

FACULTY OF MANAGEMENT SCIENCE

**Shri Ram Murti Smarak
College of Engineering & Technology,
Bareilly**



SRMS

College of
Engineering &
Technology, Bareilly

**Report of
Faculty Development Program
on
“Rejuvenating Aptitude Skills”
Session 2016-17
(14, January-2017)**



Proposal

Faculty Development Program On Rejuvenating Aptitude Skills

About the Program

The faculty of Management Science, SRMSCET- Bareilly is going to organize a faculty Development Program on Aptitude skills. The objective of this Faculty Development Program is to share and rejuvenate Aptitude orientation amongst faculty members. The focus is to improve upon the practice of Aptitude by the use of alternative methods and shortcut. As a faculty member building awareness, understanding and appreciation of the systematic use of Aptitude methods, Reasoning and Professional Communication is vital. The goal of this FDP is to help and improve the quantitative, analytical and communication skills of faculty members.

The FDP will be organized on 14-Jan-2017 (Saturday). This FDP will cover quantitative aptitude, reasoning, current affairs and professional communication.

Objective of the Program:

The objective of this FDP is to rejuvenate participants regarding the various concepts under aptitude, reasoning current affairs and professional communication.

Outcome of the Program:

The FDP is aimed to achieve the concept of training the trainers. After attending the FDP, the trainers will be trained and will show revived abilities in verbal understanding, quantitative aptitude, numeric or diagrammatic reasoning, and current affairs to be undertaken in forthcoming academic session.

Key Highlights

The key highlights of this FDP are:

- 90 minutes training sessions on Quantitative Aptitude.
 - 90 minutes training sessions on Reasoning.
 - 60 minutes presentation on Current Affairs and Professional Communication skills.
 - 60 minutes discussing the modus operandi of the Aptitude to be adopted for training students in final and pre final year
- 60 Query handling session in the last.

Target Audience

Participants of the program could be the Faculty members of SRMSCET and SRMSCET & R and who have an inherent inclination towards Aptitude, Reasoning and Communication skills.

FDP CO-ORDINATOR
Mr. S. K. Suman

FDP CONVENOR
Dr. Mamta Gaur
Faculty Incharge

Mr. Anubhav Saxena

FACULTY DEVELOPMENT PROGRAM

on

“Rejuvenating Aptitude Skills”

14th January 2017 (Saturday)

**Organizing Department
Faculty of Management Science**



Shri Ram Murti Smarak

College of Engineering & Technology, Bareilly

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RESOURCE PERSONS

The course content will be delivered from a pool of experts on the subject from various departments like Mathematics, MBA and Basic Science of SRMSCET-Bareilly.

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FACULTY DEVELOPMENT PROGRAM

on

“Rejuvenating Aptitude Skills”

FDP SCHEDULE

14th January 2017 (Saturday)

Venue: MBA Seminar Hall

S. No.	Timing	Topics covered	Resource Persons
1	09:00-09:15 AM	Inaugural Session	
2	09:15-10:45 AM	Quantitative Aptitude	Dr. Suneet Saxena Dr. Sanjay Kumar
3	10:45-11:00 AM	Tea Break	
4	11:00-12:30 PM	Logical Reasoning	Mr. Sushil Kumar Gupta Mr. Abhishek Gupta
5	12:30-01:30 PM	Lunch Break	
6	01:30-03:30 PM	Current Affairs & Professional Communication	Dr. Jaya Sharma Mr. Sumit Saxena
7	03:15-04:15 PM	Query Handling Session	All Resource Persons
8	04:15-04:30 PM	Certificate Distribution	
9	04:30-04:40 PM	High Tea	

CHIEF PATRON

Shri Dev Murti

Chairman, SRMS Trust

PATRON

Prof. (Dr.) Prabhakar Gupta

Dean Academic, SRMSCET, Bareilly

PROGRAM CONVENOR

Prof. (Dr.) Mamta Gaur

Faculty Incharge, FMS SRMSCET, Bareilly

PROGRAM COORDINATOR

Mr. S. K. Suman

Assistant Professor, FMS SRMSCET, Bareilly

Mr. Anubhav Saxena

Assistant Professor, FMS SRMSCET, Bareilly

Faculty of Management Science, SRMS CET, Bareilly
Faculty Development Program on "Rejuvenating Aptitude Skills"
Participant List

S.No	Name
1	Mr. Mukesh Azad
2	Mr. Ashish Agrawal
3	Mr. Devbrat Khare
4	Ms. Ratna Awasthi
5	Mr. Diwakar Upadhyay
6	Mr. Rajesh Gangwar
7	Mr. Tej Prakesh
8	Mr. Suman Parmanik
9	Mr. Prateek Goyal
10	Mr. Amit Dewedi
11	Mr. Ashutosh Pratap Singh
12	Mr. Anupam Kundu
13	Mr. Anubhav Saxena
14	Mr. S. K. Suman
15	Mr. Abhishek Gupta
16	Mr. Sushil Kumar Gupta
17	Dr. Ankita Tandon
18	Ms. Ankita Srivastava
19	Mr. Amit Srivastava
20	Ms. Jaya Sharma
21	Dr. Suneet Saxena
22	Dr. Sanjay Verma
23	Ms. Ruchi Saha
24	Mr. Sumit Saxena
25	Mr. Vikas Dev Singh
26	Mr. Prafull Chauhan
27	Mr. Shiva Jaiswal
28	Dr. Mani Agarwal

Technical Session-1

Quantitative Aptitude	Dr. Suneet Saxena Dr. Sanjay Kumar
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Topics

- Aptitude: Introduction & classification
- Number System
- LCM & HCF
- Ratio and Proportion
- Percentage
- Profit and Loss
- Time and Work
- Streams
- Area

Aptitude

- Competence to do a certain kind of work at a certain level.
- Measure work-related cognitive capacity.
- Cognitive : The mental action or process of acquiring knowledge and understanding through thought, experience, and the senses.

Classification

- Fluid Intelligence
- Crystallized Intelligence

Fluid Intelligence

- Ability to think and reason abstractly, effectively solve problems and think strategically.
- Test
 - Abstract and conceptual
 - Diagrammatic reasoning
 - Inductive reasoning
 - Logical reasoning

Crystallized Intelligence

- Ability to learn from past experiences and to apply this learning to work-related situations.
- Test
 - Verbal aptitude
 - Numerical aptitude

Number System

A boy was asked to find $\frac{7}{9}$ of a fraction. He made a mistake of dividing the fraction by $\frac{7}{9}$ and got an answer which exceeded the correct answer by $\frac{8}{21}$. Find the fraction.

$$\begin{aligned}\text{Fraction : } x \\ x \div \frac{7}{9} &= x \text{ of } \frac{7}{9} + \frac{8}{21} \\ \frac{9x}{7} &= \frac{7x}{9} + \frac{8}{21} \\ \frac{9x}{7} - \frac{7x}{9} &= \frac{8}{21} \\ x &= \frac{(8 \times 9 \times 7)}{(21 \times 32)} = \frac{3}{4}\end{aligned}$$

LCM HCF

Find the LCM of $\frac{9}{2}$, 3, $\frac{21}{2}$

$$\begin{aligned}\text{LCM} &= \text{LCM of numerator} / \text{HCF of Denominator} \\ \text{LCM} &= \text{LCM of } 9, 3, 21 / \text{HCF of } 2, 1, 2 \\ \text{LCM} &= 63 / 1 = 63\end{aligned}$$

Ratio and Proportion

One man adds 3 liters of water to 12 liters of milk and another 4 liters of water to 10 liters of milk. What is ratio of strengths of milk in two mixture.

$$\text{Strength of milk in First mixture} = 12/15$$

$$\text{Strength of milk in Second mixture} = 10/14$$

$$\text{ratio of strengths of milk} = 12/15 : 10/14$$

$$= 12 \times 14 : 10 \times 15$$

$$= 28:25$$

Ratio and Proportion

If 8 men can reap 80 hectares in 24 days, how many hectares can 36 men reap in 30 days

$$8 \text{ men} : 36 \text{ men}$$

$$:: 80 \text{ hect: reqd. no. of hect}$$

$$24 \text{ days} : 30 \text{ days}$$

$$\begin{aligned} \text{reqd. no. of hect} &= (36 \times 30 \times 80) / (8 \times 24) \\ &= 450 \end{aligned}$$

Percentage

The population of a Town is 10000. It increased by 10% during First year. During second year it decreased by 20% and increased by 30% during the third year. What is population after 3 years..

$$10000 \times \left\{ \frac{110}{100} \right\} \times \left\{ \frac{80}{100} \right\} \times \left\{ \frac{130}{100} \right\}$$
$$= 11440$$

Profit or Loss

A boy buys oranges at 9 for Rs 16 and sells them at 11 for Rs 20. What does he gain or lose percent.

9 oranges	16 Rs
11 oranges	20 Rs

$$\text{profit or loss} = \left[\frac{(9 \times 20 - 16 \times 11)}{(16 \times 11)} \right] \times 100$$
$$= 25/11 \% \text{ (profit)}$$

Profit or Loss

A sells a bicycle to B at a profit of 30 % and B sells to C at a loss of 20 % . If C pays Rs 520 for it, at what price did A buy.

$$\text{Resultant profit or loss \%} = 30 - 20 - (30 \times 20)/100$$

$$= 4 \% \text{ (Profit)}$$

$$\text{Price} = 520 \times 100/104 = 500$$

Compound and Simple Interest

The compound interest on certain sum for 2 yrs is Rs.40.80 and simple interest is Rs 40.00. Find the rate of interest per annum and the sum.

$$\text{Rate} = (2 \times \text{Difference in CI and SI} \times 100) / \text{SI}$$

$$\text{Rate} = 2 \times .8 \times 100 / 40 = 4 \%$$

$$\text{Sum} = (40 \times 100) / (4 \times 2) = 500$$

Compound and Simple Interest

If the difference CI and SI on a certain sum of money for 3 yrs at 5% p.a is Rs 122, find the sum.

$$\text{sum} = \{ \text{Difference} \times (100)^3 \} / \{ r^2 (300 + r) \}$$

$$\text{sum} = \{ 122 \times (100)^3 \} / \{ 5^2 (300 + 5) \}$$

$$\text{sum} = \text{Rs } 16000$$

Time and Work

A can do a piece of work in 5 days, B can do it in 6 days and C can do it in 12 days. How long will they take to complete the work.

$$\text{Work} = (x \times y \times z) / (x \times y + y \times z + z \times x)$$

$$\text{Work} = (5 \times 6 \times 12) / (5 \times 6 + 6 \times 12 + 12 \times 5)$$

$$\text{Work} = 360 / 162 \text{ days}$$

Time and Work

A and B together can do a piece of work in 12 days which B and C together can do in 16 days. After A has been working at it for 5 days and B for 7 days, C takes up and finishes it alone in 13 days. How many days could each do the work by himself.

$$(A + B) 5 \text{ days work} + (B + C) 2 \text{ days work} + C 11 \text{ days work} = 1$$

$$5 / 12 + 2 / 16 + C 11 \text{ days work} = 1$$

$$C 11 \text{ days work} = 1 - \{ 5 / 12 + 2 / 16 \} = 11 / 24$$

$$C 1 \text{ day work} = 1 / 24$$

$$B 1 \text{ day work} = 1 / 16 - 1 / 24 = 1 / 48$$

$$A 1 \text{ day work} = 1 / 12 - 1 / 48 = 1 / 16$$

$$A, B \text{ and } C \text{ can do work in } 16, 48 \text{ and } 24 \text{ days}$$

Streams

A man can row 6 Km/hr in still water. When the river is running at 1.2 km/hr. It takes him 1 hour to row to a place and back. How far is the place.

$$\text{Man's rate downstream} = 6 + 1.2 = 7.2 \text{ Km/hr}$$

$$\text{Man's rate upstream} = 6 - 1.2 = 4.8 \text{ Km/hr}$$

$$\text{Distance} = (7.2 \times 4.8) / (7.2 + 4.8) = 2.88 \text{ km}$$

Streams

Ramesh can row a certain distance downstream in 6 hrs and return the same distance in 9 hrs. If river rate is 3 km/hr, find the speed of Ramesh in still water.

$$\text{Speed} = \text{river rate} \times (\text{time down} + \text{time up}) / (\text{time up} - \text{time down})$$

$$\text{Speed} = 3 \times (6 + 9) / (9 - 6)$$

$$= 15 \text{ km/hr}$$

Area

A path 2m wide running all around a square garden has an area of 9680 sq. m. Find the area of the part of the garden enclosed by the path

$$\text{Area} = [(\text{Area of path} - 4 \times (\text{width path})^2) / 4 \times \text{width path}]^2$$

$$= [(9680 - 4 \times (2)^2) / 4 \times 2]^2$$

$$= 1459264 \text{ sq. m}$$

Technical Session-2

Logical Reasoning	Mr. Sushil Kumar Gupta Mr. Abhishek Gupta
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Introduction

- **Reason** is the capacity for consciously making sense of things, applying logic, establishing and verifying facts, and changing or justifying practices and beliefs based on new or existing information.
- **Reasoning** is associated with thinking, cognition, and intellect.

➤ Reasoning is subdivided into:

➤ Verbal

➤ Non Verbal

Verbal Reasoning

- **Verbal reasoning** is understanding and reasoning using concepts framed in words. It aims at evaluating ability to think constructively, rather than at simple fluency or vocabulary recognition.

Non-Verbal Reasoning

- **Non-verbal reasoning** involves the ability to understand and analyze visual information and solve problems using visual reasoning.
- In **non-verbal reasoning** (NVR) diagrams are used for expressing the ideas instead of using numbers and words.

Types of Verbal Reasoning

General Mental Ability

- Logical Sequence of Words
- Syllogism
- Cause and Effect
- Venn Diagrams
- Analogy
- Character Puzzles
- Classification
- Arithmetic Reasoning
- Blood Relation Test
- Series Completion
- Dice
- Cube and Cuboid
- Seating Arrangement
- Direction Sense Test
- Data Sufficiency
- Verification of Truth

Types of Verbal Reasoning

Logical Deduction

- Matching Definitions
- Logical Games
- Statement and Assumption
- Statement and Conclusion
- Letter and Symbol Series
- Essential Part
- Artificial Language
- Making Judgments
- Logical Problems
- Analyzing Arguments
- Course of Action
- Theme Detection
- Statement and Argument

GENERAL MENTAL ABILITY

Logical Sequence of Words

In this type of question, some words are given. You have to arrange these words in a meaningful order. The order may be according to age, size and need etc.

Example 1:

Arrange the following words in a meaningful order.

- 1. Death
- 2. Marriage
- 3. Education
- 4. Birth
- 5. Funeral

(A) 5, 1, 2, 3, 4

(B) 4, 2, 3, 1, 5

(C) 4, 3, 2, 5, 1

(D) 4, 3, 2, 1, 5

Syllogism

Introduction:

This section contain two or more statements and these statements are followed by two or more conclusions. You have to find out which of the conclusions logically follow from the given statements. The statements have to be taken true even if they seem to be at variance from the commonly known facts.

For such questions, you can take the help of **Venn Diagrams**. On the basis of the given statements, you should draw all the possible diagrams, and then derive the solution from each of these diagrams separately. Finally, the answer common to the all the diagrams is taken.

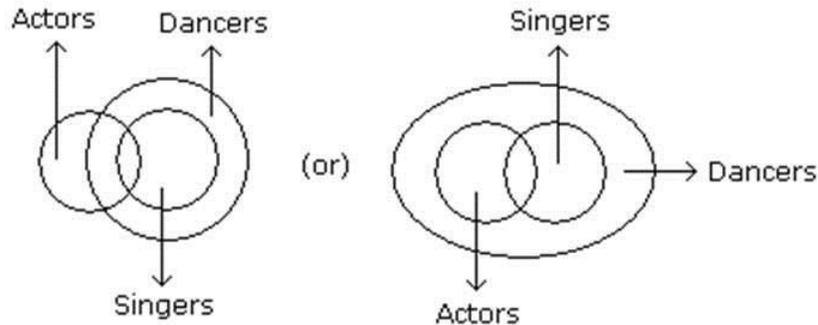
1. **Statements:** Some actors are singers. All the singers are dancers.

Conclusions:

1. Some actors are dancers.
2. No singer is actor.

- A.** Only (1) conclusion follows
- B.** Only (2) conclusion follows
- C.** Either (1) or (2) follows
- D.** Neither (1) nor (2) follows
- E.** Both (1) and (2) follow

Solution



Only (1) follows.

Cause and Effect

- Below in each of the questions are given two statements I and II. These statements may be either independent causes or may be effects of independent causes or a common cause. One of these statements may be the effect of the other statements. Read both the statements and decide which of the following answer choice correctly depicts the relationship between these two statements.

Mark answer

- (A) If statement I is the cause and statement II is its effect.
- (B) If statement II is the cause and statement I is its effect.
- (C) If both the statements I and II are independent causes.
- (D) If both the statements I and II are effects of independent causes.
- (E) If both the statements I and II are effects of some common cause.

1. **Statements:**

1. Standard of living among the middle class society is constantly going up since part of few years.
2. Indian Economy is observing remarkable growth.

- A.** Statement I is the cause and statement II is its effect.
- B.** Statement II is the cause and statement I is its effect.
- C.** Both the statements I and II are independent causes.
- D.** Both the statements I and II are effects of independent causes.
- E.** Both the statements I and II are effects of some common cause.

Blood Relation Test

1. Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy?
 - A.** Brother
 - B.** Uncle
 - C.** Cousin
 - D.** **Father**

Series Completion

- Choose the correct alternative that will continue the same pattern and replace the question mark in the given series.

1. 120, 99, 80, 63, 48, ?

A. 35

B. 38

C. 39

D. 40

2. 3, 10, 101, ?

A. 10101

B. 10201

C. 10202

D. 11012

Arithmetic Reasoning

1. The total of the ages of Amar, Akbar and Anthony is 80 years. What was the total of their ages three years ago ?
 - A. 71 years
 - B. 72 years
 - C. 74 years
 - D. 77 years

Seating Arrangement

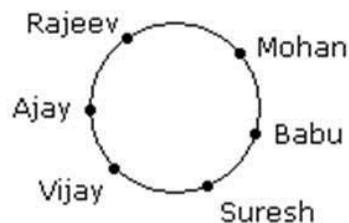
In order to solve seating arrangement questions, first of all diagram should be made. By doing so questions are easily and quickly solved.

Example 1:

1. 6 Boys are sitting in a circle and facing towards the centre of the circle.
2. Rajeev is sitting to the right of mohan but he is not just at the left of Vijay.
3. Suresh is between Babu and Vijay.
4. Ajay is sitting to the left of Vijay.

Who is sitting to the left of Mohan ?

Ans- Babu is sitting to the left of Mohan.



Venn Diagrams

- Each of these questions given below contains three elements. These elements may or may not have some inter linkage. Each group of elements may fit into one of these diagrams at (A), (B), (C), (D) and/or (E). You have to indicate the group of elements which correctly fits into the diagrams.
1. Which of the following diagrams indicates the best relation between Travelers, Train and Bus ?

- A. 
- B. 
- C. 
- D. 

Analogy

Introduction:

Analogy means **similarity**. In this type of questions, two objects related in some way are given and third object is also given with four or five alternatives. You have to find out which one of the alternatives bears the same relation with the third objects as first and second objects are related.

Example 1:

Curd : Milk :: Shoe : ?

- (A) Leather
(B) Cloth
(C) Jute
(D) Silver

Classification

In each of the following questions, five words have been given out of which four are alike in some manner, while the fifth one is different. Choose the word which is different from the rest.

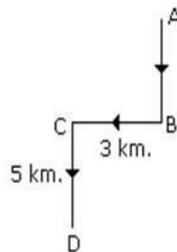
1. Choose the word which is different from the rest.

- A. **Chicken**
- B. Snake
- C. Swan
- D. Crocodile
- E. Frog

Direction Sense

1. A man walks 5 km toward south and then turns to the right. After walking 3 km he turns to the left and walks 5 km. Now in which direction is he from the starting place?

- A. West
- B. South
- C. North-East
- D. **South-West**



Verification of Truth

1. Yesterday I saw an ice cube which had already melted due to heat of a nearby furnace.
 - A. Always
 - B. Never**
 - C. Often
 - D. Sometimes

Data Sufficiency

Question: In which year was Rahul born ?

Statements:

1. Rahul at present is 25 years younger to his mother.

2. Rahul's brother, who was born in 1964, is 35 years younger to his mother.

- A. I alone is sufficient while II alone is not sufficient
- B. II alone is sufficient while I alone is not sufficient
- C. Either I or II is sufficient
- D. Neither I nor II is sufficient
- E. Both I and II are sufficient**

LOGICAL DEDUCTION

Matching Definition

1. An **Informal Gathering** occurs when a group of people get together in a casual, relaxed manner. Which situation below is the best example of an Informal Gathering?
 - A. The club meets on the first Thursday evening of every month.
 - B. After finding out about his promotion, Jeremy and a few coworkers decide to go out for a quick drink after work.**
 - C. Mary sends out 25 invitations for the bridal shower she is giving for her sister.
 - D. Whenever she eats at the Mexican restaurant, Clara seems to run into Peter.

Statement and Assumption

Statement: "If you trouble me, I will slap you." - A mother warns her child.

Assumptions:

1. With the warning, the child may stop troubling her.
2. All children are basically naughty.

- A. Only assumption I is implicit
- B. Only assumption II is implicit
- C. Either I or II is implicit
- D. Neither I nor II is implicit
- E. Both I and II are implicit

Statement and Conclusion

Statements: In a one day cricket match, the total runs made by a team were 200. Out of these 160 runs were made by spinners.

Conclusions:

1. 80% of the team consists of spinners.
2. The opening batsmen were spinners.

- A. Only conclusion I follows
- B. Only conclusion II follows
- C. Either I or II follows
- D. Neither I nor II follows
- E. Both I and II follow

Essential Part

Each question has an underlined word followed by four answer choices. You will choose the word that is a necessary part of the underlined word.

1. harvest
 - A. autumn
 - B. stockpile
 - C. tractor
 - D. crop**

Statement and Argument

Statement: Should there be students union in college/university?

Arguments:

- 1.No. This will create a political atmosphere in the campus.
- 2.Yes, it is very necessary Students are future political leaders.

- A. Only argument I is strong
- B. Only argument II is strong
- C. Either I or II is strong
- D. Neither I nor II is strong
- E. Both I and II are strong**

Artificial Language

Here are some words translated from an artificial language.

moolokarn means blue sky

wilkospadi means bicycle race

moolowilko means blue bicycle

Which word could mean "racecar"?

- A. wilkozwet
- B. spadiwilko
- C. moolobreil
- D. spadivolo**

Logical Problem

Each problem consists of three statements. Based on the first two statements, the third statement may be true, false, or uncertain.

1. Tanya is older than Eric.
Cliff is older than Tanya.
Eric is older than Cliff.

If the first two statements are true, the third statement is

- A. true
- B. false**
- C. uncertain

Course of Action

- In each question below is given a statement followed by two courses of action numbered I and II. You have to assume everything in the statement to be true and on the basis of the information given in the statement, decide which of the suggested courses of action logically follow(s) for pursuing.

Statement: A large number of people in ward X of the city are diagnosed to be suffering from a fatal malaria type.

Courses of Action:

1. The city municipal authority should take immediate steps to carry out extensive fumigation in ward X.
2. The people in the area should be advised to take steps to avoid mosquito bites.

- A. Only I follows
- B. Only II follows
- C. Either I or II follows
- D. Neither I nor II follows
- E. **Both I and II follow**

Types of Non-Verbal Reasoning

- | | |
|----------------------|------------------------|
| ➤ Series | ➤ Cubes and Dice |
| ➤ Classification | ➤ Analogy |
| ➤ Mirror Images | ➤ Analytical Reasoning |
| ➤ Embedded Images | ➤ Water Images |
| ➤ Figure Matrix | ➤ Pattern Completion |
| ➤ Paper Cutting | ➤ Paper Folding |
| ➤ Grouping of Images | ➤ Rule Detection |
| ➤ Shape Construction | ➤ Image Analysis |

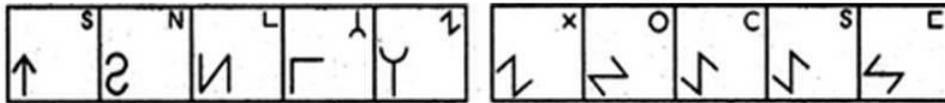
Series

Each of the following questions consists of five figures marked A, B, C, D and E called the Problem Figures followed by five other figures marked 1, 2, 3, 4 and 5 called the Answer Figures. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

1. Select a figure from amongst the Answer Figures which will continue the same series as established by the five Problem Figures.

Problem Figures:

Answer Figures:

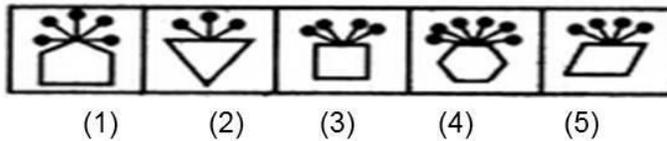


- A. 1
- B. 2
- C. 3**
- D. 4
- E. 5

Classification

In each problem, out of the five figures marked (1), (2), (3), (4) and (5), four are similar in a certain manner. However, one figure is not like the other four. Choose the figure which is different from the rest.

1. Choose the figure which is different from the rest



- A. 1**
- B. 2
- C. 3
- D. 4
- E. 5

Mirror Image

In each of the following questions you are given a combination of alphabets and/or numbers followed by four alternatives (1), (2), (3) and (4). Choose the alternative which is closely resembles the mirror image of the given combination.

1. Choose the alternative which is closely resembles the mirror image of the given combination.

ANS43Q12

(1) AN24EQT S

(3) 2NAE4QST

(2) S TQE42NA

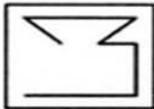
(4) T SQ4EANS

- A. 1
- B. 2
- C. 3
- D. 4

Embedded Image

In each of the following questions, you are given a figure (X) followed by four alternative figures (1), (2), (3) and (4) such that figure (X) is embedded in one of them. Trace out the alternative figure which contains fig. (X) as its part.

1. Find out the alternative figure which contains figure (X) as its part.



(X)



(1)

(2)

(3)

(4)

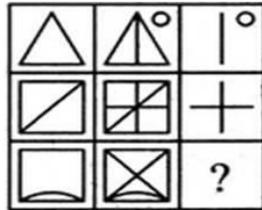
- A. 1
- B. 2
- C. 3
- D. 4



Figure Matrix

In each of the following questions, find out which of the answer figures (1), (2), (3) and (4) completes the figure matrix ?

1. Select a suitable figure from the four alternatives that would complete the figure matrix



A. 1

B. 2

C. 3

D. 4

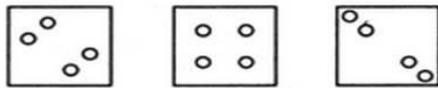
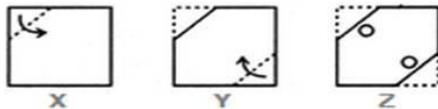


(1) (2) (3) (4)

Paper Cutting

Each of the following questions consists of a set of three figures X, Y and Z showing a sequence of folding of a piece of paper. Figure (Z) shows the manner in which the folded paper has been cut. These three figures are followed by four answer figures from which you have to choose a figure which would most closely resemble the unfolded form of figure (Z).

1. Choose a figure which would most closely resemble the unfolded form of Figure (Z).



(1) (2) (3) (4)

A. 1

B. 2

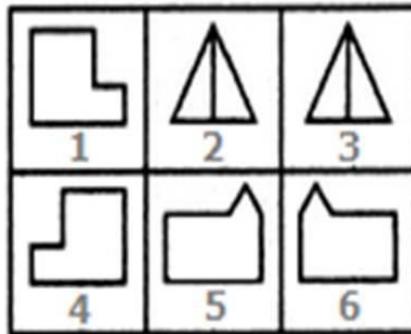
C. 3

D. 4

Grouping Of Image

In each of the following questions, group the given figures into three classes using each figure only once.

1. Group the given figures into three classes using each figure only once.

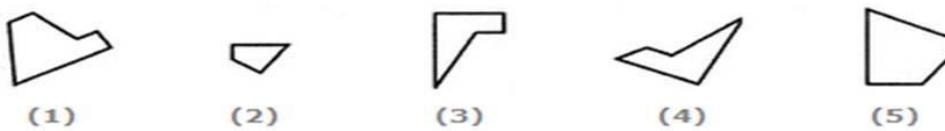


- A. 1,4 ; 2,3 ; 5,6
- B. 1,5 ; 2,6 ; 4,3
- C. 1,6 ; 2,3 ; 4,5
- D. 1,2 ; 3,6 ; 4,5

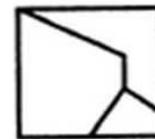
Shape Construction

In each of the following questions, a set of five alternative figures 1, 2, 3, 4 and 5 followed by a set of four alternatives (A), (B), (C) and (D) is provided. It is required to select the alternative which represents three out of the five alternative figures which when fitted into each other would form a complete square.

1. Select the alternative which represents three out of the five alternative figures which when fitted into each other would form a complete square.



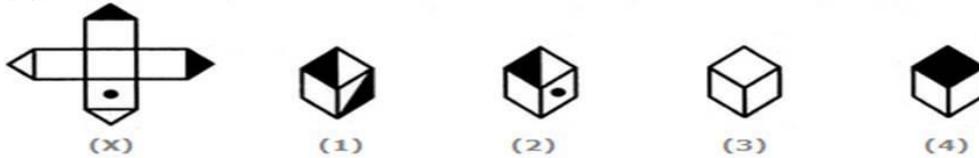
- A. 1,4,5
- B. 2,4,5
- C. 1,2,3
- D. 2,3,4



Cubes & Dice

The sheet of paper shown in the figure (X) given on the left hand side, in each problem, is folded to form a box. Choose from amongst the alternatives (1), (2), (3) and (4), the boxes that are similar to the box that will be formed.

1. Choose the box that is similar to the box formed from the given sheet of paper (X)

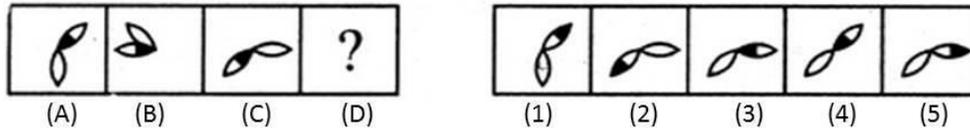


- A. 1 and 2 only
- B. 2 and 4 only
- C. 2 and 3 only
- D. 1 and 4 only

Analogy

Each of the following questions consists of two sets of figures. Figures A, B, C and D constitute the Problem Set while figures 1, 2, 3, 4 and 5 constitute the Answer Set. There is a definite relationship between figures A and B. Establish a similar relationship between figures C and D by selecting a suitable figure from the Answer Set that would replace the question mark (?) in fig. (D)

1. Select a suitable figure from the Answer Figures that would replace the question mark (?)



- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

Water Image

In each of the following questions, you are given a combination of alphabets and/or numbers followed by four alternatives (1), (2), (3) and (4). Choose the alternative which is closely resembles the water-image of the given combination.

1. Choose the alternative which is closely resembles the water-image of the given combination.

NUCLEAR

(1) BAEFGCUI

(2) IJNSTEAVB

(3) IJNSTEAVB

(4) IJNSTEAVB

A. 1

B. 2

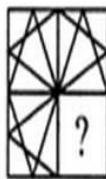
C. 3

D. 4

Pattern Completion

In each of the following questions, select a figure from amongst the four alternatives, which when placed in the blank space of figure (X) would complete the pattern.

1. Identify the figure that completes the pattern.



(X)



(1)



(2)



(3)



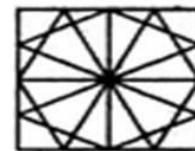
(4)

A. 1

B. 2

C. 3

D. 4



Technical Session-3

Professional Communication & Current Affairs

Dr. Jaya Sharma

Mr. Sumit Saxena

Types of Questions

Spotting Errors

Sentence Improvement

Closet Test

Change of Voice

Sentence Correction

Completing Statements

Change of Speech

Comprehension

Antonyms

Spellings

Ordering of words

One Word Substitution

Synonyms

Verbal Analogies

Idioms & Phrases

Selecting Words

Question Examples

Error Correction-

1- It is being rainy day,(a)/we decided not to go out,(b)/but to stay at home,(c) and watch a movie,(d)/No Error(e).

Sentence Improvement-

1- The new **lecturer** (a)/has **devised** (b)/a **novel** method(c)/ of solving this problem.(d)/ all correct.(e)

Closet Test

Today most businessmen are very worried. To begin with, they are not used to competition . In the past they sold whatever ...(1)... produced at whatever prices they chose. But ...(2)... increasing competition, customers began to ...(3)... and choose. Imports suddenly became ...(4)... available and that too at cheaper ...(5)...

Three Major Categories

- Grammar
- Vocabulary
- Comprehension

Grammar

- Tenses :Function
- Active & Passive
- Direct & Indirect
- Syntax

Tense

A distinction of form in a verb to express distinctions of time or duration of the action or state it denotes.

Coin A Story in Past Tense



Active & Passive Voice

Active voice describes a sentence where the subject performs the action stated by the verb. In passive voice sentences, the subject is acted upon by the verb.

Example-

The Mechanic repaired the car.(Active)

The car was repaired by the mechanic.(Passive)

Change the Voice

- I write a letter.
- Who taught you grammar?
- Open the door.
- Please don't open the door.
- The rose smells sweet.
- It is time to close the shop.

Direct & Indirect Speech

In *Direct* speech the original words of person are narrated (no change is made) and are enclosed in quotation mark. For example-

He said "I am coming."

Indirect speech, also known as *indirect discourse* or indirect style, is a *means* of expressing the content of statements, questions or other utterances, without quoting them explicitly as is done in *direct* speech.

For example- He said that he was going.

Syntax

The way in which linguistic elements (as words) are put together to form constituents (as phrases or clauses).

S+V+O

Subject + Verb + Object

Syntax Cont...

- 1- If You come, then I will go.
- 2- There lived a boy in a village whose name was Mohan.
- 3- He is the best boy and a very fast runner.
- 4-He is blind with one eye.
- 5- The crowd of angry students ordered the closing of the shop.
- 6- My niece has been married with the richest man of the town.
- 7- Each cow and each goat were sitting in the field.
- 8-The bird was sitting on the tree.

Comprehension

The word comprehension ‘actually’ means ‘grasping with intellect’ and ‘understanding.’

How to solve a Comprehension Passage-

- Quickly Skim through the Passage-

Skimming

Skimming is referred to as gist reading. Skimming may help in order to know what the text is about at its most basic level.

Comprehension cont.

- Scanning

It involves getting your eyes to quickly scuttle across sentence and is used to get just a simple piece of information.

- Solving the Questions

Now read the questions and try to find the answer.

Comprehension Cont.

While going through the passage, your three body organs should act in collaboration.

Eyes

Hand

Brain

Vocabulary

Knowledge of words (meaning of words)

- Meaning
- Synonyms
- Antonyms
- Idiom & Phrases

Enrich Your Vocabulary

Start reading in English, anything..... Newspapers, stories, comics, text books....anything, that keeps you immersed in English. New words gradually sink into your subconscious mind and become familiar.

Keep a notebook, Note down the new words you learned today and revise them periodically.

Keep a target and a [schedule to learn](#) a certain number of new words every day. You are the better person to decide the number,... I am not. Do not deviate from the schedule at any cost.

Co-relate the words

Body Parts-

Hair-

A hair shirt- If someone wears a hair shirt, they choose to make their life unpleasant by not having or experiencing anything that gives them pleasure

Curl someone's hair-To frighten or alarm someone

Co-relate the words

- **A big head-** An exaggerated sense of one's importance or status
- **A head-scratcher-** A thoroughly complex or difficult mystery, problem, puzzle, or riddle.
- **A jaundiced eye-** A biased view.
- **A feast for the eyes-**An especially attractive, pleasing, and/or remarkable sight or visual experience.

Session on Current Affairs

OBJECTIVE:

Main objective of this module is to familiarize the students with the current affairs and develop the ability to have self interpretation & analysis of GS/GK issues. This will create a competitive edge for students and will differentiate them from those who just know the issue but don't know how to use it in discussions, arguments, opinion building, and crack esteemed examinations including campus drives.

The Overall purpose of this exercise is to develop an understanding regarding important areas, current happenings, latest news and updates, economic issues, and also to develop a regular habit of reading newspaper among the students.

To make the exercise more effective various activities/competitions will be organized along with the regular classes.

METHODOLOGY:

Lecture

Discussion & Analysis

Quiz/ Role-play/ Group Activity

TIME MANAGEMENT:

Complete class of 1 hour would be divided into 3 parts of 20 minute each:

- **1st 20 minutes:** Lecture by a faculty on the selected Current Affair Issue. Faculty would explain the complete issue in brief. He/She will explain the issue and also the concepts used in the issue along with its background to make the students capable of reading and understanding many such similar articles.

Also faculty will explain the link between the sample issue taken and many other related news to which that issue could be linked along with description of important bodies, ministries and terminologies associated with it. Overall this has to be in well prepared transformation of knowledge to the students in less time to trigger their creativity regarding their ability to form their own point of view.

- **2nd 20 minutes:** In this section news, articles & Issues from the preceding week newspaper will be discussed in general. Objective over here would be to cover maximum news from different domains to familiarise the students that what is happening around him/her. Sections Covered will be reading of following:

First Page: (News of national importance), **Editorial Page** :- (Important social, political, economic issues), **Business Page** (Important business issues, new products, companies etc., **Sports Page** (various tournaments-events, winners, personalities).

In an attempt to cover all the important news/issues, every week students would also be given some sectors on which they have to come prepared with relevant facts and findings.

Sectors that would be allotted to students preferably in group of 4 would be as follows: Telecom, IT, Electronics, Automobile, Aviation, Power & Retail along with few general areas like: Major Events (National-International), New discoveries Inventions/Innovations Personalities in News/awards/authors. Overall Objective is to increase the participation of students as much as possible.

- **3rd 20 minutes:** This section would try to test the understanding of students by mode of quiz & tests. So at the end of the lecture quiz would be given to student preferably online using power point and it could be played team wise like bournvita quiz contest and scores could be used to access the student's performance on a weekly basis.

CONTENT:

Complete content is divided into 6 domains for ease of setting the uniformity in teaching in multiple classes and branches by various faculties.

Selected 6 domains/areas are as follows:

- 1. Financial & Economic**
- 2. Sports, Cultural & Entertainment**
- 3. Political, Editorial/Opinion**
- 4. Science & Technology**
- 5. Corporate & Ethical Issues**
- 6. Environment & Sustainability**

Each Domain is comprised of individual session of 1 hour to be delivered by faculty.

Most importantly students are required to develop the habits of reading newspaper regularly and come prepared for discussion along with quarries in the class. At the same time students have to be consistent in classes and different motivation techniques as per individual faculty's instinct should be used to inspire the students for these sessions.

Financial/ Economic Issues

This session would focus on basic understanding of Financial/ Economic issues in a very simple & lucid language to be easily understood by a technical graduate.

Broad Topics along with Subtopics to be covered:

- RBI & Banking system: Commercial Banks, CRR, Repo Rate, Reverse Repo, Currency & foreign Exchange.
- Budget & Five year Plans: Revenues of government, Expenditures of Govt, Fiscal Deficit, Monetary Measures.

- Financial Bodies: working of Stock Exchange - NSE, BSE & SEBI.
- Taxation System: Individual Tax, Corporate Tax, Partnerships, Start-ups
- Oil & Dollar: Oil Crisis, Rupee Dollar dynamics, Imports and Exports

SAMPLE HANDOUT

DEMONETISATION

What Is Demonetization?

- Demonetisation is a process by which a series of currency will not be legal tender. The series of currency will not acceptable as valid currency. The same thing happens with the Rs. 500 and Rs. 1000 note demonetization.

What are the causes of Demonetization?

- There can be many causes of Demonetisation in any economy some of them are : Introduction of New Currency ,Black Marketing, Currency Storage, Corruption and others.
- There will be excess fake currency in the economy is main reason of demonetisation.

What Happened on Demonetization?

- On 8th November 2016, Government of India had announced that from today onward rupees 500 and 1000 rupee note will not be a legal tender.
- This means that 500 and 1000 rupee note will be accepted by anyone except the organisation declared by government.
- They can change the currency from the banks and post offices till 30th December 2016.

Demonetization History and Background in India?

- This is not The First time When Indian Currency is Demonetised in India .
- The first instance was in 1946 and the second in 1978 when an ordinance was promulgated to phase out notes with denomination of Rs 1,000, Rs 5,000 and Rs 10,000.
- The highest denomination note ever printed by the Reserve Bank of India was the Rs 10,000 note in 1938 and again in 1954. But these notes were demonetized in January 1946 and again in January 1978, according to RBI data.
- Rs 1,000 and Rs 10,000 bank notes were in circulation prior to January 1946. Higher denomination banknotes of Rs 1,000, Rs 5,000 and Rs 10,000 were reintroduced in 1954 and all of them were demonetized in January 1978.
- The Rs 1,000 note made a comeback in November 2000. Rs 500 note came into circulation in October 1987. The move was then justified as attempt to contain the volume of banknotes in circulation due to inflation.

What are Pros and cons of demonetization in India in 2016?

- There is huge impact of Demonetization of Indian Economy. These 500 And 1000 Notes contribute more than 84 % of Money Circulation.

<p>Attack On Black Money Holders</p>	<p>People who possess huge amounts of black money in hard cash are at a complete loss now .</p> <ul style="list-style-type: none"> • Their black money in hard cash is now a pile of trash. • Now If a Black money holder Want to Deposit Money in Bank Account Than he/she Has to Show ID . • There Will Be 200 % Penalty On Income tax Amount .
<p>Death Knell To Fake Currency Rackets</p>	<ul style="list-style-type: none"> • Most of the fake currencies used to be be in the denominations of Rs. 500 and Rs. 1000 . • By banning Rs. 500 and Rs. 1000 notes, Modiji has busted all these unethical rackets completely . • Now There Will be no use These Money
<p>End Of Terrorist Funding</p>	<ul style="list-style-type: none"> • Huge sums of money especially in hard cash in the denominations of Rs. 500 and Rs. 1000 was used to fund Islamic terrorists , Naxalites and other non-state actors • Now , these Organizations will suffer from shortage of funds . • Most of These terrorist ,Maoist Organization Used These Funds For Buying Arms and Weapons • Buying arms is an extremely difficult task now after this ban .
<p>Transparency</p>	<ul style="list-style-type: none"> • Online transaction = More transparency = Financial Intelligence Unit Will tack All Online transactions • Now there Will be More Transparency In Real Estate Sector
<p>End of Huge Donations</p>	<ul style="list-style-type: none"> • Huge amounts of donation that is taken in the private education and healthcare sectors would be stopped . • Schools, engineering and medical colleges and hospitals (private ones) used to take huge amounts of money as donations especially in the form of hard cash in the denominations of Rs. 500 and Rs. 1000 .StudyDhaba.Com • These money-minded people running these institutions won't be able to make any easy money now . • Same applies to the real estate sector.
<p>Towards A Cashless Economy</p>	<ul style="list-style-type: none"> • While it is practically impossible to have a 100% cashless economy , the proportion of hard cash in the economy will decrease and our economy will get more digitized . • This will result in greater transparency . • Now government has put Some limitation for Cash Withdraw from bank Accounts. People Will go for online payments ,They Will Use PayTM Or other Online payment Companies For Buying goods or Making payments.

	<ul style="list-style-type: none"> • More Use of Debit and Credit Card
Hawala Transactions End	<ul style="list-style-type: none"> • Most Hawala transactions used to be carried out in the denominations of Rs. 500 and Rs. 1000 . • With this ban , Modiji has delivered a fatal blow to the unethical Hawala traders as they can't trade anymore using denominations of Rs. 500 and Rs. 1000 .

Cons of Demonetization – Here Is the List of Cons of Demonetization

Cons	Details
Rush At Banks	<ul style="list-style-type: none"> • Banks will be extremely over-crowded by people . • People will forget everything else and throng to the places where the banned notes are being officially exchanged leading to a tremendous chaos .
Shortage of Money To Common People	<ul style="list-style-type: none"> • There Will be Shortage of Money For Common people .
Stock Market	<ul style="list-style-type: none"> • Due to currency being sucked out of the market coupled with Trump's victory, the mood at the stock market was completely bearish . • Sensex lost 1600 points at open . This can adversely have a negative effect on trade in general .
Problem For House Wives	<ul style="list-style-type: none"> • Many Indian housewives store money secretly so that they could be of help during times of financial crisis in their households . • The accumulated money of our respected Indian housewives is of no use now until they exchange in the banks and post-offices .
Short Term Inflation	<ul style="list-style-type: none"> • Due to shortage of money in the market , a short-term cost push inflation will occur . • The price of gold has already become sky high . • Prices of vegetables and fruits have also soared burdening the common man .
Marriage Season	<ul style="list-style-type: none"> • Difficult For Those Families those have Weddings.

Impact of Demonetization on Indian Economy:

Effects on Parallel Economy:

The removal of these 500 and 1000 notes and replacement of the same with new 500 and 2000 Rupee Notes is expected to – remove black money from the economy as they will be blocked since the owners will not be in a position to deposit the same in the banks. Temporarily stall the circulation of large volume of counterfeit currency. It would curb the funding for anti-social elements like smuggling, terrorism, espionage, etc.

Effects on Money Supply:

With the older 500 and 1000 Rupees notes being scrapped, until the new 500 and 2000 Rupees notes get widely circulated in the market, money supply is expected to reduce in the short run. To the extent that black money (which is not counterfeit) does not re-enter the system, reserve money and hence money supply will decrease permanently. However gradually as the new notes get circulated in the market and the mismatch gets corrected, money supply will pick up.

Effects on Demand:

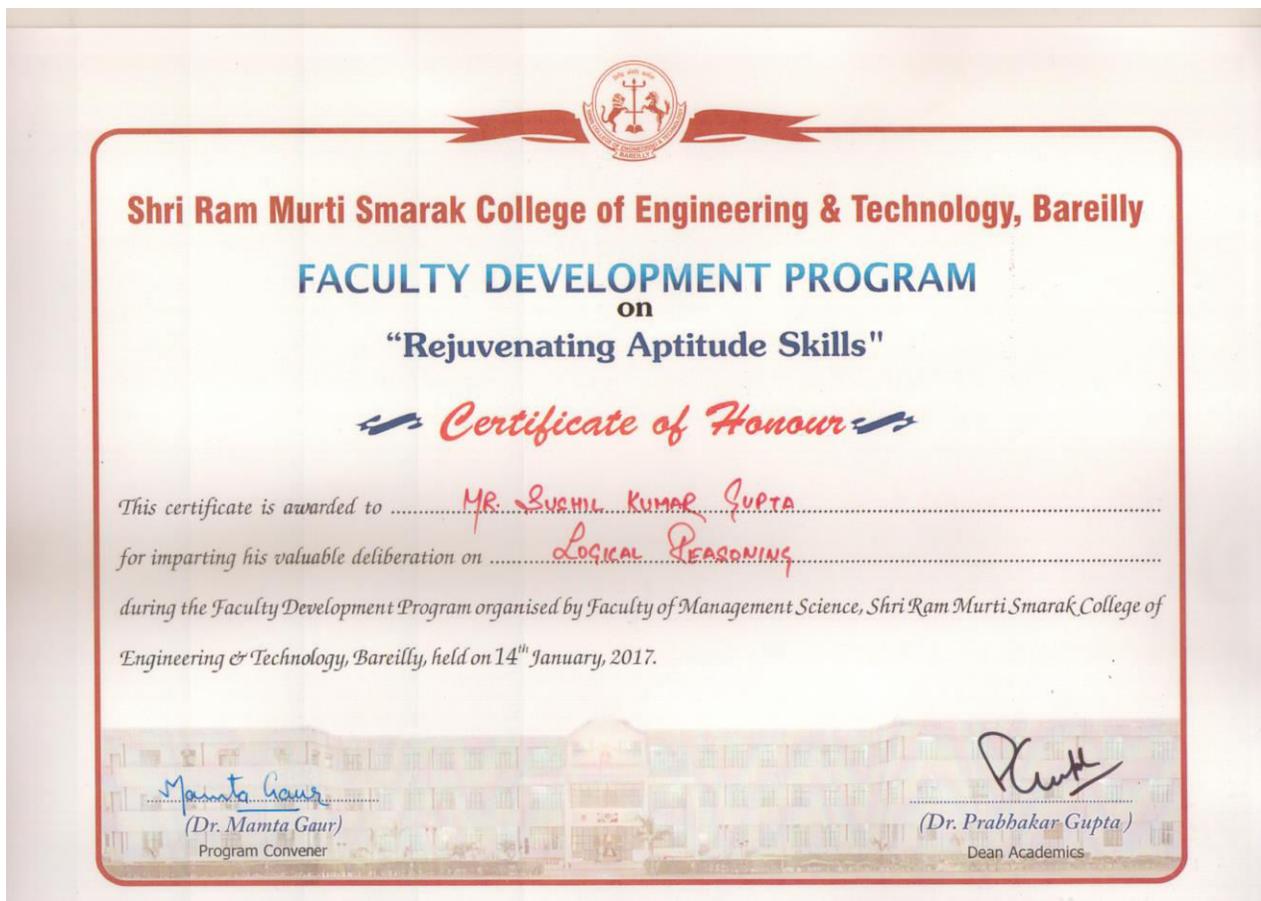
The overall demand is expected to be affected to an extent. The demand in following areas is to be impacted particularly:

Consumer goods, Real Estate and Property, Gold and luxury goods, Automobiles (only to a certain limit).

Last Technical Session

Query Handling Session	All Resource Persons
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Certificate Distribution



Faculty Development Program Photo

