



**Dr. Babasaheb Ambedkar**  
**Open University**

(Established by Government of Gujarat)  
“Jyotirmay” Parisar, Opp. Balaji Temple,  
Sarkhej-Gandhinagar Highway,  
Chharodi, Ahmedabad-382481

E-mail: [feedback@baou.edu.in](mailto:feedback@baou.edu.in)

Website : [www.baou.edu.in](http://www.baou.edu.in)

**August-2017**

**DIPLOMA ASSIGNMENTS**

**DOR-01,02,03,04**  
**(Diploma in Operation**  
**Research)**

**Last Date of Submission :**  
**28/02/2018**

## Diploma Programmes

**Dear Student,**

You are required to do one assignment for the **Diploma Programme** It is a Tutor Marked Assignment (TMA) and carries 30 marks. It covers four blocks of the course.

As in day-to-day life, **Planning** is important in attempting the assignment as well. Read the assignment carefully; go through the units on which the questions are based; jot down some points regarding each question and then re-arrange them in a logical order. In the Long-type answer, pay attention to your introduction and conclusion. The introduction must tell you how to interpret the given topic and how you propose to develop it. The conclusion must summarize your views on the topic.

Make sure that your answer :

- a) is logical
- b) is written in simple and correct English
- c) does not exceed the number of words indicated in your questions
- d) is written neatly and clearly.

**Good Luck,**

- It is compulsory to submit the assignment before the last date **28/02/2018.**
- It is compulsory to take receipt at the time of submission of the assignment in order to making an inquiry regarding assignment in future.
- Dont forget to take back the checked assignment so that can utilize it for your term end exam preparation.
- The passing marks for the diploma programme is **15**, make sure you obtain atleast **15** marks as if you obtain less then **15**, you will be considered as **FAIL** and need to write the assignment again in order to obtain your final certificate.
- You cant get final marksheet and certificate before passing the assignment successfully.
- Please attach the assignment question paper with your written assignment.
- Please take out the point out of the next page and make it the first page of your assignment after filling all the columns.

**Dr. Babasaheb Ambedkar Open University,  
Ahmedabad**

**DIPLOMA IN OPERATION RESEARCH**

**SUBJECT :** \_\_\_\_\_

Enrollment No : \_\_\_\_\_

Study Centre Name :

Name : \_\_\_\_\_

Study Centre Code : \_\_\_\_\_

Address : \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Mobile No : \_\_\_\_\_

E-Mail : \_\_\_\_\_

Student Signature : \_\_\_\_\_

Date : \_\_\_\_\_

# Dr. Babasaheb Ambedkar Open University,

## Ahmedabad

DIPLOMA COURSE

SUBJECT : DOR-01

ASSIGNMENT AUGUST 2017

TOTAL MARKS-30

PAASING MARKS-15

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### Section : A

(2x5=10)

1. Define Operation Reserch and State its relations with decision making.

OR

Describe the history of Operation Research in brief

2. State the uses of Operation Research in Various areas.

OR

Describe Various Operatin Research Modeals.

### Section : B

(4x2.5=10)

**DO as direct :**

1. State the advantages and limitations of lineair Programming Models.
2. Write Short note on the graphical Solution of linear Programming Problems.
3. Solve the following L.P. Problem and Find  $X_1, x_2 >$  Such that  
 $5x_1 + 10x_2 \leq 50, x_1 + x_2 \geq 1, x_2 \leq 4, x_1, X_2 \geq 0$  and  $Z = x_1 + x_2$  is minimum.
4. Use the graphical method to solve the following LP Problem. Maximize  $Z = 7x_1 + 3x_2$   
Subject to the Constraints.

$$X_1 + 2x_2 \geq 3$$

$$X_1 + x_2 < 4$$

$$0 < X_1 < 5/2$$

$$0 < X_2 < 3/2 \text{ and } X_1 X_2 \geq 0$$

### Section : C

(5x2=10)

**Explain the Following term.**

1. Alternative Optimal Solutions.
2. Unbounded Solution.
3. In feqsible Solution.
4. Redundancy.
5. Action Phase.

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## **Ahmedabad**

**DIPLOMA COURSE**

**SUBJECT : DOR-02**

**ASSIGNMENT AUGUST 2017**

**TOTAL MARKS-30**

**PAASING MARKS-15**

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### **Section : A**

**(1x10=10)**

1. Explain the Mathematical Model of Transportation Problem

OR

Explain the Solution Method of Assignment Problem

### **Section : B**

**(2x5=10)**

**Write Short Note on the Following (Any Two)**

1. Multiple Optimal Solutions.
2. Maximization Case in Assignment Problem.
3. Unbalanced Assignment Problem.
4. Restrictions On Assignment.

### **Section : C**

**(4x2.5=10)**

**Explain the step Of the Following method.**

1. Least Cost Method
2. Vogel' s Approximation Method
3. Transportation Algorithm ( Modi Method)
4. North- West Corner Method.

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## **Ahmedabad**

**DIPLOMA COURSE**

**SUBJECT : DOR-03**

**ASSIGNMENT AUGUST 2017**

**TOTAL MARKS-30**

**PAASING MARKS-15**

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### **Section : A**

**(1x10=10)**

(1) Describe the concept of PERT & CPM.

OR

State main points of difference in between them.

### **Section : B**

**(2X5=10)**

**write short note of the following. ( Any two)**

- (1) Various types of Floats.
- (2) Resource smoothing.
- (3) Resource leveling.
- (4) Stages of project management.

### **Section : C**

**(5X2=10)**

**Explain Following terms.**

- (1) Activity
- (2) Events
- (3) Network
- (4) Earliest occurrence time
- (5) Earliest finish time

# Dr. Babasaheb Ambedkar Open University,

## Ahmedabad

DIPLOMA COURSE

SUBJECT : DOR-04

ASSIGNMENT AUGUST 2017

TOTAL MARKS-30

PAASING MARKS-15

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### SECTION-A

(2X5=10)

(1) State the types of environment under which decision can be made.

OR

Explain the decision tree approach in decision making.

(2) what are the reasons for which risk redusing measures to be used in capital budgeting.

OR

What a maximum amount can be paid for obtaining perfect information for forth coming activities.

### SECTION-B

(2X5=10)

**Write short note on the following. (Any two)**

- (1) Concept of decision making.
- (2) Expected Opportunity loss
- (3) Probability Assignment
- (4) Simulation as a risk redusing

### SECTION-C

(10X1=10)

**(I) Give the full form of the following :**

1. COL = \_\_\_\_\_
2. EMV = \_\_\_\_\_
3. EVPI = \_\_\_\_\_
4. \_\_\_\_\_ means no information is available to assess the likelihood of alternaive outcomes.
5. \_\_\_\_\_ deviation is the square root of varience.

**(II) Explain the following terms :**

- (1) Coefficient of variation
- (2) Pay back criteria
- (3) Risk
- (4) Complete certainly
- (5) Assumed certainly