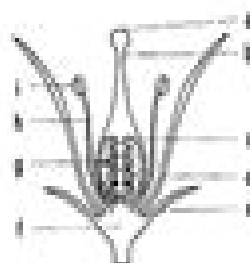


- 1.3 Indicate whether each of the statements in COLUMN I applies to A only, B only, both A and B or none of the items in COLUMN II. Write A only, B only, both A and B or none next to the question number (1.3.1 and 1.3.5) on your answer sheet.

| COLUMN I                         | COLUMN II                                                                    |
|----------------------------------|------------------------------------------------------------------------------|
| 1.3.1 Effects of deforestation   | A reduced absorption of carbon dioxide<br>B oxygen deficiency in water       |
| 1.3.2 Disadvantages of dams      | A increase seasonal flooding<br>B decreased loss of biodiversity             |
| 1.3.3 Causes of ozone depletion  | A increase in carbon dioxide concentration in the atmosphere<br>B CFC's      |
| 1.3.4 Effects of desertification | A reduced productivity<br>B poverty in local communities                     |
| 1.3.5 Advantages of GM foods     | A some crops are resistant to pests<br>B vegetables have a longer shelf life |

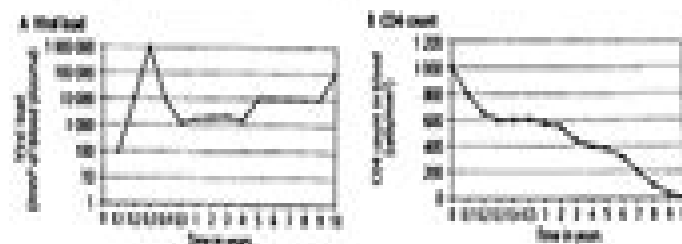
5 × 2 = (10)

- 1.4 The diagram below represents the flower of an Angiosperm plant. Study the diagram and answer the questions that follow.



- 1.4.1 What is the collective name given to parts a, b and c? (1)  
 1.4.2 Is this flower likely to be self-pollinated? Give a reason for your answer. (2)  
 1.4.3 Which LETTER represents the part that will develop into a fruit? (1)

- 1.8 Study the graph below of the viral load and CD<sub>4</sub> count in blood taken from an HIV-infected person and then answer the questions below.



- 1.8.1 Discuss the trend of the curve in Graph A. (2)  
 1.8.2 Describe the relationship between Graph A and Graph B. (2)

TOTAL SECTION A: (16)

## SECTION B QUESTION 2

- 2.1 The table below shows the number of tuberculosis (TB) cases and the number of deaths from TB around the world in 2009. Use the information in the table to answer the questions that follow.

| Region                | Number of cases<br>(1 000's) | Number of deaths<br>(1 000's) |
|-----------------------|------------------------------|-------------------------------|
| Africa                | 3 600                        | 400                           |
| The Americas          | 700                          | 70                            |
| Eastern Mediterranean | 1 000                        | 90                            |
| Europe                | 580                          | 82                            |
| South-East Asia       | 4 900                        | 480                           |
| Western Pacific       | 7 900                        | 240                           |
| Global total          | 14 000                       | 1 300                         |

- 2.1.1 What type of micro-organism causes TB? (1)  
 2.1.2 What type of medication is used to treat and cure TB? (1)  
 2.1.3 Work out the percentage of cases in Africa in terms of the global total. Show all your calculations. (2)  
 2.1.4 Which country had the highest number of deaths from TB in 2009? (1)  
 2.1.5 Suggest and explain reasons for the high number of TB cases in Africa in 2009. (2)  
 2.1.6 Give ONE symptom of TB. (1)

(16)

# Life Science Exam Grade11 P2 Essays

**JS Bruner**



## **Life Science Exam Grade11 P2 Essays:**

This is likewise one of the factors by obtaining the soft documents of this **Life Science Exam Grade11 P2 Essays** by online. You might not require more epoch to spend to go to the books instigation as without difficulty as search for them. In some cases, you likewise pull off not discover the message Life Science Exam Grade11 P2 Essays that you are looking for. It will enormously squander the time.

However below, next you visit this web page, it will be hence certainly simple to acquire as competently as download guide Life Science Exam Grade11 P2 Essays

It will not take many period as we run by before. You can attain it even if put it on something else at house and even in your workplace. appropriately easy! So, are you question? Just exercise just what we give below as with ease as evaluation **Life Science Exam Grade11 P2 Essays** what you in the manner of to read!

[https://staging.conocer.cide.edu/results/book-search/index.jsp/Johnson\\_Thunderbolt\\_Manual.pdf](https://staging.conocer.cide.edu/results/book-search/index.jsp/Johnson_Thunderbolt_Manual.pdf)

## **Table of Contents Life Science Exam Grade11 P2 Essays**

1. Understanding the eBook Life Science Exam Grade11 P2 Essays
  - The Rise of Digital Reading Life Science Exam Grade11 P2 Essays
  - Advantages of eBooks Over Traditional Books
2. Identifying Life Science Exam Grade11 P2 Essays
  - Exploring Different Genres
  - Considering Fiction vs. Non-Fiction
  - Determining Your Reading Goals
3. Choosing the Right eBook Platform
  - Popular eBook Platforms
  - Features to Look for in an Life Science Exam Grade11 P2 Essays
  - User-Friendly Interface
4. Exploring eBook Recommendations from Life Science Exam Grade11 P2 Essays

- Personalized Recommendations
  - Life Science Exam Grade11 P2 Essays User Reviews and Ratings
  - Life Science Exam Grade11 P2 Essays and Bestseller Lists
5. Accessing Life Science Exam Grade11 P2 Essays Free and Paid eBooks
    - Life Science Exam Grade11 P2 Essays Public Domain eBooks
    - Life Science Exam Grade11 P2 Essays eBook Subscription Services
    - Life Science Exam Grade11 P2 Essays Budget-Friendly Options
  6. Navigating Life Science Exam Grade11 P2 Essays eBook Formats
    - ePub, PDF, MOBI, and More
    - Life Science Exam Grade11 P2 Essays Compatibility with Devices
    - Life Science Exam Grade11 P2 Essays Enhanced eBook Features
  7. Enhancing Your Reading Experience
    - Adjustable Fonts and Text Sizes of Life Science Exam Grade11 P2 Essays
    - Highlighting and Note-Taking Life Science Exam Grade11 P2 Essays
    - Interactive Elements Life Science Exam Grade11 P2 Essays
  8. Staying Engaged with Life Science Exam Grade11 P2 Essays
    - Joining Online Reading Communities
    - Participating in Virtual Book Clubs
    - Following Authors and Publishers Life Science Exam Grade11 P2 Essays
  9. Balancing eBooks and Physical Books Life Science Exam Grade11 P2 Essays
    - Benefits of a Digital Library
    - Creating a Diverse Reading Collection Life Science Exam Grade11 P2 Essays
  10. Overcoming Reading Challenges
    - Dealing with Digital Eye Strain
    - Minimizing Distractions
    - Managing Screen Time
  11. Cultivating a Reading Routine Life Science Exam Grade11 P2 Essays
    - Setting Reading Goals Life Science Exam Grade11 P2 Essays
    - Carving Out Dedicated Reading Time
  12. Sourcing Reliable Information of Life Science Exam Grade11 P2 Essays

- Fact-Checking eBook Content of Life Science Exam Grade11 P2 Essays
- Distinguishing Credible Sources

### 13. Promoting Lifelong Learning

- Utilizing eBooks for Skill Development
- Exploring Educational eBooks

### 14. Embracing eBook Trends

- Integration of Multimedia Elements
- Interactive and Gamified eBooks

## **Life Science Exam Grade11 P2 Essays Introduction**

In the digital age, access to information has become easier than ever before. The ability to download Life Science Exam Grade11 P2 Essays has revolutionized the way we consume written content. Whether you are a student looking for course material, an avid reader searching for your next favorite book, or a professional seeking research papers, the option to download Life Science Exam Grade11 P2 Essays has opened up a world of possibilities. Downloading Life Science Exam Grade11 P2 Essays provides numerous advantages over physical copies of books and documents. Firstly, it is incredibly convenient. Gone are the days of carrying around heavy textbooks or bulky folders filled with papers. With the click of a button, you can gain immediate access to valuable resources on any device. This convenience allows for efficient studying, researching, and reading on the go. Moreover, the cost-effective nature of downloading Life Science Exam Grade11 P2 Essays has democratized knowledge. Traditional books and academic journals can be expensive, making it difficult for individuals with limited financial resources to access information. By offering free PDF downloads, publishers and authors are enabling a wider audience to benefit from their work. This inclusivity promotes equal opportunities for learning and personal growth. There are numerous websites and platforms where individuals can download Life Science Exam Grade11 P2 Essays. These websites range from academic databases offering research papers and journals to online libraries with an expansive collection of books from various genres. Many authors and publishers also upload their work to specific websites, granting readers access to their content without any charge. These platforms not only provide access to existing literature but also serve as an excellent platform for undiscovered authors to share their work with the world. However, it is essential to be cautious while downloading Life Science Exam Grade11 P2 Essays. Some websites may offer pirated or illegally obtained copies of copyrighted material. Engaging in such activities not only violates copyright laws but also undermines the efforts of authors, publishers, and researchers. To ensure ethical downloading, it is advisable to utilize reputable websites that prioritize the legal distribution of content. When downloading Life Science Exam Grade11 P2 Essays, users should also

consider the potential security risks associated with online platforms. Malicious actors may exploit vulnerabilities in unprotected websites to distribute malware or steal personal information. To protect themselves, individuals should ensure their devices have reliable antivirus software installed and validate the legitimacy of the websites they are downloading from. In conclusion, the ability to download Life Science Exam Grade11 P2 Essays has transformed the way we access information. With the convenience, cost-effectiveness, and accessibility it offers, free PDF downloads have become a popular choice for students, researchers, and book lovers worldwide. However, it is crucial to engage in ethical downloading practices and prioritize personal security when utilizing online platforms. By doing so, individuals can make the most of the vast array of free PDF resources available and embark on a journey of continuous learning and intellectual growth.

### **FAQs About Life Science Exam Grade11 P2 Essays Books**

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Life Science Exam Grade11 P2 Essays is one of the best book in our library for free trial. We provide copy of Life Science Exam Grade11 P2 Essays in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Life Science Exam Grade11 P2 Essays. Where to download Life Science Exam Grade11 P2 Essays online for free? Are you looking for Life Science Exam Grade11 P2 Essays PDF? This is definitely going to save you time and cash in something you should think about.

### **Find Life Science Exam Grade11 P2 Essays :**

**johnson thunderbolt manual**

~~journal dune princesse tome la grande nouvelle~~

johnson outboard motor repair manual 130hp 1997

**johnson iron horse manual**

**joint exams 2015 for ss2**

journal dun fantassin cagnes de france et dorient

**journal topic ideas**

~~jones principles of corrosion solution~~

~~johnson 200 hp ocean pro manual~~

joint ss2 promotion examination

**joomla 1 5 site blueprints lite ogunjobi timi**

**johnson 9 5 outboard part manual**

*journal of global business issues*

*journal article review format examples*

johnson outboard service manual 50hp

### **Life Science Exam Grade11 P2 Essays :**

airline maps a century of art and design by maxwell roberts - Dec 23 2022

web product information a nostalgic and celebratory look back at one hundred years of passenger flight featuring full color reproductions of route maps and posters from the world s most iconic airlines from the author of bestselling cult classic transit maps of

**airline maps a century of art and design the critic magazine** - Aug 19 2022

web dec 10 2019 airline maps a century of art and design collects a diverse range of plans and posters in a book that is truly global in ambition it covers the period 1919 up to 2019 and includes material published for famous airlines of today and yesteryear

**airline maps a century of art and design barnes noble** - Apr 26 2023

web oct 29 2019 in this gorgeously illustrated collection of airline route maps mark oven den and maxwell roberts look to the skies and transport readers to another time hundreds of images span a century of passenger flight from the rudimentary trajectory of routes to the most intricately detailed birds eye views of the land to be flown over

airline maps a century of art and design amazon de - May 16 2022

web airline maps a century of art and design oven den mark roberts maxwell isbn 9780143134077 kostenloser versand für alle bücher mit versand und verkauf duch amazon airline maps a century of art and design oven den mark roberts maxwell amazon de bücher



---

**airline maps a century of art and design kapak değişebilir** - Jun 16 2022

web airline maps a century of art and design kapak değişebilir ovenden mark roberts maxwell amazon com tr kitap

**airline maps a century of art and design amazon de** - Apr 14 2022

web for the first time mark ovenden and maxwell roberts chart the development of the airline map and in doing so tell the story of a century of cartography civil aviation graphic design and marketing airline maps is a visual feast that reminds the reader that mapping the journey is an essential part of arriving at the destination

the sleek history of airline maps travel smithsonian magazine - Jun 28 2023

web nov 6 2019 airline maps a century of art and design a nostalgic and celebratory look back at one hundred years of passenger flight featuring full color reproductions of route maps and posters from the

**paperback october 29 2019 amazon com** - Mar 26 2023

web oct 29 2019 designs featured sumptuous art deco style intricate artistry bold modernism 60s psychedelia clever photography and even underground map style diagrams for the first time mark ovenden and maxwell roberts chart the development of the airline map and in doing so tell the story of a century of cartography civil aviation

**airline maps a century of art and design google books** - May 28 2023

web airline maps a century of art and design mark ovenden maxwell j roberts particular books 2019 advertising 144 pages in this gorgeously illustrated collection of airline route

*airline maps a century of art and design google books* - Nov 21 2022

web a nostalgic and celebratory look back at one hundred years of passenger flight featuring full color reproductions of route maps and posters from the world s most iconic airlines from the author of bestselling cult classic transit maps of the world in this gorgeously illustrated collection of airline route maps mark ovenden and maxwell

**airline maps a century of art and design stanfords** - Feb 22 2023

web shortlisted for the 2020 edward stanford travel writing award s dorling kindersley illustrated travel book of the year a celebratory look back at one hundred years of passenger flight featuring full colour reproductions of route maps and posters from the world s most iconic airlines

*airline maps a century of art and design* - Jan 24 2023

web in this gorgeously illustrated collection of airline route maps mark ovenden and maxwell roberts look to the skies and transport readers to another time hundreds of images span a century of passenger flight from the rudimentary trajectory of routes to the most intricately detailed birds eye views of the land to be flown over

airline maps a century of art and design - Jul 30 2023

web aug 5 2020 in this sumptuous book popular authors mark ovenden and maxwell roberts display the enormous range of

commercial airline maps produced from the first scheduled passenger flight in 1919 to the book

**airline maps a century of art and design paperback** - Oct 21 2022

web buy airline maps a century of art and design 1 by oviden mark roberts maxwell isbn 9780241434123 from amazon s book store everyday low prices and free delivery on eligible orders

*airline maps a century of art and design english edition* - Sep 19 2022

web airline maps a century of art and design english edition ebook oviden mark roberts maxwell amazon it kindle store

airline maps a century of art and design kağıt kapak - Feb 10 2022

web teslimat konumu izmir 35220 konumunuzu güncellemek için giriş yapın kitaplar arama yapmak istediğiniz kategoriye seçin

**airline maps a century of art and design paperback** - Aug 31 2023

web buy airline maps a century of art and design illustrated by oviden mark roberts maxwell isbn 9780143134077 from amazon s book store everyday low prices and free delivery on eligible orders

**airline maps a century of art and design amazon com** - Oct 01 2023

web oct 29 2019 airline maps a century of art and design oviden mark roberts maxwell on amazon com free shipping on qualifying offers airline maps a century of art and design

**read book airline maps a century of art and design studocu** - Mar 14 2022

web airline maps a century of art and design a nostalgic and celebratory look back at one hundred years of passenger flight featuring full color reproductions of route maps and posters from the world 039 s most iconic airlines from the author of bestselling cult classic transit maps of the world this gorgeously illustrated collection of airline route

**airline maps a century of art and design hamiltonbook com** - Jul 18 2022

web this stunning volume charts the development of the airline map and in doing so tells the story of a century of cartography civil aviation graphic design marketing and world events a visual feast that reminds the reader that mapping the journey is an essential part of arriving at the destination

*el secreto de amara terror gótico y misterio goodreads* - Oct 23 2023

web jul 1 2019 sinopsis amara es una adolescente que siempre se sintió distinta más del otro mundo que de éste quizás por culpa de su nombre que significa eternidad la

**el secreto de amara terror gótico y misterio by amazon ae** - Dec 13 2022

web buy el secreto de amara terror gótico y misterio by online on amazon ae at best prices fast and free shipping free returns cash on delivery available on eligible purchase

el secreto de amara terror gótico y misterio spanish - Nov 12 2022

web jul 3 2019 el secreto de amara terror gótico y misterio spanish edition aguilerá sánchez susana on amazon com free shipping on qualifying offers el

el secreto de amara terror gotico y misterio william james - Jun 07 2022

web the associate to purchase and make bargains to download and install el secreto de amara terror gotico y misterio therefore simple el secreto de amara susana aguilerá

*el secreto de amara terror gótico y misterio spanish* - May 18 2023

web amazon com el secreto de amara terror gótico y misterio spanish edition 9781077713000 aguilerá sánchez susana libros

*el secreto de amara terror gótico y misterio edición kindle* - Feb 15 2023

web el secreto de amara terror gótico y misterio ebook aguilerá sánchez susana amazon com mx tienda kindle

**el secreto de amara terror gotico y misterio william james** - Aug 09 2022

web reader place all these stories at the very center of the gothic el secreto de amara susana aguilerá snchez 2019 07 03

amara es una adolescente que siempre se siti

el secreto de amara gigalibros - Sep 10 2022

web título original el secreto de amara libro revisado y corregido por mercedes buendía registro propiedad intelectual referencia 09 767483 9 19 expediente 09 rtpi

*el secreto de amara terror gótico y misterio spanish* - Jul 20 2023

web jul 1 2019 el secreto de amara terror gótico y misterio spanish edition kindle edition by aguilerá sánchez susana download it once and read it on your kindle

**el secreto de amara terror gotico y misterio** - Jan 14 2023

web novela breve de terror g tico alce n es un adolescente que vive encerrado con su madre en un enorme caser n siniestro del que nunca ha salido el mundo que conoce da un

**el secreto de amara terror gótico y misterio spanish** - Jun 19 2023

web una historia juvenil gótico suspenso cuya protagonista es amara quien nos va mostrando una serie de secretos que envuelven un viejo castillo y a su familia siendo ella clave

el secreto de amara terror gótico y misterio paperback - Mar 16 2023

web el secreto de amara terror gótico y misterio aguilerá sánchez susana amazon com au books

**amazon es opiniones de clientes el secreto de amara** - Oct 11 2022

web vea reseñas y calificaciones de reseñas que otros clientes han escrito de el secreto de amara terror gótico y misterio en amazon com lea reseñas de productos sinceras

*el secreto de amara terror gótico y misterio spanish* - Apr 17 2023

web el secreto de amara terror gótico y misterio spanish edition aguilara sánchez susana amazon sg books

**el secreto de amara terror gótico y misterio amazon es** - Sep 22 2023

web susana aguilara tiene un sello característico que destaca de forma adictiva la ficción histórica mezclada con diferentes géneros desde la romántica misterio paranormal

el secreto de amara terror gótico y misterio versión kindle - Aug 21 2023

web desde el momento en que amara ve el siniestro castillo dominando amenazador el barranco siente que ese sitio no es bueno algo hay allí oculto lo sabe algo malvado

*el secreto de amara terror gotico y misterio william james* - Jul 08 2022

web el secreto de amara susana aguilara sánchez 2019 07 03 amara es una adolescente que siempre se sintió diferente más del otro mundo que de éste quizás es

**pdf penatalaksanaan kegawatdaruratan medis** - Mar 16 2023

web darurat trauma pada mata merupakan penyebab gangguan permanen dan kehilangan penglihatan unilateral tersering trauma mekanik merupakan kegawatdaruratan pada

*unair repository* - May 18 2023

web kegawatdaruratan bedah gawat darurat adalah suatu keadaan dimana bila tidak dilakukan tindakan segera dapat mengakibatkan seseorang kehilangan organ anggota

**doc asuhan kegawatdaruratan trauma dada** - Oct 11 2022

web kegawatdaruratan ortopedi adalah trauma pada muskuloskeletal dimana apabila tidak mendapat penanganan yang tepat dapat menyebabkan komplikasi lebih

**kegawatdaruratan tht kl dr novialdi sp tht kl** - Dec 01 2021

kegawatdaruratan bedah pdf scribd - Sep 22 2023

web kegawatdaruratan bedah terdiri atas 1 perdarahan 2 obstruksi 3 infeksi 4 stranggulasi 5 kombinasi dari beberapa kegawatan diatas 1 perdarahan perdarahan adalah

*kegawat daruratan trauma thorak new pdf scribd* - Aug 09 2022

web a kontusio dinding abdomen disebabkan trauma non penetrasi atau penimbunan darah dalam jaringan lunak dan massa darah dapat menyerupai tumor b laserasi jika

*doc kegawatdaruratan trauma* - Jun 07 2022

web selain trauma abdomen kasus kasus kegawatdaruratan pada system pencernaan salah satunya perdarahan saluran cerna baik saluran cerna bagian atas ataupun saluran cerna

*m4 kb4 kegawatdaruratan non trauma ppt slideshare* - Oct 31 2021

**asuhan keperawatan gawat darurat trauma spinal** - Jan 14 2023

web beberapa cedera dada yang dapat terjadi antara lain tension pneumothoraks pneumotoraks terbuka flail chest  
hematotoraks tamponade jantung kecelakaan

askep kegawatdaruratan pada trauma abdomen documents - Jan 02 2022

**kegawatdaruratan ortopedi pdf scribd** - Jul 08 2022

web aug 25 2021 dalam penanganan kegawatdaruratan sangat diperlukan tingkat pengetahuan dan pengalaman yang baik  
berikut ada beberapa algoritma dalam

materi 2 ppt m4 kb3 kegawatdaruratan - Jun 19 2023

web buku gawat darurat medis dan bedah is a pdf book that provides comprehensive and updated information on various  
emergency conditions in medical and surgical fields it is

**makalah kegawat daruratan trauma abdomen pdf scribd** - Apr 05 2022

web kegawatdaruratan tht kl dr novialdi sp tht kl epistaksis epistaksis epistaksis mimisan perdarahan hidung penyebab dapat  
lokal sistemik penyebab lokal

*doc kegawatdaruratan trauma abdomen* - May 06 2022

web harus dilaksanakan oleh team bedah untuk pasien dengan trauma tumpul multiple dengan hemodinamik yang abnormal  
terutama bila dijumpai a perubahan sensorium trauma

**kegawatan bedah perut dan saluran cerna yang** - Feb 15 2023

web feb 8 2021 trauma dada adalah trauma tajam atau tembus yang dapat menyebabkan tamponade jantung perdarahan  
pneumothoraks hematothoraks hematoma

**pdf gawat darurat medis dan bedah researchgate** - Aug 21 2023

web dec 21 2017 abstract assalamualaikum warohmatullahi wabarakatuh puji syukur kepada allah swt atas perkenan dan  
petunjuk nya kepada kami para editor dan penulis yang

**departemen ilmu kesehatan mata fakultas** - Dec 13 2022

web kegawatdaruratan trauma abdomen kasus trauma abdomen merupakan kegawatdaruratan pada sistem pencernaan yang  
bisa terjadi karena trauma dan non

**doc kegawatdaruratan trauma abdomen** - Sep 10 2022

web selain trauma abdomen kasus kasus kegawatdaruratan pada system pencernaan salah satunya perdarahan saluran cerna

baik saluran cerna bagian atas ataupun saluran cerna  
*asuhan keperawatan kegawatdaruratan trauma* - Feb 03 2022

**kegawatdaruratan bedah pdf scribd** - Apr 17 2023

web ditambahkan 04 january 2023 penyakit atau kasus kegawatan bedah perut dan saluran cerna yang disebabkan trauma sangat kompleks dan rumit sehingga sulit dipahami

keperawatan gawat darurat mulawarman university - Jul 20 2023

web modul berjudul konsep dasar kegawatdaruratan membahas tentang konsep dasar kegawatdaruratan pengkajian airway breathing sedangkan pada kasus trauma

*bantuan hidup dasar bhd dan kegawatdaruratan* - Mar 04 2022

web jan 19 2020 m4 kb2 materi ppt keperawatan bedah ppghybrid4 150 views 33 slides panduan praktik klinis dokter faskes 1 jumpa utama amrannur 2 7k views 32 slides

**penatalaksanaan kegawatdaruratan trauma** - Nov 12 2022

web kegawatdaruratan pada trauma thorak pada faktanya banyak ahli bedah trauma merekomendasikan angiografi computed tomografi ct dada sebagai suatu alat