electric current. · describe the concept of steady current · Explanation of mathematical expression of current. · Explanation, illustration and discussion on drift velocity of charges in a conductor. · state Ohm's law · define resistivity and explain its dependence upon temperature · Discussion on Electroencephalogram (EEG). · Solve example 12.1. & 12.2. · Explanation of electrical resistance and discussion on the factors upon which it depends. · Explanation of specific resistance | · Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar · Laptop / Tab / Smart Phone · Watch the syllabus specific and relevant videos on sabaq.pk · Watch these additional videos; https://www.youtube.com/watch?v=kYwNj9uauJ4 https://www.youtube.com/watch?v=8Posj4WMo0o |

Block 1: Chemistry Week 4

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|------------------------|-------------------|---|----------------------------------|
| Week 4 5 hrs 30 min | July 20 – July 25 | Chapter#16: <u>Hydrocarbons</u> <ul style="list-style-type: none"> · Benzene and substituted Benzenes Nomenclature · Common system of naming · IUPAC system of naming · Physical properties · Structure · Molecular orbital treatment of Benzene · Modern Representation of Benzene · Resonance, Resonance Energy and Stabilization · Resonance · Resonance Energy · Reactivity and Reactions · Addition reactions · Exercise questions related to the topics | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|--|
| Week 4 5 hrs 30 | Chapter#16: <u>Hydrocarbons</u> 16.8: Benzene and substituted Benzenes 16.8.1:Nomenclature (Mono Substituted Benzenes) | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark | <ul style="list-style-type: none"> – Textbook of Chemistry Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad <u>(pgs151-162 &171-173)</u> – Laptop / Tab / Smart Phone / internet |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|---|
| | <p>(Di Substituted Benzenes)</p> <ul style="list-style-type: none"> Common system of naming IUPAC system of naming <p>16.8.2: Physical properties</p> <p>16.8.3: Structure (Molecular Orbital Aspects)</p> <ul style="list-style-type: none"> Molecular orbital treatment of Benzene Modern Representation of Benzene <p>16.8.4: Resonance, Resonance Energy and Stabilization</p> <ul style="list-style-type: none"> Resonance Resonance Energy <p>16.8.5 : Reactivity and Reactions</p> <ul style="list-style-type: none"> Addition reactions (Catalytic Hydrogenation, Addition of Halogens, Oxidation reactions, catalytic oxidation, combustion, Ozonolysis, oxidation of side chain) Related Exercise Questions | <p>on the margin against them. The subject teacher can be asked to explain it to student on helpline</p> <ul style="list-style-type: none"> Study Tables and examples very attentively and try a Self-Assessment test to understand the concepts. Study and answer Quick Quizzes given in referred pages with topics. <p><u>Written work</u></p> <ul style="list-style-type: none"> Students to mark and solve all topic related questions and problems given in Exercise All written work to be submitted and get checked by the Subject Teacher. <p><u>Let's Explore:</u> <u>Let's Explore:</u></p> <p>The students to find out the answers by themselves using internet search and record their finding on registers/loose sheets</p> <ul style="list-style-type: none"> What is benzene used for in everyday life? What things contain benzene? What does benzene smell like? What are the hazards of benzene? Is resonance energy positive or negative for Benzene? | <ul style="list-style-type: none"> Self-Check Exercises <p>Reference Links: Watch the topic related videos on</p> <ul style="list-style-type: none"> sabaq.pk elearn.gov.pk http://chemguide.co.uk/basicorg/conventions/names3.html https://en.wikipedia.org/wiki/Benzene <p>https://www.chemguide.co.uk/basicorg/bonding/benzene2.html</p> |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|------------------|-----------|
| | <p>Student will be able to:</p> <ul style="list-style-type: none">• differentiate between the common system of naming and IUPAC system of naming• name substituted Benzene both with common system & IUPAC system• explain the structure (molecular orbital aspects) of Benzene• describe & justify which representation structure of Benzene is the best• explain the Resonance Structure, Resonance Energy and Stabilization of Benzene ring• explain the reactivity and reactions of Benzene• justify the difference between valence shell electrons and delocalized electrons• compare the reactivity of benzene with alkanes and alkenes• do the quick quizzes independently• solve the relevant questions of chapter | | |

Subject: Biology– XII
Block 1: Biology Week 4

Session (2020-2021)

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|--------------------------------------|--------------------------|---|----------------------------------|
| Week 4 5 hrs 30 min | July 20 – July 25 | Chapter 16: <u>SUPPORT AND MOVEMENT</u> <ul style="list-style-type: none"> · Muscles · Types of muscles · Structure of Skeletal Muscles · Muscle contraction -Sliding Filament Model · Antagonistic arrangement of skeletal muscles · Muscle Disorders Ø Exercise Questions Chapter 17: <u>Nervous Coordination</u> <ul style="list-style-type: none"> · Reading · Steps involved in Nervous Coordination · Neurons · Structure of Neuron · Reflex Arc · Nerve Impulse · Generation and transmission of Nerve Impulse · Velocities of Nerve Impulse Ø Exercise Questions | |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|--------------------------------------|--|---|--|
| Week 4 5 hrs 30 min | <p>Chapter 16: <u>SUPPORT AND MOVEMENT</u></p> <ul style="list-style-type: none"> • Muscles • Types of muscles • Structure of Skeletal Muscles • Muscle contraction -Sliding Filament Model • Antagonistic arrangement of skeletal muscles • Muscle Disorders • Exercise <p>Chapter 17: <u>Nervous Coordination</u></p> <ul style="list-style-type: none"> • Reading • Steps involved in Nervous Coordination • Neurons • Structure of Neuron • Reflex Arc • Nerve Impulse • Generation and transmission of Nerve Impulse • Velocities of Nerve Impulse <p>Student will be able to:</p> <ul style="list-style-type: none"> • explain shape, size and types of muscles • describe the myofilaments in the structure of muscle and | <ul style="list-style-type: none"> • Watch the topic related videos on sabaq.pk and e learn and other recommended websites. • Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline • Study all the figures and tables given with topics to understand the concepts. • Read all interesting Extra information and ‘Science Tidbits’ boxes. • Read all the information given in ‘Skills: Analyzing, Interpreting and communication’ boxes. <p><u>Written work</u></p> <ul style="list-style-type: none"> • Students to mark and solve all topic related questions given in Exercise . • Draw diagrams related to questions. • All written work to be submitted and get checked by the Subject Teacher. | <ul style="list-style-type: none"> – Textbook of Biology Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad (pg.55-77) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises <p>Reference Links: Watch the topic related videos on</p> <ul style="list-style-type: none"> – sabaq.pk – elearn.gov.pk – https://www.youtube.com/watch?v=f_tZne9ON7c – https://www.youtube.com/watch?v=0qksc4kqSjM – https://www.youtube.com/watch?v=O2kuU2mZzeU – https://www.youtube.com/watch?v=b2ctEsGEpe0 – https://www.youtube.com/watch?v=bfokof2YMVU |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|----------------------------------|---|-------------------------|------------------|
| | <ul style="list-style-type: none"> contraction of muscles · explain the sliding mechanism of the myofilaments of muscles regulated by calcium ion · explain arrangement of flexor muscle and extensor muscle · explain the different causes of muscle disorders · recognize receptors as transducers sensitive to various stimuli · trace the path of a message transmitted to the CNS for proceeding · identify the three neurons(sensory, intermediate, motor) involved in nervous transmission · identify muscles and glands as the effectors · describe the detailed structure of a sensory neuron, associative and a motor neuron and relate the specialization in structures with function · explain the function of three neurons with the help of a reflex arc · describe the generation and transmission of nerve impulse · answer all topic related questions as required | | |

Block 1: Computer Science Week 4

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-------------------|---|----------------------------------|
| Week 4 5hrs | July 20 – July 25 | CHAPTER # 2: SYSTEM DEVELOPMENT LIFE CYCLE <ul style="list-style-type: none"> · A System · System development life cycle and its importance · Importance of system development life cycle · Objectives of SDLC · Stakeholders of SDLC · SDLC Phases/steps <ul style="list-style-type: none"> § Defining phase § Planning phase § Feasibility · Relevant Ex Questions at the end of Unit | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|--|
| Week 4 5 hrs | CHAPTER # 2: SYSTEM DEVELOPMENT LIFE CYCLE Students will be able to <ul style="list-style-type: none"> · understand the concept of system. · describe SDLC and its importance. · describe objectives of SDLC. | Recall the previous knowledge about the concept taught in previous classes. <ul style="list-style-type: none"> · Read all important definitions and topics given in textbook · Use Computer, Laptop, Tabs /smart phone to go over the internet and search on Google about the SDLC · Gather information about the following phases of SDLC <ul style="list-style-type: none"> § Defining Phase § Planning phase § Feasibility https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-1 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-2 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-4 | <ul style="list-style-type: none"> – Textbook of Computer Science Grade 12 – National Book Foundation Islamabad As Federal Textbook Board- Islamabad pgs24-27 – Exercise(MCQs Short Q/A, Long Q/A) Reference Links: <ul style="list-style-type: none"> – Watch the topic related |


| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|---|
| | <ul style="list-style-type: none"> · describe stakeholder of SDLC and their roles. · explain the functions of following phases of SDLC. <ul style="list-style-type: none"> § Defining Phase § Planning phase § Feasibility | <p>https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-6</p> <p>https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-7</p> <p>https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-8</p> <p>Visit the above given links to</p> <ul style="list-style-type: none"> · See the concept of System. · See the concept of SDLC and its importance in detail by giving different examples. · Describe the objectives of SDLC. · See the concept of stakeholders of SDLC. · See the explanation of following phases of SDLC with the help of example. <ul style="list-style-type: none"> § Defining Phase § Planning phase § Feasibility · See the importance of Defining phase by giving different examples. · See why planning is important w.r.t SDLC. · See what is Feasibility study? · Observe the following different types of Feasibility. <ul style="list-style-type: none"> § Technical Feasibility § Economic Feasibility § Legal Feasibility § Schedule Feasibility · Written work · Write the answers of Questions given at the end of chapter Q2(I & ii) Q3(i& ii) | <p>videos on sabaq.pk Solve the practice test given with topics on sabaq.pk</p> |

Block 1: Pakistan Studies Week 4

| Block / # of wks | Time line | Course Content Unit /Chapter name | Check list Complete or incomplete |
|------------------|-----------------|---|--------------------------------------|
| Week 4 | July 20-July 25 | Chapter 2 : Initial Problems of Islamic Republic of Pakistan <ul style="list-style-type: none"> • Background • Radcliffe Award and its injustices • Results of the Injustices done in the Partiti • Problems of the New State of Pakistan • Accession of Princely States • Efforts for Resolving the Problems National Solidarity and Stability | |

Syllabus Pack Block 1 (week 4)

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|---|
| Week 4 1 hr. 40 mins | Chapter 2 Initial Problems of Islamic Republic of Pakistan Problems: <ul style="list-style-type: none"> • Background • Radcliffe Award and its injustices • Results of the Injustices done in the Partiti • Problems of the New State of Pakistan • Accession of Princely States • Efforts for Resolving the Problems • National Solidarity and | Reading and Understanding: textbook pages 29-37 <ul style="list-style-type: none"> • Highlight the main points in the chapter in your textbooks. • Read about Radcliffe Award and relate it with the early problems of Pakistan and its Injustices at the time of Partition. • Identify its consequences that Pakistan and people of Kashmir are facing till date and Pakistan and India fought many wars on this issue. • List down the problems of the New Born State of Pakistan. • Comprehend the Kashmir, Junagadh, and Hyderabad Issues and how the princely states were not merged in the state of Pakistan in spite of their will to join Pakistan or to remain as independent states. • Know about the status of Hyderabad in South India which was one of the largest and richest states in the subcontinent and its | <ul style="list-style-type: none"> • Textbook Page 29-37 • Map of Princely states • Internet <p>Written Work Q5 (1-5) pg. 45 Q6 (1,2,3) pgs. 45 & 46</p> |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|-----------|
| | <p>Stability</p> <p>Objectives: By the end of the week /lessons Students will able to:</p> <ol style="list-style-type: none"> 1. describe/explain the initial problems faced by a new country 2. identify the role of Quaid-e-Azam in dealing with the initial problems 3. describe the importance of national solidarity and stability | <p>area was larger than that of England and Scotland combined. The majority of Hyderabad's population was Hindu, but the ruler who held the title of 'Nizam', was a Muslim who wanted Hyderabad to be an independent state. In 1948, however, Indian troops entered Hyderabad and annexed it.</p> <ul style="list-style-type: none"> •  A map could be used to see the location of princely states with the help of google maps app. • Elaborate Quaid's efforts for strengthening Pakistan on all fronts and resolving the initial Problems as soon as possible especially the settlement of refugees who left all their assets and came to Pakistan empty handed. • Describe National Solidarity and Stability in detail and relate it with today's scenario. • Try to understand the importance of National Solidarity and Stability amongst our youth for the better future of the state. <p>Written Work: Give short answers: Q5 (1-5) page 45 Give detailed answers: Q6 (1,2,3) pages 45 & 46</p> | |

Block 1: English Week 5

| # of wks / Study Hours | Week Dates | Course Content Unit /Chapter/Topics | Checklist Complete or Incomplete |
|------------------------|------------------|---|----------------------------------|
| Week 5 3hrs | July 27 – Aug 01 | <ul style="list-style-type: none"> • Comprehension and précis writing skills • Applied Grammar Phrasal Verbs and Idioms • Applied Grammar: Types of Sentences Simple, Compound. Complex and Compound-complex Sentences | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------------|--|--|---|
| Week 5 3 hrs | <p>Applied Grammar Types of Sentence Structures</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • differentiate between different sentence structures: Simple, Compound, Complex and Compound-complex sentences | <ul style="list-style-type: none"> • Watch the video tutorial for conceptual clarity about different sentence structures. • Read about Simple, Compound, Complex and Compound-complex sentence structures from the Course grammar book. • Take a chart paper / A4 paper and divide it into three equal horizontal sections or rows. • In the top section, write at least 10 simple sentences i.e., "The smart kids read books every night." • In the second column, change the same sentence into a compound one. Similarly, convert the same into a complex & compound-complex sentence. | <ul style="list-style-type: none"> • Complete Edition Intermediate (Part I) English Simple by Prof. Zia-ur-Rahman Khan (Pgs 639-640) • High School English Grammar & Composition Multicolour Edition by Wren & Martin (2016 Edition) • Chart Paper / A4 Paper • https://www.youtube.com/watch?v=smgyeUomfyA • Online practice worksheets |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|--|
| | | <ul style="list-style-type: none"> • Download & solve online practice worksheets. | |
| | <p>Applied Grammar Phrasal Verbs and Idioms</p> <p>Students will be able to :</p> <ul style="list-style-type: none"> • use phrasal verbs & idioms in sentences | <ul style="list-style-type: none"> • For Idioms & Phrasal verbs, refer to sabaq foundation class 12 syllabus related virtual lessons. Chapter 3 - Vocabulary, Section 3.4. • Learn meanings of 5 idioms & 5 phrasal verbs & their use from the first lesson followed by written practice in notebooks. • Ref: Language Study 3.6 Phrasal Verbs (pgs 112-117) Practice of concept through Language Study Ex 1 (pgs 115-117) | <ul style="list-style-type: none"> • 3.4: Idioms and Phrasal Verbs https://sabaq.pk/chapter-page.php?vg=federal-english-12th&vsq=federal-english-12th-3 • Intermediate English For Class XII (KPTBP)(Pgs 112-117) • Complete Edition Intermediate (Part II) English Simple by Prof. Zia-ur-Rahman Khan(Chapter 8) |
| | <p>Comprehension and précis writing skill</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> • answer the questions at the end of the passage • learn how to condense, draft and write précis • select a suitable title | <ul style="list-style-type: none"> • Using given resources, familiarize yourself with what is précis writing. What are the features of a good précis? What are the Do's & Don'ts in a précis? • Go through some solved Exercises / sample passages for précis writing practice from Grammar book or use the internet as a resource. • Solve any Ex taken either from past papers or from grammar book. • Answer the end of passage Qs in your own words and give a suitable title to the passage. | <ul style="list-style-type: none"> • High School English Grammar & Composition Multicolour Edition by Wren & Martin (2016 Edition) (pgs 346-362; 358-371) • Past Papers • Internet |

| | | | |
|---------------------------|---|-------------------|----------------------|
| چیک لسٹ مکمل / آہل کام | نصیبی مواد موضوع: سبق / نظم / غزل کا نام | ہفتے / دن | ہفتے کا مطالقی وقت |
| | قلہ میں روزہ | 27 لائی - 31 لائی | نمبر 5 تہ 4 گھنٹے |

سلیب میں پیک بلاک 1 (پانچواں ہفتہ)

| ذبح | طریقہ تدریس | موضوعات / مقاصد | فتہ نمبر / وقت |
|---|---|--|-----------------------|
| ارو (لازمی) بارہویں جماعت کے لیے صفحات 16 تا 25 | ☆ طلباء خجلا حسن نطی کے تعاف کو بغور چھیں او جو نکلت سمجھ نہ آئیں انہیں خط کشید کریں۔ اسکی کھلنے پر یلائی معلمہ / معلم سے ان سے متعلق آ لائن رہنمائی حاصل کریں۔ ☆ سبق کی پڑھا کریں۔ ☆ مشکل الفاظ و کرب کے معنی کے لیے لغت کا استعمال کیا جائے۔ ☆ مشقی سوالات کے جوابات اپنے الفاظ میں تحریر کیے جائیں۔ ☆ طلباء گذشتہ جماعت میں نثر پارسی تشریح کر چکے ہیں ہی طریقہ کو اپنی جماعت کے معیار کو مد نظر رکھ کر طلبہ کسی ایک نثر پارے کی تشریح کریں۔ | قلہ میں روزہ طلباء قابل ہوں گے کہ : 1۔ خجلا حسن نطی کے تعاف کو پڑھ کر سمجھ سکیں۔ 2۔ سبق کی پڑھائی کر سکیں۔ 3۔ مشقی سوالات کے جوابات لکھ سکیں۔ 4۔ نثر پارے کی تشریح کر سکیں۔ | فتہ نمبر 5 4 گھنٹے |

Block 1: Mathematics Week 5

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|----------------|--|----------------------------------|
| Week 5 5Hrs | Jul 27– Jul 30 | Unit -2 Differentiation 2.1 Theorems on differentiation 1. The derivative of a constant function 2. Derivative using power formula 3. Derivative of $y=cf(x)$ 4. Derivative of sum or a difference of functions 5. Derivative of a product (product rule) 6. Derivative of a quotient (the quotient rule) 2.2 The chain rule 2.3 Derivation of inverse functions 2.4 Derivation of the parametric function 2.5 Derivation of implicit relations | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|---|
| Week 5 5 Hrs | Unit -2 Differentiation 2.6 Theorems on differentiation 7. The derivative of a constant function 8. Derivative using power formula 9. Derivative of $y=cf(x)$ 10. Derivative of sum or a difference of functions 11. Derivative of a product | Read the textbook from Ex 2.3 & 2.4 (Page 53 – 71) to cover the desired amount of content for the week: <ul style="list-style-type: none"> · Describe the theorems on differentiation. · Comprehend the product and quotient rule using examples given in textbook · Do the Qs 1 – 17 of Ex 2.3. · Read and understand chain rule with the help of examples. · Comprehend the rule of different formulae for the derivation of the following functions with the help of examples: <ul style="list-style-type: none"> Ø inverse functions Ø parametric functions | <ul style="list-style-type: none"> · Calculus and Analytical Geometry Mathematics-12 Punjab Curriculum & Textbook Board Lahore (Page 53 – 71) · Laptop / Tab / Smart Phone · Watch the relevant videos on sabaq.pk · Watch these additional videos; |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|---|---|
| | <p>(product rule) 12. Derivative of a quotient (the quotient rule) 2.7 The chain rule 2.8 Derivation of inverse functions 2.9 Derivation of the parametric function 2.10 Derivation of implicit relations</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> · prove the theorems on differentiation · apply the theorems on differentiation to find the derivative of different types of functions · apply chain rule · find the derivative of: <ul style="list-style-type: none"> Ø inverse functions Ø parametric functions Ø implicit relations | <p>Ø implicit functions</p> <ul style="list-style-type: none"> · Do Qs 1 – 5 of Ex 2.4. | <ul style="list-style-type: none"> · https://www.khanacademy.org/math/ap-calculus-ab/ab-differentiation-1-new/ab-2-8/v/applying-the-product-rule-for-derivatives · https://www.khanacademy.org/math/ap-calculus-ab/ab-differentiation-2-new/ab-3-1a/v/chain-rule-introduction · https://www.youtube.com/watch?v=6kScLENCXLg |

Block 1: Physics Week 5

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|-----------------------------|----------------|--|----------------------------------|
| Week 5 3 : 30 Hrs | Jul 27– Jul 30 | UNIT # 12: Current Electricity 12.1 Conductance 12.2 Conductivity 12.3 Effect of temperature on resistance 12.8.1 Temperature coefficient of resistance 12.8.2 Variation of resistivity with temperature 12.4 Wire-wound resistors i) Rheostats ii) Potential divider 12.5 Thermistor . Applications Examples 12.1-12.4 Questions 13.1-13.6 Problems 13.1 -13.6 Comprehensive Questions 1-3, 5 & 10 Conceptual Questions 1-3 & 8 Numerical Problems 1-3 | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-----------------------------|--|---|---|
| Week 5 3 : 30 Hrs | UNIT # 12: Current Electricity 12.1 Conductance 12.2 Conductivity 12.3 Effect of temperature on resistance | Read the textbook from pgs. 72-80 to fulfill the following objectives and enable yourself to: . Explain conductance and effect of temperature on resistance/conductance. . Explanation and derivation of coefficient of resistance and explanation of the variation of resistivity with temperature. . Solve examples 12.3 and 12.4. | . Physics XII – Khyber Pakhtunkhwa Textbook Board, Peshawar . Laptop / Tab / Smart Phone . Watch the relevant videos on sabaq.pk . |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | 12.8.3 Temperature coefficient of resistance 12.8.4 Variation of resistivity with temperature 12.4 Wire-wound resistors iii) Rheostats iv) Potential divider 12.5 Thermistor · Applications Examples12.1-12.4 Questions13.1-13.6 Problems 13.1 -13.6 Comprehensive Questions 1-3, 5 & 10 Conceptual Questions 1-3 & 8 Numerical Problems 1-3 | <ul style="list-style-type: none"> · Explanation of wire-wound resistors: <ul style="list-style-type: none"> Ø Rheostats Ø Potential divider · Explanation of thermistor and its applications. Solve the following questions and problems using guidance from attached online links: Examples12.1-12.4 Questions13.1-13.6 Problems 13.1 -13.6 Comprehensive Questions 1-3, 5 & 10 Conceptual Questions 1-3 & 8 Numerical Problems 1-3 | <ul style="list-style-type: none"> · Watch these additional videos; · https://www.youtube.com/watch?v=IFnTaylcSEs · https://www.youtube.com/watch?v=IC1mGZqkw8k |

Subject: Chemistry– XII
Block 1: Week 5

Session (2020-2021)

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-------------------|---|----------------------------------|
| Week 5 4hrs | July 25 – July 30 | Chapter#16: <u>Hydrocarbons</u> <ul style="list-style-type: none">· Electrophilic Aromatic substitution reactions· General introduction· Explanation and example· Formation of X⁺· Attack of electrophile at pi bond· General pattern of substitution· Nitration (Mechanism)· Sulfonation (Mechanism)· Halogenations (Mechanism)· Electrophilic aromatic substitution reactions· Friedel Crafts Alkylation (Mechanism)· Friedel Craft Acylation (Mechanism)· Substituent effects (table of substituent effects) and making poly-substituted Benzenes· Ortho and Para directing groups· Meta directing groups· Making poly substituted Benzenes· Society Technology and Science· Exercise questions | |

Session (2020-2021)
Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|--|
| Week 5 4 hrs | <p>Chapter 16 : <u>Hydrocarbons</u></p> <ul style="list-style-type: none"> • Electrophilic Aromatic substitution reactions • General introduction • Explanation and example • Formation of X⁺ • Attack of electrophile at pi bond • General pattern of substitution • Nitration (Mechanism) • Sulfonation(Mechanism) • Halogenations (Mechanism) • Electrophilic aromatic substitution reactions • Friedel Crafts Alkylation (Mechanism) • Friedel Craft Acylation (Mechanism) • Substituent effects (table of substituent effects) and making poly-substituted Benzenes • Ortho and Para | <ul style="list-style-type: none"> • Watch the topic related videos on sabaq.pk and e learn and other recommended websites. • Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline • Study the Tables and figures very attentively and try a Self-Assessment test to understand the concepts as required. • Study Society Technology And Science, Tables & figures, Points to remember to understand the concepts • Study and answer Quick Quizzes given in referred pages with topics. <p><u>Written work</u></p> <ul style="list-style-type: none"> • Students to mark and solve all topic related questions and problems given in Exercise • All written work to be submitted and get checked by the Subject Teacher. <p><u>Let's Explore:</u></p> <p>The students to find out the answers by themselves using internet search and record their finding on registers/loose sheets</p> <ul style="list-style-type: none"> • What is the difference between Friedal Crafts acylation and alkylation? • What is Friedal Crafts acylation used for? • Can nitrobenzene undergo Friedal Crafts? | <ul style="list-style-type: none"> – Textbook of Chemistry Grade 12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad (pg 163-173) – Laptop / Tab / Smart Phone / internet – Self-Check Exercises – Reference Links: Watch the topic related videos on – sabaq.pk – elearn.gov.pk – (www.organic-chemistry.org/namedreactions/friedel-crafts-acylation) – www.organic-chemistry.org/namedreactions/friedel-crafts-alkylation) – www.masterorganicchemistry.com/.../electrophilic-aromatic-substitution-directing-groups) – https://www.organic-chemistry.org/namedreactions/friedel-crafts-acylation.shtm – https://www.organic-chemistry.org/namedreactions/friedel-crafts-alkylation.shtm |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|---|
| | <p>directing groups</p> <ul style="list-style-type: none"> · Meta directing groups · Making poly substituted Benzenes · Society Technology and Science · Exercise question <p>Student will be able to:</p> <ul style="list-style-type: none"> · apply the knowledge of position of substituent's in the electrophilic substitution of Benzene · explain Friedel Crafts Alkylation & acylation reaction with complete mechanism · differentiate between Ortho and Para directing groups and Meta directing groups · describe the reactivity table of Benzene on page 162 · do the quick quiz independently · solve the relevant questions of chapter | <ul style="list-style-type: none"> · Does phenol give Friedal Crafts reaction? · What is the role of $AlCl_3$ in a Friedal Crafts reaction? | <ul style="list-style-type: none"> - https://www.masterorganicchemistry.com/2017/11/09/electrophilic-aromatic-substitution-the-mechanism/ |

Subject: Biology– XII
Block 1: Biology Week 5

Session (2020-2021)

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|-------------------|---|----------------------------------|
| Week 5 4hrs | July 25 – July 30 | <u>Nervous Coordination</u> Ø Synapse Ø Basic organization of Human Nervous System Ø Effects of Drugs on Nervous Coordination Ø Disorders of Nervous System and Diagnostic Tests Ø Exercise Questions | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------|---|--|--|
| Week 5 4hrs | Chapter 17: <u>Nervous Coordination</u> Ø Synapse <ul style="list-style-type: none"> · Structure of Synapse · Mechanism of Synaptic Transmission · Classification of Neurotransmitters Ø Basic organization of Human Nervous System <ul style="list-style-type: none"> · Architecture of Brain and Spinal Cord and their Functions · Cranial and Spinal Nerves in Man · Somatic and autonomic Nervous System · Sensory receptor and their working | <ul style="list-style-type: none"> · Watch the topic related videos on sabaq.pk and e learn and other recommended websites. · Read all important definitions and topics given in textbook highlighting the important definitions and difficult terms and put a Question mark on the margin against them. The subject teacher can be asked to explain it to student on helpline · Study all the figures and tables given with topics to understand the concepts. · Read all interesting Extra information and ‘Science Tidbits’ boxes. · Read all the information given in ‘Skills: Analyzing, Interpreting and communication’ | <ul style="list-style-type: none"> – Textbook of Biology Grade12 National Book Foundation Islamabad as Federal Textbook Board- Islamabad Pg77- 94 – Laptop / Tab / Smart Phone / internet – Self-Check Exercises – Reference Links: Watch the topic related videos on – sabaq.pk – elearn.gov.pk |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|--|--|
| | <p>Ø Effects of Drugs on Nervous Coordination</p> <ul style="list-style-type: none"> · Narcotic drugs · Drug addiction and drug Tolerance <p>Ø Disorders of Nervous System and Diagnostic Tests</p> <ul style="list-style-type: none"> · Vascular Disorders of the CNS · Infectious Disorders of the CNS · Structural Disorders of the CNS · Functional Disorders of the CNS · Degenerative Disorders of CNS · Diagnostic Tests for Nervous Disorders · Exercise <p>Student will be able to:</p> <ul style="list-style-type: none"> · describe the structure of synapse · explain synaptic transmission of nerve impulse · identify the main components of the nervous system · explain briefly the functions of major divisions of brain · describe cranial and spinal nerves in man · explain the structure ,types and functions of autonomic nervous system · draw a labeled diagram of the human brain · effects of drugs on Nervous | <p>boxes.</p> <p><u>Written work</u></p> <ul style="list-style-type: none"> · Students to mark and solve all topic related questions given in Exercise . · Draw diagrams with questions where necessary · All written work to be submitted and get checked by the Subject Teacher. | <ul style="list-style-type: none"> - https://www.khanacademy.org/science/health-and-medicine/human-anatomy-and-physiology/nervous-system-introduction/v/synapse-structure - https://study.com/academy/lesson/categorization-of-neurological-disorders-central-and-peripheral-nervous-systems-disorders.html - https://youtu.be/ aCCsRCw78g |

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|--|------------------|-----------|
| | <p>Coordination</p> <ul style="list-style-type: none">· define and describe narcotic drugs· associate the effects of drugs addiction and tolerance with the reference to caffeine and nicotine· describe disorders of Nervous System and Diagnostic Tests· classify Nervous disorders into vascular, infectious, structural, functional and degenerative disorders and describe the causes, symptoms and treatment of each type· answers the questions related to the topics | | |

Block 1: Computer Science Week 5

| Wks / duration | Time line | Course Content Unit /Chapter/Topics | Checklist Complete/incomplete |
|----------------|------------------|---|----------------------------------|
| Week 5 5hrs | July 27 – Aug 01 | CHAPTER # 2: SYSTEM DEVELOPMENT LIFE CYCLE <ul style="list-style-type: none"> · SDLC Phases/steps <ul style="list-style-type: none"> § Analysis phase § Requirement Engineering § Design phase § Construction / Coding § Testing / Verification · Relevant Ex Questions at the end of Unit | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|---|--|--|
| Week 5 5 hrs | CHAPTER # 2: SYSTEM DEVELOPMENT LIFE CYCLE Students will be able to <ul style="list-style-type: none"> · describe the features and importance of following phases of SDLC. <ul style="list-style-type: none"> § Analysis phase § Requirement Engineering § Design phase § Construction / Coding § Testing / Verification | Recall the previous knowledge about the concept taught in previous classes. <ul style="list-style-type: none"> · Read all important definitions and topics given in textbook · Use Computer, Laptop, Tabs /smart phone to go over the internet and search on Google about the SDLC · Gather information about the following phases of SDLC. <ul style="list-style-type: none"> · Analysis phase · Requirement Engineering · Design phase · Construction / Coding · Testing / Verification https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-9 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-10 | <ul style="list-style-type: none"> – Textbook of Computer Science Grade 12 – National Book Foundation Islamabad As Federal Textbook Board- Islamabad pgs 28-31 – Exercise(MCQs Short Q/A,Long Q/A) Reference Links: <ul style="list-style-type: none"> – Watch the topic related videos on sabaq.pk Solve the practice test |


| Week/ Study Hours | Topic/ Objectives | Study Guidelines | Resources |
|-------------------------|-------------------|---|--------------------------------------|
| | | <p>https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-13 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-14 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-15 https://sabaq.pk/videopage.php?sid=federal-computer%20science-12th-2.1&v=cs-soft-16</p> <p>Visit the above given links to</p> <ul style="list-style-type: none"> • See the importance of Analysis phase. • See the purpose of Requirement Engineering phase. • See the following steps of Requirement Engineering. <ul style="list-style-type: none"> § Requirement gathering. § Requirement validation. § Requirement management. • See the difference between functional and non-functional requirement. • Explain the importance of Design Phase. • Observe why Design phase is considered as the “architectural” phase of SDLC. • See the different structures of Design phase. • observe the purpose of algorithms and Flowchart. • See the different symbols of Flowchart. • Watch how to construct flowchart. • Watch how algorithm of any problem can be converted to Flowchart with the help of example. • See the importance of construction/coding. • See the purpose of Testing / Verification phase • Written work • Write the answers of Questions given at the end of chapter Q2(v,vi,vii&viii) Q3(vi) | <p>given with topics on sabaq.pk</p> |

Block 1: Pakistan Studies Week 5

| Block / # of wks | Time line | Course Content Unit /Chapter name | Check list Complete or incomplete |
|------------------|------------------|--|--------------------------------------|
| Week 5 | July 27- July 30 | Chapter 2 : Initial Problems of Islamic Republic of Pakistan <ul style="list-style-type: none"> Quaid-e-Azam Muhammad Ali Jinnah' vision of Pakistan Quaid-e-Azam Muhammad Ali Jinnah's Strategy for the Solution of Problems | |

Syllabus Pack Block 1 (week 5)

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|--------------------------------|---|--|--|
| Week 5 1 hr. 40 mins | Chapter 2 Initial Problems of Islamic Republic of Pakistan Problems: <ul style="list-style-type: none"> Quaid-e-Azam Muhammad Ali Jinnah' vision of Pakistan Quaid-e-Azam Muhammad Ali Jinnah's Strategy for the Solution of Problems Objectives: By the end of the week /lessons Students will able to: <ol style="list-style-type: none"> identify the leadership and guidance provided by Quaid-e-Azam explain the sufferings and scarifies made by the people | Reading and Understanding: Page No 37-42 <ul style="list-style-type: none"> Comprehend Quaid-e-Azam's vision of Pakistan and how he served the country to the maximum and where he wanted to see the country through the future endeavours of the youth. Highlight the strategies adopted by Quaid- e- Azam for the solution of the early problems faced by the state List down the initial problems on a sheet and explain each one separately. Elaborate the slogan made by Quaid-e-Azam regarding Unity, Faith and Discipline and explain on a loose sheet how by adopting these three attributes we can become the best nation of the world. Try to understand Quaid's saying about Hard Work...work, work and work and his advice to government officials to national service. Read in detail about the advice of the Quaid-e- Azam to the students to concentrate on education to build up the country as a strong nation. Identify the role of students during Pakistan Movement specially the students of Aligarh those became the torch bearer of the | <ul style="list-style-type: none"> Textbook Pages 37-42 Map of the Subcontinent Internet Written Work Q5 (6-10) pg. 45 Q6 (4,5) pg. 46 |

| Week/ Study Hours | Chapter/Topics/ Objectives | Study Guidelines | Resources |
|-------------------------|---|---|-----------|
| | <p>of Pakistan</p> <p>3. highlight the role of Quaid -e-Azam as the real mentor for the new state of Pakistan</p> | <p>struggle for independence.</p> <ul style="list-style-type: none"> • Try to list down Quaid-e-Azam's great services to the nation one by one for further clarity of the topic. • Try to understand the that how in such short span of time he tried to organize all government departments but this dedication and sheer hard work effected his already ill health and he passed away on October 11,1948. <p> Search on internet to watch videos on Quaid-e-Azam's speeches on different occasions after creation of Pakistan</p> <p>Written Work: Give short answers: Q5 (6-10) page 45: Give detailed answers: Q6 (4,5) page 46</p> | |