

**Bharati Vidyapeeth (Deemed to be University), Pune**

**Centre for Distance and Online Education**

**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Dr. Anita Patil</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	<b>301 - Software Design Patterns</b>		
<b>Q.1)</b>	<b>Attempt ANY ONE of the Following (1000 Words)</b>		<b>(10)</b>
<b>a)</b>	Illustrate role of Chain of Responsibility design pattern with intent, structure and applicability.		
<b>b)</b>	To implement an Online Hotel Booking System which are the design patterns are required? Explain.		
<b>Q.2)</b>	<b>Attempt ANY TWO of the Following (800 Words)</b>		<b>(12)</b>
<b>a)</b>	When to use Observer design pattern? Illustrate it with intent, structure and applicability		
<b>b)</b>	Why use Software Design Patterns		
<b>c)</b>	List the design patterns used in presentation Layer of J2EE application and explain any one in detail.		
<b>d)</b>	Which design pattern you choose to convert an existing interface into another interface which client expects? Illustrate your choice with example.		
<b>Q.3)</b>	<b>Write Short Notes on (ANY TWO)</b>		<b>(08)</b>
<b>a)</b>	Proxy Design Pattern		
<b>b)</b>	Visitor Pattern		
<b>c)</b>	Interpreter pattern		
<b>d)</b>	Software Design Patterns		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Sanket Bhokre

**Programme:** MCA **Semester:** III

**Subject:** 302 - Artificial Intelligence

**Q.1)** Attempt **ANYONE** of the Following **(1000 Words)** **(10)**

**a)** What is ARTIFICIAL INTELLIGENCE?

**b)** Write problems of ARTIFICIAL INTELLIGENCE

**Q.2)** Attempt **ANY TWO** of the Following **(800 Words)** **(12)**

**a)** Advantages of ARTIFICIAL INTELLIGENCE

**b)** Disadvantages of ARTIFICIAL INTELLIGENCE

**c)** History of ARTIFICIAL INTELLIGENCE

**d)** ARTIFICIAL INTELLIGENCE Techniques

**Q.3)** Write Short Notes on **(ANY TWO)** **(08)**

**a)** What is Machine Learning ?

**b)** What is Deep Learning?

**c)** What is Relation Between Machine Learning, Deep Learning, ARTIFICIAL INTELLIGENCE

**d)** Current Developments in ARTIFICIAL INTELLIGENCE?

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Prof Anil P. Srivastava</b>	
<b>Programme:</b>	<b>MCA (Distance Mode)</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	303 Information Security		
<b>Q.1)</b>	Attempt <b>ANYONE</b> of the Following ( <b>1000 Words</b> )		<b>(10)</b>
<b>a)</b>	Elaborate the Basic Concepts of Information and Information Systems		
<b>b)</b>	What is Information Security and Organizational Management discuss.		
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following ( <b>800 Words</b> )		<b>(12)</b>
<b>a)</b>	Discuss Business Applications of Information and Information Systems		
<b>b)</b>	What is Business Application of Information and Information Systems.		
<b>c)</b>	What are Functions of Business Organizations and Levels of Organization discuss.		
<b>d)</b>	What is Organizational Structure and Information Flow discuss.		
<b>Q.3)</b>	Write Short Notes on ( <b>ANY TWO</b> )		<b>(08)</b>
<b>a)</b>	Basic Concepts of Information and Information Systems		
<b>b)</b>	Information characteristics and sources		
<b>c)</b>	Business Applications of Information and Information Systems		
<b>d)</b>	Information Security and Its Importance		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		Ashwini Sarate	
<b>Programme:</b>	MCA	<b>Semester:</b>	III
<b>Subject:</b>	304_5(MC) Java Script Programming		
<b>Q.1)</b>	Attempt <b>ANY ONE</b> of the Following <b>(1000 Words)</b>		<b>(10)</b>
<b>a)</b>	What is DOM? Explain with example?		
<b>b)</b>	Explain Math Object? Describe properties & methods of Math Object?		
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following <b>(800 Words)</b>		<b>(12)</b>
<b>a)</b>	Explain String Object? Describe properties & methods of String Object?		
<b>b)</b>	Explain Describe any 4 document related functions with example?		
<b>c)</b>	Explain Form Object? Describe Form elements & their properties?		
<b>d)</b>	Explain in brief Control statements in JavaScript		
<b>Q.3)</b>	Write Short Notes on <b>(ANY TWO)</b>		<b>(08)</b>
<b>a)</b>	Form Validation in Java Script		
<b>b)</b>	Events in Java Script		
<b>c)</b>	Date Object		
<b>d)</b>	Array		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

Name of the Assignment Setter:

Prof. Shubhum Patil

Programme:

MCA

Semester:

III

Subject:

(304\_11) Introduction to Information Security

**Q.1) Attempt ANY ONE of the Following (1000 Words) (10)**

a) Describe the Principle of Least Privilege and explain how it can prevent insider threats.

b) Explain in details Defense-in-Depth strategy

**Q.2) Attempt ANY TWO of the Following (800 Words) (12)**

a) Discuss the importance of the CIA Triad (Confidentiality, Integrity, Availability) in information security. Provide examples for each component and explain how they contribute to an organization's overall security posture.

b) Importance of threat to business continuity due to accidents related to information systems.

c) Describe the Biba Integrity Model and compare it to the Bell-LaPadula Model.

d) Explain in details cryptography

**Q.3) Write Short Notes on (ANY TWO) (08)**

a) • Security Principles

b) • Security Principles

c) • MFA

d) • Defense-in-Depth strategy

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Prof. Amruta Kulkarni</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	Social Change in Technology		
<b>Q.1)</b>	Attempt <b>ANY ONE</b> of the Following <b>(1000 Words)</b>		<b>(10)</b>
<b>a)</b>	What is Social change? What is the scope and Characteristics of Social Change? Also state role of Society in change.		
<b>b)</b>	Why social change is a dynamic concept? Discuss in details.		
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following <b>(800 Words)</b>		<b>(12)</b>
<b>a)</b>	Explain the Concept of Science and Technology in Relation to Social Change.		
<b>b)</b>	Discuss the Causes and Effects of Technology in Social Changes.		
<b>c)</b>	Evaluate Discovery as a Social Process for Social Change and Technological Development.		
<b>d)</b>	Analyze the Current Trends in Technology and Their Social Implications.		
<b>Q.3)</b>	Write Short Notes on <b>(ANY TWO)</b>		<b>(08)</b>
<b>a)</b>	Evolutionary Theories of Social Change		
<b>b)</b>	Conflict Theory of Social Change		
<b>c)</b>	Modernization Theory		
<b>d)</b>	Types of Innovation and Their Social Impact		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Ashwini Santosh Sarate.

**Programme:** MCA **Semester:** III

**Subject:** (07)-A HTML 5.0

1.

**Q.1)** Attempt **ANY ONE** of the Following **(1000 Words)** **(10)**

- |           |   |  |
|-----------|---|--|
| <b>a)</b> | Explain the purpose of the <!DOCTYPE html> declaration in HTML5. How does it differ from the <!DOCTYPE> declarations used in previous versions of HTML? |  |
| <b>b)</b> | Discuss how images can be drawn on the canvas. What are the steps involved in loading and displaying an image?  |  |

**Q.2)** Attempt **ANY TWO** of the Following **(800 Words)** **(12)**

- |           |   |  |
|-----------|---|--|
| <b>a)</b> | What is XHTML, and how does it differ from traditional HTML? Discuss the stricter syntax rules of XHTML and the significance of XML-based markup in web development.                      |  |
| <b>b)</b> | What is Modernizr, and how does it assist in the development of HTML5 web applications? Explain how Modernizr can be used for feature detection and fallback solutions in older browsers. |  |
| <b>c)</b> | What is the World Wide Web Consortium (W3C), and why is it significant for web development? Describe the role of W3C in creating web standards and ensuring cross-browser compatibility.  |  |
| <b>d)</b> | Provide examples of specific HTML5 features that can be detected using Modernizr. Discuss how these detections can influence the development process and enhance user experience.         |  |

**Q.3)** Write **Short Notes** on **(ANY TWO)** **(08)**

- |           |  |  |
|-----------|--|--|
| <b>a)</b> | Standards for the Internet                 |  |
| <b>b)</b> | Role of Working Groups in HTML Development |  |
| <b>c)</b> | Web Workers                                |  |
| <b>d)</b> | Microdata                                  |  |

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Prof. Rutuja Patil

**Programme:** MCA **Semester:** III

**Subject:** 304\_6.(DN Tech) C# Programming and Applications

**Q.1)** Attempt **ANY ONE** of the Following **(1000 Words)** **(10)**

**a)** What is Exception? Describe Exception Handling with example?

**b)** Explain array list class with example?

**Q.2)** Attempt **ANY TWO** of the Following **(800 Words)** **(12)**

**a)** Explain Different types of constructors in C# with example?

**b)** Explain access modifiers in C#?

**c)** Difference between Error & Exception?

**d)** Explain for Method Overloading with example?

**Q.3)** Write Short Notes on **(ANY TWO)** **(08)**

**a)** Type Conversion

**b)** Method Overloading

**c)** Short note with properties & events of following controls :  
A. TextBox B. Button C. Combobox D. PictureBox

**d)** Short note with properties & events of following controls :  
C. Combobox D. PictureBox

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Shashwat Doshetti</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>3<sup>rd</sup> Semester</b>
<b>Subject:</b>	<b>Economics and IT Industry</b>		
<b>Q.1)</b>	<b>Attempt ANY ONE of the Following (1000 Words)</b>		<b>(10)</b>
<b>a)</b>	Explain the <b>meaning and scope of Industrial Economics</b> and discuss the <b>need and importance of industrial economics</b> in today's economy.		
<b>b)</b>	Analyze the <b>IT industry's contribution to the Indian economy</b> and explore the <b>factors hindering its growth</b> .		
<b>Q.2)</b>	<b>Attempt ANY TWO of the Following (800 Words)</b>		<b>(12)</b>
<b>a)</b>	Describe the <b>Theory of Demand and Supply</b> , focusing on the <b>Law of Demand and Supply</b> and its application to the IT industry.		
<b>b)</b>	Discuss the <b>elasticity of demand</b> and how it affects pricing decisions in the IT industry.		
<b>c)</b>	Explain the <b>size and structure of companies</b> within the IT industry in India, focusing on key factors that influence their growth.		
<b>d)</b>	Assess the <b>impact of government and IT industry policies</b> , particularly <b>monetary policies</b> , on the sector's development.		
<b>Q.3)</b>	<b>Write Short Notes on (ANY TWO)</b>		<b>(08)</b>
<b>a)</b>	<b>Marketing Boundaries</b> and their role in determining a firm's structure in the IT industry.		
<b>b)</b>	The role of <b>competition and price output</b> in long-run and short-run monopolies in the IT industry.		
<b>c)</b>	The importance of <b>R&amp;D in the IT industry</b> and its impact on innovation.		
<b>d)</b>	Current <b>macroeconomic issues</b> facing the IT industry and the role of industrial policy.		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**

**Centre for Distance and Online Education**

**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Prof Shubhum Patil</b>	
<b>Programme:</b>	<b>MCA (Distance Mode)</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	309 Water Management		
<b>Q.1)</b>	Attempt <b>ANY ONE</b> of the Following ( <b>1000 Words</b> )		<b>(10)</b>
<b>a)</b>	Elaborate the Basic Concepts of Water Management.		
<b>b)</b>	What is Concept of virtual water?		
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following ( <b>800 Words</b> )		<b>(12)</b>
<b>a)</b>	Discuss basic principle of water resources and its planning and management.		
<b>b)</b>	Uses of water (primary, secondary and tertiary sector uses)		
<b>c)</b>	What are Functions of Health and environmental concerns of availability and quality of water resources		
<b>d)</b>	Crisis in Water Resources:.		
<b>Q.3)</b>	Write Short Notes on ( <b>ANY TWO</b> )		<b>(08)</b>
<b>a)</b>	Why Water Resources Planning and Management:		
<b>b)</b>	Explain System components of water Resources.		
<b>c)</b>	Discuss Models for impact prediction and evaluation,		
<b>d)</b>	Explain of Adaptive Integrated Policies, Post Planning and management Issues		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Amruta Pawar

**Programme:**

**Semester:**

**Subject:** Virtualization

**Q.1)** Attempt **ANY ONE** of the Following **(1000 Words)** **(10)**

**a)** What is Virtualization? Explain its types in details.

**b)** Explain OpenStack with its components.

**Q.2)** Attempt **ANY TWO** of the Following **(800 Words)** **(12)**

**a)** What is VMWare and VMWare Virtualization?

**b)** Why we use Virtualization in business? Explain it detail.

**c)** Write details about Server Virtualization.

**d)** What is Hypervisor and its types?

**Q.3)** Write Short Notes on **(ANY TWO)** **(08)**

**a)** What is Hardware support for virtualization? Write Pros and cons.

**b)** Why we use tools for Virtualization & its types?

**c)** Distinguish between Full and Para Virtualization.

**d)** Explain in brief Xen Hypervisor.

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Amruta Pawar</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	Introduction to Big Data		
<b>Q.1)</b>	Attempt <b>ANY ONE</b> of the Following ( <b>1000 Words</b> )		<b>(10)</b>
<b>a)</b>	Explain Data Analytics Cycle with suitable diagram and its phases.		
<b>b)</b>	Explain Porter's Value Chain model steps with example.		
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following ( <b>800 Words</b> )		<b>(12)</b>
<b>a)</b>	What are challenges in Business Intelligence?		
<b>b)</b>	Difference between Data Mining and Data Warehousing.		
<b>c)</b>	What is Big Data? What is Business Intelligence Application and its features?		
<b>d)</b>	Explain process of Big data value creation.		
<b>Q.3)</b>	Write Short Notes on ( <b>ANY TWO</b> )		<b>(08)</b>
<b>a)</b>	What is Big data strategy document? How to build it?		
<b>b)</b>	What is difference between value chain and supply chain?		
<b>c)</b>	Explain Life science. Why it is needed to use decision making?		
<b>d)</b>	What is Vertical AI? Write features of its. Why it is use in Business Intelligence?		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Dr. Mrs. S.V. Deshmukh

**Programme:** MCA **Semester:** III

**Subject:** Statistical Programming Using R

**Q.1)** Attempt **ANY ONE** of the following (1000 Words) **(10)**

**a)** What is Probability? Explain various types of Probability.

**b)** Explain Binomial Distribution with suitable example.

**Q.2)** Attempt **ANY TWO** of the following (800 Words) **(12)**

**a)** 10 unbiased coins are tossed simultaneously, find the probability that there will be a) Exactly 5 heads b) At least 8 heads

**b)** Calculate Chi Square for given data:

Treatment	Fever	No Fever	Total
Quinine	40	1584	1624
No Quinine	440	4432	4872
Total	480	6016	6496

**c)** Explain Addition and Multiplication Theorem.

**d)** Explain various graphical Analysis using R .

**Q.3)** Write Short Notes on (ANY TWO) **(08)**

**a)** Baye's Theorem

**b)** Scatter Plots in R

**c)** Analysis of Variance (ANOVA)

**d)** F Test

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Prof. P.R. Rasal

**Programme:** MCA **Semester:** III

**Subject:** Lab on Software Testing

**Q.1)** Attempt **ANY ONE** of the Following (**1000 Words**) **(10)**

**a)** Find out defects (layout inconsistencies, spelling errors, and the like) in the image below: [Old Google Homepage Test]

**b)** How to write Test Cases for a Login Page  
 1. Email/Phone Number/Username Textbox  
 2. Password Textbox  
 3. Login Button  
 4. Remember Me Checkbox  
 5. Keep Me Signed In Checkbox  
 6. Forgot Password Link  
 7. Sign up/Create an account Link

**Q.2)** Attempt **ANY TWO** of the Following (**800 Words**) **(12)**

**a)** Write Test Cases for ATM (Test Scenarios ATM Machine)

**b)** Write Test Cases for Log in Page.

**c)** Write the Test Scenarios of Gmail inbox functionality.

**d)** White box testing and Black box testing

**Q.3)** Write Short Notes on (**ANY TWO**) **(08)**

**a)** Retesting and regression testing.

**b)** Trace Testing

**c)** Ingratiation Testing

**d)** Unit Testing

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Prof. Abhijeet Patil</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>III</b>
<b>Subject:</b>	<b>(Linux) Desktop Environment, Shell Programming and System Administration</b>		
<b>Q.1)</b>	<b>Attempt ANY ONE of the Following (1000 Words)</b>		<b>(10)</b>
	<b>a)</b>	<b>Explain in detail Architecture of Linux OS</b>	
	<b>b)</b>	<b>Explain Internal and External Linux commands (</b>	
<b>Q.2)</b>	<b>Attempt ANY TWO of the Following (800 Words)</b>		<b>(12)</b>
	<b>a)</b>	<b>Explain features of GNOME desktop environment</b>	
	<b>b)</b>	<b>Describe Open Sources Office Applications</b>	
	<b>c)</b>	<b>What is internet? Explain FTP &amp; Telnet</b>	
	<b>d)</b>	<b>What is Linux Shell ? Explain types of Linux Shell</b>	
<b>Q.3)</b>	<b>Write Short Notes on (ANY TWO)</b>		<b>(08)</b>
	<b>a)</b>	<b>Explain with example shell commands</b>	
	<b>b)</b>	<b>Write a Shell script to demonstrate mathematical operators</b>	
	<b>c)</b>	<b>Explain Backing up and restoring files in Linux</b>	
	<b>d)</b>	<b>Desktop Environment</b>	
<b>* * * * *</b>			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

<b>Name of the Assignment Setter:</b>		<b>Prof. Susanta Kumar Nayak</b>	
<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>IV</b>
<b>Subject:</b>	<b>(09) A - IoT Architecture Sensors and Fundamentals with Hands-on lab</b>		
<b>Q.1)</b>	<b>Attempt ANY ONE of the Following (1000 Words)</b>		<b>(10)</b>
<b>a)</b>	What is IoT Ecosystem? Explain the importance and responsibility of Cloud Server towards the effective implementations of IOT in the industry.		
<b>b)</b>	What is IOT? Explain in details impacts of IOT (Internet of Things ) in Everyone's life.		
<b>Q.2)</b>	<b>Attempt ANY TWO of the Following (800 Words)</b>		<b>(12)</b>
<b>a)</b>	What are the main differences between IoT and M2M?		
<b>b)</b>	Explain the role of Protocols Specifications on M2M Ecosystem.		
<b>c)</b>	Explain in details advantages and disadvantages of IOT in Industry 4.0		
<b>d)</b>	What is a sensor and how is it distinguished from actuator?		
<b>Q.3)</b>	<b>Write Short Notes on (ANY TWO)</b>		<b>(08)</b>
<b>a)</b>	SCADA		
<b>b)</b>	MQTT		
<b>c)</b>	DTH Sensor Library		
<b>d)</b>	6LoWPANs		
* * * * *			

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Prof Sonali Deshmukh

**Programme:** MCA **Semester:** III

**Subject:** (OS Tech) Perl Scripting

<b>Q.1)</b>	Attempt <b>ANY ONE</b> of the Following ( <b>1000 Words</b> )	<b>(10)</b>
	a) Explain various built-in operators and pattern matching modifiers in Perl.	
	b) What is a Subroutine in PERL? What is its purpose? Give an example.	
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following ( <b>800 Words</b> )	<b>(12)</b>
	a) Differentiate between Programs and Scripts	
	b) How can create hashes, manipulate hashes and invert a hash in Perl.	
	c) Explain the different types control statements available in Perl. Discuss about them with examples.	
	d) Define regular expression. Explain about Regular Expressions in Perl?	
<b>Q.3)</b>	Write Short Notes on ( <b>ANY TWO</b> )	<b>(08)</b>
	a) Different objects used in PERL.	
	b) File handling Functions in Perl	
	c) Perl References	
	d) Epoch time, POSIX Function strftime()	

\*\*\*\*\*

**Bharati Vidyapeeth (Deemed to be University), Pune**  
**Centre for Distance and Online Education**  
**School of Distance Education**

**Name of the Assignment Setter:** Dr. Prashant P. Patil

**Programme:** MCA **Semester:** III

**Subject:** EL-12 (DM) Data Management Environment

**Q.1)** Attempt **ANY ONE** of the Following (1000 Words) **(10)**

**a)** Define **Data Management**. Explain its meaning, importance, and objectives in detail.

**b)** Describe the **different types of data assets** with suitable examples.

**Q.2)** Attempt **ANY TWO** of the Following (800 Words) **(12)**

**a)** Explain **Data Warehousing**. How does it differ from **Data Mart**?

**b)** Define **Record Management**. Discuss its need, objectives, and importance.

**c)** Explain the working of a **Database Administration System** with suitable examples.

**d)** Discuss **Data Quality Parameters** in detail with suitable examples.

**Q.3)** Write Short Notes on (ANY TWO) **(08)**

**a)** Data Governance Tools

**b)** Data Architecture

**c)** Document Management System (DMS)

**d)** Capability Maturity Management (CMM)

\* \* \* \* \*

**Bharati Vidyapeeth (Deemed to be University), Pune**

**Centre for Distance and Online Education**

**School of Distance Education**

<b>Name of the Assignment Setter:</b>	<b>Dr. Sheetal V. Deshmukh</b>
---------------------------------------	--------------------------------

<b>Programme:</b>	<b>MCA</b>	<b>Semester:</b>	<b>III</b>
-------------------	------------	------------------	------------

<b>Subject:</b>	<b>304- (08) A – Recommender System</b>
-----------------	---

<b>Q.1)</b>	Attempt <b>ANYONE</b> of the Following <b>(1000 Words)</b>	<b>(10)</b>
	a) Explain User Based Nearest Neighbor recommendation with suitable example.	
	b) Explain Content based Recommendation with suitable example.	
<b>Q.2)</b>	Attempt <b>ANY TWO</b> of the Following <b>(800 Words)</b>	<b>(12)</b>
	a) Discuss implementation of Knowledge Based Recommendation in real world problem.	
	b) Elaborate Monolithic hybridization design in detail.	
	c) Explain General properties of Evaluation research in recommender system	
	d) Explain various types of attacks on collaborative recommender systems.	
<b>Q.3)</b>	Write Short Notes on <b>(ANY TWO)</b>	<b>(08)</b>
	a) Pipelined hybridization design	
	b) Popular evaluation designs in recommender system	
	c) Pre-processing based approaches in recommender system	
	d) Next-generation web Recommender systems	

\* \* \* \* \*