Question Bank on Information System and Engineering Economics

**Unit I: Basic of Management Theory and Practice.**

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| Q.1 | What is the role of Information System in organizations? |
| Q.2 | What is Management Information system? |
| Q.3 | Difference between IS and IT. |
| Q.4 | What are the different types of effects of Information system when used in Organization? |
| Q.5 | Explain the information system Manager and his challenges? |
| Q.6 | Three fundamental types of information system used in organization. |
| Q.7 | Explain the types of Information Technology used in Organization |
| Q.8 | Explain communication in organizations. |
| Q.9 | Explain the case study : Indian Railways |
| Q.10 | Explain Information goods. |
| Q.11 | List of the support comparative strategy use in IS |
| Q.12 | Explain the value chain for making a passenger car. |
| Q.13 | Explain Information system in an e-commerce organization. |
| Q.14 | Explain the following terms: |
|  | a)Bargaining power of supplier  b) Barriers to Entry  c)Computing on low cost |
| Q.15 | Explain Modern organization. |
| Q.16 | Explain Advantages of E-Governance |

**UNIT I**

**Basic of Management Theory & Practices**

1. Explain the Role of Information Systems in Organizations
2. What are the roles & responsibilities of the Information System Manager?
3. Describe the challenges faced by the Information System Manager.
4. Explain the concepts of Information Systems
5. Explain TQM
6. Explain Information Systems and Management Strategy
7. Explain Information Systems and Competitive Strategy
8. Describe the important factors for the competitive environment of business
9. Explain the case study - Information Systems in the Indian Railways
10. Explain Information Systems in an e-Commerce Organization.

**UNIT II**

**Management Information System (MIS)**

1. Describe the challenges of Managing the IT function
2. Explain the various factors in Vendor Management
3. Explain the role of the CIO
4. Describe IT Governance
5. What are the Ethical and Social Issues in managing IS
6. Write short notes on:
7. Workplace Behavior and Health
8. De-skilling and Alienation
9. Telecommuting
10. E-Waste
11. What is the IT Infrastructure?
12. Explain IT Infrastructure Decisions
13. What are the Infrastructure Components
14. Explain Information Systems Security & Control
15. Describe the threats to the Organization
16. Explain the Technologies for Handling Security
17. Explain Case Study of Information Technology Infrastructure in a Bank
18. Explain Information Technology Infrastructure in a manufacturing / process industry.

**UNIT III**

**Leveraging Information Systems**

1. Explain Information Systems Development and Project Management
2. Describe any two Life Cycle Models
3. Write short notes on:
4. Top Management Support
5. Team Composition
6. Vendor Selection
7. Project Estimation
8. Function Point Analysis
9. What are the Challenges of Data Management?
10. Explain the Database Concepts
11. What are Data warehouses
12. What is Business Process Integration?
13. Explain Enterprise Resource Planning Systems
14. What are the Types of ICT Interventions?
15. Explain E-Commerce Concepts
16. Describe the Case Study - in-house or cloud based ERP implementation
17. Explain UIDAI Unique Identification Authority of India.
18. What is E-Governance?

**UNIT IV**

**Money and Economic Value**

1. What are the Key Factors in Selecting Good Engineering Economic Decisions?
2. Explain the Fundamental Principles of Engineering Economics
3. What is the Time Value of Money? Explain with example
4. Explain the concept of Money Management
5. Explain Cash Flow Diagrams with Example
6. Explain Case Study- Economic decisions done in Multi-national companies

**Unit-4**

1. What do you mean by decision making?
2. Define DSS. What are its uses? Explain engineering economics decisions.
3. Briefly explain the complete process of decision making.
4. Explain Decision Support System (DSS) with its process and Characteristics.
5. What are the Components of Decision Support System (DSS)?
6. How Decision Support System (DSS) helps in taking right decision? Explain with example.
7. Explain time value of money.
8. Describe money management in detail.
9. Describe economic decisions done in multinational companies.
10. What is the amount of interest earned on $5,000 for three years at 8% simple

interest per year?

1. You deposit $5,000 in a savings account that earns 6% simple interest per year.

How many years will it take to double your balance? If, instead, you deposit the

$5,000 in another savings account that cams 5% interest compounded yearly,

how many years will it take to double your balance?

1. Compare the interest earned on $8,000 for 15 years at 8% simple interest with the amount of interest earned if interest were compounded annually.

**UNIT V**

**Economics and Management**

1. Explain Equivalence Calculations under Inflation
2. Explain various Inflation Terminology
3. Explain Inflation and Cash Flow Analysis
4. What is Present-Worth Analysis? Explain with example
5. Explain Annual-Equivalence Analysis with example
6. Explain Constant Dollar Analysis with example
7. Explain Equivalence Calculation with Composite Cash Flow Elements
8. Describe Case Studies -comparative analysis of software enterprises from similar domains

**UNIT 5 Question Bank**

1. **Explain Consumer price index with example.**
2. **Explain producer price index with example.**
3. **Explain average inflation rate(f).**
4. **Explain conversion from constant to actual dollar.**
5. **Explain conversion from actual to constant dollar.**
6. **Explain in detail market and inflation free interest rate.**
7. **What is constant dollar explain with suitable example.**
8. **What is actual dollar explain with suitable example.**
9. **Explain adjusted discounted method.**
10. **Explain mixed dollar analysis.**
11. **What is net present criterion?**
12. **What is MARR?**
13. **What is investment pool in present worth analysis explain with suitable example.**
14. **What is Capitalized-Equivalent Method.**
15. **Explain Annual Equivalent Worth (AE) Criterion.**
16. **Explain benefits of AE analysis.**
17. **Explain capital cost versus operating cost.**

**UNIT VI**

**Understanding Cash Flow and Taxes**

1. Explain Accounting for Depreciation and Income Taxes with example
2. Explain Project Cash-Flow Analysis with example
3. Explain Financial Statements with examples
4. Explain cash flow analysis done in start-up companies
5. Explain Monthly Compounding with example
6. Explain Uniform payments
7. Explain Compound Interest with example
8. Describe Cash Outflow Sources

**UNIT 6**

**SESSION-I**

**What is the 'Internal Revenue Service - IRS'**

The Internal Revenue Service (IRS) is a U.S. government agency responsible for the collection of taxes and enforcement of tax laws.

Established in 1862 by President Abraham Lincoln, the agency operates under the authority of the United States Department of the Treasury, and its primary purpose includes the collection of individual income taxes and employment taxes. The IRS also handles corporate, gift, excise and [estate taxes](http://www.investopedia.com/terms/e/estatetax.asp). People colloquially refer to the IRS as the "tax man."

**Cost basis** is the original value of an asset for tax purposes, usually the purchase price, adjusted for stock splits, dividends and return of capital distributions. This value is used to determine the capital gain, which is equal to the difference between the asset's **cost basis** and the current market value.

**Salvage value** is the estimated resale **value** of an asset at the end of its useful life. **Salvage value** is subtracted from the cost of a fixed asset to determine the amount of the asset cost that will be depreciated.

The **useful life** of an asset is an estimate of the number of years an asset is likely to remain in service for the purpose of cost-effective revenue generation. The Internal Revenue Service (IRS) employs **useful life** estimates to determine the amount of time during which an asset can be **depreciated**.

**Annual depreciation:** a reduction in the book value of an asset at a particular rate per year.

**Book value** of an asset is the value at which the asset is carried on a balance sheet and calculated by taking the cost of an asset minus the accumulated depreciation. Book value is also net asset value of a company, calculated as total assets minus intangible assets (patents, goodwill) and liabilities.

**Half**-**year convention** is a principle of United States taxation law. Certain property is subject to depreciation. Depreciation allows one to deduct a certain amount of the value or basis of depreciable property per taxable **year**. A person with depreciable property must know when to start depreciating his/her property.

**UNIT VI**

**Working capital investment** is the amount of money you require to expand your business, meet short-term business responsibilities and cover business expenses. A start-up capital, we can say, is the amount money you require to begin a business till it yields sufficient revenue so that it can pay for its own self.

In business and engineering, the **minimum acceptable rate of return**, often abbreviated **MARR**, or hurdle rate is the minimum rate of return on a project a manager or company is willing to accept before starting a project, given its risk and the opportunity cost of forgoing other projects.

**Working capital :**the capital of a business which is used in its day-to-day trading operations, calculated as the current assets minus the current liabilities.

**Borrowed funds** refer to the borrowings of a business firm. In a company, borrowed funds consist of the finance raised from debenture holders, public deposits, financial institutions and commercial banks.

**Operating revenue** is revenue (sales) generated from a company's day-to-day business activities, which means revenue posted from selling the company's products and services. A retailer, for example, produces revenue through inventory sales, and a doctor derives revenue from consulting with patients.

**UNIT 6**

Liquidity might be your emergency savings account or the cash lying with you that you can access in case of any unforeseen happening.

[Cash Flow Case Study: Poppy Barley](https://dryrun.com/cash-flow-case-study-poppy-barley/)

Justine and Kendall Barber have brought their startup, [Poppy Barley](http://poppybarley.com/), from idea to growing business in under two years. Quite a feat for any entrepreneur let alone a company that produces custom products with staff in two countries.

Poppy Barley solves a long-running problem that most women face, proper fitting footwear. Through their ingenuity and partnerships, Poppy Barley is offering premium, custom-made, beautiful footwear at accessible prices.

From the early days, when the partners were simply recording purchases and using personal funds to get off the ground, the financial end of their business grew in complexity as fast as their sales.

But even then, they were organized. “Kendall, my co-founder, and I shared a Google drive where we would write down and record all of the personal money that each of us had put into the company” says Barber. “We started building out our budgets seriously after we had sales and then we had margins and we had cost of goods.”

## The Case for Cash Flow Projections

Within a very short time, the partners were faced with the daunting but familiar task of raising money. Developing financial projections became critical. Potential investors always asked “[What’s your cash flow](http://dryrun.com/forecasting-frequency-how-often-should-you-check-your-cash-flow/) and how many months of runway will this give you?” says Barber. “Typically they wanted to see two years of projections with sales, margins and then hires, space, insurance, all of that,” she says. When estimating sales, they were encouraged to “cut our sales in half, add 20% to our costs…because I think entrepreneurs are often overly optimistic.”

The company landed some much-needed investment dollars and, with money in hand, their business grew in quick and grew in complexity. Within a couple of months “we hired our first two people, brought on two more contractors, who over the summer became our employees,” says Barber. “Then we also went through the process of becoming a ‘real company’” where expenses pile up. “A business license, insurance, and health care and you start using more tools to help your business.”

“The biggest lesson of my first year of business was really all about cash flow, cash flow, cash flow. We took it much more seriously in determining our runway with the investment we had. Figuring out how many months we had until death,” says Barber.

She says that the greatest advantage of managing your cash flow is that it “just buys you time.” She believes that “if you have enough money and you’re diligent, you can figure it out and end up successful. But in the meantime, if you run out of money… that’s when you die.”

Managing their cash flow gives them that time and that control that they need. “We have a much better sense, in year two, of every single cost that we actually incur and how high it is,” says Barber, “We’re also a lot more cautious in making projections, that we budget in multiple scenarios of sales.”

In their second year as entrepreneurs, the partners are already highly-experienced in the management of their business. Staying organized and a dedication to managing their cash flow has given the company control over their destiny. “Now we’re in our second year, because we have sales that vary quite a bit month to month, money in the bank and higher overhead, it’s makes a big difference for us now so we keep a very close eye on our cash flow,” says Barber.

Poppy Barley is well on its way to changing the way women buy footwear. Careful cash flow management means that they can concentrate on that goal, resting assured that their finances are under control.