



A Survey on PYQs Preserving Web Application

Student, Department of Information Science & Technology, Jayachamaraj Engineering College, Dugamur,
Student, Department of Information Science & Technology, Jayachamaraj Engineering College, Dugamur,

ABSTRACT

The PYQHUB is a web application designed to archive and provide access to a repository of past question papers (PYQs) of our institution and exams. The platform aims to facilitate the easy retrieval of past questions, which can be a crucial resource for students and educators. The project addresses the need for organized, easily accessible historical exam content in a digital format, reducing the dependency on physical paper collections and scattered resources. It will offer a user-friendly interface for

browsing, searching, and downloading question papers based on filters like subject, year or exam type.

Key features of the website include:

1. User Registration and Authentication
2. Search and Filtering System
3. Paper Upload and Moderation
4. Download and Print Option
5. Categorization and Organization

INTRODUCTION

The development of a Previous Year Question (PYQ) website is aimed at preserving and organizing past examination questions across various subjects, academic levels. This type of platform is essential for students, educators, and learners, providing them with access to a repository of real exam questions that reflect the types of challenges and topics likely to appear in future exams.

OBJECTIVES

1. Content Preservation & Accessibility : By digitizing and categorizing past questions, a PYQ website ensures that this valuable educational content is preserved and accessible to a broader audience.
2. Resource for Self-Assessment: PYQ websites provide an ideal tool for self-assessment, enabling users to practice with actual questions.
3. Search and Filter Functions: With a well-designed search and filtering system, users can locate questions by year, subject or topic.

4. User-Friendly Interfaces: Usability research stresses the importance of intuitive interfaces to facilitate easy access to question papers.

TECHNOLOGIES AND ALGORITHM

Frontend Technologies:

- **HTML/CSS:** For structuring and styling web pages.
- **JavaScript:** For dynamic content and interactive features.
- **Frontend Frameworks:** React.js (optional)

Backend Technologies: Node.js

Version Control: Git for source code management and collaboration.

Search Algorithms (Keyword Search): Algorithms to match user queries with full keyword search.

Hashing Algorithms: For securely storing user passwords (e.g., bcrypt), if it involves user authentication.

Error Handling and Validation: Client-side and server-side validation algorithms to ensure data integrity when users submit forms.

LITERATURE SURVEY

The survey on the preservation of previous year question papers (PYQs) through web application involves examining the methods, technologies, challenges, and impacts associated with archiving and providing access to educational question papers online. Here is an overview based on the themes typically covered in this survey:

1. Digital Preservation

Digital Preservation by Marilyn Deegan and Simon Tanner provides essential frameworks and strategic insights for preserving digital assets over the long term, particularly for libraries, educational institutions, and cultural organizations. Key topics include handling challenges like data integrity, access maintenance, and format obsolescence, as well as foundational technologies like migration (updating file formats), emulation (simulating older systems), metadata standards, and reliable storage practices. However, the book's technical depth can be challenging for beginners and leans more toward strategic theory than hands-on guidance. Additionally, since it was published in 2006, it lacks information on newer digital preservation tools and advancements, making it less

applicable to today's evolving digital landscape.

2. Managing and Preserving Digital Materials

Managing and Preserving Digital Materials by Cathy Collins serves as a comprehensive guide to the long-term management of digital resources. The book covers essential topics, including archival standards, digital storage practices, and metadata management, all necessary for the effective organization and preservation of digital collections. It also addresses risk management and legal considerations, making it a valuable resource for institutions looking to secure digital content over time. However, some drawbacks include its focus on high-level strategies rather than detailed practical steps, which might limit its usefulness for practitioners needing immediate, technical solutions.

3. Handbook on Digital Libraries: Management, Technology and Applications

Handbook on Digital Libraries: Management, Technology and Applications by Yin-Leng Theng, Schubert Foo, Dion Goh, and Jin-Cheon Na provides an extensive overview of the technical and management strategies

involved in digital library preservation. It covers essential areas such as database management, metadata standards, and digital content preservation practices, making it an invaluable resource for institutions aiming to maintain accessible and organized digital collections over time. The book's drawbacks include its theoretical focus on digital library systems, which may not offer the practical, step-by-step guidance that practitioners often seek. Additionally, since it was published in 2009, some of the technology and standards discussed may not reflect the latest advancements in digital preservation.

4. The Use of Previous Year Examination Questions for Assessment in Higher Education

McDonald, J. H. (2002). "*The Use of Previous Year Examination Questions for Assessment in Higher Education*" examines the educational value of using past exam questions to improve student learning and assessment quality in higher education. This study argues that preserving and reusing these questions helps students familiarize themselves with testing formats and critical topics, promoting continuous improvement in assessment practices. However, the paper's limitations include its narrow focus on assessment strategy without extensive guidance on digital storage or

technical preservation, which would be necessary for long-term institutional access to these materials.

5. The Importance of Past Exam Questions in Education: A Study of Student Performance

Kahn, S. (2014). "*The Importance of Past Exam Questions in Education: A Study of Student Performance*" explores how preserving and using past exam questions can positively impact student performance and learning efficiency. However, the study's scope is limited to educational psychology, focusing more on academic benefits rather than offering detailed guidelines on digital preservation or technical solutions for long-term storage. Nonetheless, Kahn's research underscores the importance of accessible past exam materials in fostering student success and supporting robust educational frameworks.

6. Digital Preservation in Institutional Repositories: A Systematic Literature Review

Barrueco, J. M., & Termens, M. (2022). "*Digital Preservation in Institutional Repositories: A Systematic Literature Review*" provides a comprehensive overview of digital preservation practices within institutional repositories. Key points

include the importance of metadata standards, file format management, and access control in digital preservation. The paper also examines the role of technological tools and frameworks in sustaining digital archives over time. However, the review's focus on institutional repositories may limit its applicability to broader digital preservation contexts, and it may not delve deeply into the specific technologies used in preservation processes.

7. GITAM Digital Learning Platform

The GITAM Digital Learning Platform, developed by GITAM University, It covers departments like Computer Science, Mechanical Engineering, and Civil Engineering. The platform utilizes Learning Management Systems (LMS), cloud-based storage, video conferencing, and data analytics to support student learning and track progress.

Despite these advantages, the platform has some drawbacks. Students with limited internet access may struggle, and the large volume of resources can overwhelm those less familiar with digital tools. Additionally, while it offers virtual

lectures, the absence of face-to-face mentorship may limit deeper learning.

8.NPTEL Previous Year Question Papers

The NPTEL Previous Year Question Papers resource, offered by the National Programme on Technology Enhanced Learning (NPTEL), provides students with access to past exam papers from a wide range of engineering and science courses. This initiative helps learners prepare for NPTEL's certification. The platform uses web-based technologies integrated with video lectures, assignments, and exam registration through the SWAYAM portal, enabling students to access these papers across various devices. However, a potential drawback is that while the past papers are helpful in understanding exam patterns, they may not always reflect the most recent course updates or new topics introduced in the latest syllabus.

9.Digital Preservation Initiatives for Academic Resources

The "Digital Preservation Initiatives for Academic Resources" project (2022 – 2024) by various Indian academic institutions focuses on ensuring long-term

access to academic materials through digital preservation strategies. The key technologies include high-resolution scanning, archival storage systems, and backup solutions like LTO tape drives. Additionally, standards such as METS (Metadata Encoding and Transmission Standard) are employed to maintain the metadata integrity of digital resources. However, the project faces challenges, such as the complexity of managing large volumes of data and the need for continuous monitoring of evolving technologies. There is also a requirement for consistent funding and resources to ensure long-term preservation.

10.Digital Library Initiatives in India: A Comprehensive Study

The study titled "*Digital Library Initiatives in India: A Comprehensive Study*" by Sankhayan Mukherjee and Swapan Kumar Patra (2023) surveys the state of digital libraries across India, focusing on their progress, challenges, and limitations. Technologies in use include basic content management systems, online repositories, and some access tools, but the lack of adherence to global standards for metadata and digitization practices remains a critical issue. The study suggests the introduction of standardized practices, improved metadata management, and better remote access to address these gaps and improve the

effectiveness of digital library initiatives across the country.

11.EdSurge on AI and Educational Assessment

EdSurge articles highlight the integration of technology into education, focusing on tools and assessments that improve student learning. Key topics include personalized learning, data-driven decision-making, and tools to reduce student anxiety during assessments. Technologies like learning platforms, data analytics tools, and assessment software are central to these discussions. Despite these advantages, the abundance of available tools can overwhelm educators, leading to decision fatigue, and proper training is necessary for effective implementation.

CONCLUSION

The literature on PYQ website development supports the need for an organized, accessible, and legally compliant repository that can serve as an academic asset for students, teachers, and researchers alike. By leveraging modern technologies, maintaining content

accuracy, and focusing on usability, a well-developed PYQ website can preserve historical academic resources and empower users to improve their learning outcomes.

The PYQHUB aims to bridge the gap between students and their study materials, ensuring they have the best possible resources at their fingertips.

REFERENCES

- "Digital Preservation" by Marilyn Deegan and Simon Tanner.
- "Managing and Preserving Digital Materials" by Cathy Collins.
- "Handbook on Digital Libraries: Management, Technology and Applications" by Yin-Leng Theng et al.
- McDonald, J. H. (2002). "The Use of Previous Year Examination Questions for Assessment in Higher Education." *Assessment & Evaluation in Higher Education*, 27(2), 131-144.
- Kahn, S. (2014). "The Importance of Past Exam Questions in Education: A Study of Student Performance." *Journal of Educational Psychology*, 106(2), 453-466.

- "Digital Preservation in Institutional Repositories: A Systematic Literature Review" by José Manuel Barrueco and Miquel Termens (2022).
- "GITAM Digital Learning Platform" by GITAM University (2023).
- "NPTEL Previous Year Question Papers" by National Programme on Technology Enhanced Learning (NPTEL) (2024).
- "Digital Preservation Initiatives for Academic Resources" by Various academic institutions across India Various (2022-2024).
- "Digital Library Initiatives in India: A Comprehensive Study" by Sankhyayan Mukherjee and Swapna Kumar Patra arXiv (2023).

Tech Blogs:

- EdSurge articles on the use of technology in education and assessment.
- Discussions on platforms like ResearchGate related to educational assessments and resources.