

# MATHEMATICS & STATISTICS

Time : 3 hrs.]

MARCH - 2014

[Marks : 80

## SECTION - I

**Q. 1.(A) Select and write the most appropriate answer from the given alternatives for each sub-question :**

[6]

(i) Which of the following represents direction cosines of the line ?

- (a)  $0, \frac{1}{\sqrt{2}}, \frac{1}{2}$  (b)  $0, \frac{-\sqrt{3}}{2}, \frac{1}{2}$  (c)  $0, \frac{\sqrt{3}}{2}, \frac{1}{2}$  (d)  $\frac{1}{2}, \frac{1}{2}, \frac{1}{2}$  (2)

(ii)  $A = \begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$  and  $A(\text{adj } A) = KI$ , then the value of 'K' is \_\_\_\_\_.

- (a) 2 (b) -2 (c) 10 (d) -10 (2)

(iii) The general solution of the trigonometric equation  $\tan^2 \theta = 1$  is \_\_\_\_\_.

- (a)  $\theta = n\pi \pm \frac{\pi}{3}, n \in \mathbb{Z}$  (b)  $\theta = n\pi \pm \frac{\pi}{6}, n \in \mathbb{Z}$   
(c)  $\theta = n\pi \pm \frac{\pi}{4}, n \in \mathbb{Z}$  (d)  $\theta = n\pi, n \in \mathbb{Z}$  (2)

**Q. 1 (B) Attempt any THREE of the following :**

[6]

(i) If  $\vec{a}, \vec{b}, \vec{c}$  are the position vectors of the points A, B, C respectively and  $2\vec{a} + 3\vec{b} - 5\vec{c} = \vec{0}$ , then find the ratio in which the point C divides line segment AB.

(2)

(ii) The Cartesian equation of a line is  $\frac{x-2}{2} = \frac{y+4}{7} = \frac{z-5}{3}$ , find its vector equation.

(2)

(iii) Equation of a plane is  $\vec{r} \cdot (3\hat{i} - 4\hat{j} + 12\hat{k}) = 8$ . Find the length of the perpendicular from the origin to the plane.

(2)

(iv) Find the acute angle between the lines whose direction ratios are 5, 12, -13 and 3, -4, 5.

(2)

(v) Write the dual of the following statements :

- (i)  $(p \vee q) \wedge T$  (ii) Madhuri has curly hair and brown eyes.

(2)

**Q. 2 (A) Attempt any TWO of the following :**

[6]

(i) If the lines  $\frac{x-1}{2} = \frac{y+1}{3} = \frac{z-1}{4}$  and  $\frac{x-3}{1} = \frac{y-k}{2} = \frac{z}{1}$  intersect, then find the value of  $k$ .

(3)

(ii) Prove that three vectors  $\vec{a}, \vec{b}$  and  $\vec{c}$  are coplanar, if and only if, there exists a non-zero linear combination  $x\vec{a} + y\vec{b} + z\vec{c} = \vec{0}$ .

(3)

(iii) Using truth table prove that :  $\sim p \wedge q = (p \vee q) \wedge \sim p$

(3)

**Q. 2 (B) Attempt any TWO of the following :**

[8]

(i) In any  $\triangle ABC$ , with usual notations, prove that  $b^2 = c^2 + a^2 - 2ca \cos B$ .

(4)

(ii) Show that the equation  $x^2 - 6xy + 5y^2 + 10x - 14y + 9 = 0$  represents a pair of lines. Find the acute angle between them. Also find the point of intersection of the lines. (4)

# Mathematics March 2014 Question Paper Grad 1

**JE Gale**



**Mathematics March 2014 Question Paper Grad 1:**

Ignite the flame of optimism with Crafted by is motivational masterpiece, Fuel Your Spirit with **Mathematics March 2014 Question Paper Grad 1** . In a downloadable PDF format ( \*), this ebook is a beacon of encouragement. Download now and let the words propel you towards a brighter, more motivated tomorrow.

<https://splashdogs.com/results/uploaded-files/default.aspx/lifestyle%20illustration%20of%20the%201960s.pdf>

## **Table of Contents Mathematics March 2014 Question Paper Grad 1**

1. Understanding the eBook Mathematics March 2014 Question Paper Grad 1
  - The Rise of Digital Reading Mathematics March 2014 Question Paper Grad 1
  - Advantages of eBooks Over Traditional Books
2. Identifying Mathematics March 2014 Question Paper Grad 1
  - 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 Mathematics March 2014 Question Paper Grad 1
  - User-Friendly Interface
4. Exploring eBook Recommendations from Mathematics March 2014 Question Paper Grad 1
  - Personalized Recommendations
  - Mathematics March 2014 Question Paper Grad 1 User Reviews and Ratings
  - Mathematics March 2014 Question Paper Grad 1 and Bestseller Lists
5. Accessing Mathematics March 2014 Question Paper Grad 1 Free and Paid eBooks
  - Mathematics March 2014 Question Paper Grad 1 Public Domain eBooks
  - Mathematics March 2014 Question Paper Grad 1 eBook Subscription Services
  - Mathematics March 2014 Question Paper Grad 1 Budget-Friendly Options
6. Navigating Mathematics March 2014 Question Paper Grad 1 eBook Formats

- ePub, PDF, MOBI, and More
  - Mathematics March 2014 Question Paper Grad 1 Compatibility with Devices
  - Mathematics March 2014 Question Paper Grad 1 Enhanced eBook Features
7. Enhancing Your Reading Experience
    - Adjustable Fonts and Text Sizes of Mathematics March 2014 Question Paper Grad 1
    - Highlighting and Note-Taking Mathematics March 2014 Question Paper Grad 1
    - Interactive Elements Mathematics March 2014 Question Paper Grad 1
  8. Staying Engaged with Mathematics March 2014 Question Paper Grad 1
    - Joining Online Reading Communities
    - Participating in Virtual Book Clubs
    - Following Authors and Publishers Mathematics March 2014 Question Paper Grad 1
  9. Balancing eBooks and Physical Books Mathematics March 2014 Question Paper Grad 1
    - Benefits of a Digital Library
    - Creating a Diverse Reading Collection Mathematics March 2014 Question Paper Grad 1
  10. Overcoming Reading Challenges
    - Dealing with Digital Eye Strain
    - Minimizing Distractions
    - Managing Screen Time
  11. Cultivating a Reading Routine Mathematics March 2014 Question Paper Grad 1
    - Setting Reading Goals Mathematics March 2014 Question Paper Grad 1
    - Carving Out Dedicated Reading Time
  12. Sourcing Reliable Information of Mathematics March 2014 Question Paper Grad 1
    - Fact-Checking eBook Content of Mathematics March 2014 Question Paper Grad 1
    - 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

## Mathematics March 2014 Question Paper Grad 1 Introduction

In the digital age, access to information has become easier than ever before. The ability to download Mathematics March 2014 Question Paper Grad 1 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 Mathematics March 2014 Question Paper Grad 1 has opened up a world of possibilities. Downloading Mathematics March 2014 Question Paper Grad 1 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 Mathematics March 2014 Question Paper Grad 1 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 Mathematics March 2014 Question Paper Grad 1. 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 Mathematics March 2014 Question Paper Grad 1. 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 Mathematics March 2014 Question Paper Grad 1, 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 Mathematics March 2014 Question Paper Grad 1 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 Mathematics March 2014 Question Paper Grad 1 Books

1. Where can I buy Mathematics March 2014 Question Paper Grad 1 books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Mathematics March 2014 Question Paper Grad 1 book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Mathematics March 2014 Question Paper Grad 1 books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
7. What are Mathematics March 2014 Question Paper Grad 1 audiobooks, and where can I find them? Audiobooks: Audio recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.
8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores. Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.
9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.
10. Can I read Mathematics March 2014 Question Paper Grad 1 books for free? Public Domain Books: Many classic books are available for free as they're in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

**Find Mathematics March 2014 Question Paper Grad 1 :**

**lifestyle illustration of the 1960s**

life sciences grade 1 memorandum 2014 formal test 4

*life sciences gr11 nov 2014 mpumalang province*

light switch english edition

life sciences grade 11 paper 2 exemplar 2014

*life sciences paper1 september preparation exam 2014 memorandum*

life sciences 2013 trial memo

*life sciences paper 1 grade 11 november 2014 easterncape*

life sciences paper1 final examination 2014 grade10 memorandum

**life sciences study notes grade 12**

*life sciences grd1final exam essay 2014*

*life sciences paper 1 grade 11 2014 november*

*lifescience grade 12 gymnosperm the pinus question paper*

~~life sciences 2014 grade 1 paper 2 exemplar final exam~~

*lifesource dt 705 user guide*

**Mathematics March 2014 Question Paper Grad 1 :**

Journeys Reading Program | K-6 English Language Arts ... With Journeys, readers are inspired by authentic, award-winning text, becoming confident that they are building necessary skills . Order from HMH today! Unit 2 Journeys 6th Grade Anthology Reading Series 'I have, Who Has' is a game designed for students to practice vocabulary. The number of cards for each story varies depending on vocabulary and concepts covered ... Journeys 6th grade lesson 5 This supplemental pack is aligned to the Journeys 2011/2012, 2014, and 2017 curriculum for 6th grade . This Journeys Grade 6 ... Student Edition Grade 6 2017 (Journeys) Student Edition Grade 6 2017 (Journeys) ; Language, English ; Hardcover, 792 pages ; ISBN-10, 0544847032 ; ISBN-13, 978-0544847033 ; Reading age, 11 - 12 years. Journeys Student E-Books – BVM School Darby Sep 21, 2023 — Journeys Student E-Books · Classrooms · 1ST GRADE · 2ND GRADE · 3RD GRADE · 4TH GRADE · 5TH GRADE · 6TH GRADE · 7TH GRADE · 8TH GRADE ... Free Journeys Reading Resources Oct 31, 2023 — Free Journeys reading program ebooks, leveled readers, writing handbooks, readers notebooks, and close readers. Student and teacher ... All Alone in the Universe Journeys 6th Grade - YouTube Journeys (2017) Feb 9, 2017 — 2017. 2017 Journeys Student Edition Grade 6 Volume



1, 978-0-544-84740 ... 6th Grade 6th Grade. 6th Grade. Showing: Overview · K · 1 · 2 · 3 · 4 ... 6th Grade anthology 2022 bethune.pdf Introduction. The work in this anthology was written by 6th graders in Ms. Uter and Ms. Inzana's ELA class during the 2021-2022 school. XNJ2 Amazon - Lodging - Keasbey, New Jersey XNJ2 Amazon is a Lodging located at 19 Crows Mill Rd, Keasbey, Keasbey, New Jersey 08832, US. The establishment is listed under lodging category. Bloomsbury to High Bridge - XNJ2 This new route starts just across the Delaware in Easton PA where we cross over to Phillipsburg and make our way to Bloomsbury, Clinton, High Bridge, Chester ... Jazzy (xnj2) - Profile See what Jazzy (xnj2) has discovered on Pinterest, the world's biggest collection of ideas. Search results for 'xnj2' Search results for 'xnj2'. Blog Menu. Categories. Browse All Stories (514) · Garden Tips (124) · Garden Design (124) · Life & Style (76) · Edibles (24) ... Xnj2 - A.frame - Oscars.org This website uses cookies. This website uses cookies to deliver our content and to provide personalized features. Instructions for disabling cookies are in ... in [JI]-[J4]. • or  $X = UnXn$ , where  $[Xn]2 < ; /C1$  for all  $n < w$ ." by W Just · Cited by 21 — Throughout this note, "ideal" means a proper ideal  $I$  in the Boolean algebra  $pew$ ) that contains  $Fin$ -the ideal of finite subsets of  $w$ . We often. P486 XNJ (2) | 1997 Renault Clio RL Paris 1.2 3-door. ... Jan 15, 2019 — 1997 Renault Clio RL Paris 1.2 3-door. Supplied by West Sussex Motors (Renault). Xnj(2) - YouTube XNJ2-9F4Q: Attention Induced Trading and Returns Nov 5, 2021 — XNJ2-9F4Q: Attention Induced Trading and Returns: Evidence f... Publication date: 2021. Contributor: Perma.cc. Perma.cc archive of <https://ssrn> ... The Life And Liberation Of Padmasambhava Vols I - II Apr 6, 2021 — Life & Liberation of Padmasambhava (2 Volume Set) This biography of Padmasambhava ... download 1 file · FULL TEXT download · download 1 file · HOCR ... Life and Liberation of Padmasambhava - 2 Volumes This biography of Padmasambhava, the founder of Tibetan Buddhism, is a translation of the Padma bKa'i Thang recorded in the eighth century by his closest ... The Life and Liberation of Padmasambhava (Vols I & II) Padilla bKa'i Thal1g Part I: India As Recorded by Yeshe Tsogyal Rediscovered by Terchen U rgyan Lingpa Translated into F... Life & Liberation of Padmasambhava (2 Volume Set) This biography of Padmasambhava, the founder of Tibetan Buddhism, is a translation of the Padma bKa'i Thang recorded in the eighth century by his closest ... THE LIFE AND LIBERATION OF PADMASAMBHAVA 2 ... THE LIFE AND LIBERATION OF PADMASAMBHAVA 2 Volume Set. California: Dharma Publishing, 1978. First Edition; Third Printing. Hardcover. Item #155020 The Lives and Liberation of Princess Mandarava Those who read this book will gain inspiration and encouragement on the path to liberation. "An extraordinary story from the heart of Tibetan religious culture. The Life Stories of Padmasambhava and their Significance ... by S Hughes · 2013 · Cited by 3 — 1 A mound-like structure containing religious relics that symbolizes the Buddha in meditation posture. Also known as stupa. 2 Stones and rocks with carved ... Life and Liberation of Padmākara Guru Padmasambhava was an emanation of both Buddha Amitābha and the peerless Śākyamuni, and his purpose was to pacify human and spirit beings that were ... Padmasambhava - Life and Liberation Cantos 37 and 39 free buddhist audio offers over 5000 free talks on buddhism, mindfulness and meditation to stream or download.