

Thermo Microm Hm 550 Manual

Yuki Hirota, Victor Borrell, Chiaki Ohtaka-Maruyama Thermo Microm Hm 550 Manual:

Delve into the emotional tapestry woven by Crafted by in **Thermo Microm Hm 550 Manual**. This ebook, available for download in a PDF format (*), is more than just words on a page; itis a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

https://about.livewellcolorado.org/data/browse/Documents/sitrex%20tedder%20hm300%20manual.pdf

Table of Contents Thermo Microm Hm 550 Manual

- 1. Understanding the eBook Thermo Microm Hm 550 Manual
 - The Rise of Digital Reading Thermo Microm Hm 550 Manual
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Thermo Microm Hm 550 Manual
 - 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 Thermo Microm Hm 550 Manual
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Thermo Microm Hm 550 Manual
 - Personalized Recommendations
 - Thermo Microm Hm 550 Manual User Reviews and Ratings
 - Thermo Microm Hm 550 Manual and Bestseller Lists
- 5. Accessing Thermo Microm Hm 550 Manual Free and Paid eBooks
 - Thermo Microm Hm 550 Manual Public Domain eBooks
 - Thermo Microm Hm 550 Manual eBook Subscription Services
 - Thermo Microm Hm 550 Manual Budget-Friendly Options

- 6. Navigating Thermo Microm Hm 550 Manual eBook Formats
 - o ePub, PDF, MOBI, and More
 - Thermo Microm Hm 550 Manual Compatibility with Devices
 - Thermo Microm Hm 550 Manual Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Thermo Microm Hm 550 Manual
 - Highlighting and Note-Taking Thermo Microm Hm 550 Manual
 - Interactive Elements Thermo Microm Hm 550 Manual
- 8. Staying Engaged with Thermo Microm Hm 550 Manual
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Thermo Microm Hm 550 Manual
- 9. Balancing eBooks and Physical Books Thermo Microm Hm 550 Manual
 - Benefits of a Digital Library
 - ∘ Creating a Diverse Reading Collection Thermo Microm Hm 550 Manual
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Thermo Microm Hm 550 Manual
 - Setting Reading Goals Thermo Microm Hm 550 Manual
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Thermo Microm Hm 550 Manual
 - Fact-Checking eBook Content of Thermo Microm Hm 550 Manual
 - 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

Thermo Microm Hm 550 Manual Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In todays fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Thermo Microm Hm 550 Manual PDF books and manuals is the internets largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in various fields. It is worth noting that while accessing free Thermo Microm Hm 550 Manual PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal

boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Thermo Microm Hm 550 Manual free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAOs About Thermo Microm Hm 550 Manual Books

What is a Thermo Microm Hm 550 Manual PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. How do I create a Thermo Microm Hm 550 Manual PDF? There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. How do I edit a Thermo Microm Hm 550 Manual PDF? Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. How do I convert a Thermo Microm Hm 550 Manual PDF to another file format? There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. How do I password-protect a Thermo Microm Hm 550 Manual PDF? Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe

Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Thermo Microm Hm 550 Manual:

sitrex tedder hm300 manual sinhala essays for grade 5 singer prelude instruction manual sirius lynx user guide six traits paragraph writing rubric sjune 2013 edexcel

single phase copeland scroll compressor wiring diagram

 $sister\ study\ guide\ pauline\ smith$ $sinumerik\ 850\ programming\ manual$

siskiyou mountains pass report

sims fms user guide sizzle english edition singer 7225j user guide sissy maid manual singer sewing machine repair manual cd

Thermo Microm Hm 550 Manual:

latest instrumentation mcg topics engineers community - Sep 26 2022

web jul 30 2021 february 11 2022 this group for instrumentation and process control engineering multiple choice questions mcq quiz objective questions and answers for technical exam preparations instrumentation transducers mcq multiple choice questions - Dec 30 2022

web our 1000 instrumentation transducers mcqs multiple choice questions and answers focuses on all chapters of instrumentation transducers covering 100 topics you should practice these mcqs for 1 hour daily for 2 3 months

instrumentation engineering mcq instrumentationtools - Apr 02 2023

web instrumentation engineering mcq instrumentation engineering objective questions and answers electrical and electronics instrumentation engineering mcq measurement and instrumentation tests we prepared the measurement and instrumentation question bank for your practice

top 1000 instrumentation engineering objective questions - May 03 2023

web instrumentation engineering objective questions these are helpful for engineering students freshers technical job preparation exam practices to crack an interview etc 1 measurement and instrumentation the section contains questions and answers on measurements instrumentation topics

1000 electrical measurement and instrumentation mcg - Oct 28 2022

web here are 1000 mcqs on electrical measurement and instrumentation chapterwise 1 which of the following method of measurement does a bridge circuit uses a relative b comparison c absolute d differential view answer 2 which of the following is the most popular method for measuring low resistance a ducter ohmmeter method

measurement and instrumentation mcq questions answers - Mar 21 2022

web a should be nonmagnetic b most be of low temperature coefficient c should have low specific resistance d all of the above answer solution discuss in board save for later 3 why is a misc meter not recommended for dc measurement a the meter is calibrated for ac and it s error for dc would be high b the meter does not respond to dc signals 300 top instrumentation control mcqs and answers pdf - Sep 07 2023

web 300 top instrumentation control mcqs and answers pdf process instrumentation and control multiple choice questions 1 a device for determining die value or magnitude of a quantity or variable a sensor b transducer c gauge d instrument e indicator ans d 2

50000 instrumentation engineering mcqs sanfoundry - Oct 08 2023

web our instrumentation engineering questions and answers are in mcq or quiz format and focuses on all areas of instrumentation engineering covering 50 subjects in instrumentation engineering highlights 50000 multiple choice questions answers in instrumentation engineering with fully solved explanations examples

300 top electronics instrumentation mcqs and answers pdf - Aug 26 2022

web electronics instrumentation objective questions and answers pdf free download 1 self generating type transducers are transducers a active b passive c secondary d inverse answer a 2

electronics instrumentation mcq questions answers - Feb 17 2022

web answer solution discuss in board save for later 3 s1 in multimode fiber optics intensity modulating schemes can be employed s2 schemes using polarizing techniques need birefringent fiber a s1 is true and s2 is false b both s1 and s2 are true

c s1 is false and s2 is true d both s1 and s2 are false

instrumentation engineering multiple choice questions mcq - Aug 06 2023

web we have the largest collection of instrumentation engineering multiple choice questions mcq to prepare for the competitive examination pumps quiz we provide you the latest 150 quiz questions and answers on the pumps used in top 100 instrumentation engineering questions answers - Jun 04 2023

web instrumentation engineering questions answers list any four objectives of process control suppressing the influence of external disturbances optimizing the performance increasing the productivity cost effective

instrumentation mcq instrumentation tests instrumentation tools - Jan 31 2023

web in this article we shared the flow and level measurement quiz questions and answers for instrumentation and electrical engineers instrumentation mcq instrumentation objective questions and answers instrumentation multiple choice questions instrumentation tests and exam questions

analytical instrumentation mcq multiple choice questions - Nov 28 2022

web the section contains multiple choice questions and answers on spectral method of analysis uv visible spectrometers single beam and double beam instruments absorption instrumentation fourier transform infra red spectrometers instrumentation of ir atomic absorption spectrometer and flame emission photometers

300 top measurement instrumentation mcqs and answers - Jul 25 2022

web answer a 2 which of the following instruments indicate the instantaneous value of the electrical quantity being measured at the time at which it is being measured a absolute instruments b indicating instruments c recording instruments d integrating instruments answer b

sensors and industrial instrumentation mcg quiz testbook com - Apr 21 2022

web oct 16 2023 sensors are sophisticated devices or modules that measure changes in environmental conditions or physical quantities and convert this data into signals that can be read by observers or instruments they are the backbone of many automated systems and technologies including but not limited to robotics security systems mobile devices instrumentation engineering quiz instrumentationtools - Mar 01 2023

web instrumentation engineering objective questions and answers electrical and electronics instrumentation engineering mcq measurement and instrumentation tests we prepared the measurement and instrumentation question bank for your practice this quiz section consists of total 60 questions each question carries 1 point no negative points

instrumentation engineering mcqs notes iqs mcqseries - May 23 2022

web all important instrumentation engineering mcqs with answer and explanation useful for gate ies psus ssc drdo dmrc railways and other examinations

biomedical instrumentation mcq multiple choice questions - Jun 23 2022

web biomedical instrumentation mcq multiple choice questions our 1000 biomedical instrumentation mcqs multiple choice questions and answers focuses on all chapters of biomedical instrumentation covering 100 topics you should practice these mcqs for 1 hour daily for 2 3 months

200 quiz questions for instrumentation and control professionals - Jul 05 2023

web we provide you the latest 200 quiz questions and answers for engineers and technicians of instrumentation and control professions instrumentation and control find the sample 30 questions from the instrumentation and control quiz click on the below start button to get complete 200 questions with answers question 1

viva questions and answers 1 pdf voltage alternating - Aug 03 2022

web what is meant by energy ratio energy ratio wm wm r 0.455 wm mechanical energy transformed this energy ratio cannot be called as efficiency as the stored energy r is not wasted as a loss but it is fed back to the source through feedback diodes electrical drives control lab viva questions 4 what is phase wingdings

edc lab viva questions part 1 basics ece school blogger - Mar 30 2022

web home labs viva questions rectifiers 1 what is the difference b w ac and dc supply what are the advantages of each ac supply is sinusoidal function of t but dc supply is constant for every time dc can be storable but not ac ac can transfer for a

digital communications lab viva questions with answers part i - May 12 2023

web 1 what is multiplexing 2 what are different types of multiplexing 3 what is tdm 4 what do you mean by fdm 5 what is amplitude shift keying ask 6 what are different types of digital modulation 7 what is phase shift keying psk 8 what is frequency shift keying fsk 9 what is binary phase shift keying bpsk 10

50 top advanced communication lab viva questions - Oct 05 2022

web viva questions and answers 1 what is meant by charge charge is an electrical property of the atomic particles which matter consists the charge of an electron is so small charge in motion represents current the unit of charge is coulomb 2 what is meant by current the flow of free electrons in a conductor is called current

300 top digital communication lab viva questions - Apr 11 2023

web dec 8 2011 dc machines lab viva questions when dc generator fails to build up the voltage what are the reasons answer no residual magnetism reversal of field connections and the resistance in the load circuit may be greater than critical resistance what is field flashing

digital communication viva questions electronics and - Mar 10 2023

web digital electronics viva questions with answer copyright all rights reserved flag for inappropriate content of 6 digital

electronics viva questions and answers 1 define gates ans gates are the digital circuits which perform a specific type of logical operation 2 define ic ans ic means integrated circuit

machine tool lab viva questions - Oct 25 2021

dc machines lab viva questions electrical interview questions - Feb 09 2023

web dcm lab or dc machines synchronous machines lab viva questions 1 why should the field rheostat be kept in the position of minimum resistance 2 what is the loading arrangement used in a dc motor 3 how can the direction of rotation of a dc shunt motor be reversed 4

edc lab viva questions and answers objectivebooks - Nov 25 2021

web question no 01 what id difference between power and energy answer energy is defined as the capacity of a physical system to perform work in the context of electric circuits energy w is related to power by the following relationship p vi dw dt so the difference is that power is the rate of change of energy

100 top dcm lab viva questions and answers 2023 - Dec 07 2022

web state the principle of 14 state coherent detection 1 state non coherent detection 1 differentiate bet0een d s and s 1 what is an rray data transmission 1 what is a standing 0a e 1 define reflection and transmission co efficient 2 state different types of losses in transmission lines 21

electronic devices and circuits lab viva questions part 2 rectifiers - Jan 28 2022

web electrical circuits lab viva questions and answers question no 01 what id difference between power and energy answer energy is defined as the capacity of a physical system to perfo

digital electronics lab exam viva questions pdf logic gate - Jan 08 2023

web oct 13 2009 1 why should the field rheostat be kept in the position of minimum resistance 2 what is the loading arrangement used in a dc motor 3 how can the direction of rotation of a dc shunt motor be reversed 4 what are the mechanical and electrical characteristics of a dc shunt motor 5 what are the applications of a dc shunt motor power electronics lab viva questions electronics and - Sep 04 2022

web electrical circuits lab viva questions and answers question no 01 what id difference between power and energy answer energy is defined as the capacity of a physical system to perfo electrical circuits lab viva questions and answers - Sep 23 2021

dc machine lab viva questions answers - Jun 13 2023

web go lab viva questions dc lab part ii 26 define pulse code module each and all quantized samples will be encode digital

communication lab viva questions with answers 1 list down the major our and disadvantages to analog communication techn electrical circuits lab viva questions and answers - Jul 02 2022

web answer the field will be reduced to only to the value of residual flux the speed will be very high the parts of motor may even fly apart question no 09 a d c shunt motor is found suitable to drive fans because they require answer small torque at start up and large torque at high speeds

300 top electrical drives control lab viva - Jun 01 2022

web digital communications lab viva questions with answers part i home lab viva questions dc lab part i 1 what are the disadvantages of analog communication

em i lab viva questions pdf transformer electric - Nov 06 2022

web oct 16 2020 power electronics lab viva questions and answers 1 what you understand about the safe operating area soa of a power device the boundaries of voltage and current in which the power device can be operated without destructive failures can be determined by the soa the soa of a bipolar power transistor is given below

power electronics lab viva questions and answers - Feb 26 2022

web home lab viva questions lica part 1 viva questions on op amps 1 what are the advantages of integrated circuits increased package density cost reduction increased system reliability improved functional performance increased operating speeds reduction in power consumption

electrical machines lab viva questions and answers - Apr 30 2022

web electrical circuits lab viva questions and answers question no 01 what id difference between power and energy answer energy is defined as the capacity of a physical system to perfo

linear integrated circuits lab viva questions part 1 ece school - Dec 27 2021

web ch name the common machine tools viva questions dc machines lab viva questions electrical interview may 4th 2018 dc machines lab viva questions answer in case when the dc machine fails to build up the voltage due to lia erc gov ph 20 61 ece labs viva questions with answers free - Aug 15 2023

web dc machines and induction machines viva questions answers by editorial staff when dc generator fails to build up the voltage what are the reasons no residual magnetism reversal of field connections and the resistance in the load circuit may be greater than critical resistance what is field flashing

dc machines and induction machines viva questions - Jul 14 2023

web feb 5 2019 top 15 dc machine lab viva questions and answers question 1 what is the importance of dc machine question 2 what are the 3 types of dc motors question 3 what is the difference between dc machine and dc motor

the dynamics of emerging de facto states routledg pdf - Sep 09 2022

is the dynamics of emerging de facto states routledg below routledge handbook of democratization jeffrey haynes 2012 03 15 this exciting new handbook provides a global

the dynamics of emerging de facto states routledge focus by - Jun 18 2023

the dynamics of emerging de facto states eastern ukraine in the post soviet space routledge focus hardcover 27 dec 2018 by tetyana malyarenko author stefan wolff

the dynamics of emerging de facto states routledge focus by - Nov 30 2021

emerging de facto states eastern ukraine the dynamics of emerging de facto states by tetyana developing a new research agenda on post soviet de facto defacto for dynamics gp

the dynamics of emerging de facto states - Aug 20 2023

jan 15 2019 tracing the emergence of two new de facto state entities in the post soviet space the self declared donetsk and luhansk people s republics from the chaos of the

dynamic co movements between economic policy uncertainty - Feb 02 2022

may 10 2023 julex capital management llc 40 grove street suite 140 wellesley ma 02482 usa tel 781 489 5398 email info julexcapital com

the dynamics of emerging de facto states routledge - Sep 21 2023

tracing the emergence of two new de facto state entities in the post soviet space the self declared donetsk and luhansk people s republics from the chaos of the early days after

the law and politics of engaging de facto states injecting new - Jan 13 2023

2 the dynamics of emerging de facto states routledg 2021 11 23 academics practitioners and professionals in the field of economic growth productivity and development studies this

the dynamics of emerging de facto states eastern ukraine in - Apr 16 2023

request pdf on jan 15 2019 tetyana malyarenko and others published the dynamics of emerging de facto states eastern ukraine in the post soviet space find read and cite all

the dynamics of emerging de facto states routledg bbgreport - Jun 06 2022

jan 21 2020 migration studies 2019 doi 10 1093 migration mnz005 in an earlier version of this article syrians in turkey were inadvertently categorized under subsidiary protection the

the dynamics of emerging de facto states routledg margaret - Jul 07 2022

the dynamics of emerging de facto states routledg reinforcement learning and dynamic programming using function approximators on the dynamics of lending and deposit

the dynamics of emerging de facto states eastern ukraine in - May 17 2023

the dynamics of emerging de facto states eastern ukraine in the post soviet space tetyana malyarenko et stefan wolff new york routledge 2019 pp 104 volume 53 issue 2

the dynamics of emerging de facto states routledg martin - Aug 08 2022

currently this the dynamics of emerging de facto states routledg as one of the most operating sellers here will agreed be along with the best options to review political survival

thedynamicsofemergingdefactostatesroutledg copy - Mar 03 2022

jun 18 2020 against this background we examine dynamic correlations between housing market returns and the economic policy uncertainty epu index developed by baker bloom

the dynamics of emerging de facto states routledge focus by - Oct 30 2021

the dynamics of emerging de facto states routledg ulrich - Apr 04 2022

unrecognized states in the international system days of the fall the dynamics of emerging de facto states incomplete secession after unresolved conflicts globalization and

dynamic emerging markets julex capital management - Jan 01 2022

with ontological security of the post soviet de facto states the dynamics of emerging de facto states by tetyana dynamics of state building after war external internal inside the post soviet

the dynamics of emerging de facto states eastern - Mar 15 2023

sep 9 2016 regional conflicts and transformation new york routledge 2011 dov lynch engaging eurasias separatist states unresolved conflicts and de facto states

the dynamics of emerging de facto states routledg 2023 - Dec 12 2022

the dynamics of emerging de facto states routledg 1 the dynamics of emerging de facto states routledg right here we have countless books the dynamics of emerging

the dynamics of emerging de facto states google books - Jul 19 2023

frozen conflicts and internal dynamics of de facto states the dynamics of emerging de facto states eastern ukraine mapping the de facto governance in the case of emerging

the dynamics of emerging de facto states routledg pdf - Oct 10 2022

revelation the dynamics of emerging de facto states routledg as skillfully as evaluation them wherever you are now the dynamics of emerging de facto states routledg 2022

the dynamics of emerging de facto states routledg download - Nov 11 2022

right here we have countless ebook the dynamics of emerging de facto states routledg and collections to check out we

additionally present variant types and also type of the books to

dynamics of mobility stasis in refugee journeys case of - May 05 2022

the dynamics of emerging de facto states routledg right here we have countless book the dynamics of emerging de facto states routledg and collections to check out we

the law and politics of engaging de facto states - Feb 14 2023

this study addresses the interplay between law and politics against this context and problematizes false dichotomies that have arguably hindered the transformation of these